

Births: Final Data for 2003

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Abstract

Objectives—This report presents 2003 data on U.S. births according to a wide variety of characteristics. Data are presented for maternal demographic characteristics including age, live-birth order, race, Hispanic origin, marital status, and educational attainment; maternal characteristics (medical risk factors, weight gain, and tobacco and alcohol use); medical care utilization by pregnant women (prenatal care, obstetric procedures, complications of labor and/or delivery, attendant at birth, and method of delivery); and infant characteristics (period of gestation, birthweight, Apgar score, abnormal conditions, congenital anomalies, and multiple births). Also presented are birth and fertility rates by age, live-birth order, race, Hispanic origin, and marital status. Selected data by mother's State of residence are shown, as well as data on month and day of birth, sex ratio, and age of father. Trends in fertility patterns and maternal and infant characteristics are described and interpreted.

Methods—Descriptive tabulations of data reported on the birth certificates of the 4.09 million births that occurred in 2003 are presented. Denominators for population-based rates are derived from the U.S. 2000 census.

Results—In 2003 there were 4,089,950 live births reported in the United States, 2 percent more than the number in 2002. The crude birth rate (CBR) and general fertility rate (GFR) rose slightly. Childbearing among teenagers declined for the 12th straight year to another historic low. Birth rates for women aged 20–24 years also declined, whereas rates for women aged 25–44 years increased 2–6 percent, reaching highs not reported since the mid- to late 1960s. All measures of unmarried childbearing increased considerably in 2003, but smoking during pregnancy continued to decline. Timely initiation of prenatal care improved slightly. The cesarean delivery rate jumped another 5 percent to another all-time high, and the rate of vaginal birth after previous cesarean dropped 16 percent, an all-time low. Key measures of birth outcome—the percentages of preterm and low birthweight (LBW) births—rose. The twinning rate increased, but the rate of triplet and higher order multiple births was essentially stable.

Keywords: births • birth certificate • maternal and infant health • birth rates • maternal characteristics

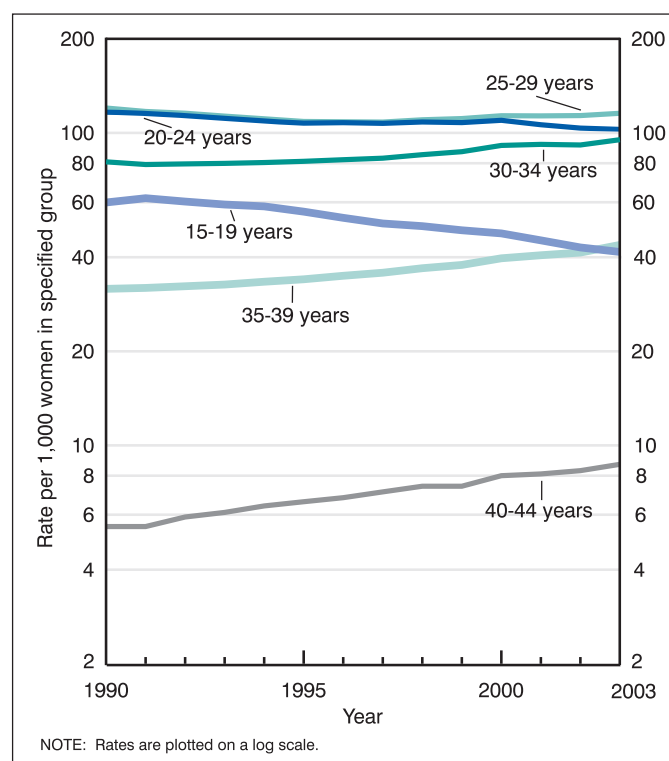


Figure 1. Birth rates by age of mother: United States, 1990–2003

Highlights

- In 2003, 4,089,950 births were registered in the United States, 2 percent more than in 2002. Births increased among non-Hispanic white, Hispanic, American Indian, and Asian or Pacific Islander (API) women but decreased among non-Hispanic black women.
- The 2003 **crude birth rate** for the United States increased 1 percent from 2002, to 14.1 live births per 1,000 total population. The **general fertility rate (GFR)** also increased, to 66.1 live births per

Acknowledgments

This report was prepared under the general direction of Charles J. Rothwell, Director of the Division of Vital Statistics (DVS), James A. Weed, Deputy Director of DVS, and Stephanie J. Ventura, Chief of the Reproductive Statistics Branch (RSB). Nicholas F. Pace, Chief of the Systems, Programming, and Statistical Resources Branch (SPSRB), and Steve Steimel, Gail Parr, Candace Cosgrove, Jiaquan Xu, Jaleh Mousavi, Jordan Sacks, Annie Liu, Manju Sharma, Bonita Gross, and Thomas D. Dunn provided computer programming support and statistical tables. Yashodhara Patel of RSB also provided statistical tables. T.J. Mathews, Sharon Kirmeyer, and Yashodhara Patel of RSB provided content review. Staff of the Data Acquisition and Evaluation Branch carried out quality evaluation and acceptance procedures for the State data files on which this report is based. The Registration Methods staff of DVS consulted with State vital statistics offices regarding the collection of birth certificate data. This report was edited by NOVA contractor Kathy Sedgwick under the direction of NCHS senior editor Demarius V. Miller and typeset by Jacqueline M. Davis and graphics were produced by Jarmila G. Ogburn of the Information Design and Publishing Staff, Office of Information Services.

1,000 women aged 15–44 years, 2 percent higher than the 2002 rate. Fertility rates increased for non-Hispanic white and Hispanic women by 2 and 3 percent, respectively, but decreased slightly for non-Hispanic black women. Fertility also increased for API women but was essentially unchanged for American Indian women.

- **The teenage birth rate** fell 3 percent in 2003 to 41.6 births per 1,000 women aged 15–19 years, another record low for the Nation. The rate has plummeted by one-third since the 1991 peak (61.8). The rate for females aged 10–14 years declined to 0.6 per 1,000, a one-third decline since 2000. Birth rates for teenagers 15–17 and 18–19 years each fell 3 percent. The rate for ages 15–17 years was 22.4 per 1,000, 42 percent lower than in 1991, and the rate for ages 18–19 years was 70.7 per 1,000, 25 percent lower than in 1991. Declines in rates have been especially striking for black teenagers: their overall rate dropped 45 percent since 1991, whereas the rate for young black females 15–17 years has plunged more than half. Rate declines for all teenagers were substantial enough to more than compensate for the increased number of female teenagers, so that the number of births to women under 20 years dropped to the fewest since 1946, the first year of the baby boom. **See figure 1.**
- The **birth rate for women aged 20–24 years** declined to 102.6 births per 1,000 women in 2003, the lowest rate on record. The birth rate for **women aged 25–29 years** rose 2 percent, to 115.6. The **birth rates for women aged 30–34 and 35–39 years** also rose, to 95.1 and 43.8, respectively, the highest rates reported since the mid-1960s. The **birth rate for women 40–44 years** increased 5 percent, to 8.7, the highest rate reported since 1969; the rate for this age group is up 58 percent since only 1990. The birth rate for women 45–49 years of age was unchanged.
- The **first birth rate** rose 3 percent between 2002 and 2003, to 26.5 births per 1,000 women aged 15–44 years. First birth rates for women under 20 years of age decreased, whereas first birth rates for women aged 25–44 years increased; rates for women 20–24 and 45–49 years of age were essentially unchanged.
- The mean or average age at first birth for the United States in 2003 was 25.2 years, slightly higher than in 2002.
- **Childbearing by unmarried women** rose steeply in 2003. The **birth rate** per 1,000 unmarried women aged 15–44 years jumped 3 percent to 44.9 births, breaking an 8-year period of little change.

The number of births to unmarried women climbed 4 percent to 1,415,995, the highest number recorded in the more than six decades for which national data are available. The proportion of all births to unmarried women increased to 34.6 percent; this measure has risen steadily since the late 1990s. Despite the overall increases, birth rates for unmarried teenagers continued to fall, with declines for younger teenagers outpacing those for older teenagers.

- **Cigarette smoking** during pregnancy fell to 10.7 percent of women giving birth in 2003. Among women who smoked, about one-quarter smoked half a pack of cigarettes or more per day. Smoking rates are especially high for women aged 18–24 years. Smoking during pregnancy is an important preventable risk factor for poor birth outcome. Compared with 7.7 percent of babies born to nonsmokers, in 2003, 12.4 percent of babies born to smokers were low birthweight (LBW), that is, they weighed less than 2,500 grams.
- **Timely initiation of prenatal care** improved again in 2003, rising to 84.1 percent of all mothers. The proportion of women beginning care in the first trimester of pregnancy has increased 11 percent since 1990. Late (care in the last trimester) or no prenatal care declined to 3.5 percent in 2003, down from 6.1 percent in 1990. Small gains in prenatal care timing were seen among each of the largest racial and ethnic groups between 2002 and 2003.
- The rate of **induction of labor** was unchanged for 2003 at 20.6 percent; this rate has more than doubled since 1990 (9.5 percent).
- For 2003 the **rate of cesarean delivery** increased 5 percent to 27.5 percent of all births, the highest rate ever reported in the United States. After falling between 1989 and 1996, the cesarean rate has risen by one-third. The **primary rate** increased 6 percent, and the rate of **vaginal birth after cesarean delivery (VBAC)** fell by 16 percent for 2002–03.
- The **preterm birth rate** (percentage of infants delivered at less than 37 completed weeks of gestation) increased 2 percent in 2003 to 12.3 percent of all births. The preterm delivery rate has risen 16 percent since 1990 and by more than 30 percent since 1981. Most of the current year increase was among infants born moderately preterm (32–36 weeks of gestation). Significant increases in moderately preterm births were also seen among singleton births only. Preterm rates increased among non-Hispanic white, non-Hispanic black, and Hispanic infants for the current year.
- The **low birthweight rate** (less than 2,500 grams) also increased in 2003, to 7.9 percent, the highest level reported since 1970. The percentage of infants born LBW has risen 18 percent since the 1984 low (6.7 percent). The rise for 2002–03 was among moderately LBW infants (1,500–2,499 grams); the very low birthweight (VLBW) level (less than 1,500 grams) was essentially unchanged. Levels increased for the three largest racial and ethnic groups and for singleton births only.
- The number of births in twin deliveries increased 3 percent for 2002–03, to 128,665 births; the twin birth rate rose 1 percent to 31.5 twins per 1,000 live births. Since 1980 the number of twins has climbed by three-fourths and the rate by two-thirds. The rate of **triplet and other higher order multiple births** (triplet+) was 187.4 per 100,000 in 2003, not significantly different from the 2002 level. The triplet/+ rate had surged from 37.0 to 193.5 between

1980 and 1998 but has been essentially stable since 1999. Multiple births continue to be at high risk of being delivered preterm or LBW.

Introduction

This report presents detailed data on numbers and characteristics of births in 2003, birth and fertility rates, maternal lifestyle and health characteristics, medical services utilization by pregnant women, and infant health characteristics. These data provide important information on fertility patterns among American women by such characteristics as age, live-birth order, race, Hispanic origin, marital status, and educational attainment. Up-to-date information on these fertility patterns is critical to understanding population growth and change in this country and in individual States. Data on maternal characteristics such as weight gain, tobacco and alcohol use, and medical risk factors are useful in accounting for differences in birth outcomes. Information on use of prenatal care, obstetric procedures, complications of labor and/or delivery, attendant at birth and place of delivery, and method of delivery by maternal demographic characteristics can also help explain differences in birth outcomes. It is very important that data on birth outcomes, especially levels of LBW and preterm birth, be monitored continuously because these variables are important predictors of infant mortality and morbidity.

A report of preliminary birth statistics for 2003 presented data on selected topics based on a substantial sample (98.5 percent) of the 2003 birth file (1). Findings for the selected measures (age, race, Hispanic origin, marital status of mother, live-birth order, prenatal care, maternal smoking, cesarean delivery, preterm births, and LBW) based on the preliminary data are very similar to those presented here based on final data. In addition to the tabulations included in this report, more detailed analysis is possible by using the Natality public-use file that is issued for each year. The data file is available on tape and in CD-ROM format since 1968, and selected detailed data tables are available on the National Center for Health Statistics (NCHS) Web site at <http://www.cdc.gov/nchs/datawh/statab/unpubd/natality/natab2000.htm> (2,3).

Methods

Data shown in this report are based on 100 percent of the birth certificates registered in all States and the District of Columbia. More than 99 percent of births occurring in this country are registered (4). Tables showing data by State also provide separate information for Puerto Rico, Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas. However, these areas are not included in totals for the United States.

This report includes data for two States, Pennsylvania and Washington, that implemented the 2003 revision of the U.S. Standard Certificate of Live Birth in 2003 (revised), and also the remaining 48 States and the District of Columbia for which data are based on the 1989 revision of the U.S. Standard Certificate of Live Birth (unrevised). The 2003 revision is described in detail elsewhere (5–7); a forthcoming report will present information on new items for the revised States. Because few States provide data based on the revised certificate, in this report revised data are combined with unrevised data where comparable. Data for Pennsylvania and Washington are excluded from

the national figures for items where data are not comparable. The comparability of data items between the 1989 and the 2003 certificates is discussed in the “Technical Notes.”

Race and Hispanic origin are reported independently on the birth certificate. In tabulations of birth data by race and Hispanic origin, data for Hispanic persons are not further classified by race because the majority of women of Hispanic origin are reported as white. Most tables in this report show data for these categories: white total; non-Hispanic white; black total; non-Hispanic black; and Hispanic. Text discussions are for non-Hispanic white, non-Hispanic black, and Hispanic mothers wherever measures for these groups are available. Data for American Indian and Asian or Pacific Islander (API) births are not shown separately by Hispanic origin because the majority of these populations are non-Hispanic. Data are also presented for four specific Hispanic subgroups: Mexican, Puerto Rican, Cuban, and Central and South American, and for an additional subgroup referred to as “other and unknown Hispanic.” Text references to black births and black mothers or white births and white mothers are used interchangeably for ease in writing.

In 1997 the Office of Management and Budget (OMB) issued “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity” (8–10). The 1997 revised standards incorporated two major changes designed to reflect the changing racial and ethnic profile of the United States. First, the revision increased from four to five the minimum set of categories to be used by Federal agencies for identification of race. The 1977 standards required Federal agencies to report race-specific tabulations using a minimum set of four single-race categories: American Indian or Alaska Native (AIAN), Asian or Pacific Islander (API), black, and white. The 1997 revised standards called for reporting Asians separately from Native Hawaiians or Other Pacific Islanders. The revised standards also require Federal data collection programs to allow respondents to select *one or more race categories*.

For the 2000 decennial census, the U.S. Census Bureau collected race and ethnicity data in accordance with the 1997 revised standards. However, the National Vital Statistics System, which is based on data collected by the States, will not be fully compliant with the new standards until all of the States revise their birth certificates to reflect the new standards. Thus, beginning with the 2000 data year, the numerators (births) for birth rates are incompatible with the denominators (populations) (see “Population denominators”). In order to compute rates, it is necessary to bridge population data for multiple-race persons to single-race categories. This has been done for birth rates by race presented in this report. Once all States revise their birth registration systems to comply with the 1997 OMB standards, the use of bridged populations can be discontinued.

Beginning with the 2003 data year, multiple-race was reported by California, Hawaii, Ohio (for births occurring in December only), Pennsylvania, Utah, and Washington. Data from the vital records of the remaining 44 States and the District of Columbia followed the 1977 OMB standards in which a single race is reported (8,9). In addition, these areas also report the minimum set of four races as stipulated in the 1977 standards, compared with the minimum of five races for the 1997 standards.

To provide uniformity and comparability of the data during the transition period before multiple-race data are available for all reporting areas, it is necessary to bridge the responses of those who reported more than one race to a single-race category. Multiple-race is imputed

to a single race (one of the following: AIAN, API, black, or white) according to the combination of races, Hispanic origin, sex, and age indicated on the birth certificate of the mother or father (10–13). See “Technical Notes.” The bridging procedure imputes multiple-race of mothers as reported on the birth certificate to one of the four minimum races stipulated in the 1977 OMB standards, that is, AIAN, API, black, or white. Mothers of a specified API subgroup (i.e., Chinese, Japanese, Hawaiian, or Filipino) in combination with another race (i.e., AIAN, black, or white) or another API subgroup cannot be imputed to a particular API subgroup. For this report, data are not shown for the specified API subgroups because of this change (14) (see “Technical Notes”). A report on births in 2003 to multiple-race women, which will include births to single- and multiple-race women of the API subgroups, is forthcoming.

Information on the measurement of marital status, gestational age, and birthweight; the computation of derived statistics and rates; population denominators; random variation and relative standard error; and the definitions of terms are presented in the “Technical Notes.”

Information on births by age, race, or marital status of mother is imputed if it is not reported on the birth certificate. These items were not reported for less than 1 percent of U.S. births in 2003. (See “Technical Notes” for additional information.) All other maternal and infant characteristics (except items on which length of gestation is calculated) are not imputed. Births for which a particular characteristic is unknown are subtracted from the figures for total births that are used as denominators before percentages, percent distributions, and medians are computed. Levels of non-reporting vary substantially by specific item and by State. Table I in the “Technical Notes” provides information on the percentage of records with missing information for each item by State for 2003. Readers should note that the levels of incomplete or inaccurate reporting for some of the items are quite high in some States. Data for 2003 for Alaska and Rhode Island are of particular concern.

Demographic Characteristics

Births and birth rates

Number of births

In 2003 a total of 4,089,950 **births** were registered in the United States, 68,224 more than in 2002 (an increase of 2 percent). The 2003 total is the highest number reported since 1963 (4,098,020). Except for a brief upward trend in the late 1990s, the number of births had generally declined since 1990, the most recent peak (4,158,212). (See tables 1–12 for national and State data by age, live-birth order, race, and Hispanic origin.)

The number of births for 2003 generally increased for all race and Hispanic origin groups (tables 1 and 6). Births rose 1 percent for non-Hispanic white women and 4 percent for Hispanic women. Births to American Indian and Asian or Pacific Islander (API) women increased 2 and 5 percent, respectively, whereas births to non-Hispanic black women (the only group to decline in 2003) fell slightly, by less than 1 percent. Among the specified Hispanic groups, increases in births ranged from 2 percent for Puerto Rican women to 8 percent for Central and South American women.

Crude birth rate

The **crude birth rate** (CBR) for 2003, 14.1 live births per 1,000 total population, was 1 percent higher than the rate for 2002 (13.9), the lowest birth rate on record for the United States (14). The 2003 rate is 16 percent lower than the most recent peak in 1990, 16.7. The CBR dropped steadily from 1990 to 1997 but has fluctuated since (table 1).

Fertility rate

In 2003 the **general fertility rate** (GFR) was 66.1 live births per 1,000 women of childbearing age (15–44 years), an increase of 2 percent from 2002 (64.8) and the highest rate since 1993 (67.0). Since 1990 the GFR has fluctuated but overall has declined 7 percent (from 70.9) (figure 2 and table 1).

The GFRs of non-Hispanic white (58.5 per 1,000 aged 15–44 years) and Hispanic (96.9) women rose 2 and 3 percent, respectively, between 2002 and 2003 (tables 1 and 6). Fertility also increased for API women (by 3 percent to 66.3). However, the rate for non-Hispanic black women declined slightly from 67.4 in 2002 to 67.1 in 2003; the rate for American Indian women was essentially unchanged. Among the specified Hispanic origin groups, the rates for Mexican, Cuban, and other Hispanic women increased 3, 5, and 6 percent, respectively, whereas the rate for Puerto Rican women was down 6 percent. Since 1990 fertility rates have decreased for all race and Hispanic origin groups except Cubans.

Age of mother

Teenagers—Birth rates for adolescents fell again in 2003, reaching historic lows for the Nation. Rates fell for all age groups, and, with only one or two exceptions, rates also declined within age groups for all race and ethnic population subgroups (tables A, 3, 4, 8, and 9). The **birth rate for the youngest teenagers** declined to 0.6 births per 1,000 females aged 10–14 years in 2003, compared with 0.7 in 2002; the 2003 rate was less than one-half the rate reported during 1989–94 (1.4 per 1,000) (15). The decline in the birth rate was substantial enough to more than compensate for the

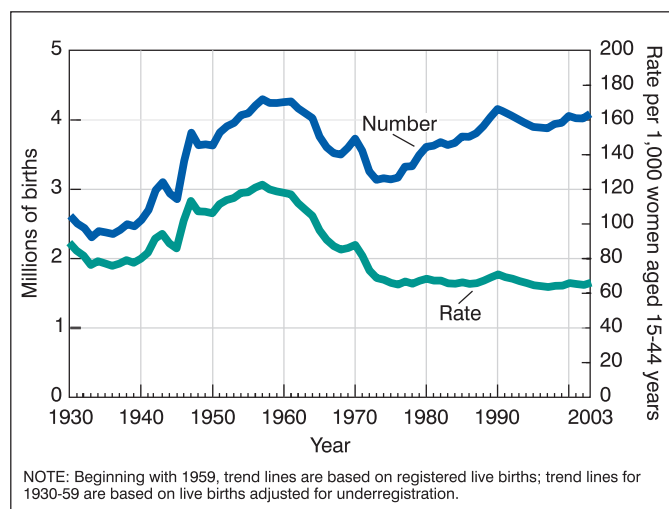


Figure 2. Live births and fertility rates: United States, 1930–2003

Table A. Birth rates for teenagers 15–19 years, by age, race, and Hispanic origin: United States, 1991, 2000, 2002, and 2003, and percentage change in rates, 1991–2003 and 2002–2003

[Rates per 1,000 women in specified group]

Age and race and Hispanic origin of mother	2003	2002	1991	Percent change, 2002–2003	Percent change, 1991–2003
10–14 years					
All races ¹	0.6	0.7	1.4	-14	-57
Non-Hispanic white	0.2	0.2	0.5	0	-60
Non-Hispanic black	1.6	1.9	4.9	-16	-67
American Indian total ²	1.0	0.9	1.6	11	-38
Asian or Pacific Islander total ²	0.2	0.3	0.8	-33	-75
Hispanic ³	1.3	1.4	2.4	-7	-46
15–19 years					
All races ¹	41.6	43.0	61.8	-3	-33
Non-Hispanic white	27.4	28.5	43.4	-4	-37
Non-Hispanic black	64.7	68.3	118.2	-5	-45
American Indian total ²	53.1	53.8	84.1	-1	-37
Asian or Pacific Islander total ²	17.4	18.3	27.3	-5	-36
Hispanic ³	82.3	83.4	104.6	-1	-21
15–17 years					
All races ¹	22.4	23.2	38.6	-3	-42
Non-Hispanic white	12.4	13.1	23.6	-5	-47
Non-Hispanic black	38.7	41.0	86.1	-6	-55
American Indian total ²	30.6	30.7	51.9	0	-41
Asian or Pacific Islander total ²	8.8	9.0	16.3	-2	-46
Hispanic ³	49.7	50.7	69.2	-2	-28
18–19 years					
All races ¹	70.7	72.8	94.0	-3	-25
Non-Hispanic white	50.0	51.9	70.6	-4	-29
Non-Hispanic black	105.3	110.3	162.2	-5	-35
American Indian total ²	87.3	89.2	134.2	-2	-35
Asian or Pacific Islander total ²	29.8	31.5	42.2	-5	-29
Hispanic ³	132.0	133.0	155.5	-1	-15

¹Includes races other than white and black.

²Race and Hispanic origin are reported separately on birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

³Includes all persons of Hispanic origin of any race; see "Technical Notes."

increased number of female teenagers (table II) (16) so that the number of births in this age group also fell sharply, to 6,661, a 9-percent drop from 2002 (7,315).

The birth rate for teenagers 15–19 years declined 3 percent to 41.6 births per 1,000 females (tables A, 4, and 9). This rate has dropped 33 percent since the recent peak in 1991 (61.8). As was true for younger teenagers, the falling birth rate has resulted in fewer births to teenagers 15–19, even though the number of female teenagers increased modestly in 2003 (table II). In 2003 teenagers aged 15–19 years gave birth to 414,580 babies, more than 100,000 fewer than the recent peak in 1990 (521,826).

Birth rates for teenagers aged 15–17 and 18–19 years each dropped 3 percent in 2003, to 22.4 and 70.7, respectively. Overall since 1991 the rate for teenagers aged 15–17 years fell 42 percent, whereas the rate for older teenagers declined 25 percent. Births to 15–17-year-olds fell to 134,384, the fewest since 1952, whereas births to older teenagers declined to 280,196, the fewest since 1946 (235,282).

Birth rates for teenagers differ sharply among race and Hispanic ethnicity population subgroups. In 2003 the overall rate was highest for

Mexican teenagers, 93.2 per 1,000 aged 15–19 years, and lowest for API teenagers, 17.4. In-between rates were 64.7 for non-Hispanic black teenagers, 60.8 for Puerto Ricans, 53.1 for American Indians, and 27.4 for non-Hispanic white teenagers.

Whereas rates have fallen for adolescents in all groups over the 1991–2003 period, the most striking declines are for non-Hispanic black teenagers. Overall, their rate fell 45 percent during this period, but the rate for non-Hispanic black teenagers aged 15–17 years has fallen more than one-half, from 86.1 per 1,000 in 1991 to 38.7 in 2003 (figure 3, table A). State-specific teenage birth rates are discussed later in this report.

Teenage pregnancy rates have fallen substantially since 1990, generally mirroring the declines in the teenage birth rates. Pregnancy rates are computed from the sums of live births, induced abortions, and fetal losses. Currently, teenage pregnancy rates are available through 2000, the most recent year for which detailed national abortion estimates are available (17–20). The teenage pregnancy rate in 2000 was 84.5 per 1,000 females aged 15–19 years, the lowest rate reported since 1976, when the Centers for Disease Control and Prevention, NCHS series of national estimates first became available (19,20). The rate has dropped 27 percent since its 1990 peak (116.3). The decline in the pregnancy rate during 1990–2000 is reflected in declines in live births and induced abortions, with larger declines reported for abortions.

New information recently reported from the 2002 National Survey of Family Growth (NSFG) suggests a number of factors that likely account for the falling pregnancy rates (21). Compared with the 1995 NSFG and the 1995 National Survey of Adolescent Males, the 2002 NSFG found significant declines in the proportions of teenage males, both younger and older, and the proportion of young adolescent

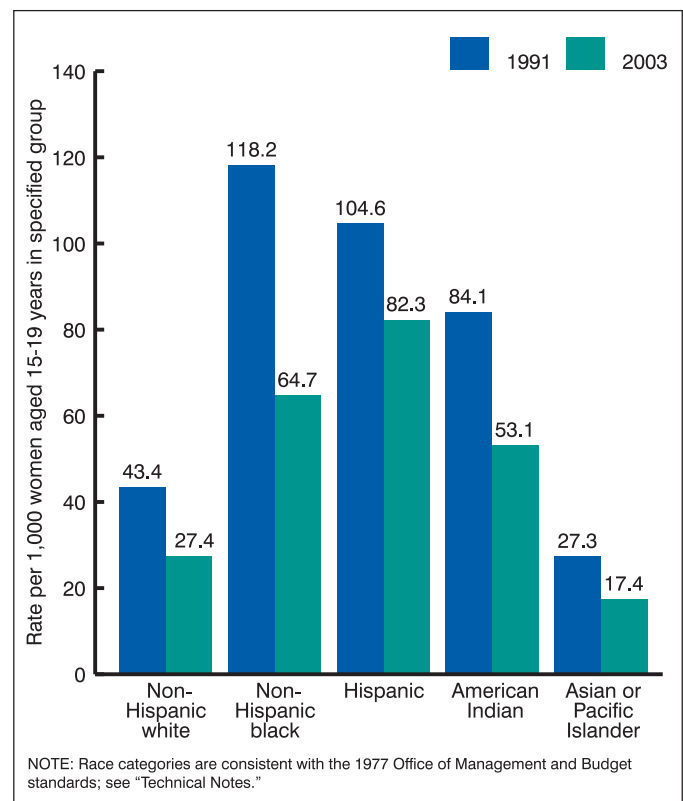


Figure 3. Birth rates for teenagers by race and Hispanic origin for 1991 and 2003

females who had ever had sexual intercourse. There were also important increases in the use of contraception, indicating more effective and consistent use. About three out of four teenagers used a method of contraception at first intercourse, and the overwhelming majority (83 percent of females and 91 percent of males) used a method at their most recent sex. The 2002 NSFG also documented increases in the use of highly effective hormonal methods such as Depo ProveraTM and LunelleTM and the use of dual methods, such as the condom with a hormonal method. Data from the CDC's Youth Risk Behavior Survey for school-age youth corroborate the findings reported by the NSFG (22). Over the past decade, many public and private efforts have focused teenagers' attention on the importance of pregnancy prevention through abstinence and responsible behavior (23,24).

Women aged 20 years and over: women in their twenties—

The birth rate for women aged 20–24 years was 102.6 births per 1,000 women in 2003, down 1 percent from 2002 (103.6). This is the lowest birth rate for this age group on record for the United States (3). The rate has declined by 12 percent since 1990 (116.5) (figure 1, tables 3, 4, 8, and 9). The rate for women aged 25–29 years increased by 2 percent in 2003, rising to 115.6 from 113.6 births per 1,000 women in 2002. The rate has fluctuated but has declined by 4 percent overall since 1990. Women in their twenties, the principal childbearing ages, historically account for the largest share of all births. The proportion of births to these women has declined over the last three decades, falling from 65 percent in 1980 to 52 percent in 2003.

Women in their thirties—The birth rate for women aged 30–34 years rose 4 percent in 2003 to 95.1 births per 1,000 from 91.5 in 2002 and reached the highest rate since 1964 (3) (tables 4 and 9). This rate has generally been on the rise since the mid-1970s (52.3 in 1975). Between 1991 and 2003 the rate rose by 20 percent. Increases since 1991 were uninterrupted except for a slight decline in 2002. Between 1991 and 2003 the number of births to women aged 30–34 years increased by 10 percent, despite an 8 percent decrease in the population of women in this group. The birth rate for women aged 35–39 years also rose in 2003, to 43.8 births per 1,000 women from 41.4 in 2002, an increase of 6 percent and the highest rate for this age since 1965 (3). Between 1990 and 2003 the rate rose by 38 percent, with an average increase of 2.5 percent per year. The rate for this age group has increased each year since 1978. The number of births to women aged 35–39 years reached another record high in 2003 (467,642). Since 1990 the number of births to this age group has risen by 47 percent, compared with a 7 percent increase in the population of women 35–39 years of age (16,25).

Women in their forties—The birth rate for women aged 40–44 years rose by 5 percent in 2003 to 8.7 births per 1,000 women, the highest rate reported since 1969 (3). The rate for this age group has more than doubled since 1984 (3.9), the most recent low. Between 1990 and 2003 rates for this age group rose by 58 percent, from 5.5. The number of births to women aged 40–44 years has increased by over 100 percent, compared with a 30-percent increase in the population. The 2003 birth rate for women aged 45–49 years was 0.5, unchanged from 2002. The rate has been stable since 2000, but has increased from 0.2 since 1991. The number of births to women aged 45–49 years increased by 6 percent (from 5,224 to 5,522) between 2002 and 2003, nearly four times that for 1990 (1,638) and the highest reported since 1945 (5,554) (3).

Births to women aged 50 years and over—In 2003 there were 323 births to women aged 50–54 years, a 23-percent increase over the

263 births reported for 2002 (tables 2 and 7). Since 1997, when data for this age group became available again, the number of births for women aged 50–54 years has increased with an average annual gain of 14 percent. (From 1964 to 1996 age of mother was imputed if the reported age was under 10 years or 50 years or over; see “Technical Notes.”) Despite the increase, the number of births to women aged 50–54 years remains too small to compute age-specific birth rates. In computing birth rates by age of mother since 1997, births to women aged 50–54 years have been included with births to women 45–49 years; the denominator for the rate is women aged 45–49 years.

The increase in birth rates for women 35 years of age and over during the last 20 years has been linked, at least in part, to the use of fertility-enhancing therapies (26). The proportion of childless women aged 35–44 years reporting impaired fecundity who sought fertility treatment rose considerably from 1982 to 1995, although the proportion has leveled off from 1995 to 2002 (27,28). In 2003, 1 out of 18 births to women aged 35 years of age and over was a multiple delivery, an outcome associated with infertility treatment, compared with 1 out of 33 births to women under 35 years of age (see section on “Multiple births”).

Among all women in 2003 birth rates by age of mother peak at age 25–29 years (115.6 births per 1,000 women). However, as in previous years, age-specific childbearing patterns differ markedly by race and Hispanic origin. Birth rates reached an apex at ages 20–24 years for Hispanic (163.4), non-Hispanic black (128.1), and American Indian women (110.0), whereas rates peaked at ages 25–29 years for non-Hispanic white women (110.8) and at 30–34 years for API women (114.6) (figure 4 and tables 3, 4, 8, and 9).

Live-birth order

The first birth rate for women aged 15–44 years was 26.5 births per 1,000 women in 2003, a rise of nearly 3 percent from 2002 (25.8) (table 5). Between 1990 and 2002 the rate generally declined; the 2003 rate is 9 percent lower than that for 1990 (29.0).

First birth rates for women aged 10–14 and 15–19 years decreased by 14 and 2 percent, respectively, between 2002 and 2003; the first birth rates for women of all 5-year age groups 25–44 years increased, with the largest gains reported for women aged 35–39 years (11 percent) (table 3). The rates for women aged 20–24 and 45–49 years essentially were unchanged.

The rate of second- and third-order births for women aged 15–44 years rose by 1 and 2 percent, respectively, from 2002 to 2003, whereas the rates for fourth-, sixth-, seventh-, and eighth- and higher-order births were unchanged. The rate for fifth-order births increased from 1.5 to 1.6.

Another useful measure in interpreting childbearing patterns is the mean age at first birth. The mean is the arithmetic average of the age of mothers at the time of birth and is computed directly from the frequency of first births by age of mother. In 2003 the mean age of first-time mothers was 25.2 years, slightly higher than the previous record high set for the United States in 2002 (25.1 years) (table B). Mean age at first birth rose for nearly all race and Hispanic origin groups. However, considerable variation still exists. API women had the highest mean age at first birth in 2003, 28.3 years, whereas American Indian women had the lowest, 21.8 years. The average age of first-time mothers was 26.2 years for non-Hispanic white, 22.7 years for non-Hispanic black, and 23.1 years for Hispanic women. (Data not shown.)

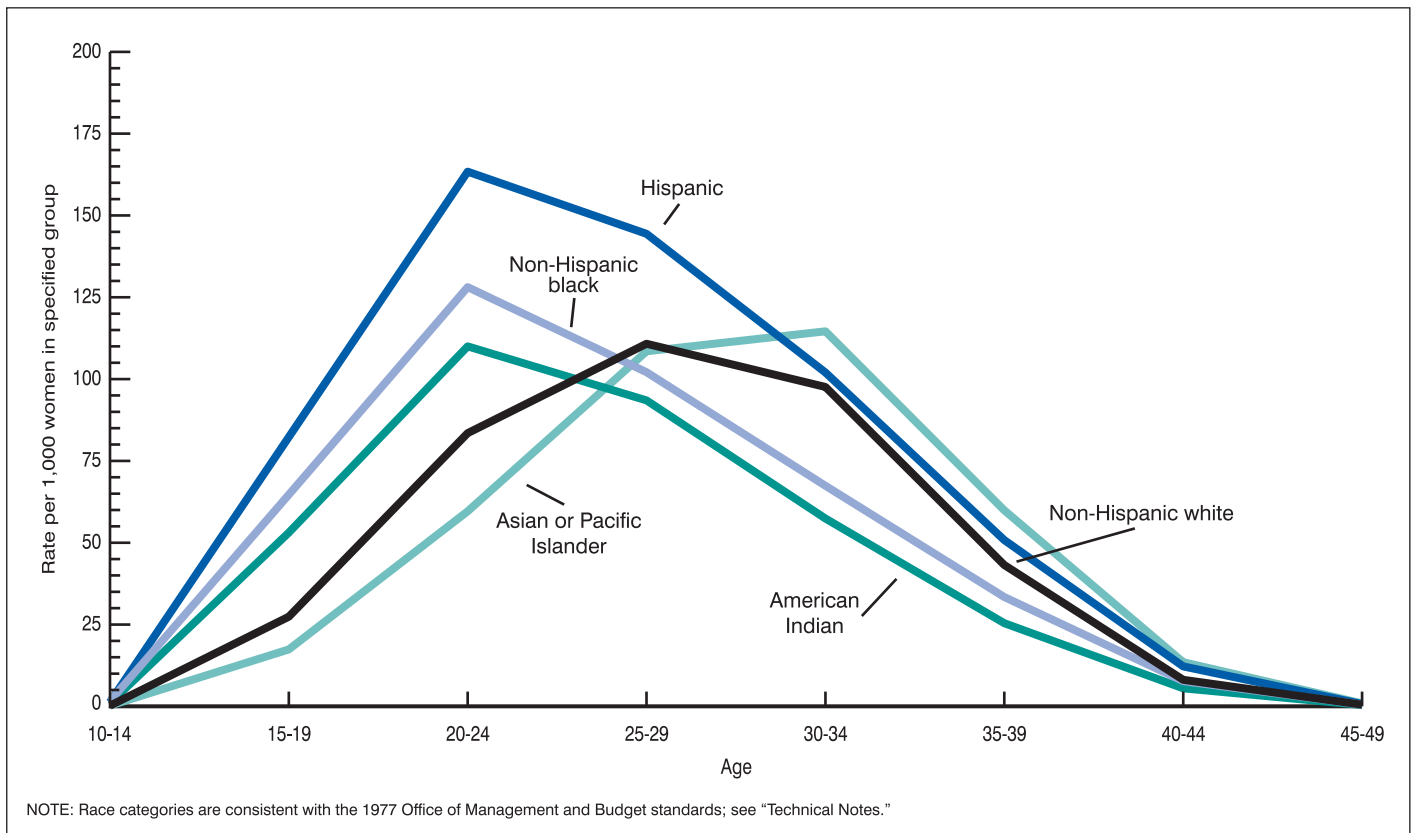


Figure 4. Birth rates by age, race, and Hispanic origin of mother: United States, 2003

Total fertility rate

The **total fertility rate** (TFR) summarizes the potential impact of current fertility patterns on completed family size. The TFR estimates the number of births that a hypothetical cohort of 1,000 women would have if they experienced throughout their childbearing years the same age-specific birth rates observed in a given year. The rate can be expressed as the average number of children that would be born per woman. Because it is computed from age-specific birth rates, the TFR is age adjusted and can be readily compared for populations across time or among geographic areas.

In 2003 the TFR was 2,042.5 (or 2.04 births per woman), 1 percent higher than the 2002 rate, 2,013.0 ([tables 4 and 9](#)). The TFR has

declined by 2 percent since 1990 when the rate was at its most recent high, 2,081.0. Between 1990 and 2003 the TFR has fluctuated, rising briefly from 1997 to 2000. The rise in the TFR between 2002 and 2003 is the result of increases in age-specific birth rates for women 25 and 44 years of age (see previous section on "Age of mother").

TFRs for most **race and Hispanic origin** groups also increased between 2002 and 2003, with rates rising 2 to 3 percent for non-Hispanic white, Hispanic, and API women. The rate for American Indians was essentially unchanged, whereas the rate for non-Hispanic black women declined 1 percent. Rates for Mexican, other Hispanic, and Cuban women increased 3, 5, and 6 percent, respectively, whereas the rate for Puerto Rican women was down 5 percent.

Differences among these groups are even more apparent when their rates are compared with the replacement rate. The replacement rate is the rate at which a given generation can exactly replace itself (2,100 births per 1,000 women). The U.S. TFR was below the replacement rate for the 32d consecutive year in 2003. Whereas the TFRs for most groups were below replacement in 2003, the rate was above replacement for Hispanics overall (2,785.5), and for Mexican (2,957.5) and other Hispanic women (2,733.0) ([tables 4, 9, 13, and 14](#)). State-specific TFRs for 2003 are discussed in the next section.

Births and birth rates by State

As noted previously, in 2003 the number of births in the United States increased by nearly 2 percent from the previous year. The increase in the national number of births was widespread across States; 24 States reported significant increases in their number of births. States with increased numbers of births were observed in nearly every region of the country. [See table 10 for 2003 data.](#)

Table B. Mean age of mother at first birth by race and Hispanic origin of mother: United States, 2003

Race and Hispanic origin of mother	Mean age
Total	25.2
Asian or Pacific Islander	28.3
Cuban	26.8
Non-Hispanic white	26.2
Central and South American	25.3
Puerto Rican	22.7
Non-Hispanic black	22.7
Mexican	22.5
American Indian	21.8

NOTES: Mean age at birth is the arithmetic average of the age of mothers at the time of the birth, computed directly from the frequency of births by age of mother and birth order (first). Race and Hispanic origin are reported separately on birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards; see "Technical Notes."

In 2003 CBRs by State ranged from 10.6 births per 1,000 total population (Maine and Vermont) to 21.2 (Utah). Between 2002 and 2003 rates increased significantly in seven States (California, Florida, Indiana, Maryland, Missouri, Pennsylvania, and Wisconsin) and were essentially unchanged in all other reporting areas. The rate declined significantly in Puerto Rico.

State-specific fertility rates, which provide a more refined picture of geographic variation in childbearing, ranged from a high of 92.2 births per 1,000 women aged 15–44 years in Utah to a low of 51.1 in Vermont. Fertility rates increased significantly for 31 States in 2003. Puerto Rico was the only reporting area for which the fertility rate fell significantly between 2002 and 2003.

State-specific TFRs for 2003, which provide a summary of lifetime fertility, are also shown in [table 10](#). Fertility tends to be higher for States in the western half of the country. In 2003, as in previous years, the majority of western States reported TFRs significantly above the national rate, whereas the majority of eastern States reported TFRs significantly below the national rate. In 2003 State-specific TFRs ranged from a high of 2,566.5 (2.6 births per woman) in Utah to a low of 1,683.0 (1.7 births per woman) in Vermont.

Birth rate for teenagers by State

In 2003 State-specific birth rates per 1,000 teenagers aged 15–19 years ranged from 18–19 in New Hampshire and Vermont to 62–63 in Mississippi, New Mexico, and Texas ([tables C and 10](#)). Between 2002 and 2003 teen birth rates declined significantly in 13 States (California, Colorado, Florida, Georgia, Illinois, Maryland, New Jersey, New York, North Carolina, Oregon, Rhode Island, Texas, and Vermont), the District of Columbia, and Puerto Rico. Birth rates were essentially unchanged for all other States and territories. Since 1991 teen birth rates have declined significantly for all reporting areas. More detailed analysis of trends and variations in teenage birthrates by age, race, and Hispanic origin are available elsewhere (29,30).

Sex ratio

There were 2,093,535 male live births in 2003 compared with 1,996,415 female live births. These numbers yield a sex ratio of 1,049 male per 1,000 female live births ([tables 13 and 14](#)). The sex ratio has fluctuated narrowly over the past 60 years, ranging from 1,046 to 1,059. A recent report, however, has shown a decline in the ratio after 1971 (31). Similar to previous years, the sex ratio was the highest for births to API mothers (1,067), followed by births to non-Hispanic white (1,053), American Indian (1,047), Hispanic (1,041), and non-Hispanic black (1,036) mothers.

Month of birth

In 2003 the average number of births per month was 340,829. The actual number of births per month ranged from 307,248 in February to 364,226 in July ([table 15](#)). Observed monthly birth and fertility rates, which take into account the different number of days in the month, increased significantly for most months between 2002 and 2003. Observed birth rates were lower, however, for January, August, and November, and unchanged in February. Observed fertility rates increased in 2003 for all months except January, August, and November, which were essentially unchanged. Observed fertility rates were at their highest in September (70.3) and lowest in November

and January (62.5), consistent with the well-established pattern of birth rates peaking in the late summer before falling in the late fall and winter.

Day of the week of birth

On average 11,205 infants were born per day in 2003. However, the average number of births varied appreciably by day of the week. In 2003, as in previous years, the average number of births was the highest on Tuesday (13,001) and lowest on Sunday (7,563) ([table 16](#)).

An index of occurrence can be used to measure the variation in the daily pattern of births. The index is defined as the ratio of the average number of births per day of the week to the average number of births per day of the year with the base set at 100. In 2003 Tuesday had the highest index at 116.0, indicating that there were 16.0 percent more births on Tuesday than on the average day. As in previous years, infants in 2003 were much less likely to be born on weekends—Sunday (67.5) followed by Saturday (76.8).

This weekend deficit is evident for both vaginal and cesarean deliveries but is notably larger for cesarean births that had a Tuesday index of 123.4 and a Sunday index of 49.0. In 2003 the index of occurrence for vaginal births on Sunday was 74.7, compared with 59.5 for primary cesareans and 32.5 for repeat cesareans. Since 1989, when these data first became available, the weekend birth deficit for cesarean births has grown. Between 1989 and 2003 the Sunday index for all cesarean deliveries fell 19 percent, from 60.7 to 49.0.

Births to unmarried women

The **birth rate for unmarried women** jumped 3 percent in 2003, to 44.9 births per 1,000 unmarried women aged 15–44 years. The 2003 rate was the highest since 1994 (46.2). The rate indicates the risk that an unmarried woman will give birth. This rate had changed relatively little during the period 1995–2002 ([tables D, 17, and 18; figure 5](#)). Largely as a result of the rising birth rate, the **number of births to unmarried women** rose 4 percent in 2003, to 1,415,995, the highest number ever in the more than six decades for which national statistics are available (32). The number rose steadily through the mid- to late 1990s, principally as a result of increases in the number of unmarried women in the reproductive ages (33–35). The rise in 2003 reflects, in small part, the population growth, but mostly it reflects the increase in the birth rate. In 2003, **34.6 percent of all births were to unmarried women**. This percentage has risen steadily since the late 1990s, following several years of essentially no change ([table D](#)). About 42 percent of first births in 2003 were to unmarried women (tabular data not shown).

Since 1998 all States except Michigan and New York report mother's marital status on the birth certificate through a direct question in the birth registration process. Michigan and New York infer the mother's marital status on the basis of other information on the birth certificate; see "Technical Notes" for detailed information.

Birth rates for unmarried women by age continue to be highest for women in their twenties ([tables 17 and 18](#)). In 2003 the rates were 71.2 per 1,000 for women aged 20–24 years and 65.7 for women aged 25–29 years. The next highest rate was 57.6, for older unmarried teenagers aged 18–19 years. Rates for other age groups are considerably lower.

Table C. Birth rates for teenagers 15–19 years by State, 1991 and 2003, and percentage change 1991–2003: United States and each State and territory

[Birth rates per 1,000 estimated female population aged 15–19 years in each area]

State	1991	2003	Percent change, 1991–2003	State	1991	2003	Percent change, 1991–2003
United States ¹	61.8	41.6	–33	Nebraska	42.4	36.0	–15
Alabama	73.6	52.4	–29	Nevada	74.5	53.0	–29
Alaska	66.0	38.6	–42	New Hampshire	33.1	18.2	–45
Arizona	79.7	61.1	–23	New Jersey	41.3	25.5	–38
Arkansas	79.5	59.0	–26	New Mexico	79.5	62.7	–21
California	73.8	40.1	–46	New York	45.5	28.2	–38
Colorado	58.3	43.9	–25	North Carolina	70.0	49.0	–30
Connecticut	40.1	24.8	–38	North Dakota	35.5	26.8	–25
Delaware	60.4	44.9	–26	Ohio	60.5	39.4	–35
District of Columbia	109.6	60.3	–45	Oklahoma	72.1	55.9	–23
Florida	67.9	42.5	–37	Oregon	54.8	34.4	–37
Georgia	76.0	53.5	–30	Pennsylvania	46.7	31.2	–33
Hawaii	59.2	37.3	–37	Rhode Island	44.7	31.3	–30
Idaho	53.9	39.3	–27	South Carolina	72.5	51.5	–29
Illinois	64.5	40.4	–37	South Dakota	47.6	34.7	–27
Indiana	60.4	43.5	–28	Tennessee	74.8	53.5	–29
Iowa	42.5	31.9	–25	Texas	78.4	62.9	–20
Kansas	55.4	41.2	–26	Utah	48.0	34.6	–28
Kentucky	68.8	49.6	–28	Vermont	39.2	18.9	–52
Louisiana	76.0	56.0	–26	Virginia	53.4	36.1	–32
Maine	43.5	24.9	–43	Washington	53.7	31.5	–41
Maryland	54.1	33.3	–38	West Virginia	58.0	44.8	–23
Massachusetts	37.5	23.0	–39	Wisconsin	43.7	31.3	–28
Michigan	58.9	34.4	–42	Wyoming	54.3	40.8	–25
Minnesota	37.3	26.6	–29	Puerto Rico	72.4	59.5	–18
Mississippi	85.3	62.5	–27	Virgin Islands	77.9	50.9	–35
Missouri	64.4	43.2	–33	Guam	95.7	64.3	–33
Montana	46.8	35.0	–25	American Samoa	---	40.4	---
				Northern Marianas	---	42.3	---

--- Data not available.

¹Excludes data for the territories.

Largely reflecting fertility differentials for all women, **rates for unmarried women likewise vary considerably by race and ethnicity**. In 2003 the rate for Hispanic women was highest, at 92.2 per 1,000, followed by black women at 66.3, non-Hispanic white women at 28.6, and API women at 22.2. These differences have changed little in recent years. Birth rates by race and Hispanic origin increased slightly or were generally stable in 2003 ([table 18](#)). The largest 1-year increase was the rate for Hispanic women, up 5 percent, close to the level last reported in 1992 (92.8). The rate for unmarried black women was essentially unchanged; this rate had fallen 27 percent during 1989–2002. Rates for non-Hispanic white and API women changed little in recent years.

Birth rates for unmarried black and Hispanic teenagers are relatively similar, but at ages 20 years and over the rates increasingly diverge. In age groups 30–34 years and over, the rates for unmarried Hispanic women are about double the rates for unmarried black women. Among age groups under 20 years, API women have the lowest rates, whereas at ages 20 and over, rates are lowest for non-Hispanic white women.

The overall increase in the nonmarital birth rate from 2002 to 2003 entirely reflects increases in rates for women aged 20 and over, especially the 7- to 8-percent increases for women 25 and over. Rates for unmarried teenagers continued to fall. Overall, the birth rate for unmarried teenagers has dropped 24 percent since the 1994 peak, but the rate of decline for younger teenagers has considerably outpaced that for older teenagers, 36 percent compared with 17 percent.

Among teenage population subgroups, nonmarital birth rates have generally fallen since 1994, although rates for black teenagers have been declining since 1991. The largest declines have been reported for younger teenagers, 15–17 years. The rate for young black teenagers has plummeted more than one-half since 1991, whereas the rates for young Hispanic and non-Hispanic white teenagers fell 23 and 39 percent, respectively.

The **proportions of all births that are to unmarried women** increased in 2003 in the largest race or Hispanic origin groups. They were 15.0 percent for API women, 23.6 percent for non-Hispanic white women, 45.0 percent for Hispanic women, 61.3 percent for American Indian women, and 68.5 percent for non-Hispanic black women.

Numbers and proportions of births to unmarried women by race and Hispanic origin and by State are shown in [table 19](#). Numbers increased in the majority of areas; increases amounted to 5 percent or more in 12 States and American Samoa, and they declined in the District of Columbia, Vermont, Puerto Rico, and the Virgin Islands. Proportions rose in the majority of States with increases amounting to 3 percent or more in 13 States and American Samoa. There were declines in the District of Columbia, Montana, North Dakota, South Dakota, Vermont, and the Northern Marianas.

Age of father

The **birth rate per 1,000 men aged 15–54 years** was 48.9 in 2003, a slight increase from the all-time low of 48.4 reported in 2002

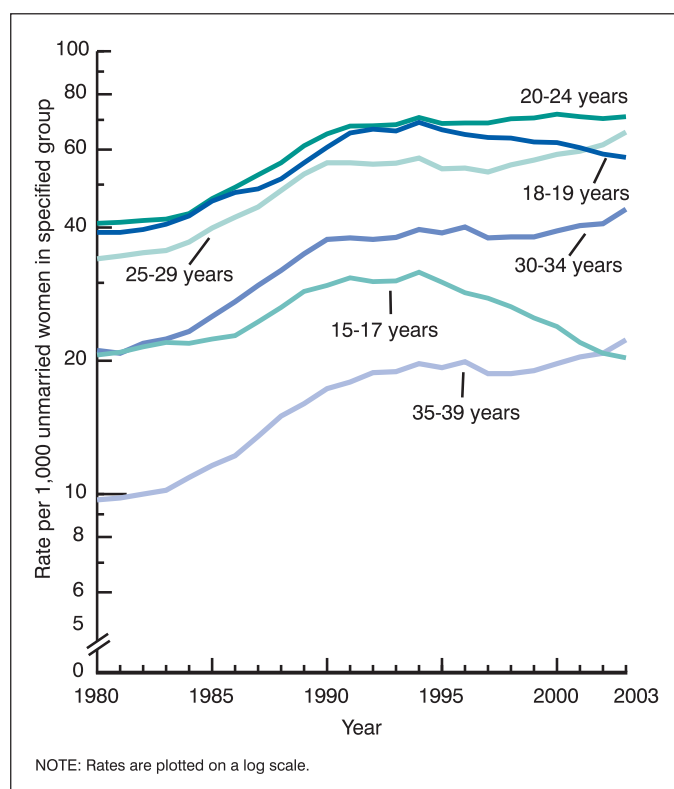


Figure 5. Birth rates for unmarried women, by age of mother: United States, 1980–2003

Table D. Number, rate, and percentage of births to unmarried women and birth rate for married women: United States, 1980 and 1985–2003

Year	Births to unmarried women			Birth rate for married women ³
	Number	Rate ¹	Percent ²	
2003	1,415,995	44.9	34.6	88.1
2002	1,365,966	43.7	34.0	86.3
2001	1,349,249	43.8	33.5	86.7
2000	1,347,043	44.0	33.2	87.4
1999	1,308,560	43.3	33.0	84.8
1998	1,293,567	43.3	32.8	84.2
1997	1,257,444	42.9	32.4	82.7
1996	1,260,306	43.8	32.4	82.3
1995	1,253,976	44.3	32.2	82.6
1994	1,289,592	46.2	32.6	82.9
1993	1,240,172	44.8	31.0	86.1
1992	1,224,876	44.9	30.1	88.5
1991	1,213,769	45.0	29.5	89.6
1990	1,165,384	43.8	28.0	93.2
1989	1,094,169	41.6	27.1	91.9
1988	1,005,299	38.5	25.7	90.8
1987	933,013	36.0	24.5	90.0
1986	878,477	34.2	23.4	90.7
1985	828,174	32.8	22.0	93.3
1980	665,747	29.4	18.4	97.0

¹Births to unmarried women per 1,000 unmarried women aged 15–44 years.

²Percent of all births to unmarried women.

³Births to married women per 1,000 married women aged 15–44 years.

(table 20). Birth rates for males aged less than 25 years continued to decline; birth rates for fathers aged 15–19 and 20–24 years posted all-time lows of 16.9 and 73.5 per 1,000, respectively. Birth rates increased for men in the 25–54-year age groups and were unchanged for men aged 55 and over.

Information on age of father is often missing on birth certificates of children born to women less than 25 years of age and to unmarried women. In 2003 age of father was not reported for 13 percent of all births, 24 percent of births to all women less than 25 years of age, and 37 percent of all nonmarital births. In computing birth rates by age of father, births where age of father is not stated were distributed in the same proportion as births where age of father is stated within each 5-year age interval of mother. This procedure avoids the distortion in rates that would result if the relationship between age of mother and age of father were disregarded. The procedures for computing birth rates by age of father are described in more detail in the “Technical Notes.”

Educational attainment

Information on educational attainment was reported on the birth certificates of all States and the District of Columbia in 2003. However, the education item on the 2003 Standard Certificate of Live Birth, implemented by Pennsylvania and Washington in 2003, has a different format than that of the 1989 standard certificate (see “Technical Notes”). As a result, education data for the States with the revised certificates are not comparable with the data for the States with the unrevised certificates. For this report, in order to compare the change over time, information on educational attainment for all years excludes data for Pennsylvania and Washington.

In 2003, 78.4 percent of women who gave birth had at least 12 or more years of schooling (a high school education), and 26.6 percent had 16 or more years of schooling (4 years of college), increases of less than 1 and 2 percent, respectively, from 2002 (table 21). The educational attainment of women giving birth (based on completed years of education at the time of birth) has increased substantially over the last few decades. Since 1990 the proportion of mothers with 16 or more years of schooling has increased by 52 percent. This trend, in part, reflects increases in educational attainment of all women during this time (36).

Although the overall trend in educational attainment has been on the increase, variations by race and ethnicity are still seen. In 2003, 88.5 percent of non-Hispanic white, 76.2 percent of non-Hispanic black, and 52.5 percent of Hispanic mothers had at least 12 years of schooling. Although the overall proportion of Hispanic mothers who have completed high school was comparatively low, variation among the specified Hispanic groups was wide, ranging from 46.4 percent of Mexican mothers to 88.5 percent of Cuban mothers. The percentage of American Indian and API mothers with at least 12 years of schooling was 69.5 and 90.1, respectively, in 2003 (tables 13, 14, and 21).

Maternal education has long been considered an important factor in fertility and maternal and infant health. The educational attainment of women has been shown to have a profound effect on the number of births and the risk of adverse birth outcome. Women with higher educational attainment are more likely to desire and give birth to fewer children, and they are less likely to engage in behaviors detrimental to health and pregnancy (27,29,37).

Maternal Lifestyle and Health Characteristics

Weight gain

Excessive and insufficient maternal weight gain during pregnancy can negatively influence pregnancy outcome. Inadequate weight gain has been associated with an increased risk of intrauterine growth retardation, shortened period of gestation, low birthweight (LBW), and perinatal mortality (38,39). High weight gain during pregnancy has been linked with an elevated risk of a large-for-gestational-age (LGA) infant, cesarean delivery, and long-term maternal weight retention (40). Based on the mother's body mass index (BMI), the Institute of Medicine (IOM) recommend that women who are underweight gain 28–40 pounds and those who are of normal weight gain 15–25 pounds. For extremely obese women, the IOM recommends a minimum weight gain of 15 pounds. However, the IOM recommends that weight gain goals be tailored to individual needs (41).

Median weight gain for 2003 was stable at 30.5 pounds, unchanged for 6 years. This measure has varied by only one-tenth of a pound since 1990. Among women with at least full-term births (40 weeks of gestation or more), 10.8 percent gained less than 16 pounds, considered inadequate for most women (41); 21.7 percent had weight gains of more than 40 pounds, considered excessive in most cases (table 22). Between 1989 (when data became available) and 2003, the percentage of all mothers who gained less than 16 pounds increased 31 percent (from 9.4 to 12.3), and the percentage who gained over 40 pounds rose by a similar amount (from 15.1 to 19.7). In short, in 2003 nearly one-third of mothers had weight gains outside of the guidelines recommended by the IOM (41).

BMI is calculated from a woman's prepregnancy weight and height, neither of which is available from the 1989 revision of the U.S. birth certificate, which only captures information on total weight gained during pregnancy. Therefore, it is not possible from these data to determine whether the weight gain was within the recommendations for the mother's BMI. The 2003 revision of the birth certificate does capture the mother's BMI directly (5). These data will be available later this year for the two States that implemented the 2003 revision of the Certificate of Live Birth.

Weight gained during pregnancy continues to differ widely by racial and ethnic group. Non-Hispanic white women and Asian and Pacific Islander women have relatively low proportions of women with weight gains of less than 16 pounds (10.2 and 9.6 percent, respectively), whereas non-Hispanic black women and American Indian women have higher proportions of women with inadequate weight gains (17.7 and 17.3 percent, respectively) (tables 24 and 25). Among the Hispanic subgroups, Mexican mothers were more than twice as likely to gain less than 16 pounds than Cuban mothers (16.9 compared with 7.8 percent) (table 25).

Moderate maternal weight gain and healthy birthweight are positively correlated, as demonstrated by a general decline in the percentage of LBW infants as maternal weight gain increases (from 13.9 percent for weight gains of less than 16 pounds to 5.6 percent for gains of 36–39 pounds) (table 23). The declining trend reverses slightly for weight gains of 40 or more pounds, but it still does not approach the level of risk for inadequate gain.

Medical risk factors

In 2003 the most frequently reported medical risk factors were **pregnancy-associated hypertension** (37.4 per 1,000 live births), **diabetes** (32.8), and **anemia** (23.8) (table 26). These have been the most frequently reported risk factors, with minor variation in order, since 1989 when these data became available from the birth certificates. After steadily rising during the 1990s (from 26.9), the rate of pregnancy-associated hypertension has been essentially unchanged since 2000. Rates for diabetes and anemia have risen nearly 40 percent for 1990–2003. For comparability, 1990 rates for certain medical risk factors exclude data for Pennsylvania and Washington, which implemented the 2003 Standard Certificate of Live Birth; see table 26 and “Technical Notes.”

Pregnancy-associated hypertension, chronic hypertension, and eclampsia are all closely related hypertensive disorders, but the latter two are rarer conditions. The rate for **chronic hypertension** has increased since 1990 (6.5 in 1990; 8.8 in 2003), whereas the **eclampsia rate** has declined (4.0 in 1990; 3.0 in 2003).

During pregnancy, medical risk factors can contribute to serious complications and maternal and infant morbidity and mortality, particularly if not treated properly (42–44). Sixteen medical risk factors that can affect pregnancy outcome are separately identified on the 1989 revision of the Certificate of Live Birth used by 48 States and the District of Columbia for 2003 (table 26). Birth certificate data may underreport or incorrectly report medical risk factor prevalence because of a lack of adherence to uniform definitions and difficulty in interpreting data from medical records (45). Rates for rarely occurring medical risk factors and for smaller population groups can vary from year to year and should be used with caution.

The reported rate of **hydramnios/oligohydramnios** (the excess or shortage of amniotic fluid) has increased consistently during the 1990s, more than doubling between 1990 and 2003, from 5.9 to 13.8. This condition has been associated with maternal diabetes. **Acute or chronic lung disease** (e.g., asthma, tuberculosis) also has risen dramatically. The rate of lung disease more than quadrupled between 1990 and 2003 (from 3.0 to 12.1 per 1,000) and has increased for all age groups, most notably for younger women. In the early 1990s this condition was slightly more prevalent in older women.

The risk of having a medical condition during pregnancy often differs by maternal age (table 26). For example, teenage mothers are more than one-and-a-half times as likely to have anemia during pregnancy compared with women aged 40 years and over (3.3 compared with 2.0 percent). Older mothers, however, are much more prone to chronic conditions such as diabetes (7.6 for mothers aged 40 years and over compared with 1.0 for mothers under 20 years), chronic hypertension (2.6 compared with 0.3), and cardiac disease (0.9 compared with 0.3). Other risk factors, however, such as lung disease and pregnancy-associated hypertension, have higher rates at both the oldest and youngest ages.

The levels of medical risk factors during pregnancy can also vary greatly by maternal race and ethnicity (tables 27 and 28). In 2003 American Indian women had higher rates of anemia than other groups (52.4 per 1,000 compared with 19.9 percent for non-Hispanic white women). Rates for diabetes ranged from a low of 30.5 per 1,000 for non-Hispanic black women to a high of 55.1 for API women. Among Hispanic women, levels of diabetes were highest for Puerto Rican

mothers and those of other or unknown Hispanic origin; rates of pregnancy-associated hypertension were highest for Cuban, Puerto Rican, and other or unknown Hispanic origin mothers ([table 28](#)).

Tobacco use during pregnancy

Smoking during pregnancy was reported by 10.7 percent of women giving birth in 2003. This represents a decline from the 11.2 percent measured for the same group of reporting areas in 2002 (47 States and the District of Columbia). Among women who smoked during pregnancy in 2003, 26 percent smoked half a pack or more of cigarettes, unchanged from 2002 for the same reporting area.

Pennsylvania and Washington implemented the 2003 revision of the U. S. Standard Certificate of Live Birth in 2003. The tobacco use question on the 2003 revision differs from the question on the 1989 revision that is in use in the other States (see “Technical Notes”). Therefore data for Pennsylvania and Washington are not included in the tabulations in this report. In addition, California did not report smoking on the birth certificate in 2003. The reporting area accounted for 81 percent of U.S. births in 2003 (see [tables 29–32 for 2003 data](#)).

Findings from other studies suggest that smoking is somewhat underreported on the birth certificate. Nonetheless, the trends and variations in maternal smoking based on birth certificate data are corroborated by data from surveillance data and nationally representative surveys (22,27,46). The question on smoking on the 1989 revision of the birth certificate lacks a specific time reference and the source of information varies, thus affecting consistency and reliability of reporting. It is believed that the new question on prenatal smoking will provide much higher quality information because it has components for each trimester of pregnancy, thus affording women an opportunity to report changes in their smoking behavior (47–49).

Smoking during pregnancy has long been linked to adverse pregnancy outcomes, including LBW, intrauterine growth retardation, miscarriage, and infant mortality, as well as negative consequences for child health and development (50). These adverse outcomes in turn are associated with substantial economic and social costs (51).

Women in age groups 18–24 years have the highest smoking rates, a pattern that has been reported for many years. In 2003, 17.1 percent of teenagers 18–19 years and 16.1 percent of women in their early twenties reported smoking. Even among younger teenagers 15–17 years, one in eight were smokers. Rates are sharply lower for women in age groups 25–29 years and over.

Smoking rates differ sharply among racial and Hispanic origin populations ([tables 24 and 25](#)). The highest rates reported were for American Indian and non-Hispanic white women, 18.1 and 14.3 percent, respectively. Rates for other groups were 8.3 percent for non-Hispanic black; 7.9 percent for Puerto Rican; and 2 percent or less for Cuban, Mexican, and Central and South American women.

Women who have attended but not completed high school have the highest smoking rates among education subgroups: 22.8 percent reported smoking in 2003. More than 4 in 10 non-Hispanic white women in this category were smokers ([table 31](#)). Among non-Hispanic white women 20 years of age and over in the same educational group, nearly half were smokers (46.9 percent; tabular data not shown).

As noted, smoking during pregnancy has been repeatedly linked to elevated risk of low infant birthweight and a number of other adverse pregnancy outcomes (52,53). In 2003, 12.4 percent of babies born to smokers compared with 7.7 percent of babies born to nonsmokers were

LBW (less than 2,500 grams; 5 lb 8 oz) ([table 32](#)). The gap is almost twofold for maternal age groups 20–24 years and over, with a slightly smaller differential for teenage mothers, whose risk for LBW is already higher (see [table 45](#)). Further, there is no safe level of smoking. Even among births to women who smoked fewer than 6 cigarettes daily, LBW was 53 percent higher than among births to women who did not smoke (11.8 percent compared with 7.7 percent). About one-third of all smokers in 2003 smoked fewer than 6 cigarettes daily ([table 29](#)).

Alcohol use during pregnancy

Alcohol use during pregnancy is a major risk factor for poor birth outcome, independent of other maternal health risk and behavior factors (54,55). Questions on alcohol use are included on the birth certificates of the District of Columbia and all States except California, Pennsylvania, and Washington. This reporting area accounted for 81 percent of U.S. births in 2003.

Unfortunately, alcohol use is substantially underreported on the birth certificate, compared with data collected in nationally representative surveys of pregnant women. Only 0.7 percent of women giving birth in 2003 reported alcohol use during pregnancy, down from 0.8 percent in 2002 for the same reporting area ([data for 2003 shown in \[tables 24 and 25\]\(#\)](#)).

According to the most recently conducted Behavioral Risk Factor Surveillance System (BRFSS) survey, 12.8 percent of women reported alcohol use during pregnancy in 1999 compared with 1.0 percent based on 1999 birth certificate data (56,57). The BRFSS data indicate that alcohol use declined during the late 1990s; however, no decline in binge drinking was found (57).

The birth certificate question on alcohol use from the 1989 revision is evidently not sensitive enough to measure this behavior accurately. This is unfortunate because alcohol use is clearly a critical risk factor for poor birth outcome, and it is implicated as well in delayed infant and child development (54,55). The question wording as well as the lack of specific time reference for the birth certificate questions are probably factors contributing to the underreporting. In addition, the stigma of maternal alcohol use likely contributes to the underreporting (58,59).

Medical Services Utilization

Prenatal care

National measures for prenatal care in this report exclude data for Pennsylvania and Washington, which implemented the 2003 revision to the U.S. Standard Certificate of Live Birth (revised States). Data for all other reporting areas are based on the 1989 revision to the U.S. Standard Certificate of Live Birth (unrevised States). It was necessary to exclude data for these two revised States from the U.S. totals because the question on the timing of prenatal care was changed between the 1989 and 2003 revisions and because of likely changes in the sources of these data. As a result, 2003 prenatal care data for the revised States are not comparable with data for the unrevised States. Therefore, unless otherwise noted, data presented in this section are based on the 48 unrevised States. See “Technical Notes.”

The proportion of women beginning prenatal care within their first trimester of pregnancy improved slightly from 83.7 percent for 2002 to 84.1 percent in 2003. (See [tables 24, 25, and 33–35](#).) Timely initiation

of prenatal care has been on a modest upswing in recent years, rising 11 percent since 1990 (see [table E](#)). The percentage of women beginning care in the last trimester of pregnancy, or with no prenatal care at all, declined slightly from 3.6 to 3.5 percent between 2002 and 2003; this measure has dropped from 6.1 percent since 1990. Appropriate prenatal care can enhance pregnancy outcome by providing health care advice and managing chronic and pregnancy-related health conditions (60–62).

Timely prenatal care initiation improved slightly among each of the largest racial and ethnic groups for 2002–03; non-Hispanic white (89.0 percent for 2003), non-Hispanic black (75.9 percent), and Hispanic (77.5 percent). Since 1990 substantial gains of at least 20 percent are seen in first trimester care receipt among non-Hispanic black, Hispanic, and American Indian women (see [tables E, 24, and 25 for 2003 data](#)). Concurrent declines over this time period in the percentage of women with late or no care have also been observed among these groups. These gains may be linked in part to the expansion of Medicaid for pregnant women in the late 1980s (63,64). Although differences by race and ethnicity in prenatal care receipt appear to be narrowing (64), large disparities persist. In 2003 more than 5–8 percent of Hispanic, non-Hispanic black, and American Indian mothers received late or no prenatal care compared with 2 percent of non-Hispanic white mothers.

Increases in prenatal care utilization between 1990 and 2003 are evident for the vast majority of States (data not shown). For 2003 three States—New Hampshire, Rhode Island, and Vermont—reported levels of first trimester care above 90 percent and levels of late or no care of less than 2 percent ([table 34](#)). Prenatal care utilization levels by

State were the least favorable in New Mexico, where only 68.9 percent of women received timely care and 8.1 percent began care late or had no care at all.

The “month that prenatal care began” item can be a useful measure of prenatal care timing, but it does not take into account the number of prenatal care visits or gestational age at delivery, important factors in determining the appropriateness of care. The Adequacy of Prenatal Care Index (APNCU) is an alternative measure based on recommendations from the American College of Obstetricians and Gynecologists that incorporates the month that care began, the number of prenatal visits, and adjusts for gestational age. It categorizes prenatal care utilization as follows: intensive, adequate, intermediate, and inadequate (65,66). According to the APNCU, one-third (32.5 percent) of all women had intensive utilization of prenatal care in 2003, that is, more than the recommended amount of care, and 11 percent of mothers received inadequate care ([table F](#)). This compares with levels of 25 and 18 percent, respectively, in 1990 (data not shown). Wide differences in utilization by race and Hispanic origin are also observed when prenatal care is measured using the APNCU. In 2003, 7 percent of non-Hispanic white mothers received inadequate care compared with 16–17 percent of Hispanic and non-Hispanic black women.

Obstetric procedures

In 2003, as in past years, of the six specific obstetric procedures reported on the 1989 revision of the birth certificate, electronic fetal monitoring (EFM) was reported most frequently (85.4 percent, or more than 3.2 million live births) ([table 36](#)). This rate has climbed steadily since 1989 (68.1 percent). The benefits and risks of routine use of EFM remain controversial (67). The use of EFM and other obstetric procedures may be underreported on the birth certificate (68). For comparability, 2003 and 1989 rates for a number of the obstetric procedures discussed exclude data for Pennsylvania and Washington, which implemented the 2003 Standard Certificate of Live Birth. For reporting areas for the specific procedures, see [table 36](#) and “Technical Notes.”

In 2003, 67 percent of women who had live births received ultrasound, unchanged from 2002. The use of this procedure has also increased steadily since 1989, from 47.6 percent. Advances in this technology allow early screening for fetal anomalies (69).

The rate of induction of labor was unchanged between 2002 and 2003 (20.6 percent); this rate has more than doubled from the 1990 level of 9.5 percent. Between 1990 and 2000 the rate of induction rose steadily every year for all gestational ages, including preterm deliveries (less than 37 completed weeks of gestation). However, since 2000 the

Table E. First trimester prenatal care by race and Hispanic origin of mother: Total of 48 States and the District of Columbia, 1990, 1995, 2000–2003

Year	All races ¹	Non-Hispanic ¹		Hispanic ²
		White	Black	
2003	84.1	89.0	75.9	77.5
2002	83.7	88.7	75.3	76.8
2001	83.3	88.6	74.5	75.8
2000	83.1	88.6	74.3	74.5
1995	81.2	87.1	70.6	70.8
1990	75.6	83.3	61.0	60.2

¹Includes races other than white and black and origin not stated.

²Includes all persons of Hispanic origin of any race.

NOTES: Race categories are consistent with the 1977 Office of Management and Budget standards; see “Technical Notes.” Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth; see “Technical Notes.”

Table F. Adequacy of Prenatal Care Utilization Index by race and Hispanic origin of mother: 48 States and the District of Columbia, 2003

All races and Hispanic origins	Intensive use	Adequate	Percent	
			Intermediate	Inadequate
Total	32.5	42.9	13.6	11.0
Non-Hispanic white	34.0	46.0	12.7	7.2
Non-Hispanic black	33.3	35.7	13.6	17.4
Hispanic	29.3	39.2	15.5	16.0

NOTES: Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth; see “Technical Notes.” See reference 61 for calculation of this measure. Race categories are consistent with the 1977 Office of Management and Budget standards; see “Technical Notes.”

preterm induction rate has fluctuated but has generally trended downward (13.4 for 2003). In contrast, for infants born at 37–41 weeks of gestation, the induction rate increased each year, to 21.6 percent for 2003. For gestational ages greater than 41 weeks, the rate increased each year during 1990–2001 but has been the same for 2002 and 2003 (24.2 percent).

For 2002–03 rates of induction were stable or increased only slightly for most racial and ethnic groups (tables 27 and 28). However, induction levels more than doubled for each of the largest racial and ethnic groups between 1990 and 2003, and rates among groups continue to vary widely. For example, the rate for non-Hispanic white women (24.7 percent) was notably higher than that for non-Hispanic black women (17.5) (figure 6). The 2003 rates among the Hispanic subgroups ranged from 13.0 percent for Mexican to 19.3 percent for Cuban mothers. The total rate for API mothers has been stable since 2001 at about 14 percent. The rate for American Indian mothers, which had been over 20 percent since 2000, was down slightly in 2003 (19.9).

It has been suggested that increasing induction rates may be related, in part, to an increase in elective inductions (inductions with no medical or obstetric indication). In a study of variation in induction rates among hospitals and clinicians, 25 percent of inductions had no apparent medical indication (70). Induction (including elective induction) may increase the risk of cesarean delivery in nulliparous women (71).

The rate of stimulation of labor was 16.7 percent for 2003, a slight decrease from the 2002 rate (17.0). This rate increased 59 percent between 1989 and 1997 but has fluctuated only slightly since. The overall rate for tocolysis, the use of agents that inhibit or delay uterine activity for the management of preterm labor, has remained at

2.1 percent since 2001. The rate of tocolysis has been fairly stable since 1996. There is continuing discussion regarding the safety, efficacy, and appropriate use of these agents (72).

The overall rate for amniocentesis continued to decrease. The amniocentesis rate was 1.7 percent of all live births in 2003, down from 1.9 percent in 2002 and 3.2 percent in 1989. This continuing downturn may reflect increased use of noninvasive screening tests in place of amniocentesis (e.g., ultrasound and measurement of serum markers) (73).

Complications of labor and/or delivery

The presence of moderate or heavy meconium staining was the complication most frequently reported on the birth certificate for 2003, as for previous years. This complication occurred at a rate of 48.6 per 1,000 births, or in about 5 percent of all deliveries. The presence of meconium during labor and delivery can directly alter the amniotic fluid, reduce antibacterial activity (and subsequently increase the risk of perinatal bacterial infection), and damage the infant's lungs if inhaled (43). Depending on the severity of the condition, other complications of labor and delivery reported on the birth certificate may require medical interventions and can also affect the health of the infant. Of the 15 complications of labor and/or delivery reported on the 1989 revision of the birth certificate, the other four most frequently reported complications for 2003 were as follows: breech/malpresentation (3.9 percent), fetal distress (3.8 percent), dysfunctional labor (2.9 percent), and premature rupture of membrane (PROM) (2.2 percent) (table 37). PROM rates have declined overall and among the largest race groups over the last 14 years. The rates

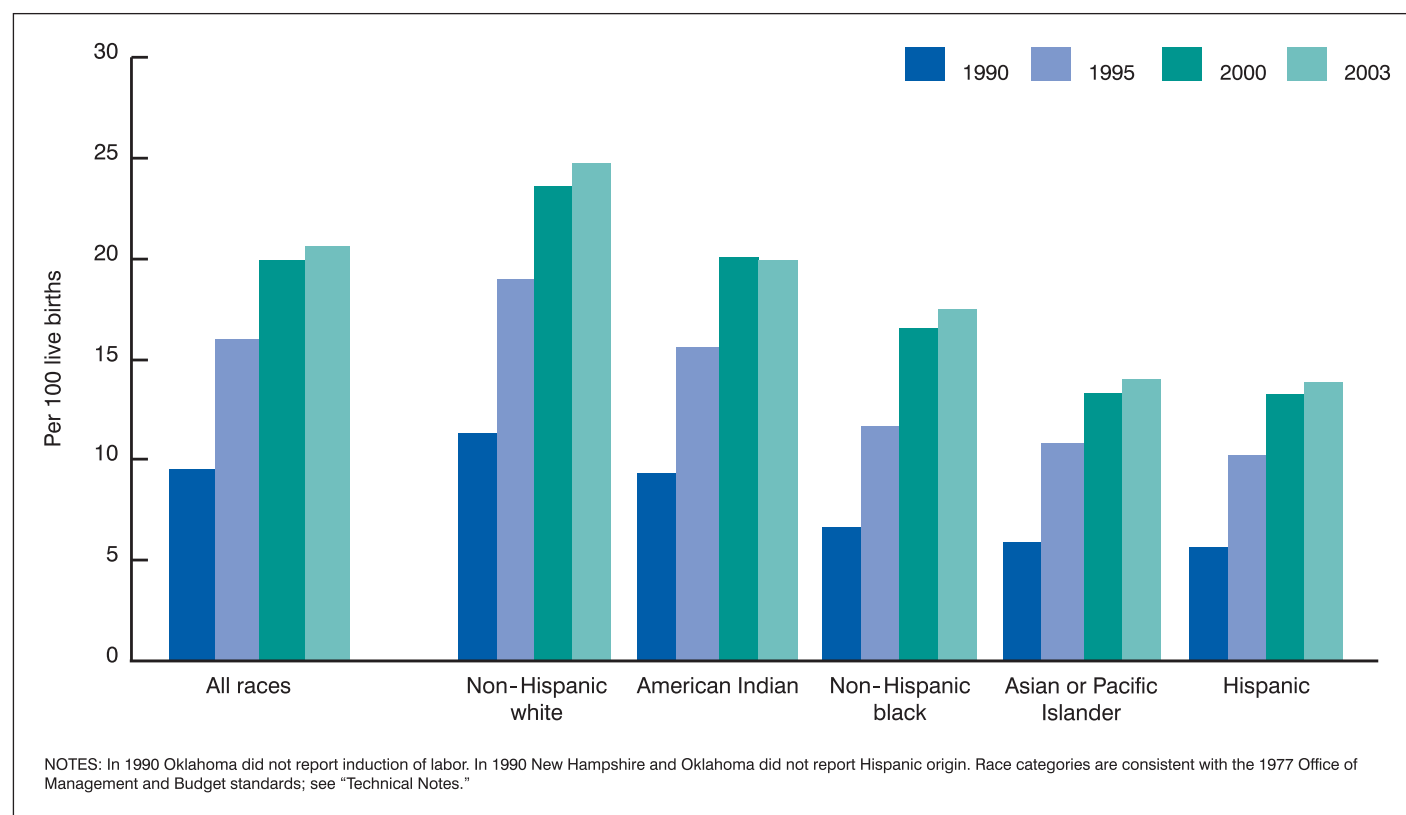


Figure 6. Rates of induction of labor by race and Hispanic origin of mother: United States, 1990, 1995, 2000, and 2003

of breech/malpresentation, on the other hand, have remained at the same level or increased slightly during this 14-year period.

Labor and delivery complication rates vary by race and Hispanic origin (tables 27 and 28). For example, non-Hispanic black women had higher meconium rates than non-Hispanic white women (63.9 in contrast to 42.8 per 1,000 live births). Non-Hispanic black women had substantially lower rates of cephalopelvic disproportion (10.7) and breech/malpresentation (31.6) (leading risk factors for cesarean delivery) compared with non-Hispanic white women (16.8 and 43.8, respectively). Differences in meconium rates also were evident among Hispanic subgroups. In 2003 rates for moderate/heavy meconium ranged from a low of 30.5 per 1,000 for Cuban mothers to a high of 58.8 for Central and South American mothers.

Attendant at birth and place of delivery

In 2003 the percentage of all births delivered by physicians in hospitals (91.4 percent) was essentially the same as in 2002 (91.3) (table 38). As in previous years, in 2003 almost all doctor-attended births were attended by doctors of medicine (M.D.s). The percentage of physician-attended births attended by doctors of osteopathy (D.O.s) was 4.8 percent in 2003, unchanged from 2002. This level has grown steadily from 3.0 percent reported in 1989 (the first year data on D.O.s were available from the birth certificate).

The percentage of all births attended by midwives, which had increased steadily between 1975 and 2002 (from less than 1.0 percent to 8.1 percent), was about the same in 2003 (8.0 percent). The vast majority of all midwife-attended births in 2003 were by certified nurse midwives (CNMs) (94.6 percent). This rate was stable at 95.0 percent for 1996–2000 but has declined slightly since. Hospitals are the primary site for midwife-attended births (74). Because of underreporting of midwife-attended deliveries, these data should be considered lower estimates of the actual number of midwife-attended births (4,75).

Ninety-nine percent of all births in 2003 were delivered in hospitals, a rate that has been stable over the past several decades. Out-of-hospital births occurred predominantly in a residence (65 percent); 27 percent were in a freestanding birthing center in 2003. These levels have fluctuated only moderately since 1989. A national study of the safety of vaginal birth after cesarean (VBAC) in birthing centers suggests that birthing centers should refer women who desire a VBAC to a hospital for delivery and that hospitals should provide the option of a midwife-obstetrician team for such women (76).

About 92 percent of births to non-Hispanic white and black women were attended by a physician in a hospital, compared with 90 percent of births to Hispanic women. As in previous years, in 2003 Hispanic women were more likely to have a midwife-attended hospital birth (9.1 percent) than non-Hispanic white and black women (6.8 and 7.0 percent, respectively).

Among the Hispanic subgroups, Cuban women had the highest rate of physician-attended hospital births (93.3 percent); the rates for Mexican, Puerto Rican, and Central or South American women ranged from 85 to 87 percent. Mexican, Puerto Rican, and Central or South American women also had the highest rates of midwife-attended hospital births (9–10 percent); Cuban women had the lowest rate (4 percent) (data not shown).

Method of delivery

For 2003 the rate of cesarean delivery increased to 27.5 percent of all births, the highest rate ever reported in the United States. This rate is a 5 percent rise from 2002 (26.1 percent). After falling between 1989 and 1996, the cesarean rate had risen by one-third from the 1996 low of 20.7 (tables 39 and 40 and figure 7). Data from the National Hospital Discharge Survey show similar trends in cesarean delivery for 1990–2002 (77).

The escalation in the total cesarean rate is being driven by both the rise in the primary cesarean rate and the steep decline in the VBAC rate. Controversy continues on the risks, benefits, and long-term consequences of cesarean delivery, especially with regard to medically indicated or elective cesarean delivery and VBAC delivery (78–80).

The primary cesarean rate for 2003 (19.1 per 100 live births to women who had no previous cesarean) was 6 percent higher than in 2002 (18.0). This rate has increased by an average of 5 percent each year during 1998–2003 and was 31 percent higher than the low reported for 1996–97 (14.6). The rates for low-risk women (i.e., primiparous women with full-term, singleton deliveries, with vertex presentations) have also increased (81) by an average of 5 percent per year since 1998 (data not shown). Rates for women at even lower risk (i.e., those with singleton, full-term, vertex presentation births with no risk factors or complications of labor or delivery reported on the birth certificate) increased 67 percent for 1991–2001 (82). The increase in primary cesarean deliveries may be associated with nonclinical factors such as demographics, physician practice patterns, and maternal choice (79,83).

Among women with a first (primary) cesarean delivery, subsequent deliveries will be either a repeat cesarean or a VBAC. Between 2002 and 2003 the rate of VBAC fell 16 percent—from 12.6 to 10.6 per 100 women with a previous cesarean and the lowest level reported from birth certificate data. The VBAC rate has plummeted by 63 percent since 1996, after increasing by 50 percent between 1989 and 1996 (from 18.9 to 28.3 percent) (figure 8). This rate has declined by a similar magnitude among low-risk women (full-term, singleton deliveries with vertex presentations) (data not shown).

This steep decline in the rate of VBAC implies a corresponding rise in the rate of repeat cesarean deliveries (the rate of cesarean delivery per 100 women with a previous cesarean) (figure 8). The

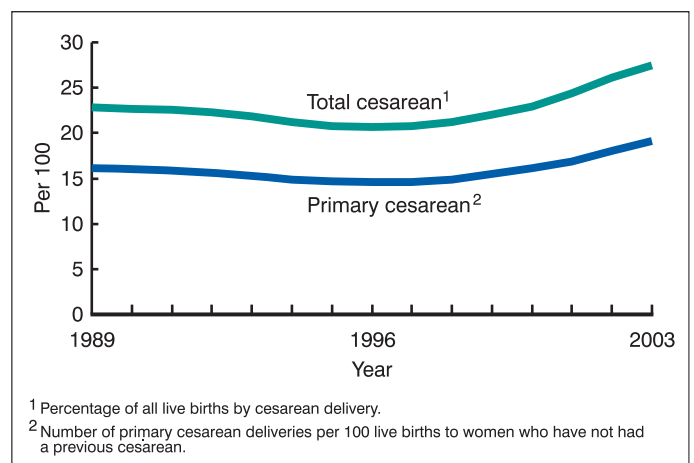


Figure 7. Total and primary cesarean rate: United States, 1989–2003

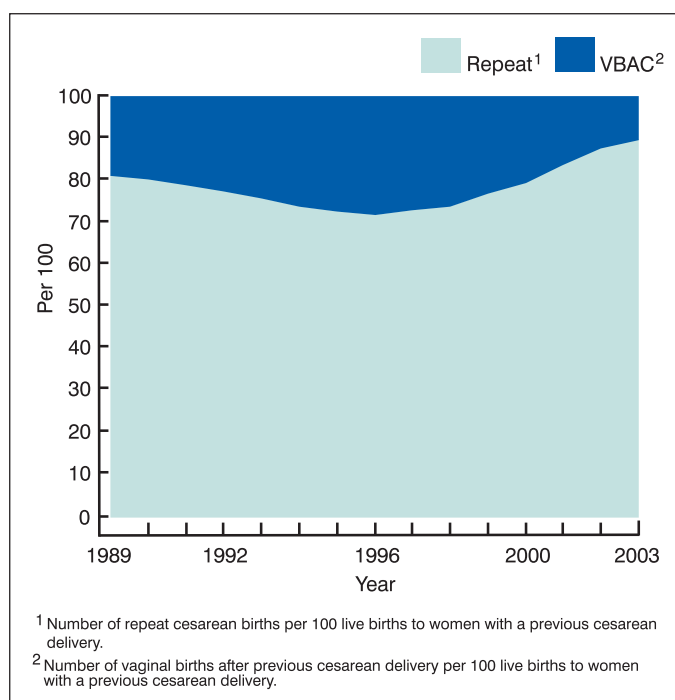


Figure 8. Rates of repeat cesarean delivery and vaginal birth after cesarean delivery (VBAC): United States, 1989–2003

repeat rate increased from 71.7 to 89.4 percent between 1996 and 2003; therefore, once a woman has a cesarean delivery, it is highly likely (there is an almost 90 percent chance) that subsequent deliveries will be by cesarean. The steep decline in the VBAC rate and, accordingly, the increase in the repeat cesarean rate may be related to reports of risks associated with VBAC, more conservative practice guidelines, legal pressures, as well as the continuing debate regarding the harms and benefits of vaginal birth compared with cesarean section (80, 83–86).

For 2002–03 the primary cesarean rate increased and the VBAC rate decreased for all age, racial, and ethnic groups (including subgroups). Between 2002 and 2003 the primary cesarean rate rose 7 percent for non-Hispanic white and non-Hispanic black women and 6 percent for Hispanic women. The primary rates for non-Hispanic black women (20.7) remained slightly higher than the rate for non-Hispanic white and Hispanic women (19.5 and 17.0, respectively). The VBAC rate declined by at least 14 percent for each group for 2003.

Until 2002 VBAC rates decreased and rates of repeat cesarean delivery increased with advancing maternal age. However, repeat cesarean rates and, therefore, VBAC rates have been essentially the same for all age groups since 2002. In 2003 at least 89 percent of women in all age groups who had a previous cesarean had a repeat cesarean delivery (data not shown).

As in past years, primary cesarean rates rose as maternal age increased. For example, the 2003 rate for mothers aged 40–54 years (42.5) was more than twice that of mothers under 20 years (17.2) (table 40). The increased likelihood of cesarean delivery in older women may be related to biologic factors, patient-practitioner concerns (87), and the increased rate of multiple births.

For American Indian women the overall cesarean rate in 2003 was 24.1 percent; the rate for API mothers was 26.6 percent. Among the Hispanic subgroups, the rate of cesarean delivery ranged between 25.8 for Mexican to 39.8 for Cuban mothers (tables 24 and 25).

Between 1996 and 2003 total cesarean rates increased for all gestational ages, with the greatest increase (about 33 percent) for moderately preterm (32–36 weeks) and term (37–41 weeks) infants. Rates for very preterm infants (less than 32 weeks) and postterm infants (greater than 41 weeks) increased by 25 and 23 percent, respectively. In 2003 one-half of all very preterm (49.5 percent) and over one-third (37.3 percent) of moderately preterm infants were cesarean deliveries (figure 9). See also the section on “Period of gestation.”

Cesarean rates increased for all 50 States and the District of Columbia for 2002–03. As in previous years, there was considerable variation in cesarean rates by State, from under 22 percent in Alaska, Idaho, New Mexico, Utah, and Wisconsin to over 30 percent for Florida, Kentucky, Louisiana, Mississippi, New Jersey, Texas, and West Virginia (table 41). Almost one-half (46.1 percent) of births in Puerto Rico were cesarean deliveries.

Between 2002 and 2003 VBAC rates decreased in 47 States and the District of Columbia and were unchanged in Hawaii. VBAC rates rose for Pennsylvania and Washington. This unexplained increase may be due to wording and formatting changes to the method of delivery item on the 2003 revision of the U.S. Standard Certificate of Live Birth; see “Technical Notes.” For 2003 VBAC rates ranged from 5.1 in Louisiana to 24.0 per 100 in Vermont; in other words, repeat cesarean rates ranged from 94.9 in Louisiana to 76.0 in Vermont.

Mothers reported to have medical risk factors and complications of labor and/or delivery during pregnancy frequently have higher rates of cesarean delivery (table 42). For example, more than 55 percent of mothers with eclampsia and almost all mothers with cephalopelvic disproportion (96.0 percent) and breech/malpresentation (87.0 percent) had a cesarean delivery.

Since 1996, as the cesarean rate has increased, the percentage of births delivered by either forceps or vacuum extraction has decreased (data not shown). The combined rate of forceps and vacuum

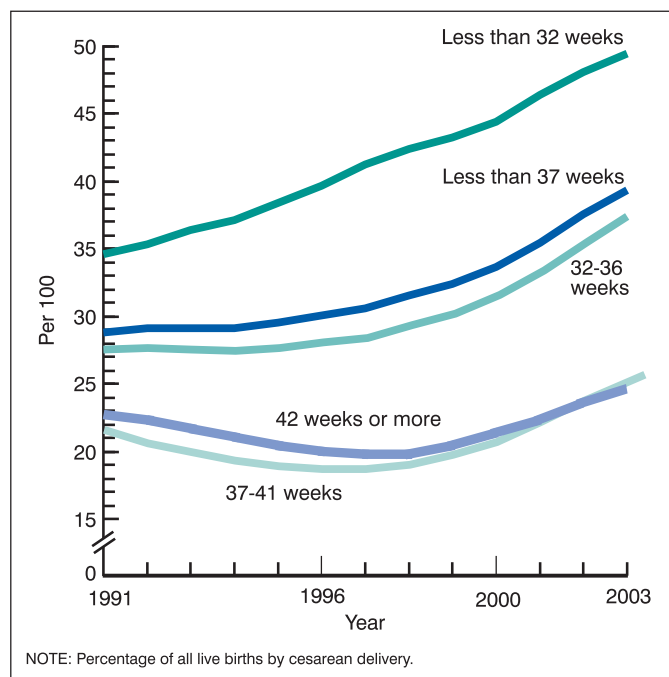


Figure 9. Total cesarean rate by gestational age at delivery: United States, 1991–2003

extraction for 2003 (5.6 percent) is 41 percent lower than the 1994 high of 9.5 percent (88).

Infant Health Characteristics

Period of gestation

The preterm birth rate rose 2 percent from 12.1 percent of all births in 2002 to 12.3 percent in 2003. The proportion of infants born preterm (less than 37 completed weeks of gestation) has risen 16 percent since 1990 (from 10.6 percent) and more than 30 percent since 1981 (9.4 percent). Most of the current year increase was among infants born at 32–36 weeks of gestation (from 10.12 to 10.37 percent) or those considered moderately preterm; the percentage of infants born at less than 32 weeks of gestation, or very preterm, was essentially unchanged at 1.97 percent (1.96 percent in 2002). The rate of very preterm births has risen moderately in recent years, however, from 1.81 percent since 1981. See tables 24, 25, 43, and 44. Preterm birth is a leading cause of infant death and is associated with nearly one-half of all congenital neurological defects (e.g., cerebral palsy) (89,90). Unfortunately, uncertainty continues on the causes and best management of preterm labor (90–92).

The primary measure used to determine the gestational age of the newborn is the interval between the first day of the mother's last normal menstrual period (LMP) and the date of birth. The LMP-based gestational age is subject to error for several reasons, including imperfect maternal recall or misidentification of the LMP because of postconception bleeding, delayed ovulation, or intervening early miscarriage. Although these data are edited for gestational ages that are clearly inconsistent with the infant's plurality and birthweight (see "Technical Notes"), these edits are conservative, and substantial incongruities in these data persist. Additionally, changes in reporting of this measure over time may affect trends in preterm birth rates, particularly by race. (93–95).

Preterm rates were up between 2002 and 2003 for the three largest race and ethnic groups: non-Hispanic white (11.0 to 11.3 percent), non-Hispanic black (17.7 to 17.8 percent), and Hispanic (11.6 to 11.9 percent) (table 44). Among births to non-Hispanic white mothers, rates increased for both very preterm and moderately preterm births. However, increases for non-Hispanic blacks and Hispanics were predominately among moderately preterm births. Since 1990 preterm birth rates have risen by one-third for non-Hispanic white births (from 8.5 percent) and a more modest 8 percent for Hispanic births (11.0 percent). In contrast, preterm rates among non-Hispanic black infants over this period have declined slightly (from 18.9 percent). Notwithstanding the more positive preterm trends for non-Hispanic blacks, their preterm risk continues to be substantially higher than those of other groups. The very preterm rate, about twice as high among non-Hispanic black compared with non-Hispanic white and Hispanic births (3.99 compared with 1.60 and 1.73 percent, respectively), is of particular concern. For preterm birth rates for American Indians, Asian and Pacific Islanders, and the Hispanic subgroups, see tables 24 and 25.

The rise in the incidence of plural births, which are much more likely than singletons to be born preterm, had an important influence on the overall preterm birth rate over the past two decades. The preterm rate for singletons rose from 10.4 to 10.6 between 2002 and 2003 and has risen 9 percent since 1990 (from 9.7). Fortunately, the increase in singleton preterm births is limited to those born moderately preterm;

the singleton very preterm birth rate declined slightly over this period (from 1.69 to 1.58) (14) (data for 2003 not shown).

A marked change in the proportion of births born at and postterm has also been observed in recent years. Births are increasingly more likely to be delivered earlier in term, or at 37–39 weeks of gestation, and less likely to be delivered at 40 weeks and later. The percentage of births delivered at 40 plus weeks declined from 48 to 36 percent between 1990 and 2003, whereas the proportion delivered at 37–39 weeks increased from 41 to 52 percent. See figure 10. The shift toward earlier delivery at all gestational ages suggests changes in the use of delivery management techniques such as induction of labor and cesarean delivery (96–98). (See section on "Method of delivery" and figure 9.)

The wide variation in preterm birth rates by State can be at least partly linked to differences in State demographics (e.g., maternal age distributions and multiple birth rates). For 2003 preterm birth rates below 10 percent were reported for Connecticut, New Hampshire, and Vermont, compared with levels of over 15 percent for Alabama, Louisiana, and Mississippi. Preterm rates increased for the vast majority of States between 1990 and 2003. See table G.

Birthweight

The **low birthweight rate (LBW)** rose to 7.9 percent for 2003, from 7.8 percent in 2002, the highest level reported since 1970. Following declines during the 1970s through the early 1980s, the percentage of newborns delivered LBW (birthweight of less than 2,500 grams or less than 5 lb 8 oz) has generally risen; the 2003 rate is 18 percent higher than the 1984 low (6.7 percent). The percentage of infants born **very low birthweight (VLBW)** (less than 1,500 grams or less than 3 lb 4 oz) was 1.45 percent for 2003, not significantly different from the previous year (1.46 percent). Thus, all of the increase in LBW for the current year was among moderately low birthweight (MLBW) infants, that is, infants born at between 1,500 and 2,499 grams. The percentage MLBW increased from 6.36 to 6.48 between 2002 and 2003 and has risen from 5.69 since 1990. Although essentially unchanged for the current year, the VLBW level has also climbed significantly in recent years. (See tables 43–47 and figure 11.)

Although the link may not be directly causal (99), weight at birth can be an important predictor of infant mortality. For VLBW infants, the risk of dying in the first year of life is nearly 100 times that of infants

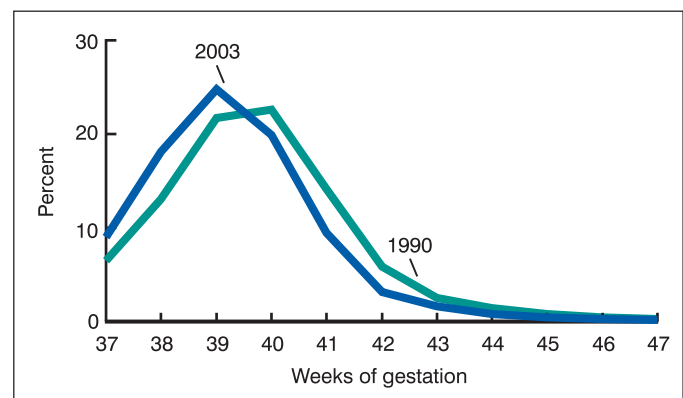


Figure 10. Percent distribution of births 37–47 weeks of gestation: United States, 1990 and 2003

Table G. Preterm birth rates by State: United States and each State, 1990 and 2002

State	2003	1990	Percent change, 1990–2003	State	2003	1990	Percent change, 1990–2003
United States	12.3	10.6	16	Nebraska.	12.4	8.5	45
Alabama	15.7	13.1	20	Nevada.	13.6	11.1	22
Alaska	11.1	9.0	23	New Hampshire.	9.2	6.8	36
Arizona	13.1	10.2	28	New Jersey	12.1	10.7	13
Arkansas.	13.0	12.5	4	New Mexico	12.7	11.0	15
California.	10.5	9.8	7	New York	11.4	10.7	7
Colorado	12.1	9.6	26	North Carolina.	13.6	12.5	9
Connecticut	9.7	8.9	9	North Dakota	12.0	8.3	45
Delaware.	13.7	11.1	24	Ohio	12.5	10.6	18
District of Columbia	14.8	20.7	–28	Oklahoma	12.7	10.1	26
Florida	13.0	11.6	13	Oregon.	10.1	8.0	25
Georgia	13.1	12.8	2	Pennsylvania	11.6	10.3	12
Hawaii	12.6	10.0	26	Rhode Island	11.6	9.6	21
Idaho	10.7	8.7	24	South Carolina	14.5	12.3	18
Illinois	12.8	11.4	13	South Dakota	11.2	8.9	25
Indiana	12.9	9.9	30	Tennessee	14.1	12.6	12
Iowa	11.4	8.7	31	Texas.	13.9	11.2	23
Kansas	11.6	9.5	22	Utah	10.4	8.7	20
Kentucky	14.0	10.5	34	Vermont	9.5	7.1	34
Louisiana.	15.6	13.9	12	Virginia	12.1	11.0	9
Maine.	10.1	7.6	32	Washington	10.3	8.4	22
Maryland	13.1	11.2	16	West Virginia	13.3	9.9	34
Massachusetts	10.7	7.7	39	Wisconsin	11.3	9.2	23
Michigan	11.9	10.7	11	Wyoming.	11.8	10.3	15
Minnesota	10.2	8.2	25				
Mississippi	17.9	15.1	19				
Missouri	13.1	10.7	22				
Montana	11.1	8.5	31				

NOTE: Preterm is defined as less than 37 completed weeks of gestation.

who weigh at least 2,500 grams at birth; the risk for MLBW infants (1,500–2,499 grams) is more than five times higher than that of heavier newborns (89). Smaller infants who do survive, especially those born

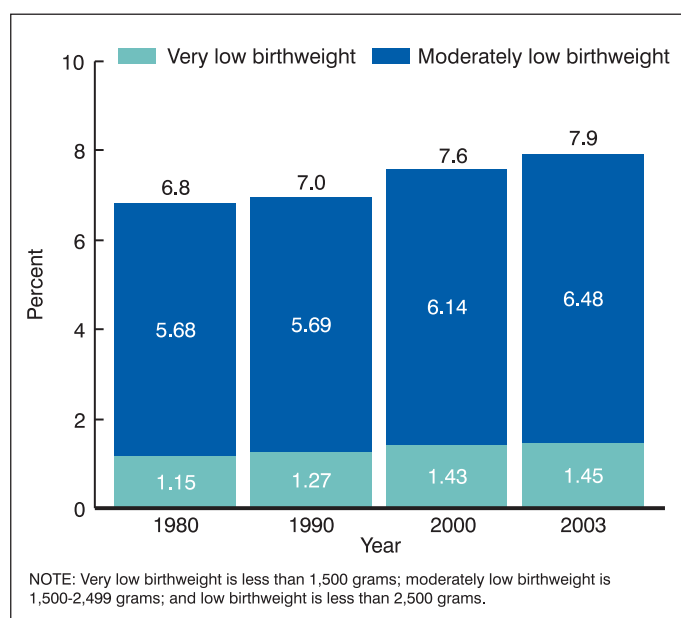


Figure 11. Percentage of births very low, moderately low, and low birthweight: United States, 1980, 1990, and 2000 and 2003

at less than 1,500 grams, are more likely to suffer long-term disabilities (100).

Recent trends in LBW are influenced by the strong growth in the multiple birth rate (101) (see section on “Multiple births”); twins and higher order multiples are much more likely to be born LBW than singletons; 58.2 percent of all plural births were born LBW in 2003. However, even when multiples are excluded, LBW rates are on the rise. For 2003 the **singleton LBW rate** was 6.2 percent, a small increase over 2002 (6.1 percent), and 5 percent higher than the 1990 level (5.9 percent). Studies suggest that singletons conceived with assisted reproductive technology (ART), which account for an increasing number of births (102,103), are at greater risk of LBW than those conceived spontaneously (104,105).

LBW levels increased for 2002–03 for the largest racial and ethnic groups: non-Hispanic white (from 6.9 to 7.0 percent), non-Hispanic black (from 13.4 to 13.6 percent), and Hispanic (from 6.5 to 6.7 percent). Fortunately, however, VLBW rates were essentially unchanged. See tables 24 and 25 for VLBW and LBW levels for American Indian, Asian and Pacific Islander, Mexican, Puerto Rican, Cuban, and Central and South American infants.

Singleton LBW also rose between 2002 and 2003 among each of the largest racial groups. See table H. Since 1990 LBW rates for singletons have risen 6 and 12 percent for Hispanic and non-Hispanic white infants, respectively, but have declined 3 percent among non-Hispanic black newborns.

The percentage of infants born at 4,000 grams or more (at least 8 lb 14 oz) or macrosomic births, declined from 9.2 to 8.9 percent between 2002 and 2003. The proportion of higher birthweight infants

Table H. Rate of very low birthweight and low birthweight, and mean birthweight among singletons by race and Hispanic origin of mother, United States: 1990, 1995, 2000, and 2003

	2003	2002	2000	1995	1990 ¹
Total, all races, origins ²					
Percent very low birthweight	1.11	1.11	1.11	1.08	1.05
Percent low birthweight	6.20	6.12	6.00	6.05	5.90
Mean birthweight in grams (standard deviation) ³ . . .	3,325 (571)	3,332 (573)	3,348 (577)	3,353 (581)	3,365 (583)
Non-Hispanic white					
Percent very low birthweight	0.82	0.81	0.80	0.78	0.73
Percent low birthweight	5.11	5.02	4.88	4.87	4.56
Mean birthweight in grams (standard deviation) ³ . . .	3,384 (555)	3,392 (556)	3,410 (560)	3,416 (563)	3,433 (562)
Non-Hispanic black					
Percent very low birthweight	2.61	2.63	2.62	2.55	2.54
Percent low birthweight	11.58	11.44	11.28	11.66	11.92
Mean birthweight in grams (standard deviation) ³ . . .	3,122 (631)	3,128 (632)	3,141 (637)	3,132 (635)	3,128 (635)
Hispanic ⁴					
Percent very low birthweight	0.94	0.96	0.94	0.93	0.87
Percent low birthweight	5.55	5.44	5.36	5.36	5.23
Mean birthweight in grams (standard deviation) ³ . . .	3,324 (548)	3,332 (550)	3,344 (552)	3,343 (553)	3,351 (552)

¹Data for 1990 by race and Hispanic origin exclude data for New Hampshire and Oklahoma, which did not require reporting of Hispanic origin of mother.

²Includes births to races not shown separately.

³Computed in grams.

⁴Includes persons of Hispanic origin of any race.

NOTES: Very low birthweight is less than 1,500 grams. Low birthweight is less than 2,500 grams. Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes."

has dropped from over 11 percent since the 1980s. (See [tables 24, 25, and 45 for 2003 data](#).)

In 2003 the **mean or average birthweight** for infants delivered in single deliveries was 3,325 grams (7 lb 5 oz). Since 1990 the average birthweight has declined slightly, by about 1 percent, for U.S. births overall and for non-Hispanic white and Hispanic births. The mean birthweight for non-Hispanic black infants has been essentially stable over this period ([table H](#)).

LBW risk historically has differed markedly by **maternal age**, with the youngest and oldest mothers the most likely to deliver at-risk infants. In 2003 mothers under 15 years and mothers over 45 years of age were two to three times as likely to bear a VLBW infant compared with their 25–34-year-old counterparts. Any analysis of LBW or VLBW risk by maternal age, however, should take into account the disproportionate impact of multiple births on levels for older women. Plural births are much more likely to be LBW and VLBW and also occur much more frequently among older women. (See section on "Multiple births".) In illustration, among all infants born to women 45 years and over in 2003, the VLBW rate was 4.0 percent, twice the VLBW level for singletons born to this age group (2.0 percent). (Data not shown.)

LBW levels also vary widely by State. For 2003 the lowest LBW rates were reported for Alaska and Washington (6.0 percent); the highest rate was observed in Mississippi (11.4 percent). Maternal demographic factors such as age and race or ethnicity account for some of these differences by State. Rates for non-Hispanic white births ranged from a low of 5.2 percent (Alaska) to a high of 8.9 percent (Wyoming) ([tables 46 and 47](#)). For States reporting 1,000 or more births to non-Hispanic black women, the percentage of births born LBW ranged from 10.3 to 15.7 percent in Minnesota and Colorado, respectively. Ranges by State for Hispanic births are very similar to those for non-Hispanic white births. Rates for States with at least 1,000 births

to Hispanic mothers ranged from 5.1 and 5.3 percent for Minnesota and Oregon, respectively, to 8.7 and 8.9 percent for New Mexico and Rhode Island, respectively.

Apgar score

The Apgar score has been in use for over 50 years. In 1953 Virginia Apgar, M.D., proposed a new method of evaluating the general physical condition of the newborn at 1 minute, 5 minutes, and if desired, at additional 5-minute intervals after delivery (106). The Apgar score measures five easily identifiable infant characteristics—heart rate, respiratory effort, muscle tone, reflex irritability, and color. Each characteristic is assessed and assigned a value of 0 to 2, with 2 being optimum. The total score is the sum of the scores of the five components. A score of 0 to 3 indicates an infant in need of resuscitation; a score of 4 to 6 is considered intermediate; a score of 7 or greater indicates that the neonate is in good to excellent physical condition.

The 1-minute Apgar, no longer available from national vital statistics data, signals the need for immediate resuscitation. The 5-minute Apgar score can be a useful clinical indicator of the effectiveness of resuscitation efforts but has limited use in determining the severity of the problem and correlates poorly with future neurologic outcome. The 2003 revision of the Certificate of Live Birth includes items for both the 5- and 10-minute Apgar scores; for further information see the Revision Web site (5). All States except California and Texas reported information on the 5-minute Apgar score in 2003.

The proportion of newborns with 5-minute Apgar scores of 9 or 10, indicating excellent infant health status, has increased very slowly from 88.6 percent to 91.1 percent between 1978 and 2003. The proportion of births with low Apgar scores (below 7) declined over

30 percent from 1978 to 1993 (2.1 percent to 1.4) but has been unchanged since (tables 24 and 25). This is in contrast to trends in other indicators of infant health such as LBW and preterm births, which have generally risen in recent years (see the sections on gestational age and birthweight).

For non-Hispanic black infants, the percentage of unfavorable Apgar scores has declined and excellent Apgar scores have increased in the past decade, whereas low and high Apgar ratings have remained steady for non-Hispanic white infants. Despite the improvement in scores for non-Hispanic black infants, disparities persist between the two groups. In 2003, 2.3 percent of non-Hispanic black infants had Apgar scores under 7 compared with 1.3 percent of non-Hispanic white infants.

Of all LBW infants, 9 percent had low Apgar scores for 2003, compared with 1 percent of normal weight (2,500–3,999 grams) infants; among VLBW infants, 32 percent had low Apgar scores in 2003 (data not shown).

Abnormal conditions of the newborn

The most frequently reported of the eight abnormal conditions on the 1989 revision of the birth certificate are as follows: assisted ventilation less than 30 minutes, assisted ventilation of 30 minutes or longer, and hyaline membrane disease/respiratory distress syndrome (RDS) (table 48). There may be underreporting of abnormal conditions on the birth certificate (107), especially those difficult to identify at birth: for example, fetal alcohol syndrome (FAS) (108).

In 2003 the rate for assisted ventilation less than 30 minutes was 21.4 per 1,000, a rate almost double the 1990 rate of 12.9. For assisted ventilation of 30 minutes or longer the rate was 9.3 per 1,000. This rate has gradually increased since 1990 (7.2). Assisted ventilation is central to the therapy for respiratory disease such as RDS (109).

For comparability, rates and trend analysis for the abnormal conditions discussed exclude data for Pennsylvania and Washington, which implemented the 2003 Standard Certificate of Live Birth. See “Technical Notes.”

The overall rate of hyaline membrane disease/RDS in 2003 was 6.0 per 1,000. This rate has decreased since 1994, when the highest level (6.8) was reported. A frequent cause of disease in preterm infants, risk factors for hyaline membrane disease/RDS include early gestational age, inadequately controlled maternal diabetes, multiple births, and fetal asphyxia (109,110). It has been suggested that medically induced delivery before labor for early-term infants (gestational ages 37 and 38 weeks) may be a risk factor for RDS, possibly because of lung immaturity (111).

The rate for meconium aspiration syndrome (1.2 in 2003) has slowly decreased from the 1990 rate (3.1); the rate for anemia for 2003 (0.9) was one-half the 1990 rate (1.8).

Congenital anomalies

The leading cause of infant death in the United States, congenital anomalies (89) also cause metabolic disorders and disability (112) (table 49). Since 1992 there has been a national effort to prevent neural tube defects (NTDs), such as spina bifida and anencephalus, by encouraging increased intake of folic acid among women of childbearing age (113). Since 1998 fortification of all cereal and grain products with folic acid has been mandatory (113);

increased folate use among women of childbearing age has been reported (114). It has been suggested that greater maternal weight may be a risk factor for NTDs (115) and that multivitamin supplementation may also protect against defects other than NTDs (116).

The rate for the NTD anencephalus increased to 11.4 per 100,000 births in 2003, from 9.9 for 2002. The spina bifida/meningocele rate was 18.7 in 2003 compared with 20.0 for 2002. The rate for anencephalus declined for 1997–2002 (113); the rate for spina bifida declined between 1997 and 2003.

Among the most commonly reported specific anomalies, cleft lip/palate was reported at a rate of 75.9 per 100,000 births. The rate of clubfoot was 57.6 per 100,000; the rate of Down's syndrome was 46.5. Rates for several of the congenital anomalies discussed exclude data for Pennsylvania and Washington, which implemented the 2003 Standard Certificate of Live Birth; see “Technical Notes.”

Although congenital anomalies are underreported on the birth certificate, birth certificate data may be a valuable resource for investigative or confirmatory studies (117). Birth certificate data have been used to support an association between maternal smoking and birth defects such as cleft lip/palate and clubfoot (117,118). Early ascertainment and reporting of congenital anomalies are limited because many anomalies are not recognizable at birth; the most serious or apparent anomalies are more likely to be observed and documented prior to birth registration (119). The congenital anomalies reported on birth certificates are rare events. Because a small change in the number of anomalies reported can result in a relatively large change in rates, caution should also be used in comparing yearly rates for a specific anomaly.

Rates for certain types of anomalies differ widely with maternal age (table 49). For example, in 2003 as in past years, rates for omphalocele/gastroschisis are highest for infants of the youngest mothers, whereas rates for Down's syndrome and heart malformations are highest for infants of mothers aged 35 years and over.

Multiple births

The twin birth rate rose to 31.5 twin births per 1,000 total live births in 2003, another record high, and a 1 percent increase over the 2002 level (31.1). The twinning rate has climbed by two-thirds (from 18.9 per 1,000) and the number of births in twin deliveries by more than three-fourths since 1980, from 68,339 to 128,665 (120). (See tables 50 and J.)

The triplet/+ birth rate held steady for 2003 at 187.4, not significantly changed from the previous year (184.0). Between 1980 and 1998 the triplet/+ birth rate (the number of triplets, quadruplets, and quintuplets and other higher order multiples per 100,000 live births) had surged by more than 500 percent, rising from 37.0 to 193.5 (120). Since 1999, however, the triplet/+ rate has remained stable and significantly lower than the 1998 peak. Despite the stability in the rate, the number of triplet/+ born in 2003 was the highest ever reported, 7,663.

The rising incidence of multiple births over the last two decades has been associated with two related trends: the older age at childbearing (older mothers are more likely than younger mothers to conceive multiples spontaneously) and increasing use of fertility therapies (i.e., ART such as *in vitro* fertilization (IVF) and non-ART procedures such as intrauterine insemination and ovulation-inducing drugs) (26,102,121). A study of multiples born in the year 2000 estimated that natural conception accounted for 67 percent of the twins and only 18 percent of the triplet/+ born that year (122).

Table J. Numbers of twin, triplet, quadruplet, and quintuplet and other higher order multiple births: United States, selected years 1980–2003

Year	Twins	Triplets ¹	Quadruplets ¹	Quintuplets and higher order multiples ²	Triplet/+	Twin birth rate ³	Triplet/+ birth rate ⁴
2003	128,665	7,110	468	85	7,663	31.5	187.4
2002	125,134	6,898	434	69	7,401	31.1	184.0
2001	121,246	6,885	501	85	7,471	30.1	185.6
2000	118,916	6,742	506	77	7,325	29.3	180.5
1995	96,736	4,551	365	57	4,973	24.8	127.5
1990	93,865	2,830	185	13	3,028	22.6	72.8
1985	77,102	(⁵)1,925	---	---	1,925	20.5	51.2
1980	68,339	(⁵)1,337	---	---	1,337	18.9	37.0

--- Data not available.

¹Triplets, quadruplets, and quintuplets and other higher order multiple births were not differentiated in the national data set until 1989.

²Quintuplets, sextuplets, and higher order multiple births are not differentiated in the national data set.

³Births in twin deliveries per 1,000 live births.

⁴Births in triplet and higher order multiple deliveries per 100,000 live births.

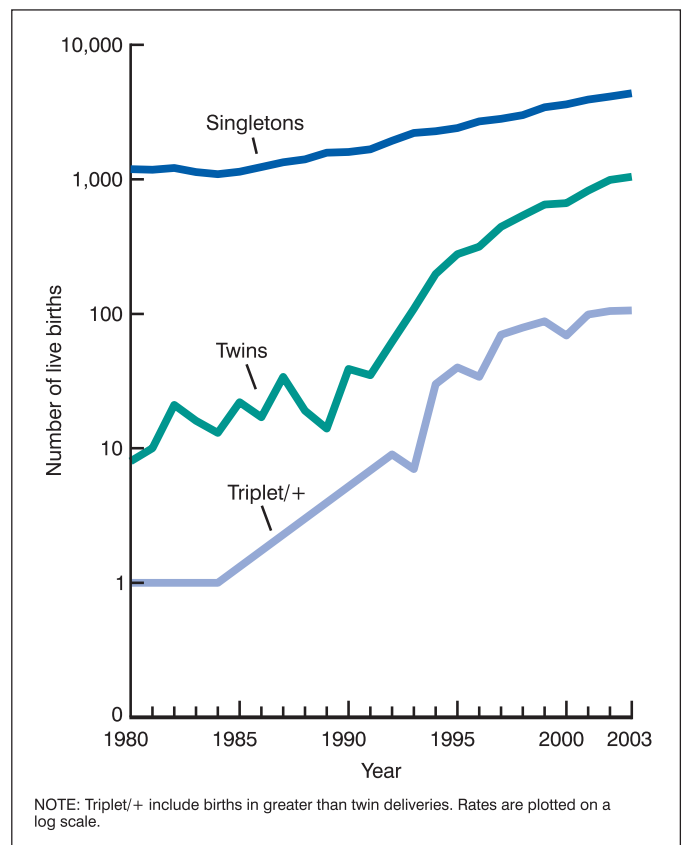
⁵Includes quadruplets and higher order multiple births.

The recent stabilization of the triplet/+ birth rate may be linked to recommendations in the late 1990s from The American College of Obstetricians and Gynecologists and The American Society of Reproductive Medicine intended to prevent higher order multiple pregnancies by limiting the number of embryos transferred (123,124). The proportion of ART procedures involving the transfer of three or more embryos, a predictor of triplet/+ birth outcome, appears to have declined between 1997 and 2001 (125). Refinements of ART therapies plus other factors also may have played a role (126,127).

Twinning rates increased for the current year among non-Hispanic white (35.2) and Hispanic (21.3) women but were unchanged for non-Hispanic black mothers (34.7). Triplet/+ birth rates were essentially stable for each group. The highest rates and the fastest growth in multiples are reported for non-Hispanic white mothers; women in this group are also more likely to receive infertility services (27). Between 1990 and 2003 the twin birth rate rose by more than 50 percent among non-Hispanic white women, and the triplet/+ rate rose by 184 percent. In comparison, twinning rates rose 30 percent among non-Hispanic black mothers and 18 percent among Hispanic mothers; triplet/+ birth rates by 137 and 117 percent, respectively.

By maternal age, the rise in twin and triplet/+ birth rates has been most pronounced among older mothers, and especially those aged 40 years and over. The number of singletons born to women aged 45–49 years has risen nearly threefold between 1990 and 2003 (from 1,599 to 4,371 births), but the number of multiples has climbed even more dramatically. Between 1990 and 2003 the number of twins born to women in this age group surged from only 39 to 1,045 and the number of triplet/+ births from 0 to 106 (120). See figure 12.

The greatly increased risk of adverse outcome associated with multiple gestation pregnancies compared with singleton gestation pregnancies is well documented, as is the way increasing rates of these high-risk pregnancies are affecting national measures of public health (128–130). In 2003 multiples accounted for 3 percent of all live births but more than one of every four VLBW infants (data not shown). In 2002, the latest year for which data are available, nearly one of every five neonatal deaths (death within the first month of birth) were born in a multiple delivery (130,131).

**Figure 12. Numbers of twin, triplet, and singleton births to women 45–49 years of age: United States, 1990–2003**

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Guide to Tables in Births: Final Data for 2003

TABLE:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Geographic area: States ¹										10	11	12							19						
United States or all reporting areas	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Years: Current year only		2	3				7	8		10	11	12	13	14	15	16	17		19		21	22	23	24	25
Trend	1			4	5	6			9									18		20					
Type of entry: Number of births	1	2				6	7			10	11	12	13	14	15	16	17		19		21	22			
Rates or other measures	1		3	4	5	6		8	9	10			13	14	15	16	17	18	19	20	21	22	23	24	25
Characteristics: Age of father																				20					
Age of mother		2	3	4			7		9								17	18			21				
Alcohol use																								24	25
Apgar score																								24	25
Birthweight																							23	24	25
Day of week																16									
Education													13	14							21				
Gestational age																						22	23	24	25
Hispanic origin of mother						⁴ 6	⁴ 7	⁴ 8	⁴ 9			⁴ 12		⁴ 14			⁶ 17	⁶ 18	⁶ 19		⁶ 21	⁶ 22	⁴ 23		⁴ 25
Live-birth order		2	3		5		7	8					13	14											
Method of delivery																16								24	25
Month of birth															15										
Nativity of mother													13	14										24	25
Prenatal care																								24	25
Race of father																				³ 20					
Race of mother	² 1	² 2	² 3	² 4	³ 5	⁴ 6	⁴ 7	⁴ 8	⁴ 9		² 11	⁴ 12	⁵ 13	⁴ 14	³ 15	³ 16	⁶ 17	⁶ 18	⁶ 19		³ 21	⁶ 22	⁴ 23	⁵ 24	⁴ 25
Sex of child													13	14											
Teenage mothers										10			13	14											
Tobacco use																								24	25
Unmarried mothers													13	14			17	18	19						
Weight gain during pregnancy																						22	23	24	25

TABLE:	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Geographic area: States ¹									34							41					46	47			
United States or all reporting areas	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Years: Current year only	26	27	28	29	30	31	32	33	34	35	36	37	38		40	41	42	43		45	46	47	48	49	50
Trend														39					44						
Type of entry: Number of births	26	27	28	29	30	31		33		35	36	37	38	39	40		42	43		45	46	47	48	49	50
Rates or other measures	26	27	28	29	30	31	32	33	34	35	36	37		39	40	41	42	43	44	45	46	47	48	49	50
Characteristics: Abnormal conditions of newborn																							48		
Age of mother	26			29	30		32	33			36	37			40					45			48	49	50
Attendant at birth													38												
Birthweight							32											43	44	45	46	47			
Complications of labor		27	28									37					42								
Congenital anomalies																							49		
Education						31																			
Gestational age																		43	44						
Hispanic origin of mother			⁴ 28		⁴ 30	⁶ 31	⁶ 32	⁶ 33	⁶ 34	⁶ 35			⁶ 38	⁶ 39	⁶ 40	⁶ 41		⁶ 43	⁶ 44	⁶ 45	⁶ 46	⁶ 47			⁶ 50
Medical risk factors	26	27	28														42								
Method of delivery														39	40	41	42								
Obstetric procedures		27	28								36														
Place of delivery													38												
Multiple births																									50
Prenatal care								33	34	35															
Race of mother	³ 26	⁵ 27	⁴ 28	³ 29	⁴ 30	³ 31	⁶ 32	⁶ 33	⁶ 34	⁶ 35	³ 36	³ 37	⁶ 38	⁶ 39	⁶ 40	⁶ 41		⁶ 43	³ 44	⁶ 45	⁶ 46	⁶ 47	³ 48	³ 49	⁶ 50
Tobacco use				29	30	31	32																		

¹Includes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.
²Includes white, black, American Indian, and Asian or Pacific Islander.
³Includes white and black.
⁴Includes Mexican, Puerto Rican, Cuban, Central and South American, other and unknown Hispanic, non-Hispanic white, and non-Hispanic black.
⁵Includes white, black, American Indian, and Asian and Pacific Islanders.
⁶Includes Hispanic, non-Hispanic white, and non-Hispanic black.

Table 1. Live births, birth rates, and fertility rates, by race: United States, specified years 1940–55 and each year, 1960–2003

[Birth rates are live births per 1,000 population in specified group. Fertility rates are live births per 1,000 women aged 15–44 years in specified group. Population enumerated as of April 1 for 1940, 1950, 1960, 1970, 1980, 1990, and 2000 and estimated as of July 1 for all other years. Beginning with 1970, excludes births to nonresidents of the United States]

Year	Number					Birth rate					Fertility rate				
	All races ¹	White	Black	American Indian ²	Asian or Pacific Islander	All races ¹	White	Black	American Indian ²	Asian or Pacific Islander	All races ¹	White	Black	American Indian ²	Asian or Pacific Islander
Registered births															
Race of mother:															
2003	4,089,950	3,225,848	599,847	43,052	221,203	14.1	13.6	15.7	13.8	16.8	66.1	66.1	66.3	58.4	66.3
2002	4,021,726	3,174,760	593,691	42,368	210,907	13.9	13.5	15.7	13.8	16.5	64.8	64.8	65.8	58.0	64.1
2001	4,025,933	3,177,626	606,156	41,872	200,279	14.1	13.7	16.3	13.7	16.4	65.3	65.0	67.6	58.1	64.2
2000	4,058,814	3,194,005	622,598	41,668	200,543	14.4	13.9	17.0	14.0	17.1	65.9	65.3	70.0	58.7	65.8
1999	3,959,417	3,132,501	605,970	40,170	180,776	14.2	13.7	16.8	14.2	15.9	64.4	64.0	68.5	59.0	60.9
1998	3,941,553	3,118,727	609,902	40,272	172,652	14.3	13.8	17.1	14.8	15.9	64.3	63.6	69.4	61.3	60.1
1997	3,880,894	3,072,640	599,913	38,572	169,769	14.2	13.7	17.1	14.7	16.2	63.6	62.8	69.0	60.8	61.3
1996	3,891,494	3,093,057	594,781	37,880	165,776	14.4	13.9	17.3	14.9	16.5	64.1	63.3	69.2	61.8	62.3
1995	3,899,589	3,098,885	603,139	37,278	160,287	14.6	14.1	17.8	15.3	16.7	64.6	63.6	71.0	63.0	62.6
1994	3,952,767	3,121,004	636,391	37,740	157,632	15.0	14.3	19.1	16.0	17.1	65.9	64.2	75.9	65.8	63.9
1993	4,000,240	3,149,833	658,875	38,732	152,800	15.4	14.6	20.2	17.0	17.3	67.0	64.9	79.6	69.7	64.3
1992	4,065,014	3,201,678	673,633	39,453	150,250	15.8	15.0	21.1	17.9	17.9	68.4	66.1	82.4	73.1	66.1
1991	4,110,907	3,241,273	682,602	38,841	145,372	16.2	15.3	21.8	18.3	18.3	69.3	66.7	84.8	73.9	67.1
1990	4,158,212	3,290,273	684,336	39,051	141,635	16.7	15.8	22.4	18.9	19.0	70.9	68.3	86.8	76.2	69.6
1989	4,040,958	3,192,355	673,124	39,478	133,075	16.4	15.4	22.3	19.7	18.7	69.2	66.4	86.2	79.0	68.2
1988	3,909,510	3,102,083	638,562	37,088	129,035	16.0	15.0	21.5	19.3	19.2	67.3	64.5	82.6	76.8	70.2
1987	3,809,394	3,043,828	611,173	35,322	116,560	15.7	14.9	20.8	19.1	18.4	65.8	63.3	80.1	75.6	67.1
1986	3,756,547	3,019,175	592,910	34,169	107,797	15.6	14.8	20.5	19.2	18.0	65.4	63.1	78.9	75.9	66.0
1985	3,760,561	3,037,913	581,824	34,037	104,606	15.8	15.0	20.4	19.8	18.7	66.3	64.1	78.8	78.6	68.4
1984 ³	3,669,141	2,967,100	568,138	33,256	98,926	15.6	14.8	20.1	20.1	18.8	65.5	63.2	78.2	79.8	69.2
1983 ³	3,638,933	2,946,468	562,624	32,881	95,713	15.6	14.8	20.2	20.6	19.5	65.7	63.4	78.7	81.8	71.7
1982 ³	3,680,537	2,984,817	568,506	32,436	93,193	15.9	15.1	20.7	21.1	20.3	67.3	64.8	80.9	83.6	74.8
1981 ³	3,629,238	2,947,679	564,955	29,688	84,553	15.8	15.0	20.8	20.0	20.1	67.3	64.8	82.0	79.6	73.7
1980 ³	3,612,258	2,936,351	568,080	29,389	74,355	15.9	15.1	21.3	20.7	19.9	68.4	65.6	84.7	82.7	73.2
Race of child:															
1980 ³	3,612,258	2,898,732	589,616	36,797	---	15.9	14.9	22.1	---	---	68.4	64.7	88.1	---	---
1979 ³	3,494,398	2,808,420	577,855	34,269	---	15.6	14.5	22.0	---	---	67.2	63.4	88.3	---	---
1978 ³	3,333,279	2,681,116	551,540	33,160	---	15.0	14.0	21.3	---	---	65.5	61.7	86.7	---	---
1977 ³	3,326,632	2,691,070	544,221	30,500	---	15.1	14.1	21.4	---	---	66.8	63.2	88.1	---	---
1976 ³	3,167,788	2,567,614	514,479	29,009	---	14.6	13.6	20.5	---	---	65.0	61.5	85.8	---	---
1975 ³	3,144,198	2,551,996	511,581	27,546	---	14.6	13.6	20.7	---	---	66.0	62.5	87.9	---	---
1974 ³	3,159,958	2,575,792	507,162	26,631	---	14.8	13.9	20.8	---	---	67.8	64.2	89.7	---	---
1973 ³	3,136,965	2,551,030	512,597	26,464	---	14.8	13.8	21.4	---	---	68.8	64.9	93.6	---	---
1972 ³	3,258,411	2,655,558	531,329	27,368	---	15.6	14.5	22.5	---	---	73.1	68.9	99.9	---	---
1971 ⁴	3,555,970	2,919,746	564,960	27,148	---	17.2	16.1	24.4	---	---	81.6	77.3	109.7	---	---
1970 ⁴	3,731,386	3,091,264	572,362	25,864	---	18.4	17.4	25.3	---	---	87.9	84.1	115.4	---	---
1969 ⁴	3,600,206	2,993,614	543,132	24,008	---	17.9	16.9	24.4	---	---	86.1	82.2	112.1	---	---
1968 ⁴	3,501,564	2,912,224	531,152	24,156	---	17.6	16.6	24.2	---	---	85.2	81.3	112.7	---	---
1967 ⁵	3,520,959	2,922,502	543,976	22,665	---	17.8	16.8	25.1	---	---	87.2	82.8	118.5	---	---
1966 ⁴	3,606,274	2,993,230	558,244	23,014	---	18.4	17.4	26.2	---	---	90.8	86.2	124.7	---	---
1965 ⁴	3,760,358	3,123,860	581,126	24,066	---	19.4	18.3	27.7	---	---	96.3	91.3	133.2	---	---
1964 ⁴	4,027,490	3,369,160	607,556	24,382	---	21.1	20.0	29.5	---	---	104.7	99.8	142.6	---	---
1963 ^{4,6}	4,098,020	3,326,344	580,658	22,358	---	21.7	20.7	---	---	---	108.3	103.6	---	---	---
1962 ^{4,6}	4,167,362	3,394,068	584,610	21,968	---	22.4	21.4	---	---	---	112.0	107.5	---	---	---
1961 ⁴	4,268,326	3,600,864	611,072	21,464	---	23.3	22.2	---	---	---	117.1	112.3	---	---	---
1960 ⁴	4,257,850	3,600,744	602,264	21,114	---	23.7	22.7	31.9	---	---	118.0	113.2	153.5	---	---
Births adjusted for underregistration															
Race of child:															
1955	4,097,000	3,485,000	---	---	---	25.0	23.8	---	---	---	118.3	113.7	---	---	---
1950	3,632,000	3,108,000	---	---	---	24.1	23.0	---	---	---	106.2	102.3	---	---	---
1945	2,858,000	2,471,000	---	---	---	20.4	19.7	---	---	---	85.9	83.4	---	---	---
1940	2,559,000	2,199,000	---	---	---	19.4	18.6	---	---	---	79.9	77.1	---	---	---

--- Data not available. ¹For 1960–91 includes births to races not shown separately. For 1992 and later years unknown race of mother is imputed; see "Technical Notes."

²Includes births to Aleuts and Eskimos. ³Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see "Technical Notes."

⁴Based on a 50-percent sample of births.

⁵Based on a 20- to 50-percent sample of births.

⁶Figures by race exclude New Jersey.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 2. Live births by age of mother, live-birth order, and race of mother: United States, 2003

[Live-birth order refers to number of children born alive to mother]

Live-birth order and race of mother	All ages	Age of mother													
		Under 15 years	15–19 years						20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years
			Total	15 years	16 years	17 years	18 years	19 years							
All races	4,089,950	6,661	414,580	18,238	41,344	74,802	117,750	162,446	1,032,305	1,086,366	975,546	467,642	101,005	5,522	323
1st child.	1,633,987	6,511	330,160	17,520	38,152	64,671	93,595	116,222	481,624	394,295	288,323	109,377	22,212	1,391	94
2d child	1,320,477	124	70,554	627	2,895	9,100	20,621	37,311	351,903	366,504	348,224	152,914	28,781	1,400	73
3d child	684,296	4	11,224	28	165	769	2,878	7,384	142,104	202,610	198,580	107,847	20,956	924	47
4th child	267,683	1	1,322	5	12	56	269	980	40,751	78,656	82,663	51,291	12,379	582	38
5th child	97,308	1	162	1	1	5	37	118	10,037	27,041	31,136	21,997	6,527	383	24
6th child	38,816	—	22	1	—	1	5	15	2,223	9,194	13,040	10,411	3,659	249	18
7th child	17,347	—	4	—	1	—	3	—	501	3,327	5,784	5,455	2,113	155	8
8th child and over. . . .	18,081	—	7	—	—	—	2	5	181	1,690	5,083	6,745	3,945	412	18
Not stated	11,955	20	1,125	56	118	200	340	411	2,981	3,049	2,713	1,605	433	26	3
White	3,225,848	3,677	298,347	11,484	28,151	52,941	85,734	120,037	790,910	871,496	795,902	379,773	81,031	4,445	267
1st child.	1,288,684	3,608	240,706	11,069	26,169	46,311	69,286	87,871	379,879	321,092	234,859	89,190	18,122	1,150	78
2d child	1,057,829	54	48,971	355	1,822	5,976	14,274	26,544	273,145	300,418	286,948	124,099	22,996	1,132	66
3d child	544,265	2	7,069	18	84	481	1,769	4,717	102,624	162,498	165,415	89,124	16,759	733	41
4th child	205,040	1	744	3	6	33	151	551	26,150	58,831	66,902	41,931	9,984	467	30
5th child	70,741	1	90	—	1	3	21	65	5,614	18,365	23,689	17,473	5,186	300	23
6th child	26,731	—	10	1	—	1	3	5	1,075	5,496	9,210	7,889	2,843	195	13
7th child	11,678	—	2	—	1	—	1	—	241	1,749	3,827	4,060	1,676	117	6
8th child and over. . . .	12,192	—	4	—	—	—	1	3	104	801	3,020	4,775	3,150	330	8
Not stated	8,688	11	751	38	68	136	228	281	2,078	2,246	2,032	1,232	315	21	2
Black	599,847	2,726	100,951	6,056	11,654	19,145	27,817	36,279	196,268	139,947	97,529	49,889	11,895	614	28
1st child.	226,476	2,651	77,333	5,780	10,569	16,008	21,018	23,958	77,823	35,317	21,568	9,501	2,154	123	6
2d child	174,614	65	18,968	250	960	2,799	5,588	9,371	65,234	43,567	29,781	13,881	2,976	138	4
3d child	105,788	1	3,738	9	76	265	995	2,393	34,218	31,511	21,969	11,663	2,571	113	4
4th child	49,947	—	516	2	6	20	104	384	12,917	16,395	11,739	6,677	1,625	74	4
5th child	21,611	—	65	—	—	2	15	48	3,995	7,348	5,781	3,376	992	53	1
6th child	9,824	—	10	—	—	—	1	9	1,045	3,136	3,041	1,936	617	37	2
7th child	4,596	—	2	—	—	—	2	—	237	1,351	1,581	1,072	327	24	2
8th child and over. . . .	4,660	—	3	—	—	—	1	2	66	780	1,667	1,531	560	48	5
Not stated	2,331	9	316	15	43	51	93	114	733	542	402	252	73	4	—
American Indian ¹	43,052	154	7,690	411	815	1,449	2,115	2,900	14,645	10,524	6,423	2,906	666	41	3
1st child.	15,237	150	5,955	392	744	1,253	1,648	1,918	5,488	2,169	1,048	360	62	5	—
2d child	11,788	3	1,435	15	65	173	396	786	5,185	2,993	1,516	537	113	6	—
3d child	7,738	1	234	1	2	13	55	163	2,709	2,624	1,441	603	121	5	—
4th child	4,152	—	35	—	—	2	7	26	932	1,534	1,048	489	106	5	3
5th child	1,992	—	2	—	—	—	1	1	229	691	621	361	82	6	—
6th child	1,022	—	1	—	—	—	—	1	47	300	381	233	57	3	—
7th child	486	—	—	—	—	—	—	—	8	117	176	140	42	3	—
8th child and over. . . .	477	—	—	—	—	—	—	—	5	45	169	173	77	8	—
Not stated	160	—	28	3	4	8	8	5	42	51	23	10	6	—	—
Asian or Pacific Islander	221,203	104	7,592	287	724	1,267	2,084	3,230	30,482	64,399	75,692	35,074	7,413	422	25
1st child.	103,590	102	6,166	279	670	1,099	1,643	2,475	18,434	35,717	30,848	10,326	1,874	113	10
2d child	76,246	2	1,180	7	48	152	363	610	8,339	19,526	29,979	14,397	2,696	124	3
3d child	26,505	—	183	—	3	10	59	111	2,553	5,977	9,755	6,457	1,505	73	2
4th child	8,544	—	27	—	—	1	7	19	752	1,896	2,974	2,194	664	36	1
5th child	2,964	—	5	1	—	—	—	4	199	637	1,045	787	267	24	—
6th child	1,239	—	1	—	—	—	1	—	56	262	408	353	142	14	3
7th child	587	—	—	—	—	—	—	—	15	110	200	183	68	11	—
8th child and over. . . .	752	—	—	—	—	—	—	—	6	64	227	266	158	26	5
Not stated	776	—	30	—	3	5	11	11	128	210	256	111	39	1	1

— Quantity zero.

¹Includes births of Aleuts and Eskimos.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 3. Fertility rates and birth rates, by age of mother, live-birth order, and race of mother: United States, 2003

[Rates are live births per 1,000 women in specified age and racial group. Fertility rate computed by relating total births, regardless of age of mother, to women aged 15–44 years. Population estimated as of July 1. Live-birth order refers to number of children born alive to mother. Figures for live-birth order not stated are distributed]

Live-birth order and race of mother	Age of mother										
	15–44 years	10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years ¹
			Total	15–17 years	18–19 years						
All races	66.1	0.6	41.6	22.4	70.7	102.6	115.6	95.1	43.8	8.7	0.5
1st child	26.5	0.6	33.2	20.1	53.1	48.0	42.1	28.2	10.3	1.9	0.1
2d child	21.4	0.0	7.1	2.1	14.7	35.1	39.1	34.1	14.4	2.5	0.1
3d child	11.1	*	1.1	0.2	2.6	14.2	21.6	19.4	10.1	1.8	0.1
4th child	4.3	*	0.1	0.0	0.3	4.1	8.4	8.1	4.8	1.1	0.1
5th child	1.6	*	0.0	*	0.0	1.0	2.9	3.0	2.1	0.6	0.0
6th and 7th child	0.9	*	0.0	*	0.0	0.3	1.3	1.8	1.5	0.5	0.0
8th child and over	0.3	*	*	*	*	0.0	0.2	0.5	0.6	0.3	0.0
White	66.1	0.5	38.3	19.8	66.2	100.6	119.5	99.3	44.8	8.7	0.5
1st child	26.5	0.5	31.0	17.9	50.7	48.4	44.1	29.4	10.6	1.9	0.1
2d child	21.7	0.0	6.3	1.7	13.2	34.8	41.3	35.9	14.7	2.5	0.1
3d child	11.2	*	0.9	0.1	2.1	13.1	22.3	20.7	10.5	1.8	0.1
4th child	4.2	*	0.1	0.0	0.2	3.3	8.1	8.4	5.0	1.1	0.1
5th child	1.5	*	0.0	*	0.0	0.7	2.5	3.0	2.1	0.6	0.0
6th and 7th child	0.8	*	*	*	*	0.2	1.0	1.6	1.4	0.5	0.0
8th child and over	0.3	*	*	*	*	0.0	0.1	0.4	0.6	0.3	0.0
Black	66.3	1.6	63.8	38.2	103.7	126.1	100.4	66.5	33.2	7.7	0.5
1st child	25.1	1.5	49.0	33.6	73.0	50.2	25.4	14.8	6.4	1.4	0.1
2d child	19.4	0.0	12.0	4.2	24.3	42.1	31.4	20.4	9.3	1.9	0.1
3d child	11.7	*	2.4	0.4	5.5	22.1	22.7	15.0	7.8	1.7	0.1
4th child	5.5	*	0.3	0.0	0.8	8.3	11.8	8.0	4.5	1.1	0.1
5th child	2.4	*	0.0	*	0.1	2.6	5.3	4.0	2.3	0.6	0.0
6th and 7th child	1.6	*	*	*	*	0.8	3.2	3.2	2.0	0.6	0.0
8th child and over	0.5	*	*	*	*	0.0	0.6	1.1	1.0	0.4	0.0
American Indian ²	58.4	1.0	53.1	30.6	87.3	110.0	93.5	57.4	25.4	5.5	0.4
1st child	20.7	1.0	41.2	27.5	62.2	41.3	19.4	9.4	3.2	0.5	*
2d child	16.1	*	9.9	2.9	20.6	39.1	26.7	13.6	4.7	0.9	*
3d child	10.5	*	1.6	*	3.8	20.4	23.4	12.9	5.3	1.0	*
4th child	5.7	*	0.2	*	0.6	7.0	13.7	9.4	4.3	0.9	*
5th child	2.7	*	*	*	*	1.7	6.2	5.6	3.2	0.7	*
6th and 7th child	2.1	*	*	*	*	0.4	3.7	5.0	3.3	0.8	*
8th child and over	0.6	*	*	*	*	*	0.4	1.5	1.5	0.6	*
Asian or Pacific Islander	66.3	0.2	17.4	8.8	29.8	59.6	108.5	114.6	59.9	13.5	0.9
1st child	31.1	0.2	14.2	8.0	23.2	36.2	60.4	46.9	17.7	3.4	0.2
2d child	22.9	*	2.7	0.8	5.5	16.4	33.0	45.6	24.7	4.9	0.3
3d child	8.0	*	0.4	*	1.0	5.0	10.1	14.8	11.1	2.7	0.1
4th child	2.6	*	0.1	*	0.1	1.5	3.2	4.5	3.8	1.2	0.1
5th child	0.9	*	*	*	*	0.4	1.1	1.6	1.3	0.5	0.0
6th and 7th child	0.5	*	*	*	*	0.1	0.6	0.9	0.9	0.4	0.1
8th child and over	0.2	*	*	*	*	*	0.1	0.3	0.5	0.3	0.1

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in numerator.

0.0 Quantity more than zero but less than 0.05.

¹Birth rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

²Includes births to Aleuts and Eskimos.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 4. Total fertility rates and birth rates, by age of mother: United States, 1970–2003, and by age and race of mother: United States, 1980–2003

[Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Birth rates are live births per 1,000 women in specified group. Population enumerated as of April 1 for 1970, 1980, 1990, and 2000 and estimated as of July 1 for all other years]

Year and race	Total fertility rate	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years ¹
			Total	15–17 years	18–19 years						
All races²											
2003	2,042.5	0.6	41.6	22.4	70.7	102.6	115.6	95.1	43.8	8.7	0.5
2002	2,013.0	0.7	43.0	23.2	72.8	103.6	113.6	91.5	41.4	8.3	0.5
2001	2,034.0	0.8	45.3	24.7	76.1	106.2	113.4	91.9	40.6	8.1	0.5
2000	2,056.0	0.9	47.7	26.9	78.1	109.7	113.5	91.2	39.7	8.0	0.5
1999	2,007.5	0.9	48.8	28.2	79.1	107.9	111.2	87.1	37.8	7.4	0.4
1998	1,999.0	1.0	50.3	29.9	80.9	108.4	110.2	85.2	36.9	7.4	0.4
1997	1,971.0	1.1	51.3	31.4	82.1	107.3	108.3	83.0	35.7	7.1	0.4
1996	1,976.0	1.2	53.5	33.3	84.7	107.8	108.6	82.1	34.9	6.8	0.3
1995	1,978.0	1.3	56.0	35.5	87.7	107.5	108.8	81.1	34.0	6.6	0.3
1994	2,001.5	1.4	58.2	37.2	90.2	109.2	111.0	80.4	33.4	6.4	0.3
1993	2,019.5	1.4	59.0	37.5	91.1	111.3	113.2	79.9	32.7	6.1	0.3
1992	2,046.0	1.4	60.3	37.6	93.6	113.7	115.7	79.6	32.3	5.9	0.3
1991	2,062.5	1.4	61.8	38.6	94.0	115.3	117.2	79.2	31.9	5.5	0.2
1990	2,081.0	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
1989	2,014.0	1.4	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2
1988	1,934.0	1.3	53.0	33.6	79.9	110.2	114.4	74.8	28.1	4.8	0.2
1987	1,872.0	1.3	50.6	31.7	78.5	107.9	111.6	72.1	26.3	4.4	0.2
1986	1,837.5	1.3	50.2	30.5	79.6	107.4	109.8	70.1	24.4	4.1	0.2
1985	1,844.0	1.2	51.0	31.0	79.6	108.3	111.0	69.1	24.0	4.0	0.2
1984 ³	1,806.5	1.2	50.6	31.0	77.4	106.8	108.7	67.0	22.9	3.9	0.2
1983 ³	1,799.0	1.1	51.4	31.8	77.4	107.8	108.5	64.9	22.0	3.9	0.2
1982 ³	1,827.5	1.1	52.4	32.3	79.4	111.6	111.0	64.1	21.2	3.9	0.2
1981 ³	1,812.0	1.1	52.2	32.0	80.0	112.2	111.5	61.4	20.0	3.8	0.2
1980 ³	1,839.5	1.1	53.0	32.5	82.1	115.1	112.9	61.9	19.8	3.9	0.2
1979 ³	1,808.0	1.2	52.3	32.3	81.3	112.8	111.4	60.3	19.5	3.9	0.2
1978 ³	1,760.0	1.2	51.5	32.2	79.8	109.9	108.5	57.8	19.0	3.9	0.2
1977 ³	1,789.5	1.2	52.8	33.9	80.9	112.9	111.0	56.4	19.2	4.2	0.2
1976 ³	1,738.0	1.2	52.8	34.1	80.5	110.3	106.2	53.6	19.0	4.3	0.2
1975 ³	1,774.0	1.3	55.6	36.1	85.0	113.0	108.2	52.3	19.5	4.6	0.3
1974 ³	1,835.0	1.2	57.5	37.3	88.7	117.7	111.5	53.8	20.2	4.8	0.3
1973 ³	1,879.0	1.2	59.3	38.5	91.2	119.7	112.2	55.6	22.1	5.4	0.3
1972 ³	2,010.0	1.2	61.7	39.0	96.9	130.2	117.7	59.8	24.8	6.2	0.4
1971 ⁴	2,266.5	1.1	64.5	38.2	105.3	150.1	134.1	67.3	28.7	7.1	0.4
1970 ⁴	2,480.0	1.2	68.3	38.8	114.7	167.8	145.1	73.3	31.7	8.1	0.5
White											
2003	2,061.0	0.5	38.3	19.8	66.2	100.6	119.5	99.3	44.8	8.7	0.5
2002	2,027.5	0.5	39.4	20.5	68.0	101.6	117.4	95.5	42.4	8.2	0.5
2001	2,040.0	0.5	41.2	21.4	70.8	103.7	117.0	95.8	41.3	8.0	0.5
2000	2,051.0	0.6	43.2	23.3	72.3	106.6	116.7	94.6	40.2	7.9	0.4
1999	2,007.5	0.6	44.0	24.4	73.0	105.0	114.9	90.7	38.5	7.4	0.4
1998	1,991.0	0.6	44.9	25.6	74.1	105.4	113.6	88.5	37.5	7.3	0.4
1997	1,955.0	0.7	45.5	26.6	75.0	104.5	111.3	85.7	36.1	6.9	0.3
1996	1,960.5	0.7	47.5	28.0	77.6	105.3	111.7	84.6	35.3	6.7	0.3
1995	1,954.5	0.8	49.5	29.6	80.2	104.7	111.7	83.3	34.2	6.4	0.3
1994	1,957.5	0.8	50.5	30.4	81.2	105.0	113.0	82.2	33.5	6.2	0.3
1993	1,961.5	0.8	50.6	30.0	81.5	106.1	114.7	81.3	32.6	5.9	0.3
1992	1,978.0	0.8	51.4	29.9	83.2	107.7	116.9	80.8	32.1	5.7	0.2
1991	1,988.0	0.8	52.6	30.5	83.3	108.8	118.0	80.2	31.8	5.2	0.2
1990	2,003.0	0.7	50.8	29.5	78.0	109.8	120.7	81.7	31.5	5.2	0.2
1989	1,931.0	0.7	47.9	28.1	72.9	106.9	117.8	78.1	29.7	4.9	0.2
1988	1,856.5	0.6	44.4	26.0	69.6	103.7	114.8	75.4	27.7	4.5	0.2
1987	1,804.5	0.6	42.5	24.6	68.9	102.3	112.3	73.0	25.9	4.1	0.2
1986	1,776.0	0.6	42.3	23.8	70.1	102.7	110.8	70.9	23.9	3.8	0.2
1985	1,787.0	0.6	43.3	24.4	70.4	104.1	112.3	69.9	23.3	3.7	0.2
1984 ³	1,748.5	0.6	42.9	24.3	68.4	102.7	109.8	67.7	22.2	3.6	0.2
1983 ³	1,740.5	0.6	43.9	25.0	68.8	103.8	109.4	65.3	21.3	3.6	0.2
1982 ³	1,767.0	0.6	45.0	25.5	70.8	107.7	111.9	64.0	20.4	3.6	0.2
1981 ³	1,748.0	0.5	44.9	25.4	71.5	108.3	112.3	61.0	19.0	3.4	0.2
1980 ³	1,773.0	0.6	45.4	25.5	73.2	111.1	113.8	61.2	18.8	3.5	0.2

See footnotes at end of table.

Table 4. Total fertility rates and birth rates, by age of mother: United States, 1970–2003, and by age and race of mother: United States, 1980–2003—Con.

[Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Birth rates are live births per 1,000 women in specified group. Population enumerated as of April 1 for 1970, 1980, 1990, and 2000 and estimated as of July 1 for all other years]

			Age of mother								
Year and race	Total fertility rate	10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years ¹
			Total	15–17 years	18–19 years						
Black											
2003	1,999.0	1.6	63.8	38.2	103.7	126.1	100.4	66.5	33.2	7.7	0.5
2002	1,991.0	1.8	66.6	40.0	107.6	127.1	99.0	64.4	31.5	7.4	0.4
2001	2,051.0	2.0	71.8	43.9	114.0	133.2	99.2	64.8	31.6	7.2	0.4
2000	2,129.0	2.3	77.4	49.0	118.8	141.3	100.3	65.4	31.5	7.2	0.4
1999	2,082.5	2.5	79.1	50.5	120.6	137.9	97.3	62.7	30.2	6.5	0.3
1998	2,111.5	2.8	83.5	55.4	124.8	138.4	97.5	63.2	30.0	6.6	0.3
1997	2,091.5	3.1	86.3	59.3	127.7	135.2	95.0	62.6	29.3	6.5	0.3
1996	2,088.5	3.5	89.6	63.3	130.5	133.2	94.3	62.0	28.7	6.1	0.3
1995	2,127.5	4.1	94.4	68.5	135.0	133.7	95.6	63.0	28.4	6.0	0.3
1994	2,258.5	4.5	102.9	75.1	146.2	142.9	101.5	65.0	28.7	5.9	0.3
1993	2,351.0	4.5	107.3	78.9	150.2	150.2	106.4	66.6	29.0	5.9	0.3
1992	2,416.0	4.6	111.3	80.5	156.3	156.2	109.7	67.0	28.6	5.6	0.2
1991	2,462.0	4.7	114.8	83.5	157.6	159.7	112.0	67.3	28.2	5.5	0.2
1990	2,480.0	4.9	112.8	82.3	152.9	160.2	115.5	68.7	28.1	5.5	0.3
1989	2,432.5	5.1	111.5	81.9	151.9	156.8	114.4	66.3	26.7	5.4	0.3
1988	2,298.0	4.9	102.7	75.7	142.7	149.7	108.2	63.1	25.6	5.1	0.3
1987	2,198.0	4.8	97.6	72.1	135.8	142.7	104.3	60.6	24.6	4.8	0.2
1986	2,135.5	4.7	95.8	69.3	135.1	137.3	101.1	59.3	23.8	4.8	0.3
1985	2,109.0	4.5	95.4	69.3	132.4	135.0	100.2	57.9	23.9	4.6	0.3
1984 ³	2,070.5	4.4	94.1	69.2	128.1	132.2	98.4	56.7	23.3	4.8	0.2
1983 ³	2,066.0	4.1	93.9	69.6	127.1	131.9	98.4	56.2	23.3	5.1	0.3
1982 ³	2,106.5	4.0	94.3	69.7	128.9	135.4	101.3	57.5	23.3	5.1	0.4
1981 ³	2,117.5	4.0	94.5	69.3	131.0	136.5	102.3	57.4	23.1	5.4	0.3
1980 ³	2,176.5	4.3	97.8	72.5	135.1	140.0	103.9	59.9	23.5	5.6	0.3
American Indian ⁵											
2003	1,731.5	1.0	53.1	30.6	87.3	110.0	93.5	57.4	25.4	5.5	0.4
2002	1,735.0	0.9	53.8	30.7	89.2	112.6	91.8	56.4	25.4	5.8	0.3
2001	1,746.5	1.0	56.3	31.4	94.8	115.0	90.4	55.9	24.7	5.7	0.3
2000	1,772.5	1.1	58.3	34.1	97.1	117.2	91.8	55.5	24.6	5.7	0.3
1999	1,783.5	1.4	59.9	36.5	98.0	120.7	90.6	53.8	24.3	5.7	0.3
1998	1,851.0	1.5	64.7	39.7	106.9	125.1	92.0	56.8	24.6	5.3	*
1997	1,834.5	1.5	65.2	41.0	107.1	122.5	91.6	56.0	24.4	5.4	0.3
1996	1,855.0	1.6	68.2	42.7	113.3	123.5	91.1	56.5	24.4	5.5	*
1995	1,878.5	1.6	72.9	44.6	122.2	123.1	91.6	56.5	24.3	5.5	*
1994	1,950.0	1.8	76.4	48.4	123.7	126.5	98.2	56.6	24.8	5.4	0.3
1993	2,048.5	1.4	79.8	51.5	126.3	134.2	103.5	59.5	25.5	5.6	*
1992	2,135.5	1.6	82.4	52.3	130.5	142.3	107.0	61.0	26.7	5.9	*
1991	2,142.5	1.6	84.1	51.9	134.2	143.8	105.6	60.8	26.4	5.8	0.4
1990	2,184.5	1.6	81.1	48.5	129.3	148.7	110.3	61.5	27.5	5.9	*
1989	2,248.5	1.5	82.7	51.6	128.9	152.4	114.2	64.8	27.4	6.4	*
1988	2,155.0	1.7	77.5	49.7	121.1	145.2	110.9	64.5	25.6	5.3	*
1987	2,100.5	1.7	77.2	48.8	122.2	140.0	107.9	63.0	24.4	5.6	*
1986	2,083.0	1.8	78.1	48.7	125.3	138.8	107.9	60.7	23.8	5.3	*
1985	2,129.5	1.7	79.2	47.7	124.1	139.1	109.6	62.6	27.4	6.0	*
1984 ³	2,137.5	1.7	81.5	50.7	124.7	142.4	109.2	60.5	26.3	5.6	*
1983 ³	2,182.0	1.9	84.2	55.2	121.4	145.5	113.7	58.9	25.5	6.4	*
1982 ³	2,215.0	1.4	83.5	52.6	127.6	148.1	115.8	60.9	26.9	6.0	*
1981 ³	2,092.5	2.1	78.4	49.7	121.5	141.2	105.6	58.9	25.2	6.6	*
1980 ³	2,165.0	1.9	82.2	51.5	129.5	143.7	106.6	61.8	28.1	8.2	*

See footnotes at end of table.

Table 4. Total fertility rates and birth rates, by age of mother: United States, 1970–2003, and by age and race of mother: United States, 1980–2003—Con.

[Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Birth rates are live births per 1,000 women in specified group. Population enumerated as of April 1 for 1970, 1980, 1990, and 2000 and estimated as of July 1 for all other years]

		Age of mother											
		Total fertility rate	15–19 years					20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
			10–14 years	Total	15–17 years	18–19 years							
Year and race													
Asian or Pacific Islander													
2003	1,873.0	0.2	17.4	8.8	29.8	59.6	108.5	114.6	59.9	13.5	0.9		
2002	1,819.5	0.3	18.3	9.0	31.5	60.4	105.4	109.6	56.5	12.5	0.9		
2001	1,840.0	0.2	19.8	10.3	32.8	59.1	106.4	112.6	56.7	12.3	0.9		
2000	1,892.0	0.3	20.5	11.6	32.6	60.3	108.4	116.5	59.0	12.6	0.8		
1999	1,754.5	0.4	21.4	12.4	33.9	58.9	100.8	104.3	52.9	11.3	0.9		
1998	1,731.5	0.5	22.2	13.8	34.5	59.2	98.7	101.6	51.4	11.8	0.9		
1997	1,757.5	0.5	22.3	14.0	34.9	61.2	101.6	102.5	51.0	11.5	0.9		
1996	1,787.0	0.6	23.5	14.7	36.8	63.5	102.8	104.1	50.2	11.9	0.8		
1995	1,795.5	0.7	25.5	15.6	40.1	64.2	103.7	102.3	50.1	11.8	0.8		
1994	1,834.0	0.7	26.6	16.3	41.3	66.4	108.0	102.2	50.4	11.5	1.0		
1993	1,841.5	0.7	26.5	16.1	41.2	68.1	110.3	101.2	49.4	11.2	0.9		
1992	1,894.5	0.7	26.5	15.4	41.9	71.7	114.6	102.7	50.7	11.1	0.9		
1991	1,928.0	0.8	27.3	16.3	42.2	73.8	118.9	103.3	49.2	11.2	1.1		
1990	2,002.5	0.7	26.4	16.0	40.2	79.2	126.3	106.5	49.6	10.7	1.1		
1989	1,947.5	0.6	25.6	15.0	40.4	78.8	124.0	102.3	47.0	10.2	1.0		
1988	1,983.5	0.6	24.2	13.6	39.6	80.7	128.0	104.4	47.5	10.3	1.0		
1987	1,886.0	0.6	22.4	12.6	37.0	79.7	122.7	97.0	44.2	9.5	1.1		
1986	1,836.0	0.5	22.8	12.1	38.8	79.2	119.9	92.6	41.9	9.3	1.0		
1985	1,885.0	0.4	23.8	12.5	40.8	83.6	123.0	93.6	42.7	8.7	1.2		
1984 ³	1,892.0	0.5	24.2	12.6	40.7	86.7	124.3	92.4	40.6	8.7	1.0		
1983 ³	1,943.5	0.5	26.1	12.9	44.5	94.0	126.2	93.3	39.4	8.2	1.0		
1982 ³	2,015.5	0.4	29.4	14.0	50.8	98.9	130.9	94.4	39.2	8.8	1.1		
1981 ³	1,976.0	0.3	28.5	13.4	49.5	96.4	129.1	93.4	38.0	8.6	0.9		
1980 ³	1,953.5	0.3	26.2	12.0	46.2	93.3	127.4	96.0	38.3	8.5	0.7		

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in numerator.

¹Beginning 1997, rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

²For 1970–91 includes births to races not shown separately. For 1992 and later years unknown race of mother is imputed; see “Technical Notes.”

³Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see “Technical Notes.”

⁴Based on a 50-percent sample of births.

⁵Includes births to Aleuts and Eskimos.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see “Technical Notes.”

Table 5. Fertility rates and birth rates, by live-birth order and race of mother: United States, 1980–2003

[Rates are live births per 1,000 women aged 15–44 years. Population enumerated as of April 1 for 1980, 1990, and 2000 and estimated as of July 1 for all other years. Figures for live-birth order not stated are distributed]

Year and race of mother	Fertility rate	Live-birth order						
		1	2	3	4	5	6 and 7	8 and over
All races ¹								
2003	66.1	26.5	21.4	11.1	4.3	1.6	0.9	0.3
2002	64.8	25.8	21.1	10.9	4.3	1.5	0.9	0.3
2001	65.3	26.0	21.3	11.0	4.3	1.6	0.9	0.3
2000	65.9	26.5	21.4	11.0	4.2	1.6	0.9	0.3
1999	64.4	26.0	21.0	10.7	4.1	1.5	0.9	0.3
1998	64.3	25.9	21.0	10.6	4.1	1.5	0.9	0.3
1997	63.6	25.9	20.7	10.4	4.0	1.5	0.9	0.3
1996	64.1	26.3	20.7	10.4	4.0	1.5	0.9	0.3
1995	64.6	26.9	20.7	10.3	4.0	1.5	0.9	0.3
1994	65.9	27.1	21.2	10.6	4.1	1.6	0.9	0.3
1993	67.0	27.3	21.7	10.9	4.3	1.6	1.0	0.3
1992	68.4	27.6	22.2	11.2	4.4	1.7	1.0	0.3
1991	69.3	28.2	22.3	11.4	4.4	1.7	1.0	0.3
1990	70.9	29.0	22.8	11.7	4.5	1.7	1.0	0.3
1989	69.2	28.4	22.4	11.3	4.3	1.6	0.9	0.3
1988	67.3	27.6	22.0	10.9	4.1	1.5	0.9	0.3
1987	65.8	27.2	21.6	10.5	3.9	1.4	0.8	0.3
1986	65.4	27.2	21.6	10.3	3.8	1.4	0.8	0.3
1985	66.3	27.6	22.0	10.4	3.8	1.4	0.8	0.3
1984 ²	65.5	27.4	21.7	10.1	3.7	1.4	0.9	0.3
1983 ²	65.7	27.8	21.5	10.1	3.7	1.4	0.9	0.3
1982 ²	67.3	28.6	22.0	10.2	3.8	1.4	0.9	0.3
1981 ²	67.3	29.0	21.6	10.1	3.8	1.5	0.9	0.4
1980 ²	68.4	29.5	21.8	10.3	3.9	1.5	1.0	0.4
White								
2003	66.1	26.5	21.7	11.2	4.2	1.5	0.8	0.3
2002	64.8	25.7	21.5	11.0	4.1	1.4	0.8	0.2
2001	65.0	25.9	21.6	11.0	4.1	1.4	0.8	0.2
2000	65.3	26.3	21.5	11.0	4.0	1.4	0.8	0.2
1999	64.0	25.9	21.2	10.6	3.9	1.3	0.7	0.2
1998	63.6	25.7	21.2	10.5	3.9	1.3	0.7	0.2
1997	62.8	25.7	20.8	10.2	3.8	1.3	0.7	0.2
1996	63.3	26.2	20.9	10.2	3.8	1.3	0.7	0.2
1995	63.6	26.6	20.9	10.2	3.7	1.3	0.7	0.2
1994	64.2	26.7	21.2	10.3	3.8	1.3	0.7	0.2
1993	64.9	26.8	21.5	10.4	3.9	1.4	0.8	0.2
1992	66.1	27.1	21.9	10.7	4.0	1.4	0.8	0.2
1991	66.7	27.7	21.9	10.8	4.0	1.4	0.8	0.2
1990	68.3	28.4	22.4	11.1	4.0	1.4	0.8	0.2
1989	66.4	27.6	21.9	10.7	3.8	1.3	0.7	0.2
1988	64.5	26.8	21.6	10.4	3.6	1.2	0.7	0.2
1987	63.3	26.5	21.3	10.0	3.5	1.2	0.7	0.2
1986	63.1	26.6	21.3	9.8	3.4	1.2	0.7	0.2
1985	64.1	27.0	21.8	9.9	3.4	1.2	0.7	0.2
1984 ²	63.2	26.8	21.4	9.6	3.3	1.2	0.7	0.2
1983 ²	63.4	27.2	21.2	9.5	3.3	1.2	0.7	0.2
1982 ²	64.8	28.0	21.6	9.6	3.4	1.2	0.7	0.3
1981 ²	64.8	28.4	21.1	9.5	3.4	1.2	0.8	0.3
1980 ²	65.6	28.8	21.3	9.6	3.4	1.3	0.8	0.3

See footnotes at end of table.

Table 5. Fertility rates and birth rates, by live-birth order and race of mother: United States, 1980–2003—Con.

[Rates are live births per 1,000 women aged 15–44 years. Population enumerated as of April 1 for 1980, 1990, and 2000 and estimated as of July 1 for all other years. Figures for live-birth order not stated are distributed]

Year and race of mother	Fertility rate	Live-birth order						
		1	2	3	4	5	6 and 7	8 and over
Black								
2003	66.3	25.1	19.4	11.7	5.5	2.4	1.6	0.5
2002	65.8	24.8	19.2	11.7	5.5	2.4	1.6	0.5
2001	67.6	25.4	19.9	12.1	5.6	2.5	1.6	0.5
2000	70.0	26.2	20.8	12.5	5.8	2.5	1.7	0.6
1999	68.5	25.9	20.4	12.1	5.5	2.4	1.6	0.5
1998	69.4	26.5	20.6	12.0	5.6	2.5	1.7	0.6
1997	69.0	26.7	20.2	11.8	5.5	2.5	1.7	0.6
1996	69.2	27.0	20.1	11.7	5.5	2.5	1.7	0.6
1995	71.0	28.2	20.4	11.8	5.6	2.6	1.8	0.6
1994	75.9	29.4	21.9	12.9	6.2	2.9	2.0	0.6
1993	79.6	29.8	23.1	14.0	6.8	3.1	2.1	0.6
1992	82.4	30.3	24.1	14.8	7.1	3.3	2.1	0.6
1991	84.8	31.3	24.9	15.3	7.3	3.3	2.1	0.6
1990	86.8	32.4	25.6	15.6	7.4	3.2	2.0	0.6
1989	86.2	32.9	25.4	15.3	7.1	3.0	1.9	0.6
1988	82.6	31.8	24.6	14.4	6.6	2.8	1.8	0.5
1987	80.1	31.2	23.8	13.9	6.3	2.7	1.7	0.5
1986	78.9	31.0	23.4	13.5	6.1	2.6	1.7	0.5
1985	78.8	31.0	23.4	13.4	6.1	2.6	1.7	0.5
1984 ²	78.1	30.9	23.0	13.2	6.0	2.6	1.7	0.6
1983 ²	78.7	31.1	23.1	13.2	6.1	2.7	1.8	0.6
1982 ²	80.9	31.7	23.9	13.8	6.3	2.7	1.8	0.7
1981 ²	82.0	32.3	24.2	13.7	6.3	2.8	1.9	0.8
1980 ²	84.9	33.7	24.7	14.0	6.5	2.9	2.1	0.9

¹Includes races other than white and black.

²Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 6. Live births, birth rates, and fertility rates, by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2003

[Birth rates are live births per 1,000 population in specified group. Fertility rates are live births per 1,000 women aged 15–44 years in specified group. Population enumerated as of April 1 for 1990 and 2000 and estimated as of July 1 for all other years]

Measure and year	Hispanic							Non-Hispanic		
	All origins ¹	Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total ²	White	Black
Number										
2003	4,089,950	912,329	654,504	58,400	14,867	135,586	48,972	3,149,034	2,321,904	576,033
2002	4,021,726	876,642	627,505	57,465	14,232	125,981	51,459	3,119,944	2,298,156	578,335
2001	4,025,933	851,851	611,000	57,568	14,017	121,365	47,901	3,149,572	2,326,578	589,917
2000	4,058,814	815,868	581,915	58,124	13,429	113,344	49,056	3,199,994	2,362,968	604,346
1999	3,959,417	764,339	540,674	57,138	13,088	103,307	50,132	3,147,580	2,346,450	588,981
1998	3,941,553	734,661	516,011	57,349	13,226	98,226	49,849	3,158,975	2,361,462	593,127
1997	3,880,894	709,767	499,024	55,450	12,887	97,405	45,001	3,115,174	2,333,363	581,431
1996	3,891,494	701,339	489,666	54,863	12,613	97,888	46,309	3,133,484	2,358,989	578,099
1995	3,899,589	679,768	469,615	54,824	12,473	94,996	47,860	3,160,495	2,382,638	587,781
1994	3,952,767	665,026	454,536	57,240	11,889	93,485	47,876	3,245,115	2,438,855	619,198
1993	4,000,240	654,418	443,733	58,102	11,916	92,371	48,296	3,295,345	2,472,031	641,273
1992 ³	4,049,024	643,271	432,047	59,569	11,472	89,031	51,152	3,365,862	2,527,207	657,450
1991 ³	4,094,566	623,085	411,233	59,833	11,058	86,908	54,053	3,434,464	2,589,878	666,758
1990 ⁴	4,092,994	595,073	385,640	58,807	11,311	83,008	56,307	3,457,417	2,626,500	661,701
1989 ⁵	3,903,012	532,249	327,233	56,229	10,842	72,443	65,502	3,297,493	2,526,367	611,269
Birth rate										
2003 ⁶	14.1	22.9	24.7	15.1	9.9	23.0	(⁶)	12.7	11.8	15.9
2002 ⁶	13.9	22.6	24.2	16.5	10.0	22.4	(⁶)	12.6	11.7	16.1
2001 ⁶	14.1	23.0	24.8	17.8	10.3	21.8	(⁶)	12.8	11.8	16.6
2000 ⁶	14.4	23.1	25.0	18.1	9.7	21.8	(⁶)	13.2	12.2	17.3
1999 ⁶	14.2	22.5	24.2	18.0	9.4	21.7	(⁶)	13.0	12.1	17.1
1998 ⁶	14.3	22.7	24.6	17.9	9.7	21.7	(⁶)	13.2	12.2	17.5
1997 ⁶	14.2	23.0	25.3	17.2	10.0	21.3	(⁶)	13.1	12.2	17.4
1996 ⁶	14.4	23.8	26.2	17.2	10.6	22.5	(⁶)	13.3	12.3	17.6
1995 ⁶	14.6	24.1	25.8	19.0	10.8	24.2	(⁶)	13.5	12.5	18.2
1994 ⁶	15.0	24.7	26.1	20.8	10.7	24.9	(⁶)	13.9	12.8	19.5
1993 ⁶	15.4	25.4	26.8	21.5	10.5	26.3	(⁶)	14.3	13.1	20.7
1992 ^{6,7}	15.8	26.1	27.4	22.9	10.1	27.5	(⁶)	14.8	13.4	21.6
1991 ^{6,7}	16.2	26.5	27.6	23.3	9.8	28.3	(⁶)	15.2	13.9	22.4
1990 ^{4,6}	16.7	26.7	28.7	21.6	10.9	27.5	(⁶)	15.7	14.4	23.0
1989 ^{5,6}	16.3	26.2	25.7	23.7	10.0	28.3	(⁶)	15.4	14.2	22.8
Fertility rate										
2003 ⁶	66.1	96.9	105.5	61.6	61.7	91.2	(⁶)	60.5	58.5	67.1
2002 ⁶	64.8	94.4	102.8	65.4	59.0	86.1	(⁶)	59.6	57.4	67.4
2001 ⁶	65.3	96.0	105.7	72.2	56.7	82.7	(⁶)	60.1	57.7	69.1
2000 ⁶	65.9	95.9	105.1	73.5	49.3	85.1	(⁶)	61.1	58.5	71.4
1999 ⁶	64.4	93.0	101.5	71.1	47.0	84.8	(⁶)	60.0	57.7	69.9
1998 ⁶	64.3	93.2	103.2	69.7	46.5	83.5	(⁶)	60.0	57.6	70.9
1997 ⁶	63.6	94.2	106.6	65.8	53.1	80.6	(⁶)	59.3	56.8	70.3
1996 ⁶	64.1	97.5	110.7	66.5	55.1	84.2	(⁶)	59.6	57.1	70.7
1995 ⁶	64.6	98.8	109.9	71.3	52.2	89.1	(⁶)	60.2	57.5	72.8
1994 ⁶	65.9	100.7	109.9	78.2	53.6	93.2	(⁶)	61.6	58.2	77.5
1993 ⁶	67.0	103.3	110.9	79.8	53.9	101.5	(⁶)	62.7	58.9	81.5
1992 ^{6,7}	68.4	106.1	113.3	87.9	49.4	104.7	(⁶)	64.2	60.0	84.5
1991 ^{6,7}	69.3	106.9	114.9	87.9	47.6	105.5	(⁶)	65.2	60.9	87.0
1990 ^{4,6}	71.0	107.7	118.9	82.9	52.6	102.7	(⁶)	67.1	62.8	89.0
1989 ^{5,6}	69.2	104.9	106.6	86.6	49.8	95.8	(⁶)	65.7	60.5	84.8

¹Includes origin not stated.

²Includes races other than white and black.

³Excludes data for New Hampshire, which did not report Hispanic origin.

⁴Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.

⁵Excludes data for Louisiana, New Hampshire, and Oklahoma, which did not report Hispanic origin.

⁶Rates for the Central and South American population include other and unknown Hispanic.

⁷Rates are estimated for the United States based on birth data for 49 States and the District of Columbia. Births for New Hampshire that did not report Hispanic origin are included in the rates for non-Hispanic women; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes."

Table 7. Live births by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2003

[Live-birth order refers to number of children born alive to mother. Includes births with stated origin of mother only]

Live-birth order and origin of mother	Age of mother														
	All ages	Under 15 years	15–19 years						20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years
			Total	15 years	16 years	17 years	18 years	19 years							
Hispanic															
Total	912,329	2,356	128,524	6,818	15,151	24,986	35,927	45,642	273,311	246,361	169,054	75,801	16,172	738	12
1st child	330,032	2,299	98,961	6,519	13,784	20,918	27,208	30,532	117,279	64,418	33,173	11,638	2,141	122	1
2d child	280,462	47	24,661	257	1,264	3,627	7,431	12,082	98,707	85,060	49,833	18,733	3,296	122	3
3d child	175,225	1	3,993	16	66	341	1,059	2,511	41,204	60,095	46,009	20,158	3,618	146	1
4th child	76,317	1	484	2	4	26	105	347	11,768	24,359	24,007	12,700	2,887	108	3
5th child	28,959	—	53	—	1	2	9	41	2,812	8,148	9,527	6,568	1,771	78	2
6th child	10,928	—	8	1	—	1	2	4	598	2,452	3,678	3,071	1,053	67	1
7th child	4,489	—	1	—	1	—	—	—	128	840	1,416	1,457	613	33	1
8th child and over	3,545	—	2	—	—	—	—	2	58	374	1,031	1,279	740	61	—
Not stated	2,372	8	361	23	31	71	113	123	757	615	380	197	53	1	—
Mexican															
Total	654,504	1,842	98,396	5,274	11,741	19,252	27,538	34,591	203,314	177,499	115,033	48,120	9,858	435	7
1st child	227,447	1,799	74,989	5,043	10,643	15,986	20,603	22,714	84,114	41,396	18,402	5,732	966	48	1
2d child	198,082	34	19,483	200	1,010	2,910	5,902	9,461	74,905	60,948	31,196	9,884	1,569	61	2
3d child	130,702	1	3,224	13	57	278	863	2,013	31,767	46,404	33,855	13,232	2,143	75	1
4th child	58,997	1	393	2	4	23	85	279	9,143	19,114	18,942	9,384	1,955	64	1
5th child	22,709	—	45	—	1	2	8	34	2,202	6,368	7,589	5,132	1,317	56	—
6th child	8,509	—	8	1	—	1	2	4	485	1,883	2,876	2,412	794	50	1
7th child	3,600	—	1	—	1	—	—	—	112	678	1,123	1,181	477	27	1
8th child and over	2,819	—	2	—	—	—	—	2	47	288	794	1,030	604	54	—
Not stated	1,639	7	251	15	25	52	75	84	539	420	256	133	33	—	—
Puerto Rican															
Total	58,400	191	10,239	579	1,203	2,038	2,804	3,615	19,004	14,169	9,301	4,515	934	47	—
1st child	22,913	189	7,980	558	1,105	1,740	2,137	2,440	7,697	3,727	2,255	872	184	9	—
2d child	18,020	2	1,890	18	96	269	569	938	6,672	4,734	3,043	1,406	261	12	—
3d child	10,222	—	288	1	2	20	73	192	3,210	3,291	2,113	1,114	199	7	—
4th child	4,262	—	48	—	—	2	12	34	1,038	1,466	1,000	562	142	6	—
5th child	1,629	—	1	—	—	—	1	—	266	546	466	277	65	8	—
6th child	705	—	—	—	—	—	—	—	48	246	222	146	42	1	—
7th child	260	—	—	—	—	—	—	—	11	77	96	59	16	1	—
8th child and over	220	—	—	—	—	—	—	—	3	44	82	67	22	2	—
Not stated	169	—	32	2	—	7	12	11	59	38	24	12	3	1	—
Cuban															
Total	14,867	15	1,162	36	104	209	339	474	2,608	3,966	4,298	2,283	511	24	—
1st child	6,969	14	990	35	99	193	286	377	1,585	1,966	1,623	652	131	8	—
2d child	5,283	1	148	1	5	12	43	87	760	1,404	1,835	951	178	6	—
3d child	1,885	—	18	—	—	3	8	7	207	440	639	465	109	7	—
4th child	493	—	1	—	—	—	—	1	41	120	146	130	53	2	—
5th child	130	—	1	—	—	—	—	1	10	20	33	45	20	1	—
6th child	54	—	—	—	—	—	—	—	1	8	13	23	9	—	—
7th child	20	—	—	—	—	—	—	—	—	4	5	6	5	—	—
8th child and over	15	—	—	—	—	—	—	—	—	2	—	8	5	—	—
Not stated	18	—	4	—	—	1	2	1	4	2	4	3	1	—	—
Central and South American															
Total	135,586	152	11,119	440	1,140	2,009	3,204	4,326	33,588	38,505	31,448	16,629	3,960	183	2
1st child	53,522	148	9,096	422	1,050	1,761	2,599	3,264	17,692	13,780	8,615	3,462	689	40	—
2d child	43,849	4	1,749	16	84	223	532	894	11,133	13,816	10,794	5,269	1,051	33	—
3d child	23,856	—	227	—	1	21	63	142	3,663	7,279	7,339	4,306	996	46	—
4th child	8,940	—	19	—	—	—	3	16	822	2,464	2,951	2,058	595	30	1
5th child	3,205	—	3	—	—	—	—	3	168	807	1,072	850	292	12	1
6th child	1,170	—	—	—	—	—	—	—	27	203	399	372	155	14	—
7th child	430	—	—	—	—	—	—	—	3	43	131	157	92	4	—
8th child and over	335	—	—	—	—	—	—	—	7	21	97	124	82	4	—
Not stated	279	—	25	2	5	4	7	7	73	92	50	31	8	—	—

See footnotes at end of table.

Table 7. Live births by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2003—Con.

[Live-birth order refers to number of children born alive to mother. Includes births with stated origin of mother only]

Live-birth order and origin of mother	Age of mother														
	All ages	Under 15 years	15–19 years						20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years
			Total	15 years	16 years	17 years	18 years	19 years							
Other and unknown															
Hispanic	48,972	156	7,608	489	963	1,478	2,042	2,636	14,797	12,222	8,974	4,254	909	49	3
1st child	19,181	149	5,906	461	887	1,238	1,583	1,737	6,191	3,549	2,278	920	171	17	–
2d child	15,228	6	1,391	22	69	213	385	702	5,237	4,158	2,965	1,223	237	10	1
3d child	8,560	–	236	2	6	19	52	157	2,357	2,681	2,063	1,041	171	11	–
4th child	3,625	–	23	–	–	1	5	17	724	1,195	968	566	142	6	1
5th child	1,286	–	3	–	–	–	–	3	166	407	367	264	77	1	1
6th child	490	–	–	–	–	–	–	–	37	112	168	118	53	2	–
7th child	179	–	–	–	–	–	–	–	2	38	61	54	23	1	–
8th child and over	156	–	–	–	–	–	–	–	1	19	58	50	27	1	–
Not stated	267	1	49	4	1	7	17	20	82	63	46	18	8	–	–
Non-Hispanic															
Total ¹	3,149,034	4,258	283,602	11,317	25,956	49,350	81,111	115,868	752,607	832,783	799,179	387,807	83,812	4,689	297
1st child	1,292,838	4,171	229,334	10,910	24,164	43,361	65,861	85,038	361,482	327,158	252,813	96,684	19,849	1,257	90
2d child	1,031,628	74	45,498	368	1,614	5,425	13,054	25,037	251,100	279,333	296,055	133,018	25,224	1,258	68
3d child	504,732	3	7,148	10	98	423	1,800	4,817	100,098	141,324	151,304	86,893	17,162	756	44
4th child	189,495	–	832	3	8	30	164	627	28,719	53,773	58,077	38,211	9,387	464	32
5th child	67,577	–	107	1	–	3	26	77	7,150	18,696	21,369	15,251	4,687	296	21
6th child	27,525	–	14	–	–	–	3	11	1,608	6,660	9,237	7,252	2,561	178	15
7th child	12,679	–	3	–	–	–	3	–	370	2,456	4,305	3,947	1,473	119	6
8th child and over	14,337	–	5	–	–	–	2	3	123	1,303	4,005	5,385	3,155	343	18
Not stated	8,223	10	661	25	72	108	198	258	1,957	2,080	2,014	1,166	314	18	3
White	2,321,904	1,399	172,620	4,878	13,375	28,550	50,484	75,333	522,275	627,437	626,315	303,354	64,600	3,660	244
1st child	961,897	1,384	144,011	4,754	12,743	25,917	42,636	57,961	264,696	256,719	200,974	77,145	15,872	1,022	74
2d child	780,026	12	24,817	111	585	2,424	6,958	14,739	176,115	216,354	236,903	105,130	19,630	1,004	61
3d child	370,971	1	3,137	3	17	144	725	2,248	62,118	103,249	119,674	69,039	13,142	573	38
4th child	129,615	–	270	1	2	7	49	211	14,613	34,879	43,045	29,324	7,106	352	26
5th child	42,120	–	36	–	–	1	11	24	2,879	10,364	14,269	10,930	3,404	218	20
6th child	15,932	–	2	–	–	–	1	1	496	3,093	5,580	4,833	1,789	128	11
7th child	7,201	–	1	–	–	–	1	–	112	927	2,430	2,597	1,048	82	4
8th child and over	8,643	–	2	–	–	–	1	1	49	439	2,006	3,481	2,391	267	8
Not stated	5,499	2	344	9	28	57	102	148	1,197	1,413	1,434	875	218	14	2
Black	576,033	2,642	97,509	5,852	11,247	18,431	26,915	35,064	189,020	133,821	93,346	47,661	11,419	588	27
1st child	217,190	2,572	74,576	5,590	10,193	15,383	20,298	23,112	74,504	33,589	20,636	9,106	2,084	117	6
2d child	167,441	61	18,414	240	931	2,723	5,437	9,083	62,774	41,512	28,434	13,263	2,849	130	4
3d child	101,657	1	3,648	7	76	259	976	2,330	33,281	30,174	20,938	11,055	2,446	110	4
4th child	48,203	–	509	2	6	20	104	377	12,602	15,816	11,272	6,368	1,560	72	4
5th child	20,934	–	64	–	–	2	14	48	3,902	7,124	5,590	3,242	960	51	1
6th child	9,547	–	10	–	–	–	1	9	1,019	3,062	2,947	1,878	595	35	1
7th child	4,488	–	2	–	–	–	2	–	235	1,316	1,539	1,051	319	24	2
8th child and over	4,555	–	3	–	–	–	1	2	64	762	1,633	1,497	545	46	5
Not stated	2,018	8	283	13	41	44	82	103	639	466	357	201	61	3	–

– Quantity zero.

¹Includes races other than white and black.

NOTE: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race. See "Technical Notes."

Table 8. Fertility rates and birth rates, by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2003

[Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Birth rates are live births per 1,000 women in specified age and racial group. Populations estimated as of July 1. Live-birth order refers to number of children born alive to mother. Figures for live-birth order not stated are distributed]

Live-birth order and race of mother	Age of mother										
	15–44 years ¹	10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years ²
			Total	15–17 years	18–19 years						
Hispanic											
Total	96.9	1.3	82.3	49.7	132.0	163.4	144.4	102.0	50.8	12.2	0.7
1st child	35.2	1.3	63.5	43.8	93.7	70.3	37.8	20.1	7.8	1.6	0.1
2d child	29.9	0.0	15.8	5.5	31.7	59.2	50.0	30.1	12.6	2.5	0.1
3d child	18.7	*	2.6	0.4	5.8	24.7	35.3	27.8	13.5	2.7	0.1
4th child	8.1	*	0.3	0.0	0.7	7.1	14.3	14.5	8.5	2.2	0.1
5th child	3.1	*	0.0	*	0.1	1.7	4.8	5.8	4.4	1.3	0.1
6th and 7th child	1.6	*	*	*	*	0.4	1.9	3.1	3.0	1.3	0.1
8th child and over	0.4	*	*	*	*	0.0	0.2	0.6	0.9	0.6	0.1
Mexican											
1st child	36.8	1.4	71.2	49.8	104.0	73.4	35.4	16.8	6.0	1.3	0.1
2d child	32.0	0.0	18.5	6.5	36.9	65.3	52.1	28.5	10.3	2.0	0.1
3d child	21.1	*	3.1	0.5	6.9	27.7	39.7	30.9	13.8	2.8	0.1
4th child	9.5	*	0.4	0.0	0.9	8.0	16.3	17.3	9.8	2.6	0.1
5th child	3.7	*	0.0	*	0.1	1.9	5.4	6.9	5.4	1.7	0.1
6th and 7th child	2.0	*	*	*	*	0.5	2.2	3.6	3.8	1.7	0.1
8th child and over	0.5	*	*	*	*	0.0	0.2	0.7	1.1	0.8	0.1
Puerto Rican											
1st child	24.3	1.0	47.5	32.1	*	52.0	22.8	13.5	5.7	1.3	*
2d child	19.1	*	11.3	3.6	*	45.1	29.0	18.3	9.2	1.8	*
3d child	10.8	*	1.7	0.2	*	21.7	20.2	12.7	7.3	1.4	*
4th child	4.5	*	0.3	*	*	7.0	9.0	6.0	3.7	1.0	*
5th child	1.7	*	*	*	*	1.8	3.3	2.8	1.8	0.4	*
6th and 7th child	1.0	*	*	*	*	0.4	2.0	1.9	1.3	0.4	*
8th child and over	0.2	*	*	*	*	*	0.3	0.5	0.4	0.1	*
Cuban											
1st child	29.0	*	*	*	*	*	*	*	*	*	*
2d child	22.0	*	*	*	*	*	*	*	*	*	*
3d child	7.8	*	*	*	*	*	*	*	*	*	*
4th child	2.1	*	*	*	*	*	*	*	*	*	*
5th child	0.5	*	*	*	*	*	*	*	*	*	*
6th and 7th child	0.3	*	*	*	*	*	*	*	*	*	*
8th child and over	*	*	*	*	*	*	*	*	*	*	*
Other Hispanic ³											
1st child	36.0	1.0	48.6	32.6	70.3	70.4	52.3	30.3	13.3	2.5	0.2
2d child	29.3	*	10.2	3.5	19.2	48.3	54.3	38.3	19.7	3.7	0.2
3d child	16.1	*	1.5	0.3	3.2	17.7	30.1	26.2	16.2	3.3	0.2
4th child	6.2	*	0.1	*	0.3	4.6	11.1	10.9	8.0	2.1	0.1
5th child	2.2	*	*	*	*	1.0	3.7	4.0	3.4	1.1	*
6th and 7th child	1.1	*	*	*	*	0.2	1.2	2.1	2.1	0.9	0.1
8th child and over	0.2	*	*	*	*	*	0.1	0.4	0.5	0.3	*
Non-Hispanic ⁴											
Total ⁵	60.5	0.5	34.1	17.3	59.4	90.5	109.2	93.8	42.6	8.3	0.5
1st child	24.9	0.5	27.6	15.7	45.6	43.5	43.0	29.8	10.7	2.0	0.1
2d child	19.9	0.0	5.5	1.5	11.5	30.3	36.7	34.8	14.7	2.5	0.1
3d child	9.7	*	0.9	0.1	2.0	12.1	18.6	17.8	9.6	1.7	0.1
4th child	3.7	*	0.1	0.0	0.2	3.5	7.1	6.8	4.2	0.9	0.1
5th child	1.3	*	0.0	*	0.0	0.9	2.5	2.5	1.7	0.5	0.0
6th and 7th child	0.8	*	*	*	*	0.2	1.2	1.6	1.2	0.4	0.0
8th child and over	0.3	*	*	*	*	0.0	0.2	0.5	0.6	0.3	0.0

See footnotes at end of table.

Table 8. Fertility rates and birth rates, by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2003—Con.

[Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Birth rates are live births per 1,000 women in specified age and racial group. Populations estimated as of July 1. Live-birth order refers to number of children born alive to mother. Figures for live-birth order not stated are distributed]

Live-birth order and race of mother	Age of mother										
	15–19 years					20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years ²
	15–44 years ¹	10–14 years	Total	15–17 years	18–19 years						
White	58.5	0.2	27.4	12.4	50.0	83.5	110.8	97.6	43.2	8.1	0.5
1st child	24.3	0.2	22.9	11.5	40.1	42.4	45.5	31.4	11.0	2.0	0.1
2d child	19.7	*	4.0	0.8	8.7	28.2	38.3	37.0	15.0	2.5	0.1
3d child	9.4	*	0.5	0.0	1.2	10.0	18.3	18.7	9.9	1.6	0.1
4th child	3.3	*	0.0	*	0.1	2.3	6.2	6.7	4.2	0.9	0.0
5th child	1.1	*	0.0	*	0.0	0.5	1.8	2.2	1.6	0.4	0.0
6th and 7th child	0.6	*	*	*	*	0.1	0.7	1.3	1.1	0.4	0.0
8th child and over	0.2	*	*	*	*	0.0	0.1	0.3	0.5	0.3	0.0
Black	67.1	1.6	64.7	38.7	105.3	128.1	102.1	67.4	33.4	7.7	0.5
1st child	25.4	1.6	49.7	34.1	74.0	50.7	25.7	15.0	6.4	1.4	0.1
2d child	19.6	0.0	12.2	4.3	24.7	42.7	31.7	20.6	9.3	1.9	0.1
3d child	11.9	*	2.4	0.4	5.6	22.6	23.1	15.2	7.8	1.7	0.1
4th child	5.6	*	0.3	0.0	0.8	8.6	12.1	8.2	4.5	1.1	0.1
5th child	2.5	*	0.0	*	0.1	2.7	5.5	4.1	2.3	0.7	0.0
6th and 7th child	1.6	*	*	*	*	0.9	3.4	3.3	2.1	0.6	0.0
8th child and over	0.5	*	*	*	*	0.0	0.6	1.2	1.1	0.4	0.0

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator or, for the Hispanic subgroups, fewer than 75,000 women in the denominator; see "Technical Notes." These guidelines for denominator size follow the suggestions of the U.S. Census Bureau.

0.0 Quantity more than zero but less than 0.05.

¹Fertility rates computed by relating total births, regardless of age of mother, to women aged 15–44 years.

²Birth rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

³Includes Central and South American and other and unknown Hispanic.

⁴Includes origin not stated.

⁵Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Persons of Hispanic origin may be of any race. In this table only non-Hispanic women are classified by race.

Table 9. Total fertility rates, fertility rates, and birth rates, by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2003

[Fertility rates are live births per 1,000 women aged 15–44 years in specified racial group, and birth rates are live births per 1,000 women in specified age and racial group. Population enumerated as of April 1 for 1990 and 2000 and estimated as of July 1 for all other years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5]

Year and origin or race of mother	Total fertility rate	Fertility rate ¹	10–14 years	Age of mother								
				15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years ²
				Total	15–17 years	18–19 years						
All origins												
2003	2,042.5	66.1	0.6	41.6	22.4	70.7	102.6	115.6	95.1	43.8	8.7	0.5
2002	2,013.0	64.8	0.7	43.0	23.2	72.8	103.6	113.6	91.5	41.4	8.3	0.5
2001	2,034.0	65.3	0.8	45.3	24.7	76.1	106.2	113.4	91.9	40.6	8.1	0.5
2000	2,056.0	65.9	0.9	47.7	26.9	78.1	109.7	113.5	91.2	39.7	8.0	0.5
1999	2,007.5	64.4	0.9	48.8	28.2	79.1	107.9	111.2	87.1	37.8	7.4	0.4
1998	1,999.0	64.3	1.0	50.3	29.9	80.9	108.4	110.2	85.2	36.9	7.4	0.4
1997	1,971.0	63.6	1.1	51.3	31.4	82.1	107.3	108.3	83.0	35.7	7.1	0.4
1996	1,976.0	64.1	1.2	53.5	33.3	84.7	107.8	108.6	82.1	34.9	6.8	0.3
1995	1,978.0	64.6	1.3	56.0	35.5	87.7	107.5	108.8	81.1	34.0	6.6	0.3
1994	2,001.5	65.9	1.4	58.2	37.2	90.2	109.2	111.0	80.4	33.4	6.4	0.3
1993	2,019.5	67.0	1.4	59.0	37.5	91.1	111.3	113.2	79.9	32.7	6.1	0.3
1992	2,046.0	68.4	1.4	60.3	37.6	93.6	113.7	115.7	79.6	32.3	5.9	0.3
1991	2,062.5	69.3	1.4	61.8	38.6	94.0	115.3	117.2	79.2	31.9	5.5	0.2
1990	2,081.0	70.9	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
1989	2,014.0	69.2	1.4	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2
Hispanic												
Total												
2003	2,785.5	96.9	1.3	82.3	49.7	132.0	163.4	144.4	102.0	50.8	12.2	0.7
2002	2,718.0	94.4	1.4	83.4	50.7	133.0	164.3	139.4	95.1	47.8	11.5	0.7
2001	2,748.5	96.0	1.6	86.4	52.8	135.5	163.5	140.4	97.6	47.9	11.6	0.7
2000	2,730.0	95.9	1.7	87.3	55.5	132.6	161.3	139.9	97.1	46.6	11.5	0.6
1999	2,649.0	93.0	1.9	86.8	56.9	129.5	157.3	135.8	92.3	44.5	10.6	0.6
1998	2,652.5	93.2	1.9	87.9	58.5	131.5	159.3	136.1	90.5	43.4	10.8	0.6
1997	2,680.5	94.2	2.1	89.6	61.1	132.4	162.6	137.5	89.6	43.4	10.7	0.6
1996	2,772.0	97.5	2.4	94.6	64.2	140.0	170.2	140.7	91.3	43.9	10.7	0.6
1995	2,798.5	98.8	2.6	99.3	68.3	145.4	171.9	140.4	90.5	43.7	10.7	0.6
1994	2,839.0	100.7	2.6	101.3	69.9	147.5	175.7	142.4	91.1	43.4	10.7	0.6
1993	2,894.5	103.3	2.6	101.8	68.5	151.1	180.0	146.0	93.2	44.1	10.6	0.6
1992 ³	2,957.5	106.1	2.5	103.3	68.9	153.9	185.2	148.8	94.8	45.3	11.0	0.6
1991 ³	2,963.5	106.9	2.4	104.6	69.2	155.5	184.6	150.0	95.1	44.7	10.7	0.6
1990 ⁴	2,959.5	107.7	2.4	100.3	65.9	147.7	181.0	153.0	98.3	45.3	10.9	0.7
1989 ⁵	2,903.5	104.9	2.3	100.8	---	---	184.4	146.6	92.1	43.5	10.4	0.6
Mexican												
2003	2,957.5	105.5	1.5	93.2	56.9	148.8	176.9	151.5	104.7	50.2	12.8	0.7
2002	2,879.5	102.8	1.5	94.5	58.6	147.5	176.9	144.5	97.9	47.5	12.3	0.8
2001	2,928.5	105.7	1.7	95.4	59.3	147.0	177.0	146.4	101.9	50.0	12.6	0.7
2000	2,906.5	105.1	1.9	95.4	60.6	146.7	174.9	144.7	102.3	49.2	12.2	0.7
1999	2,823.0	101.5	2.1	94.3	60.8	145.6	170.8	141.4	97.4	47.2	10.7	0.7
1998	2,878.0	103.2	2.1	96.4	62.9	149.2	176.5	147.4	94.9	46.9	10.8	0.6
1997	2,957.0	106.6	2.3	103.4	71.3	151.6	180.9	150.0	95.3	47.4	11.5	0.6
1996	3,052.0	110.7	2.6	112.2	77.7	161.6	185.3	154.7	96.5	46.4	12.0	0.7
1995	3,033.5	109.9	2.7	115.9	79.1	170.7	190.4	146.6	93.0	45.5	11.9	0.7
1994	3,024.0	109.9	2.7	109.2	73.6	163.3	189.1	153.6	92.5	45.3	11.7	0.7
1993	3,041.5	110.9	2.5	103.6	68.4	156.6	187.9	159.5	97.2	45.5	11.3	0.8
1992 ³	3,107.0	113.3	2.4	105.1	---	---	196.6	160.2	97.1	47.4	11.8	0.8
1991 ³	3,103.5	114.9	2.5	108.3	70.0	164.7	192.4	156.1	99.7	49.1	11.9	0.7
1990 ⁴	3,214.0	118.9	2.5	108.0	69.7	162.2	200.3	165.3	104.4	49.1	12.4	0.8
1989 ⁵	2,916.5	106.6	2.0	94.5	---	---	184.3	153.7	96.1	41.0	11.1	0.6

See footnotes at end of table.

Table 9. Total fertility rates, fertility rates, and birth rates, by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2003—Con.

[Fertility rates are live births per 1,000 women aged 15–44 years in specified racial group, and birth rates are live births per 1,000 women in specified age and racial group. Population enumerated as of April 1 for 1990 and 2000 and estimated as of July 1 for all other years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5]

Year and origin or race of mother	Total fertility rate	Fertility rate ¹	10–14 years	Age of mother								
				15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years ²
				Total	15–17 years	18–19 years						
Puerto Rican												
2003	1,841.0	61.6	1.0	60.8	35.9	*	127.9	86.6	55.6	29.5	6.4	0.4
2002	1,947.5	65.4	1.4	61.4	39.7	*	136.5	90.6	61.5	31.3	6.3	0.5
2001	2,165.0	72.2	1.7	82.2	*	*	147.2	93.6	70.5	30.7	6.7	0.4
2000	2,178.5	73.5	1.7	82.9	54.7	120.4	149.5	101.6	61.1	32.0	6.6	0.3
1999	2,104.5	71.1	1.6	74.0	49.4	*	146.0	106.5	58.0	27.3	7.2	0.3
1998	2,043.5	69.7	1.8	76.2	51.7	*	146.7	88.7	61.9	25.8	7.2	0.4
1997	1,931.5	65.8	1.7	68.9	45.0	*	136.0	92.9	54.1	26.1	6.2	0.4
1996	1,965.0	66.5	1.9	76.5	48.6	*	133.7	95.6	54.3	25.2	5.6	*
1995	2,078.0	71.3	2.9	82.8	57.3	*	138.1	97.9	61.2	26.9	5.5	0.3
1994	2,341.5	78.2	3.1	99.6	68.8	*	169.0	103.8	59.5	27.5	5.6	0.2
1993	2,416.0	79.8	3.1	104.9	70.1	*	184.6	102.8	54.4	26.7	6.2	*
1992 ³	2,568.5	87.9	3.4	106.5	---	---	199.1	102.6	65.3	29.9	6.6	*
1991 ³	2,573.5	87.9	2.7	111.0	*	*	193.3	108.9	68.1	23.9	6.5	*
1990 ⁴	2,301.0	82.9	2.9	101.6	71.6	141.6	150.1	109.9	62.8	26.2	6.2	0.5
1989 ⁵	2,421.0	86.6	3.8	112.7	---	---	171.0	98.0	65.2	26.9	6.3	*
Cuban												
2003	2,059.5	61.7	*	*	*	*	*	*	*	*	*	*
2002	1,940.5	59.0	*	*	*	*	*	*	*	*	*	*
2001	1,792.5	56.7	*	*	*	*	*	*	*	*	*	*
2000	1,528.0	49.3	*	23.5	14.2	43.4	64.2	104.0	68.1	37.3	7.9	*
1999	1,388.5	47.0	*	*	*	*	*	*	*	*	*	*
1998	1,402.5	46.5	*	*	*	*	*	*	*	*	*	*
1997	1,619.5	53.1	*	*	*	*	*	*	*	*	*	*
1996	1,617.0	55.1	*	*	*	*	*	*	*	*	*	*
1995	1,584.0	52.2	*	*	*	*	*	*	*	*	*	*
1994	1,587.0	53.6	*	*	*	*	*	*	*	*	*	*
1993	1,570.0	53.9	*	*	*	*	*	*	*	*	*	*
1992 ³	1,453.5	49.4	*	*	---	---	*	*	*	*	*	*
1991 ³	1,352.5	47.6	*	*	*	*	*	*	*	*	*	*
1990 ⁴	1,459.5	52.6	*	30.3	18.2	46.1	64.6	95.4	67.6	28.2	4.9	*
1989 ⁵	1,479.0	49.8	*	*	---	---	*	*	*	*	*	*
Other Hispanic ⁶												
2003	2,733.0	91.2	1.0	60.4	36.4	93.1	142.2	152.8	112.3	63.2	13.9	0.8
2002	2,610.5	86.1	1.1	63.0	34.7	110.3	143.3	147.2	98.4	56.1	12.2	0.8
2001	2,519.5	82.7	1.1	65.3	35.6	115.2	136.0	143.3	95.4	50.3	11.6	0.9
2000	2,563.5	85.1	1.2	69.9	44.4	102.0	133.2	143.9	103.6	47.7	12.5	0.7
1999	2,517.0	84.8	1.5	75.5	53.1	100.5	130.2	138.4	98.3	46.5	12.3	0.7
1998	2,448.5	83.5	1.8	75.0	53.3	100.3	122.7	133.6	97.8	45.4	12.8	0.6
1997	2,376.5	80.6	1.8	66.4	44.5	98.0	129.3	125.8	95.6	43.9	11.8	0.7
1996	2,516.5	84.2	2.2	64.8	43.4	95.6	149.6	127.9	98.0	49.1	11.0	0.7
1995	2,629.5	89.1	2.3	72.1	51.3	99.4	144.3	147.7	97.9	49.4	11.6	0.6
1994	2,693.0	93.2	2.5	82.6	62.7	105.0	151.2	137.0	104.4	48.4	11.9	0.6
1993	2,914.5	101.5	2.6	102.0	74.7	134.6	167.5	139.4	106.7	51.7	12.5	0.5
1992 ³	2,989.0	104.7	2.4	108.2	---	---	168.0	151.9	104.4	49.9	12.5	0.5
1991 ³	3,064.5	105.5	2.2	100.7	67.3	145.6	184.1	164.5	100.2	49.2	11.4	0.6
1990 ⁴	2,877.0	102.7	2.1	86.0	57.2	123.8	162.9	155.8	106.9	49.4	11.6	0.7
1989 ⁵	2,683.0	95.8	1.7	66.4	---	---	159.2	150.4	85.1	60.3	12.7	0.8

See footnotes at end of table.

Table 9. Total fertility rates, fertility rates, and birth rates, by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2003—Con.

[Fertility rates are live births per 1,000 women aged 15–44 years in specified racial group, and birth rates are live births per 1,000 women in specified age and racial group. Population enumerated as of April 1 for 1990 and 2000 and estimated as of July 1 for all other years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5]

				Age of mother								
Year and origin or race of mother	Total fertility rate	Fertility rate ¹	10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years ²
				Total	15–17 years	18–19 years						
Non-Hispanic ⁷												
Total ⁸												
2003	1,897.5	60.5	0.5	34.1	17.3	59.4	90.5	109.2	93.8	42.6	8.3	0.5
2002	1,877.0	59.6	0.6	35.5	18.2	61.8	91.8	107.9	90.8	40.4	7.9	0.5
2001	1,898.5	60.1	0.6	37.9	19.6	65.2	94.9	107.7	90.9	39.5	7.7	0.5
2000	1,931.5	61.1	0.7	40.7	21.9	68.2	99.5	108.4	90.2	38.8	7.6	0.4
1999	1,894.0	60.0	0.8	42.2	23.3	70.2	98.4	106.7	86.2	37.0	7.1	0.4
1998	1,887.5	60.0	0.8	44.0	25.2	72.4	98.9	105.8	84.4	36.2	7.0	0.4
1997	1,853.0	59.3	0.9	45.0	26.7	73.7	97.4	103.5	82.0	34.8	6.7	0.3
1996	1,852.0	59.6	1.0	47.0	28.4	75.8	97.3	103.6	80.8	33.9	6.5	0.3
1995	1,856.5	60.2	1.1	49.3	30.5	78.6	97.4	104.1	79.9	33.0	6.2	0.3
1994	1,883.5	61.6	1.2	51.7	32.3	81.4	99.5	106.5	79.1	32.4	6.0	0.3
1993	1,901.5	62.7	1.2	52.7	32.9	82.3	101.7	108.7	78.4	31.6	5.7	0.3
1992 ³	1,929.0	64.2	1.2	54.3	33.2	85.3	104.3	111.4	77.9	31.1	5.4	0.2
1991 ³	1,953.0	65.2	1.3	56.1	34.4	86.1	106.5	113.1	77.5	30.8	5.1	0.2
1990 ⁴	1,979.5	67.1	1.3	54.8	33.8	81.4	108.1	116.5	79.2	30.7	5.1	0.2
1989 ⁵	1,921.0	65.7	1.3	53.4	---	---	107.8	113.4	74.7	28.6	4.8	0.2
White												
2003	1,856.5	58.5	0.2	27.4	12.4	50.0	83.5	110.8	97.6	43.2	8.1	0.5
2002	1,828.5	57.4	0.2	28.5	13.1	51.9	84.3	109.3	94.4	40.9	7.6	0.5
2001	1,843.0	57.7	0.3	30.3	14.0	54.8	87.1	108.9	94.3	39.8	7.5	0.4
2000	1,866.0	58.5	0.3	32.6	15.8	57.5	91.2	109.4	93.2	38.8	7.3	0.4
1999	1,838.5	57.7	0.3	34.1	17.1	59.4	90.6	108.6	89.5	37.3	6.9	0.4
1998	1,825.0	57.6	0.3	35.3	18.3	60.9	91.2	107.4	87.2	36.4	6.8	0.4
1997	1,785.5	56.8	0.4	36.0	19.3	62.1	90.0	104.8	84.3	34.8	6.5	0.3
1996	1,781.0	57.1	0.4	37.6	20.6	64.0	90.1	104.9	82.8	33.9	6.2	0.3
1995	1,777.5	57.5	0.4	39.3	22.0	66.2	90.2	105.1	81.5	32.8	5.9	0.3
1994	1,782.5	58.2	0.5	40.4	22.7	67.6	90.9	106.6	80.2	32.0	5.7	0.2
1993	1,786.0	58.9	0.5	40.7	22.7	67.7	92.2	108.2	79.0	31.0	5.4	0.2
1992 ³	1,803.5	60.0	0.5	41.7	22.7	69.8	93.9	110.6	78.3	30.4	5.1	0.2
1991 ³	1,822.5	60.9	0.5	43.4	23.6	70.6	95.7	112.1	77.7	30.2	4.7	0.2
1990 ⁴	1,850.5	62.8	0.5	42.5	23.2	66.6	97.5	115.3	79.4	30.0	4.7	0.2
1989 ⁵	1,770.0	60.5	0.4	39.9	---	---	94.7	111.7	75.0	27.8	4.3	0.2
Black												
2003	2,027.5	67.1	1.6	64.7	38.7	105.3	128.1	102.1	67.4	33.4	7.7	0.5
2002	2,047.0	67.4	1.9	68.3	41.0	110.3	131.0	102.1	66.1	32.1	7.5	0.4
2001	2,104.5	69.1	2.1	73.5	44.9	116.7	137.2	102.1	66.2	32.1	7.3	0.4
2000	2,178.5	71.4	2.4	79.2	50.1	121.9	145.4	102.8	66.5	31.8	7.2	0.4
1999	2,134.0	69.9	2.6	81.0	51.7	123.9	142.1	99.8	63.9	30.6	6.5	0.3
1998	2,164.0	70.9	2.9	85.7	56.8	128.2	142.5	99.9	64.4	30.4	6.7	0.3
1997	2,137.5	70.3	3.2	88.3	60.7	131.0	138.8	97.2	63.6	29.6	6.5	0.3
1996	2,140.0	70.7	3.6	91.9	64.8	134.1	137.0	96.7	63.2	29.1	6.2	0.3
1995	2,186.5	72.8	4.2	97.2	70.4	139.2	137.8	98.5	64.4	28.8	6.1	0.3
1994	2,314.5	77.5	4.6	105.7	77.0	150.4	146.8	104.1	66.3	29.1	6.0	0.3
1993	2,412.5	81.5	4.6	110.5	81.1	154.6	154.5	109.2	68.1	29.4	5.9	0.3
1992 ³	2,482.5	84.5	4.8	114.7	82.9	161.1	160.8	112.8	68.4	29.1	5.7	0.2
1991 ³	2,532.0	87.0	4.9	118.2	86.1	162.2	164.8	115.1	68.9	28.7	5.6	0.2
1990 ⁴	2,547.5	89.0	5.0	116.2	84.9	157.5	165.1	118.4	70.2	28.7	5.6	0.3
1989 ⁵	2,424.0	84.8	5.2	111.9	---	---	156.3	113.8	65.7	26.3	5.3	0.3

--- Data not available.

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator or, for the Hispanic subgroups, fewer than 50 women for 1990 and 2000 and 75,000 women for all other years in the denominator; see "Technical Notes." These guidelines for denominator size follow the suggestions of the U.S. Census Bureau.

0.0 Quantity more than zero but less than 0.05. ¹Fertility rates computed by relating total births, regardless of age of mother, to women 15–44 years.

²Beginning in 1997, rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

³Excludes data for New Hampshire, which did not report Hispanic origin.

⁴Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.

⁵Excludes data for Louisiana, New Hampshire, and Oklahoma, which did not report Hispanic origin.

⁶Includes Central and South American and other and unknown Hispanic.

⁷Includes origin not stated.

⁸Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes."

Table 10. Number of births, birth rates, fertility rates, total fertility rates, and birth rates for teenagers 15–19 years, by age of mother: United States, each State and territory, 2003

[By place of residence. Birth rates are live births per 1,000 estimated population in each area; fertility rates are live births per 1,000 women aged 15–44 years estimated in each area; total fertility rates are sums of birth rates for 5-year age groups multiplied by 5; birth rates by age are live births per 1,000 women in specified age group estimated in each area. Populations estimated as of July 1]

State	Number of births	Birth rate	Fertility rate	Total fertility rate	Teenage birth rate		
					15–19 years		
					Total	15–17 years	18–19 years
United States ¹	4,089,950	14.1	66.1	2,042.5	41.6	22.4	70.7
Alabama	59,552	13.2	62.5	1,918.0	52.4	28.9	87.1
Alaska	10,086	15.5	72.5	2,374.5	38.6	19.3	68.2
Arizona	90,967	16.3	79.2	2,385.0	61.1	35.5	102.0
Arkansas	37,784	13.9	67.4	2,055.0	59.0	30.5	101.1
California	540,997	15.2	69.9	2,131.5	40.1	21.8	68.1
Colorado	69,339	15.2	69.5	2,119.5	43.9	24.9	73.2
Connecticut	42,873	12.3	59.6	1,915.5	24.8	12.9	43.6
Delaware	11,329	13.9	64.6	2,009.5	44.9	23.7	77.7
District of Columbia	7,619	13.5	53.9	1,593.5	60.3	39.4	84.9
Florida	212,250	12.5	63.4	2,005.0	42.5	22.2	74.2
Georgia	135,979	15.7	69.3	2,121.5	53.5	29.0	91.3
Hawaii	18,100	14.4	72.2	2,242.5	37.3	18.7	63.9
Idaho	21,800	16.0	76.0	2,319.0	39.3	17.4	70.7
Illinois	182,495	14.4	67.0	2,052.5	40.4	22.9	66.6
Indiana	86,434	14.0	66.4	2,054.0	43.5	21.6	77.2
Iowa	38,174	13.0	63.3	1,986.5	31.9	15.2	55.5
Kansas	39,476	14.5	69.5	2,152.0	41.2	20.2	71.3
Kentucky	55,236	13.4	63.1	1,951.5	49.6	24.7	86.5
Louisiana	65,040	14.5	66.1	2,001.5	56.0	30.1	92.9
Maine	13,855	10.6	52.0	1,746.0	24.9	12.4	43.6
Maryland	74,930	13.6	62.4	1,977.5	33.3	18.2	56.9
Massachusetts	80,184	12.5	57.2	1,735.5	23.0	12.0	39.9
Michigan	131,094	13.0	61.7	1,939.0	34.4	18.2	59.3
Minnesota	70,050	13.8	64.1	2,024.5	26.6	13.4	46.0
Mississippi	42,380	14.7	67.9	2,030.0	62.5	35.3	101.9
Missouri	77,045	13.5	64.1	1,994.0	43.2	21.5	75.4
Montana	11,422	12.4	62.6	2,029.0	35.0	16.5	61.4
Nebraska	25,917	14.9	71.4	2,209.0	36.0	18.5	61.0
Nevada	33,647	15.0	72.2	2,208.0	53.0	29.1	91.2
New Hampshire	14,393	11.2	52.7	1,771.5	18.2	7.1	35.9
New Jersey	116,983	13.5	64.9	2,051.0	25.5	13.8	44.1
New Mexico	27,821	14.8	71.4	2,200.5	62.7	37.4	100.5
New York	253,714	13.2	61.0	1,866.0	28.2	14.9	48.1
North Carolina	118,323	14.1	65.8	2,018.0	49.0	26.6	84.4
North Dakota	7,972	12.6	61.6	1,933.5	26.8	12.1	46.6
Ohio	149,679	13.1	62.7	1,964.0	39.4	20.2	68.1
Oklahoma	50,981	14.5	69.9	2,110.5	55.9	28.8	94.8
Oregon	45,953	12.9	62.5	1,901.5	34.4	17.1	60.4
Pennsylvania	145,959	11.8	58.1	1,855.0	31.2	17.5	52.3
Rhode Island	13,209	12.3	56.6	1,763.0	31.3	18.8	50.1
South Carolina	55,649	13.4	62.9	1,929.5	51.5	28.7	86.2
South Dakota	11,027	14.4	70.8	2,241.5	34.7	17.5	59.4
Tennessee	78,890	13.5	63.1	1,950.5	53.5	28.2	91.1
Texas	377,476	17.1	77.5	2,346.5	62.9	37.2	102.1
Utah	49,860	21.2	92.2	2,566.5	34.6	16.4	60.7
Vermont	6,589	10.6	51.1	1,683.0	18.9	6.7	37.1
Virginia	101,254	13.7	63.3	1,973.5	36.1	17.4	64.6
Washington	80,489	13.1	61.2	1,899.5	31.5	15.5	55.5
West Virginia	20,935	11.6	58.1	1,798.5	44.8	21.1	79.7
Wisconsin	70,040	12.8	60.7	1,943.0	31.3	15.7	54.5
Wyoming	6,700	13.4	65.6	2,058.5	40.8	19.3	71.1
Puerto Rico	50,696	13.1	59.4	1,756.5	59.5	41.0	87.2
Virgin Islands	1,522	14.0	66.8	2,157.0	50.9	25.2	106.1
Guam	3,281	20.1	89.4	2,678.5	64.3	36.4	109.5
American Samoa	1,608	27.8	124.7	3,852.0	40.4	15.8	87.6
Northern Marianas	1,349	17.7	45.1	1,290.5	42.3	33.1	53.5

¹Excludes data for the territories.

Table 11. Live births by race of mother: United States, each State and territory, 2003

[By place of residence]

State	Number				
	All races	White	Black	American Indian ¹	Asian or Pacific Islander
United States ²	4,089,950	3,225,848	599,847	43,052	221,203
Alabama	59,552	40,868	17,931	146	607
Alaska	10,086	6,493	404	2,477	712
Arizona	90,967	78,940	3,261	6,068	2,698
Arkansas	37,784	29,750	7,236	259	539
California	540,997	438,374	32,349	2,916	67,358
Colorado	69,339	63,166	2,937	564	2,672
Connecticut	42,873	35,388	5,187	262	2,036
Delaware	11,329	7,941	2,907	32	449
District of Columbia	7,619	2,108	5,250	5	256
Florida	212,250	158,026	47,341	1,088	5,795
Georgia	135,979	88,125	43,099	319	4,436
Hawaii	18,100	5,086	583	71	12,360
Idaho	21,800	20,974	106	369	351
Illinois	182,495	141,820	31,565	260	8,850
Indiana	86,434	75,541	9,375	136	1,382
Iowa	38,174	35,688	1,287	260	939
Kansas	39,476	35,007	2,763	480	1,226
Kentucky	55,236	49,416	4,851	101	868
Louisiana	65,040	37,312	26,224	403	1,101
Maine	13,855	13,365	183	99	208
Maryland	74,930	44,704	25,515	188	4,523
Massachusetts	80,184	66,009	8,596	184	5,395
Michigan	131,094	103,166	22,567	639	4,722
Minnesota	70,050	59,404	5,362	1,416	3,868
Mississippi	42,380	23,251	18,553	284	292
Missouri	77,045	63,816	11,166	366	1,697
Montana	11,422	9,848	50	1,400	124
Nebraska	25,917	23,376	1,468	470	603
Nevada	33,647	27,700	2,900	520	2,527
New Hampshire	14,393	13,646	243	35	469
New Jersey	116,983	85,858	20,200	188	10,737
New Mexico	27,821	23,284	532	3,603	402
New York	253,714	183,829	48,025	637	21,223
North Carolina	118,323	86,407	27,171	1,637	3,108
North Dakota	7,972	6,890	109	858	115
Ohio	149,679	123,617	22,678	298	3,086
Oklahoma	50,981	39,959	4,625	5,320	1,077
Oregon	45,953	41,574	1,018	867	2,494
Pennsylvania	145,959	118,394	22,056	333	5,176
Rhode Island	13,209	11,225	1,258	163	563
South Carolina	55,649	36,270	18,334	152	893
South Dakota	11,027	8,903	122	1,875	127
Tennessee	78,890	60,972	16,249	180	1,489
Texas	377,476	321,542	41,885	902	13,147
Utah	49,860	47,328	383	617	1,532
Vermont	6,589	6,411	53	7	118
Virginia	101,254	71,918	22,607	178	6,551
Washington	80,489	66,581	4,015	2,051	7,842
West Virginia	20,935	20,043	721	25	146
Wisconsin	70,040	60,244	6,494	1,054	2,248
Wyoming	6,700	6,291	53	290	66
Puerto Rico	50,696	46,067	4,605	---	---
Virgin Islands	1,522	351	1,147	2	22
Guam	3,281	276	39	5	2,961
American Samoa	1,608	2	—	—	1,606
Northern Marianas	1,349	13	—	—	1,336

--- Data not available. — Quantity zero.

¹Includes births to Aleuts and Eskimos.²Excludes data for the territories.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. California, Hawaii, Ohio (for December), Pennsylvania, Utah, and Washington reported multiple-race data in 2003. The multiple-race data for these States were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other States; see "Technical Notes." In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 12. Live births by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, each State and territory, 2003

[By place of residence]

State	All origins	Origin of mother									
		Hispanic						Non-Hispanic			
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total ¹	White	Black	Not stated
United States ²	4,089,950	912,329	654,504	58,400	14,867	135,586	48,972	3,149,034	2,321,904	576,033	28,587
Alabama	59,552	2,904	2,163	82	20	231	408	56,603	37,996	17,887	45
Alaska	10,086	770	286	61	12	80	331	7,546	4,917	264	1,770
Arizona	90,967	39,780	37,398	276	63	788	1,255	49,547	39,222	2,636	1,640
Arkansas	37,784	3,278	2,752	35	5	444	42	34,425	26,480	7,190	81
California	540,997	269,705	235,975	1,975	729	25,577	5,449	265,467	166,764	30,925	5,825
Colorado	69,339	21,387	17,003	272	71	796	3,245	47,942	42,348	2,807	10
Connecticut	42,873	7,547	897	4,261	94	2,034	261	35,096	28,047	4,812	230
Delaware	11,329	1,380	791	309	5	271	4	9,907	6,584	2,848	42
District of Columbia	7,619	962	101	12	3	803	43	6,641	1,844	4,570	16
Florida	212,250	54,857	13,355	9,514	10,558	20,187	1,243	157,083	104,289	46,295	310
Georgia	135,979	18,262	14,372	586	137	3,057	110	115,449	68,900	42,038	2,268
Hawaii	18,100	2,617	503	760	12	88	1,254	15,453	4,275	483	30
Idaho	21,800	2,939	2,349	26	4	65	495	18,714	17,923	103	147
Illinois	182,495	42,460	35,891	2,701	192	1,864	1,812	139,935	99,565	31,303	100
Indiana	86,434	6,779	5,861	298	23	465	132	79,301	68,511	9,327	354
Iowa	38,174	2,519	2,012	60	3	361	83	35,588	33,185	1,264	67
Kansas	39,476	5,442	4,489	102	18	319	514	33,612	29,230	2,725	422
Kentucky	55,236	1,959	1,465	104	91	259	40	53,234	47,568	4,812	43
Louisiana	65,040	1,675	673	95	84	160	663	63,315	35,726	26,140	50
Maine	13,855	166	29	30	4	38	65	13,630	13,153	176	59
Maryland	74,930	6,976	1,599	375	63	4,543	396	67,883	39,234	24,125	71
Massachusetts	80,184	9,800	499	4,334	78	4,708	181	69,975	57,884	6,579	409
Michigan	131,094	7,670	6,221	382	91	499	477	120,886	93,630	22,312	2,538
Minnesota	70,050	4,932	3,684	100	29	717	402	64,472	54,074	5,251	646
Mississippi	42,380	543	252	16	3	59	213	41,780	22,664	18,542	57
Missouri	77,045	3,483	2,631	117	41	390	304	73,490	60,488	11,012	72
Montana	11,422	379	174	10	7	22	166	10,851	9,299	49	192
Nebraska	25,917	3,453	2,693	28	15	528	189	21,884	19,404	1,444	580
Nevada	33,647	12,198	10,172	247	203	1,197	379	21,151	15,612	2,752	298
New Hampshire	14,393	528	133	130	16	181	68	13,261	12,590	173	604
New Jersey	116,983	26,534	5,300	6,758	739	13,537	200	90,251	61,911	17,601	198
New Mexico	27,821	14,843	7,220	70	42	108	7,403	12,968	8,606	476	10
New York	253,714	55,281	9,366	12,512	405	24,529	8,469	197,562	132,088	43,796	871
North Carolina	118,323	16,080	12,222	670	128	2,932	128	102,155	70,473	26,983	88
North Dakota	7,972	168	97	9	—	13	49	7,637	6,571	106	167
Ohio	149,679	5,352	2,985	1,250	54	659	404	143,952	118,304	22,326	375
Oklahoma	50,981	5,733	5,229	124	18	276	86	45,152	34,349	4,556	96
Oregon	45,953	8,439	7,827	82	35	327	168	37,219	33,074	977	295
Pennsylvania	145,959	10,832	2,374	5,703	159	1,575	1,021	133,218	109,259	18,974	1,909
Rhode Island	13,209	2,483	186	706	18	1,516	57	9,023	7,251	1,117	1,703
South Carolina	55,649	3,662	2,636	194	22	619	191	51,924	32,677	18,250	63
South Dakota	11,027	340	207	20	2	85	26	10,677	8,616	116	10
Tennessee	78,890	4,934	3,711	199	61	816	147	73,931	56,119	16,170	25
Texas	377,476	183,139	164,422	1,090	324	10,238	7,065	193,266	138,194	41,252	1,071
Utah	49,860	7,069	5,224	113	15	724	993	42,571	40,154	341	220
Vermont	6,589	59	24	13	2	9	11	6,486	6,311	52	44
Virginia	101,254	10,401	2,967	675	77	5,960	722	90,667	62,347	21,838	186
Washington	80,489	13,320	11,024	282	52	608	1,354	65,008	53,848	3,072	2,161
West Virginia	20,935	104	39	15	2	16	32	20,747	19,874	713	84
Wisconsin	70,040	5,539	4,428	606	38	294	173	64,487	54,845	6,421	14
Wyoming	6,700	667	593	11	—	14	49	6,012	5,627	52	21
Puerto Rico	50,696	---	---	---	---	---	---	---	---	---	50,696
Virgin Islands	1,522	344	1	79	—	50	214	1,038	104	914	140
Guam	3,281	54	27	11	1	7	8	3,150	241	35	77
American Samoa	1,608	---	---	---	---	---	---	---	---	---	1,608
Northern Marianas	1,349	---	---	---	---	---	---	---	---	---	1,349

— Quantity zero. --- Data not available.

¹Includes races other than white and black.²Excludes data for the territories.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. California, Hawaii, Ohio (for December), Pennsylvania, Utah, and Washington reported multiple-race data in 2003. The multiple-race data for these States were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other States; see "Technical Notes." In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes."

Table 13. Total number of births, rates (birth, fertility, and total fertility), and percentage of births with selected demographic characteristics, by race of mother and place of birth of mother: United States, 2003

[Birth rates are live births per 1,000 population. Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Populations estimated as of July 1]

Characteristic	All races	White	Black	American Indian ¹	Asian or Pacific Islander
			Number		
Births	4,089,950	3,225,848	599,847	43,052	221,203
			Rate		
Birth rate	14.1	13.6	15.7	13.8	16.8
Fertility rate	66.1	66.1	66.3	58.4	66.3
Total fertility rate	2,042.5	2,061.0	1,999.0	1,731.5	1,873.0
Sex ratio ²	1,049	1,050	1,036	1,047	1,067
All births			Percent		
Births to mothers under 20 years	10.3	9.4	17.3	18.2	3.5
4th- and higher-order births	10.8	10.1	15.2	19.0	6.4
Births to unmarried mothers	34.6	29.4	68.2	61.3	15.0
Mothers completing 12 years or more of school ³	78.4	78.2	76.0	69.5	90.1
Mothers born in the 50 States and DC.	76.3	78.3	86.0	94.4	17.0
Mothers born in the 50 States and DC					
Births to mothers under 20 years	11.2	9.4	19.2	18.8	11.5
4th- and higher-order births	10.3	9.2	15.5	19.3	7.6
Births to unmarried mothers	35.4	27.5	72.4	62.9	31.6
Mothers completing 12 years or more of school ³	83.8	85.8	75.0	69.9	89.9
Mothers born outside the 50 States and DC					
Births to mothers under 20 years	7.5	9.2	5.2	8.8	1.8
4th- and higher-order births	12.2	13.6	13.2	13.2	6.1
Births to unmarried mothers	31.9	36.0	41.9	34.4	11.6
Mothers completing 12 years or more of school ³	61.2	51.3	82.3	62.8	90.2

¹Includes births to Aleuts and Eskimos.

²Male live births per 1,000 female live births.

³Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 14. Total number of births, rates (birth, fertility, and total fertility), and percentage of births with selected demographic characteristics, by Hispanic origin of mother and by race for mothers of non-Hispanic origin and by place of birth of mother: United States, 2003

[Birth rates are live births per 1,000 population. Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Populations estimated as of July 1]

Characteristic	All origins ¹	Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total ²	White	Black
Number										
Births	4,089,950	912,329	654,504	58,400	14,867	135,586	48,972	3,149,034	2,321,904	576,033
Rate										
Birth rate ³	14.1	22.9	24.7	15.1	9.9	23.0	(³)	12.7	11.8	15.9
Fertility rate ³	66.1	96.9	105.5	61.6	61.7	91.2	(³)	60.5	58.5	67.1
Total fertility rate ³	2,042.5	2,785.5	2,957.5	1,841.0	2,059.5	2,733.0	(³)	1,897.5	1,856.5	2,027.5
Sex ratio ⁴	1,049	1,041	1,040	1,043	1,035	1,044	1,036	1,051	1,053	1,036
Percent										
All births										
Births to mothers under 20 years	10.3	14.3	15.3	17.9	7.9	8.3	15.9	9.1	7.5	17.4
4th- and higher-order births	10.8	13.7	14.8	12.2	4.8	10.4	11.8	9.9	8.8	15.3
Births to unmarried mothers	34.6	45.0	43.7	59.8	31.4	46.0	46.7	31.6	23.6	68.5
Mothers completing 12 years or more of school ⁵	78.4	52.5	46.4	70.1	88.5	64.7	69.9	86.1	88.5	76.2
Mothers born in the 50 States and DC	76.3	36.7	36.2	66.6	47.2	12.1	73.0	87.8	94.2	87.6
Mothers born in the 50 States and DC										
Births to mothers under 20 years	11.2	20.6	21.4	19.5	11.8	18.8	18.8	10.0	7.8	19.2
4th- and higher-order births	10.3	12.1	12.8	11.6	5.2	5.3	11.8	10.1	8.7	15.5
Births to unmarried mothers	35.4	49.6	48.3	62.1	30.1	47.1	49.0	33.7	24.3	72.6
Mothers completing 12 years or more of school ⁵	83.8	69.3	67.4	70.0	86.9	81.2	73.0	85.7	88.4	75.0
Mothers born outside the 50 States and DC										
Births to mothers under 20 years	7.5	10.7	11.8	14.4	4.4	6.9	7.6	2.6	2.9	4.5
4th- and higher-order births	12.2	14.6	15.9	13.3	4.4	11.1	11.8	8.6	9.4	13.5
Births to unmarried mothers	31.9	42.3	41.0	55.0	32.5	45.9	39.2	16.4	11.2	39.5
Mothers completing 12 years or more of school ⁵	61.2	42.6	34.3	70.3	89.8	62.4	61.1	89.7	90.9	85.4

¹Includes origin not stated.

²Includes races other than white and black.

³Rates for Central and South American include other and unknown Hispanic.⁴Male live births per 1,000 female live births.

⁵Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes."

Table 15. Live births by race of mother and observed and seasonally adjusted birth and fertility rates, by month: United States, 2003

[Rates on an annual basis per 1,000 population for specified month. Birth rates are live births per 1,000 total population. Fertility rates are live births per 1,000 women aged 15–44 years. Monthly populations estimated as of the first of each month]

Month	Number			Observed		Seasonally adjusted ¹	
	All races ²	White	Black	Birth rate	Fertility rate	Birth rate	Fertility rate
Total	4,089,950	3,225,848	599,847	14.1	66.1	...	...
January	329,803	257,667	50,803	13.4	62.5	14.7	66.0
February	307,248	241,252	46,156	13.8	64.5	14.7	66.0
March	336,920	266,258	48,714	13.7	63.8	14.7	66.1
April	330,106	262,671	46,252	13.8	64.6	14.6	65.6
May	346,754	276,206	47,990	14.0	65.7	14.6	66.0
June	337,425	267,731	48,114	14.1	66.0	14.6	65.9
July	364,226	288,949	52,553	14.7	68.9	14.6	65.7
August	360,103	283,960	53,094	14.5	68.1	14.6	66.0
September	359,644	284,332	52,494	15.0	70.3	14.6	66.0
October	354,048	279,270	51,704	14.3	66.9	14.6	66.0
November	320,094	249,416	49,197	13.3	62.5	14.7	66.4
December	343,579	268,136	52,776	13.8	64.9	14.5	65.6

... Category not applicable.

¹The method of seasonal adjustment, developed by the U.S. Bureau of the Census, is described in *The X11 Variant of the Census Method II Seasonal Adjustment Program*, Technical Paper No. 15 (1967 revision).

²Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 16. Live births by day of week and index of occurrence by method of delivery, day of week, and race of mother: United States, 2003

Day of week and race of mother	Average number of births	Index of occurrence ¹				
		Total ²	Vaginal	Method of delivery		
				Cesarean		
				Total	Primary	Repeat
All races ³	11,205	100.0	100.0	100.0	100.0	100.0
Sunday	7,563	67.5	74.7	49.0	59.5	32.5
Monday	11,733	104.7	101.7	112.4	101.7	129.4
Tuesday	13,001	116.0	113.2	123.4	120.2	128.5
Wednesday	12,598	112.4	110.3	117.9	116.4	120.2
Thursday	12,514	111.7	109.7	116.8	114.8	120.0
Friday	12,396	110.6	106.5	121.2	114.9	131.0
Saturday	8,605	76.8	83.7	59.0	72.3	38.0
White	8,838	100.0	100.0	100.0	100.0	100.0
Sunday	5,818	65.8	73.0	47.1	57.7	30.7
Monday	9,326	105.5	102.4	113.6	102.6	130.6
Tuesday	10,320	116.8	113.9	124.2	121.1	128.8
Wednesday	9,995	113.1	111.0	118.5	117.3	120.3
Thursday	9,918	112.2	110.3	117.2	115.1	120.4
Friday	9,834	111.3	106.9	122.5	115.7	133.0
Saturday	6,634	75.1	82.2	56.6	70.1	35.9
Black	1,643	100.0	100.0	100.0	100.0	100.0
Sunday	1,189	72.4	79.6	55.1	65.0	39.1
Monday	1,676	102.0	99.1	108.6	98.3	125.5
Tuesday	1,878	114.3	111.4	121.2	117.4	127.3
Wednesday	1,821	110.8	108.5	116.2	113.6	120.4
Thursday	1,808	110.0	107.7	115.5	113.6	118.6
Friday	1,773	107.9	104.5	116.1	112.1	122.5
Saturday	1,356	82.5	89.0	67.0	79.8	46.1

¹Index is the ratio of the average number of births by a specified method of delivery on a given day of the week to the average daily number of births by a specified method of delivery for the year, multiplied by 100.

²Includes method of delivery not stated.

³Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 17. Number, birth rate, and percentage of births to unmarried women, by age, race, and Hispanic origin of mother: United States, 2003

Measure and age of mother	All races ¹	White		Black		American Indian ^{2,3}	Asian or Pacific Islander ²	Hispanic ⁴
		Total ²	Non-Hispanic	Total ²	Non-Hispanic			
Number								
All ages	1,415,995	947,012	546,991	409,333	394,831	26,401	33,249	410,620
Under 15 years	6,469	3,499	1,353	2,715	2,633	152	103	2,224
15–19 years	337,201	227,879	132,482	97,000	93,918	6,778	5,544	97,925
15 years.	17,331	10,647	4,627	6,020	5,820	398	266	6,226
16 years.	37,666	24,727	11,980	11,535	11,150	778	626	13,105
17 years.	65,574	44,380	24,454	18,823	18,154	1,365	1,006	20,473
18 years.	96,105	65,850	39,516	26,831	26,028	1,849	1,575	26,946
19 years.	120,525	82,275	51,905	33,791	32,766	2,388	2,071	31,175
20–24 years	549,353	367,924	224,941	160,312	155,153	10,002	11,115	146,729
25–29 years	287,205	190,605	101,454	83,421	80,087	5,293	7,886	91,644
30–34 years	147,555	97,957	52,167	41,692	39,926	2,668	5,238	46,995
35–39 years	69,071	46,038	26,352	19,260	18,400	1,193	2,580	20,158
40 years and over	19,141	13,110	8,242	4,933	4,714	315	783	4,945
Rate per 1,000 in specified group								
15–44 years ⁵	44.9	40.4	28.6	66.3	---	---	22.2	92.2
15–19 years	34.8	30.1	21.5	62.2	---	---	13.1	66.6
15–17 years	20.3	17.2	11.0	38.1	---	---	7.5	43.0
18–19 years	57.6	50.4	37.9	100.4	---	---	21.4	107.0
20–24 years	71.2	63.0	47.2	118.0	---	---	26.6	133.7
25–29 years	65.7	60.8	40.8	90.4	---	---	30.7	136.0
30–34 years	44.0	42.0	27.8	51.2	---	---	31.5	99.2
35–39 years	22.3	21.2	14.7	25.3	---	---	19.8	54.7
40–44 years ⁶	5.8	5.5	4.1	6.5	---	---	7.9	13.3
Percent of births								
All ages	34.6	29.4	23.6	68.2	68.5	61.3	15.0	45.0
Under 15 years	97.1	95.2	96.7	99.6	99.7	98.7	99.0	94.4
15–19 years	81.3	76.4	76.7	96.1	96.3	88.1	73.0	76.2
15 years.	95.0	92.7	94.9	99.4	99.5	96.8	92.7	91.3
16 years.	91.1	87.8	89.6	99.0	99.1	95.5	86.5	86.5
17 years.	87.7	83.8	85.7	98.3	98.5	94.2	79.4	81.9
18 years.	81.6	76.8	78.3	96.5	96.7	87.4	75.6	75.0
19 years.	74.2	68.5	68.9	93.1	93.4	82.3	64.1	68.3
20–24 years	53.2	46.5	43.1	81.7	82.1	68.3	36.5	53.7
25–29 years	26.4	21.9	16.2	59.6	59.8	50.3	12.2	37.2
30–34 years	15.1	12.3	8.3	42.7	42.8	41.5	6.9	27.8
35–39 years	14.8	12.1	8.7	38.6	38.6	41.1	7.4	26.6
40 years and over	17.9	15.3	12.0	39.3	39.2	44.4	10.0	29.2

--- Data not available.

¹Includes races other than white and black and origin not stated.²Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."³Includes births to Aleuts and Eskimos.⁴Includes all persons of Hispanic origin of any race.⁵Birth rates computed by relating total births to unmarried mothers, regardless of age of mother, to unmarried women aged 15–44 years.⁶Birth rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40–44 years.

NOTES: For 48 States and the District of Columbia, marital status is reported in the birth registration process; for Michigan and New York, mother's marital status is inferred; see "Technical Notes." Rates cannot be computed for unmarried non-Hispanic black women or for American Indian women because the necessary populations are not available.

Table 18. Birth rates for unmarried women by age of mother: United States, 1970, 1975, and 1980–2003, and by age, race, and Hispanic origin of mother: United States, 1980–2003

[Rates are live births to unmarried women per 1,000 unmarried women. Populations estimated as of July 1 for all years]

Year and race and Hispanic origin	Age of mother								
	15–44 years ¹	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years ²
		Total	15–17 years	18–19 years					
All races ³									
2003 ⁴	44.9	34.8	20.3	57.6	71.2	65.7	44.0	22.3	5.8
2002 ⁴	43.7	35.4	20.8	58.6	70.5	61.5	40.8	20.8	5.4
2001 ⁴	43.8	37.0	22.0	60.6	71.3	59.5	40.4	20.4	5.3
2000 ⁴	44.1	39.0	23.9	62.2	72.2	58.5	39.3	19.7	5.0
1999 ⁴	43.3	39.7	25.0	62.3	70.8	56.9	38.1	19.0	4.6
1998 ⁴	43.3	40.9	26.5	63.6	70.4	55.4	38.1	18.7	4.6
1997 ⁴	42.9	41.4	27.7	63.9	68.9	53.4	37.9	18.7	4.6
1996 ⁴	43.8	42.2	28.5	64.9	68.9	54.5	40.2	19.9	4.8
1995 ⁴	44.3	43.8	30.1	66.5	68.7	54.3	38.9	19.3	4.7
1994 ⁴	46.2	45.8	31.7	69.1	70.9	57.4	39.6	19.7	4.7
1993 ⁴	44.8	44.0	30.3	66.2	68.5	55.9	38.0	18.9	4.4
1992 ⁴	44.9	44.2	30.2	66.7	67.9	55.6	37.6	18.8	4.1
1991 ⁴	45.0	44.6	30.8	65.4	67.8	56.0	37.9	17.9	3.8
1990 ⁴	43.8	42.5	29.6	60.7	65.1	56.0	37.6	17.3	3.6
1989 ⁴	41.6	40.1	28.7	56.0	61.2	52.8	34.9	16.0	3.4
1988 ⁴	38.5	36.4	26.4	51.5	56.0	48.5	32.0	15.0	3.2
1987 ⁴	36.0	33.8	24.5	48.9	52.6	44.5	29.6	13.5	2.9
1986 ⁴	34.2	32.3	22.8	48.0	49.3	42.2	27.2	12.2	2.7
1985 ⁴	32.8	31.4	22.4	45.9	46.5	39.9	25.2	11.6	2.5
1984 ^{4,5}	31.0	30.0	21.9	42.5	43.0	37.1	23.3	10.9	2.5
1983 ^{4,5}	30.3	29.5	22.0	40.7	41.8	35.5	22.4	10.2	2.6
1982 ^{4,5}	30.0	28.7	21.5	39.6	41.5	35.1	21.9	10.0	2.7
1981 ^{4,5}	29.5	27.9	20.9	39.0	41.1	34.5	20.8	9.8	2.6
1980 ^{4,5}	29.4	27.6	20.6	39.0	40.9	34.0	21.1	9.7	2.6
1980 ^{5,6}	28.4	27.5	20.7	38.7	39.7	31.4	18.5	8.4	2.3
1975 ^{5,6}	24.5	23.9	19.3	32.5	31.2	27.5	17.9	9.1	2.6
1970 ^{6,7}	26.4	22.4	17.1	32.9	38.4	37.0	27.1	13.6	3.5
White total									
2003 ⁴	40.4	30.1	17.2	50.4	63.0	60.8	42.0	21.2	5.5
2002 ⁴	38.9	30.4	17.5	51.0	61.6	56.8	38.3	19.4	5.0
2001 ⁴	38.5	31.3	18.1	52.1	61.8	54.6	37.2	18.6	4.9
2000 ⁴	38.2	32.7	19.7	53.1	61.7	52.9	35.9	17.9	4.5
1999 ⁴	37.4	33.2	20.6	52.9	60.2	50.8	34.9	17.4	4.1
1998 ⁴	36.9	33.6	21.5	53.1	59.5	48.6	34.1	16.9	4.1
1997 ⁴	36.3	33.6	22.0	52.9	57.9	47.0	33.6	16.6	3.9
1996 ⁴	37.0	34.0	22.3	53.5	57.9	48.1	35.4	17.7	4.3
1995 ⁴	37.0	35.0	23.3	54.7	57.2	47.4	33.7	16.8	4.2
1994 ⁴	37.8	35.8	23.9	55.8	57.5	48.6	33.8	17.2	4.3
1993 ⁴	35.6	33.3	21.9	52.0	53.8	46.0	31.9	16.3	3.9
1992 ⁴	35.0	32.7	21.4	51.2	52.4	44.8	31.3	16.1	3.6
1991 ⁴	34.5	32.7	21.7	49.4	51.4	44.3	30.9	15.2	3.2
1990 ⁴	32.9	30.6	20.4	44.9	48.2	43.0	29.9	14.5	3.2
1989 ⁴	30.2	28.0	19.3	40.2	43.8	39.1	26.8	13.1	2.9
1988 ⁴	27.4	25.3	17.6	36.8	39.2	35.4	24.2	12.1	2.7
1987 ⁴	25.3	23.2	16.2	34.5	36.6	32.0	22.3	10.7	2.4
1986 ⁴	23.9	21.8	14.9	33.5	34.2	30.5	20.1	9.7	2.2
1985 ⁴	22.5	20.8	14.5	31.2	31.7	28.5	18.4	9.0	2.0
1984 ^{4,5}	20.6	19.3	13.7	27.9	28.5	25.5	16.8	8.4	2.0
1983 ^{4,5}	19.8	18.7	13.6	26.4	27.1	23.8	15.9	7.8	2.0
1982 ^{4,5}	19.3	18.0	13.1	25.3	26.5	23.1	15.3	7.4	2.1
1981 ^{4,5}	18.6	17.2	12.6	24.6	25.8	22.3	14.2	7.2	1.9
1980 ^{4,5}	18.1	16.5	12.0	24.1	25.1	21.5	14.1	7.1	1.8

See footnotes at end of table.

Table 18. Birth rates for unmarried women by age of mother: United States, 1970, 1975, and 1980–2003, and by age, race, and Hispanic origin of mother: United States, 1980–2003—Con.

[Rates are live births to unmarried women per 1,000 unmarried women. Populations estimated as of July 1 for all years]

Year and race and Hispanic origin	Age of mother								
	15–44 years ¹	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years ²
		Total	15–17 years	18–19 years					
Non-Hispanic white									
2003 ⁴	28.6	21.5	11.0	37.9	47.2	40.8	27.8	14.7	4.1
2002 ⁴	27.8	22.1	11.5	38.8	46.1	38.5	26.0	13.5	3.7
2001 ⁴	27.8	23.1	12.1	40.3	46.4	37.5	25.4	13.2	3.6
2000 ⁴	28.0	24.7	13.6	42.1	47.0	36.9	24.8	12.9	3.3
1999 ⁴	27.9	25.6	14.6	42.7	46.3	36.2	24.8	13.0	3.1
1998 ⁴	27.9	26.2	15.5	43.1	46.3	35.4	25.0	13.1	3.1
1997 ⁴	27.5	26.4	16.2	43.3	44.8	34.4	24.9	12.7	2.9
1996 ⁴	28.2	27.0	16.9	43.9	44.5	35.0	26.4	13.8	3.3
1995 ⁴	28.1	27.7	17.6	44.6	43.9	34.4	25.1	12.9	3.2
1994 ⁴	28.4	28.1	17.9	45.0	43.8	34.7	24.6	12.8	3.1
1993 ⁴	---	---	---	---	---	---	---	---	---
1992 ⁴	---	---	---	---	---	---	---	---	---
1991 ⁴	---	---	---	---	---	---	---	---	---
1990 ^{4,8}	24.4	25.0	16.2	37.0	36.4	30.3	20.5	6.1	---
Black total									
2003 ⁴	66.3	62.2	38.1	100.4	118.0	90.4	51.2	25.3	6.5
2002 ⁴	66.2	64.8	39.9	104.1	119.2	85.9	49.9	24.9	6.3
2001 ⁴	68.1	69.9	43.8	110.2	122.8	84.1	51.1	25.4	6.3
2000 ⁴	70.5	75.0	48.3	115.0	129.0	85.9	50.2	25.4	6.3
1999 ⁴	69.7	76.5	50.0	115.8	126.8	85.5	49.0	24.2	5.8
1998 ⁴	71.6	81.5	55.0	121.5	127.8	86.5	50.5	24.3	6.0
1997 ⁴	71.5	84.5	59.0	124.8	124.2	81.4	51.0	24.3	6.5
1996 ⁴	72.8	87.5	62.6	127.2	122.6	81.2	53.4	25.2	6.1
1995 ⁴	74.5	91.2	67.4	129.2	124.6	82.3	53.3	25.3	6.0
1994 ⁴	80.8	99.3	73.9	139.6	135.2	91.3	56.5	26.0	5.9
1993 ⁴	83.0	101.2	75.9	140.0	139.9	92.8	56.7	25.7	5.8
1992 ⁴	85.7	104.8	77.2	146.4	142.6	96.8	57.3	25.6	5.4
1991 ⁴	89.0	107.8	79.9	147.7	146.4	100.0	59.8	25.5	5.4
1990 ⁴	90.5	106.0	78.8	143.7	144.8	105.3	61.5	25.5	5.1
1989 ⁴	90.7	104.5	78.9	140.9	142.4	102.9	60.5	24.9	5.0
1988 ⁴	86.5	96.1	73.5	130.5	133.6	97.2	57.4	24.1	5.0
1987 ⁴	82.6	90.9	69.9	123.0	126.1	91.6	53.1	22.4	4.7
1986 ⁴	79.0	88.5	67.0	121.1	118.0	84.6	50.0	20.6	4.4
1985 ⁴	77.0	87.6	66.8	117.9	113.1	79.3	47.5	20.4	4.3
1984 ^{4,5}	75.2	86.1	66.5	113.6	107.9	77.8	43.8	19.4	4.3
1983 ^{4,5}	76.2	85.5	66.8	111.9	107.2	79.7	43.8	19.4	4.8
1982 ^{4,5}	77.9	85.1	66.3	112.7	109.3	82.7	44.1	19.5	5.2
1981 ^{4,5}	79.4	85.0	65.9	114.2	110.7	83.1	45.5	19.6	5.6
1980 ^{4,5}	81.1	87.9	68.8	118.2	112.3	81.4	46.7	19.0	5.5
Asian or Pacific Islander total									
2003 ⁴	22.2	13.1	7.5	21.4	26.6	30.7	31.5	19.8	7.9
2002 ⁴	21.3	13.4	7.5	22.2	26.5	27.5	28.6	18.7	6.8
2001 ⁴	21.2	14.6	8.7	23.0	25.2	26.7	29.4	19.7	6.3
2000 ⁴	20.9	15.2	9.6	23.2	24.2	25.4	29.7	18.4	6.9

See footnotes at end of table.

Table 18. Birth rates for unmarried women by age of mother: United States, 1970, 1975, and 1980–2003, and by age, race, and Hispanic origin of mother: United States, 1980–2003—Con.

[Rates are live births to unmarried women per 1,000 unmarried women. Populations estimated as of July 1 for all years]

Year and race and Hispanic origin	Age of mother								
	15–44 years ¹	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years ²
		Total	15–17 years	18–19 years					
Hispanic ⁹									
2003 ⁴	92.2	66.6	43.0	107.0	133.7	136.0	99.2	54.7	13.3
2002 ⁴	87.9	66.1	43.0	105.3	131.4	123.1	88.1	51.3	12.6
2001 ⁴	87.8	67.1	44.2	104.3	132.3	120.7	91.4	49.7	12.2
2000 ⁴	87.3	68.5	47.0	102.2	130.5	121.6	89.4	46.1	12.2
1999 ⁴	84.9	68.6	48.7	99.9	126.1	119.6	84.2	42.4	11.2
1998 ⁴	82.8	69.3	49.8	101.2	120.6	115.9	78.2	38.8	12.0
1997 ⁴	83.2	69.2	50.7	100.6	122.8	114.8	78.8	40.5	12.1
1996 ⁴	86.2	69.3	49.7	102.3	131.6	122.0	84.6	41.2	12.3
1995 ⁴	88.8	73.2	52.8	108.6	135.8	122.3	84.1	42.2	12.1
1994 ⁴	95.8	77.7	55.7	115.4	144.5	131.7	91.2	47.4	13.9
1993 ⁴	91.4	71.1	49.6	108.8	134.3	130.4	87.8	47.1	14.1
1992 ⁴	92.8	70.3	49.2	106.6	138.2	133.4	89.9	47.8	14.6
1991 ⁴	92.5	71.0	49.5	107.5	134.2	135.1	88.2	47.6	14.1
1990 ^{4,8}	89.6	65.9	45.9	98.9	129.8	131.7	88.1	50.8	13.7

--- Data not available.

¹Rates computed by relating total births to unmarried mothers, regardless of age of mother, to unmarried women aged 15–44 years.²Rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40–44 years.³Includes races other than white, black, and Asian or Pacific Islander.⁴Data for States in which marital status was not reported have been inferred and included with data from the remaining States; see "Technical Notes."⁵Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see "Technical Notes."⁶Births to unmarried women are estimated for the United States from data for registration areas in which marital status of mother was reported; see "Technical Notes."⁷Based on a 50-percent sample of births.⁸Rates for 1990 based on data for 48 States and the District of Columbia that reported Hispanic origin on the birth certificate. Rate shown for 1990 for ages 35–39 years are based on births to unmarried women aged 35–44 years.⁹Includes all persons of Hispanic origin of any race.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes." Rates cannot be computed for unmarried non-Hispanic black women or for American Indian women because the necessary populations are not available.

Table 19. Number and percentages of births to unmarried women, by race and Hispanic origin of mother: United States, each State and territory, 2003

[By place of residence]

State	Births to unmarried women						Percent unmarried					
	All races ¹	White		Black		Hispanic ³	All races ¹	White		Black		Hispanic ³
		Total ²	Non-Hispanic	Total ²	Non-Hispanic			Total ²	Non-Hispanic	Total ²	Non-Hispanic	
United States ⁴	1,415,995	947,012	546,991	409,333	394,831	410,620	34.6	29.4	23.6	68.2	68.5	45.0
Alabama	20,827	8,274	7,577	12,434	12,409	707	35.0	20.2	19.9	69.3	69.4	24.3
Alaska	3,487	1,556	1,154	187	115	311	34.6	24.0	23.5	46.3	43.6	40.4
Arizona	37,762	30,833	9,968	2,028	1,628	21,017	41.5	39.1	25.4	62.2	61.8	52.8
Arkansas	14,358	8,682	7,331	5,483	5,462	1,355	38.0	29.2	27.7	75.8	76.0	41.3
California	181,364	150,305	33,916	20,099	19,287	116,468	33.5	34.3	20.3	62.1	62.4	43.2
Colorado	18,519	16,311	7,722	1,530	1,456	8,827	26.7	25.8	18.2	52.1	51.9	41.3
Connecticut	12,874	9,214	4,713	3,420	3,196	4,685	30.0	26.0	16.8	65.9	66.4	62.1
Delaware	4,747	2,666	1,880	2,032	1,985	810	41.9	33.6	28.6	69.9	69.7	58.7
District of Columbia	4,084	223	102	3,810	3,381	560	53.6	10.6	5.5	72.6	74.0	58.2
Florida	84,762	51,729	29,943	31,695	31,095	22,477	39.9	32.7	28.7	67.0	67.2	41.0
Georgia	51,854	22,950	14,824	28,244	27,781	8,154	38.1	26.0	21.5	65.5	66.1	44.7
Hawaii	6,058	1,287	993	143	122	1,134	33.5	25.3	23.2	24.5	25.3	43.3
Idaho	4,865	4,554	3,437	41	41	1,072	22.3	21.7	19.2	38.7	39.8	36.5
Illinois	64,439	39,609	21,000	24,117	23,942	18,774	35.3	27.9	21.1	76.4	76.5	44.2
Indiana	32,100	24,714	21,207	7,148	7,117	3,398	37.1	32.7	31.0	76.2	76.3	50.1
Iowa	11,395	10,084	9,017	959	944	1,076	29.9	28.3	27.2	74.5	74.7	42.7
Kansas	12,475	10,197	7,712	1,892	1,870	2,452	31.6	29.1	26.4	68.5	68.6	45.1
Kentucky	18,683	14,925	14,109	3,557	3,542	859	33.8	30.2	29.7	73.3	73.6	43.8
Louisiana	30,922	10,608	10,072	19,922	19,883	573	47.5	28.4	28.2	76.0	76.1	34.2
Maine	4,642	4,468	4,400	63	58	55	33.5	33.4	33.5	34.4	33.0	33.1
Maryland	26,084	10,661	8,241	14,917	14,182	3,214	34.8	23.8	21.0	58.5	58.8	46.1
Massachusetts	22,263	16,360	11,425	5,003	3,741	6,118	27.8	24.8	19.7	58.2	56.9	62.4
Michigan	45,386	27,865	24,058	16,646	16,522	3,362	34.6	27.0	25.7	73.8	74.0	43.8
Minnesota	19,425	14,202	11,679	3,035	2,961	2,471	27.7	23.9	21.6	56.6	56.4	50.1
Mississippi	19,926	5,740	5,491	13,945	13,941	242	47.0	24.7	24.2	75.2	75.2	44.6
Missouri	27,426	18,383	16,912	8,598	8,497	1,585	35.6	28.8	28.0	77.0	77.2	45.5
Montana	3,677	2,670	2,440	27	26	161	32.2	27.1	26.2	54.0	53.1	42.5
Nebraska	7,687	6,250	4,605	1,033	1,019	1,503	29.7	26.7	23.7	70.4	70.6	43.5
Nevada	13,172	10,159	4,580	2,022	1,930	5,627	39.1	36.7	29.3	69.7	70.1	46.1
New Hampshire	3,571	3,429	3,028	102	73	210	24.8	25.1	24.1	42.0	42.2	39.8
New Jersey	34,313	20,870	8,240	12,801	11,341	14,093	29.3	24.3	13.3	63.4	64.4	53.1
New Mexico	13,479	10,377	2,380	326	281	8,113	48.4	44.6	27.7	61.3	59.0	54.7
New York	92,597	56,594	25,739	31,946	29,071	33,424	36.5	30.8	19.5	66.5	66.4	60.5
North Carolina	41,802	22,491	14,579	18,001	17,899	7,995	35.3	26.0	20.7	66.3	66.3	49.7
North Dakota	2,276	1,599	1,490	32	30	56	28.5	23.2	22.7	29.4	28.3	33.3
Ohio	54,130	36,551	33,925	17,096	16,846	2,719	36.2	29.6	28.7	75.4	75.5	50.8
Oklahoma	18,915	12,721	10,349	3,291	3,243	2,466	37.1	31.8	30.1	71.2	71.2	43.0
Oregon	14,586	13,017	9,360	652	627	3,645	31.7	31.3	28.3	64.0	64.2	43.2
Pennsylvania	49,547	32,134	27,166	16,460	14,148	6,408	33.9	27.1	24.9	74.6	74.6	59.2
Rhode Island	4,728	3,616	1,871	815	731	1,411	35.8	32.2	25.8	64.8	65.4	56.8
South Carolina	22,857	9,380	7,832	13,269	13,224	1,574	41.1	25.9	24.0	72.4	72.5	43.0
South Dakota	3,768	2,193	2,071	56	52	166	34.2	24.6	24.0	45.9	44.8	48.8
Tennessee	29,367	17,141	14,854	11,934	11,889	2,338	37.2	28.1	26.5	73.4	73.5	47.4
Texas	129,484	101,812	30,629	26,256	25,902	71,229	34.3	31.7	22.2	62.7	62.8	38.9
Utah	8,590	7,794	5,062	181	165	2,726	17.2	16.5	12.6	47.3	48.4	38.6
Vermont	1,978	1,929	1,896	28	27	17	30.0	30.1	30.0	52.8	51.9	*
Virginia	30,816	16,164	12,154	14,080	13,706	4,420	30.4	22.5	19.5	62.3	62.8	42.5
Washington	23,207	18,225	13,193	2,064	1,592	5,653	28.8	27.4	24.5	51.4	51.8	42.4
West Virginia	7,235	6,665	6,598	538	533	35	34.6	33.3	33.2	74.6	74.8	33.7
Wisconsin	21,300	14,881	12,444	5,347	5,291	2,542	30.4	24.7	22.7	82.3	82.4	45.9
Wyoming	2,186	1,950	1,623	28	27	333	32.6	31.0	28.8	52.8	51.9	49.9
Puerto Rico	26,962	23,825	---	3,125	---	---	53.2	51.7	---	67.9	---	---
Virgin Islands	1,047	183	28	859	684	226	68.8	52.1	26.9	74.9	74.8	65.7
Guam	1,821	39	33	12	12	17	55.5	14.1	13.7	*	*	*
American Samoa	609	---	---	---	---	---	37.9	*	---	*	---	---
Northern Marianas	780	4	---	---	---	---	57.8	*	---	*	---	---

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

--- Data not available.

- Quantity zero.

¹Includes races other than white and black and origin not stated.²Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. California, Hawaii, Ohio (for December), Pennsylvania, Utah, and Washington reported multiple-race data in 2003. The multiple-race data for these States were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other States; see "Technical Notes." Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."³Includes all persons of Hispanic origin of any race.⁴Excludes data for the territories.

Table 20. Birth rates by age and race of father: United States, 1980–2003

[Rates are live births per 1,000 men in specified group. Populations enumerated as of April 1 for 1980, 1990, and 2000 and estimated as of July 1 for all other years. Figures for age of father not stated are distributed]

Year and race of father	Age of father									
	15–54 years ¹	15–19 years ²	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55 years and over
All races³										
2003	48.9	16.9	73.5	105.7	102.2	60.2	23.4	7.6	2.5	0.3
2002	48.4	17.4	75.6	105.0	99.1	57.7	22.6	7.4	2.4	0.3
2001	49.0	18.5	78.5	105.8	99.6	57.0	22.3	7.3	2.4	0.3
2000	50.0	19.8	82.1	106.5	99.5	56.3	22.2	7.3	2.5	0.3
1999	49.2	20.6	81.1	105.3	95.9	53.9	21.1	7.0	2.4	0.3
1998	49.6	21.3	82.3	104.4	94.4	53.1	21.0	7.1	2.5	0.3
1997	49.4	21.9	82.1	102.6	92.0	51.5	20.7	7.0	2.5	0.3
1996	50.2	22.7	83.4	102.8	91.3	51.1	20.5	6.9	2.5	0.3
1995	51.0	23.9	83.9	103.2	90.7	50.4	20.3	7.0	2.5	0.3
1994	52.4	24.6	85.6	105.3	91.1	50.5	20.3	7.2	2.6	0.3
1993	53.7	24.4	86.0	108.1	91.7	50.7	20.2	7.3	2.7	0.4
1992	55.3	24.4	87.1	111.1	93.0	51.1	20.4	7.3	2.7	0.4
1991	56.8	24.7	87.9	113.5	94.3	51.6	20.2	7.4	2.7	0.4
1990	58.4	23.5	88.0	116.4	97.8	53.0	21.0	7.5	2.8	0.4
1989	57.2	21.9	85.4	114.3	94.8	51.3	20.4	7.4	2.7	0.6
1988	55.8	19.6	82.4	111.6	93.2	49.9	19.9	7.1	2.7	0.4
1987	55.0	18.3	80.5	109.9	91.2	48.6	19.0	6.9	2.6	0.4
1986	54.8	17.9	80.3	109.6	90.3	46.8	18.3	6.7	2.6	0.4
1985	55.6	18.0	81.2	112.3	91.1	47.3	18.1	6.6	2.5	0.4
1984 ⁴	55.0	17.8	80.7	111.4	89.9	46.0	17.8	6.3	2.4	0.4
1983 ⁴	55.1	18.2	82.6	113.0	89.1	45.2	17.4	6.4	2.3	0.4
1982 ⁴	56.4	18.6	86.5	117.3	90.3	44.5	17.5	6.4	2.3	0.4
1981 ⁴	56.3	18.4	88.4	119.1	88.7	43.3	17.0	6.2	2.3	0.4
1980 ⁴	57.0	18.8	92.0	123.1	91.0	42.8	17.1	6.1	2.2	0.3
White										
2003	47.1	14.3	69.2	106.1	102.8	58.9	21.9	6.7	2.1	0.3
2002	46.4	14.8	70.8	104.8	99.4	56.4	21.0	6.6	2.0	0.3
2001	46.9	15.5	73.1	105.4	99.9	55.7	20.8	6.5	2.0	0.3
2000	47.6	16.6	75.8	105.4	99.5	54.7	20.7	6.5	2.1	0.3
1999	46.9	17.3	74.7	104.1	96.2	52.7	19.8	6.3	2.1	0.3
1998	47.1	17.7	75.6	102.7	94.3	51.9	19.6	6.3	2.1	0.3
1997	46.8	18.0	75.3	100.9	91.7	50.2	19.3	6.2	2.1	0.3
1996	47.7	18.7	76.7	101.4	91.1	49.9	19.2	6.1	2.1	0.2
1995	48.4	19.4	77.0	101.7	90.4	49.1	19.1	6.2	2.1	0.2
1994	49.3	19.5	77.4	103.1	90.4	48.9	18.9	6.3	2.2	0.3
1993	50.3	18.9	77.2	105.5	90.7	48.9	18.7	6.4	2.2	0.2
1992	51.8	18.8	77.8	108.2	91.9	49.1	18.8	6.4	2.2	0.3
1991	53.1	19.0	78.4	110.2	92.8	49.6	18.5	6.5	2.2	0.3
1990	54.6	18.1	78.3	113.2	96.1	50.9	19.2	6.5	2.2	0.3
1989	53.3	16.7	75.9	110.8	93.0	49.1	18.7	6.3	2.1	0.4
1988	52.2	14.8	73.7	108.3	91.2	47.6	18.1	6.1	2.1	0.3
1987	51.6	13.9	72.8	107.0	89.5	46.2	17.3	5.9	2.0	0.3
1986	51.7	13.8	73.3	107.0	88.7	44.4	16.6	5.7	2.0	0.3
1985	52.6	14.0	74.7	109.9	89.5	44.8	16.3	5.6	1.9	0.3
1984 ⁴	51.8	14.0	74.3	108.8	87.9	43.5	16.0	5.3	1.9	0.3
1983 ⁴	52.0	14.4	76.3	110.2	86.8	42.6	15.5	5.3	1.8	0.3
1982 ⁴	53.1	14.9	80.1	114.2	87.5	41.7	15.6	5.3	1.9	0.3
1981 ⁴	52.9	15.0	81.7	115.8	85.8	40.3	15.0	5.2	1.8	0.3
1980 ⁴	53.4	15.4	84.9	119.4	87.8	39.7	15.0	5.1	1.8	0.3

See footnotes at end of table.

Table 20. Birth rates by age and race of father: United States, 1980–2003—Con.

[Rates are live births per 1,000 men in specified group. Populations enumerated as of April 1 for 1980, 1990, and 2000 and estimated as of July 1 for all other years. Figures for age of father not stated are distributed]

Year and race of father	Age of father									
	15–54 years ¹	15–19 years ²	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55 years and over
Black										
2003	61.0	32.5	111.9	122.3	96.2	59.9	29.6	12.4	4.9	0.9
2002	61.2	33.3	116.2	123.6	94.0	57.8	28.5	12.0	4.7	0.9
2001	63.3	36.5	124.5	125.9	95.6	57.1	28.2	11.8	4.7	1.0
2000	66.2	39.6	135.5	131.0	95.2	56.9	28.4	11.7	5.0	1.0
1999	65.4	41.0	133.8	129.6	91.6	54.3	26.5	11.2	4.9	1.0
1998	66.8	42.8	137.0	130.3	90.9	54.0	26.7	11.6	5.0	1.0
1997	66.7	45.1	136.3	126.3	88.8	52.6	26.1	11.4	5.2	1.0
1996	67.2	46.7	137.6	123.9	87.0	51.8	25.7	11.3	5.3	1.1
1995	69.1	49.9	139.2	123.9	87.7	52.0	25.7	11.9	5.4	1.1
1994	74.0	54.1	149.1	129.6	91.4	53.8	26.4	12.8	5.8	1.1
1993	77.6	56.2	152.7	134.2	94.0	56.3	27.7	13.4	6.3	1.3
1992	80.4	57.0	157.1	138.6	95.8	56.7	28.4	13.7	6.1	1.4
1991	83.0	57.8	158.5	142.0	99.2	58.5	29.4	14.1	6.7	1.4
1990	84.9	55.2	158.2	144.9	103.2	60.4	31.1	15.0	7.1	1.4
1989	84.1	52.9	153.4	143.5	101.4	59.9	31.1	14.9	6.9	2.7
1988	80.7	48.1	144.1	137.9	100.0	58.0	30.6	14.3	6.9	1.4
1987	78.3	44.6	136.1	133.9	97.4	58.0	30.0	13.8	6.6	1.3
1986	77.2	42.6	131.4	131.6	97.4	58.0	29.1	13.5	6.7	1.3
1985	77.2	41.8	129.5	132.7	97.3	59.4	29.5	13.3	6.5	1.2
1984 ⁴	76.7	40.9	128.0	132.2	98.3	58.4	29.3	13.3	6.1	1.2
1983 ⁴	77.2	40.7	129.1	134.4	99.0	59.6	29.6	13.5	6.0	1.2
1982 ⁴	79.5	40.3	133.4	141.2	103.6	61.1	29.6	13.9	6.0	1.2
1981 ⁴	80.4	38.9	138.4	145.6	104.3	61.3	29.7	13.3	5.7	1.2
1980 ⁴	83.0	40.1	145.3	152.8	109.6	62.0	31.2	13.6	5.9	1.1

¹Rates computed by relating total births, regardless of age of father, to men aged 15–54 years.

²Rates computed by relating births of fathers under 20 years of age to men aged 15–19 years.

³Includes races other than white and black.

⁴Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see “Technical Notes.”

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all men (including Hispanic men) are classified only according to their race; see “Technical Notes.” Age of father was not stated for 13.4 percent of births in 2003.

Table 21. Live births by educational attainment, and percentage of mothers completing 12 years or more and 16 years or more of school, by age and race and Hispanic origin of mother: Total of 48 States and the District of Columbia, 2003

Age and race of mother	Total	Years of school completed by mother						Percent 12 years or more	Percent 16 years or more
		0-8 years	9-11 years	12 years	13-15 years	16 years or more	Not stated		
All races ¹									
All ages	3,863,502	233,840	588,283	1,162,697	811,985	1,012,730	53,967	78.4	26.6
Under 15 years	6,341	4,884	1,298	—	—	—	159	*	*
15-19 years	394,919	33,508	196,889	137,333	21,114	—	6,075	40.7	*
15 years	17,344	5,129	11,735	—	—	—	480	*	*
16 years	39,332	4,963	32,475	1,119	—	—	775	2.9	*
17 years	71,353	5,913	52,278	11,741	241	—	1,180	17.1	*
18 years	112,293	7,972	50,769	48,493	3,516	—	1,543	47.0	*
19 years	154,597	9,531	49,632	75,980	17,357	—	2,097	61.2	*
20-24 years	980,514	63,057	204,945	423,305	220,117	56,387	12,703	72.3	5.8
25-29 years	1,025,666	61,487	104,139	299,115	258,304	288,933	13,688	83.6	28.6
30-34 years	916,840	42,846	54,016	190,800	199,543	417,131	12,504	89.3	46.1
35-39 years	438,771	21,643	22,032	90,951	91,675	205,602	6,868	89.9	47.6
40 years and over	100,451	6,415	4,964	21,193	21,232	44,677	1,970	88.4	45.4
White total ²									
All ages	3,040,873	210,711	443,337	879,194	629,732	837,720	40,179	78.2	27.9
Under 15 years	3,512	2,654	770	—	—	—	88	*	*
15-19 years	284,360	28,528	139,800	97,463	14,252	—	4,317	39.9	*
15 years	10,963	3,350	7,299	—	—	—	314	*	*
16 years	26,861	3,952	21,584	768	—	—	557	2.9	*
17 years	50,615	5,226	36,181	8,201	174	—	833	16.8	*
18 years	81,801	7,218	37,295	33,847	2,335	—	1,106	44.8	*
19 years	114,120	8,782	37,441	54,647	11,743	—	1,507	59.0	*
20-24 years	750,290	58,793	157,422	316,774	163,806	43,939	9,556	70.8	5.9
25-29 years	821,227	57,145	82,021	231,504	203,379	236,883	10,295	82.8	29.2
30-34 years	745,992	38,746	42,990	147,820	159,135	348,034	9,267	88.9	47.2
35-39 years	355,111	19,271	16,739	69,768	72,446	171,685	5,202	89.7	49.1
40 years and over	80,381	5,574	3,595	15,865	16,714	37,179	1,454	88.4	47.1
Non-Hispanic white									
All ages	2,158,797	33,454	212,021	620,663	513,666	760,496	18,497	88.5	35.5
Under 15 years	1,316	1,042	250	—	—	—	24	*	*
15-19 years	161,828	8,148	76,711	65,249	10,172	—	1,548	47.1	*
15 years	4,548	1,364	3,088	—	—	—	96	*	*
16 years	12,496	1,391	10,536	409	—	—	160	3.3	*
17 years	26,846	1,574	20,006	4,869	112	—	285	18.8	*
18 years	47,441	1,882	21,483	22,104	1,566	—	406	50.3	*
19 years	70,497	1,937	21,598	37,867	8,494	—	601	66.3	*
20-24 years	488,194	10,422	83,319	224,817	128,393	37,466	3,777	80.6	7.7
25-29 years	582,914	6,599	31,320	161,587	166,223	212,531	4,654	93.4	36.8
30-34 years	580,329	4,249	13,443	105,645	133,308	318,774	4,910	96.9	55.4
35-39 years	280,645	2,217	5,519	51,239	61,266	157,579	2,825	97.2	56.7
40 years and over	63,571	777	1,459	12,126	14,304	34,146	759	96.4	54.4
Black total ²									
All ages	573,776	14,570	121,098	220,995	132,461	75,613	9,039	76.0	13.4
Under 15 years	2,588	2,059	464	—	—	—	65	*	*
15-19 years	96,294	4,206	50,240	34,553	5,826	—	1,469	42.6	*
15 years	5,744	1,627	3,972	—	—	—	145	*	*
16 years	11,047	877	9,689	291	—	—	190	2.7	*
17 years	18,180	575	14,211	3,055	59	—	280	17.4	*
18 years	26,567	587	11,849	12,782	975	—	374	52.5	*
19 years	34,756	540	10,519	18,425	4,792	—	480	67.7	*
20-24 years	187,923	2,698	40,520	88,414	45,546	8,306	2,439	76.7	4.5
25-29 years	133,853	2,254	17,335	50,587	38,799	22,803	2,075	85.1	17.3
30-34 years	93,416	1,855	7,815	29,141	26,379	26,455	1,771	89.4	28.9
35-39 years	47,722	1,112	3,761	14,602	12,886	14,429	932	89.6	30.8
40 years and over	11,980	386	963	3,698	3,025	3,620	288	88.5	31.0

See footnotes at end of table.

Table 21. Live births by educational attainment, and percentage of mothers completing 12 years or more and 16 years or more of school, by age and race and Hispanic origin of mother: Total of 48 States and the District of Columbia, 2003—Con.

Age and race of mother	Total	Years of school completed by mother						Percent 12 years or more	Percent 16 years or more
		0–8 years	9–11 years	12 years	13–15 years	16 years or more	Not stated		
Non-Hispanic black									
All ages	553,987	12,376	117,279	214,309	128,458	73,396	8,169	76.2	13.4
Under 15 years	2,531	2,019	450	—	—	—	62	*	*
15–19 years	93,623	3,940	48,944	33,691	5,678	—	1,370	42.7	*
15 years	5,595	1,577	3,880	—	—	—	138	*	*
16 years	10,741	845	9,441	275	—	—	180	2.6	*
17 years	17,640	528	13,842	2,953	56	—	261	17.3	*
18 years	25,875	529	11,574	12,490	938	—	344	52.6	*
19 years	33,772	461	10,207	17,973	4,684	—	447	68.0	*
20–24 years	182,032	2,133	39,330	86,037	44,230	8,043	2,259	76.9	4.5
25–29 years	128,686	1,642	16,608	48,887	37,574	22,138	1,837	85.6	17.5
30–34 years	89,775	1,425	7,432	28,098	25,557	25,695	1,568	90.0	29.1
35–39 years	45,795	887	3,589	14,003	12,486	14,012	818	90.0	31.2
40 years and over	11,545	330	926	3,593	2,933	3,508	255	88.9	31.1
Hispanic ³									
All ages	888,177	179,657	234,793	263,657	118,461	75,687	15,922	52.5	8.7
Under 15 years	2,250	1,653	538	—	—	—	59	*	*
15–19 years	124,616	20,695	64,310	33,008	4,227	—	2,376	30.5	*
15 years	6,569	2,048	4,319	—	—	—	202	*	*
16 years	14,645	2,597	11,321	381	—	—	346	2.7	*
17 years	24,201	3,706	16,513	3,433	63	—	486	14.7	*
18 years	34,864	5,411	16,053	12,006	807	—	587	37.4	*
19 years	44,337	6,933	16,104	17,188	3,357	—	755	47.1	*
20–24 years	265,614	49,087	75,075	93,818	36,383	6,567	4,684	52.4	2.5
25–29 years	239,989	51,257	51,384	71,223	37,833	24,022	4,270	56.5	10.2
30–34 years	165,152	34,900	29,919	42,897	26,180	28,455	2,801	60.1	17.5
35–39 years	74,008	17,231	11,402	18,912	11,397	13,688	1,378	60.6	18.8
40 years and over	16,548	4,834	2,165	3,799	2,441	2,955	354	56.8	18.2

— Quantity zero.

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Includes races other than white and black.²Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."³Includes all persons of Hispanic origin of any race.

NOTE: Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

Table 22. Number of live births and percent distribution, by weight gain of mother during pregnancy and median weight gain, according to period of gestation and race and Hispanic origin of mother: Total of 49 reporting States and the District of Columbia, 2003

Period of gestation ¹ and race and Hispanic origin of mother	Weight gain during pregnancy										Median weight gain in pounds
	All births	Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	Not stated	
All gestation periods ²	Number										
All races ³	3,548,953	410,229	357,405	458,300	585,514	454,516	418,727	228,945	428,973	206,344	...
White total ⁴	2,787,474	297,601	270,105	360,388	467,186	371,152	339,605	187,293	344,316	149,828	...
Non-Hispanic white	2,155,140	209,691	191,953	273,520	364,606	301,256	276,213	155,532	288,331	94,038	...
Black total ⁴	567,498	92,425	65,566	69,982	83,575	57,462	57,291	30,703	68,200	42,294	...
Non-Hispanic black	545,108	89,567	63,330	67,261	80,128	54,794	54,955	29,358	65,593	40,122	...
Hispanic ⁵	642,624	89,493	79,745	88,603	104,476	71,213	64,337	32,378	57,131	55,248	...
Under 37 weeks											
All races ³	446,127	74,658	54,205	58,190	65,791	45,957	42,005	23,039	47,909	34,373	...
White total ⁴	323,512	48,655	37,925	42,906	49,059	35,270	32,146	17,939	36,835	22,777	...
Non-Hispanic white	245,822	34,007	27,164	32,544	37,889	28,240	25,827	14,801	31,057	14,293	...
Black total ⁴	100,594	22,643	13,279	12,078	13,313	8,379	7,940	4,103	9,307	9,552	...
Non-Hispanic black	97,637	22,095	12,934	11,716	12,913	8,118	7,670	3,980	9,030	9,181	...
Hispanic ⁵	79,155	14,951	11,001	10,606	11,437	7,172	6,481	3,185	5,924	8,398	...
37–39 weeks											
All races ³	1,840,887	206,842	187,372	244,844	313,404	241,613	218,550	116,542	212,395	99,325	...
White total ⁴	1,453,012	152,418	142,680	193,129	250,810	197,615	177,547	95,375	170,584	72,854	...
Non-Hispanic white	1,132,187	108,662	102,628	147,745	197,456	161,398	145,178	79,633	143,168	46,319	...
Black total ⁴	285,044	44,031	32,885	36,383	43,419	29,983	29,633	15,521	33,735	19,454	...
Non-Hispanic black	273,918	42,660	31,749	34,956	41,644	28,572	28,466	14,863	32,538	18,470	...
Hispanic ⁵	325,928	44,501	40,890	46,283	54,296	36,926	32,799	16,034	27,880	26,319	...
40 weeks and over											
All races ³	1,255,561	128,090	115,499	154,873	205,866	166,612	157,852	89,183	168,291	69,295	...
White total ⁴	1,006,388	96,115	89,267	124,055	166,970	138,004	129,669	73,837	136,636	51,835	...
Non-Hispanic white	774,234	66,768	62,008	93,030	129,014	111,458	105,044	60,990	113,905	32,017	...
Black total ⁴	180,423	25,553	19,326	21,447	26,773	19,047	19,662	11,044	25,062	12,509	...
Non-Hispanic black	172,228	24,625	18,574	20,517	25,502	18,052	18,768	10,484	23,930	11,776	...
Hispanic ⁵	236,120	29,887	27,779	31,618	38,640	27,016	24,979	13,122	23,275	19,804	...
All gestation periods ²	Percent distribution										
All races ³	100.0	12.3	10.7	13.7	17.5	13.6	12.5	6.8	12.8	...	30.5
White total ⁴	100.0	11.3	10.2	13.7	17.7	14.1	12.9	7.1	13.1	...	30.7
Non-Hispanic white	100.0	10.2	9.3	13.3	17.7	14.6	13.4	7.5	14.0	...	31.0
Black total ⁴	100.0	17.6	12.5	13.3	15.9	10.9	10.9	5.8	13.0	...	29.9
Non-Hispanic black	100.0	17.7	12.5	13.3	15.9	10.9	10.9	5.8	13.0	...	29.8
Hispanic ⁵	100.0	15.2	13.6	15.1	17.8	12.1	11.0	5.5	9.7	...	28.7
Under 37 weeks											
All races ³	100.0	18.1	13.2	14.1	16.0	11.2	10.2	5.6	11.6	...	28.3
White total ⁴	100.0	16.2	12.6	14.3	16.3	11.7	10.7	6.0	12.2	...	29.4
Non-Hispanic white	100.0	14.7	11.7	14.1	16.4	12.2	11.2	6.4	13.4	...	30.2
Black total ⁴	100.0	24.9	14.6	13.3	14.6	9.2	8.7	4.5	10.2	...	25.6
Non-Hispanic black	100.0	25.0	14.6	13.2	14.6	9.2	8.7	4.5	10.2	...	25.6
Hispanic ⁵	100.0	21.1	15.5	15.0	16.2	10.1	9.2	4.5	8.4	...	25.7

See footnotes at end of table.

Table 22. Number of live births and percent distribution, by weight gain of mother during pregnancy and median weight gain, according to period of gestation and race and Hispanic origin of mother: Total of 49 reporting States and the District of Columbia, 2003—Con.

Period of gestation ¹ and race and Hispanic origin of mother	Weight gain during pregnancy										Median weight gain in pounds
	All births	Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	Not stated	
37–39 weeks	Percent distribution										
All races ³	100.0	11.9	10.8	14.1	18.0	13.9	12.5	6.7	12.2	...	30.5
White total ⁴	100.0	11.0	10.3	14.0	18.2	14.3	12.9	6.9	12.4	...	30.6
Non-Hispanic white	100.0	10.0	9.5	13.6	18.2	14.9	13.4	7.3	13.2	...	30.9
Black total ⁴	100.0	16.6	12.4	13.7	16.3	11.3	11.2	5.8	12.7	...	30.0
Non-Hispanic black	100.0	16.7	12.4	13.7	16.3	11.2	11.1	5.8	12.7	...	30.0
Hispanic ⁵	100.0	14.9	13.6	15.4	18.1	12.3	10.9	5.4	9.3	...	28.6
40 weeks and over											
All races ³	100.0	10.8	9.7	13.1	17.4	14.0	13.3	7.5	14.2	...	30.9
White total ⁴	100.0	10.1	9.4	13.0	17.5	14.5	13.6	7.7	14.3	...	31.1
Non-Hispanic white	100.0	9.0	8.4	12.5	17.4	15.0	14.2	8.2	15.3	...	32.3
Black total ⁴	100.0	15.2	11.5	12.8	15.9	11.3	11.7	6.6	14.9	...	30.4
Non-Hispanic black	100.0	15.3	11.6	12.8	15.9	11.3	11.7	6.5	14.9	...	30.4
Hispanic ⁵	100.0	13.8	12.8	14.6	17.9	12.5	11.5	6.1	10.8	...	30.0

... Category not applicable.

¹Expressed in completed weeks.²Includes births with period of gestation not stated.³Includes races other than white and black and origin not stated.⁴Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."⁵Includes all persons of Hispanic origin of any race.

NOTE: Excludes data for California, which did not require reporting of weight gain during pregnancy.

Table 23. Percentage low birthweight by weight gain of mother during pregnancy, period of gestation, and race and Hispanic origin of mother: Total of 49 reporting States and the District of Columbia, 2003

[Low birthweight is defined as weight of less than 2,500 grams (5 lb 8 oz)]

Period of gestation ¹ and race and Hispanic origin of mother	Total	Weight gain during pregnancy								
		Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	Not stated
All gestation periods ²										
All races ³	8.1	13.9	10.7	8.3	6.9	5.9	5.6	5.7	6.1	12.2
White total ⁴	7.1	11.8	9.3	7.4	6.1	5.3	5.1	5.3	5.7	10.4
Non-Hispanic white	7.1	12.2	9.8	7.6	6.2	5.4	5.1	5.3	5.9	11.0
Black total ⁴	13.4	20.9	16.3	13.4	11.7	10.0	9.1	8.6	8.3	18.8
Non-Hispanic black	13.6	21.1	16.5	13.5	11.9	10.2	9.2	8.7	8.3	19.0
Hispanic ⁵	7.0	10.9	8.2	6.8	5.8	5.2	4.8	4.9	4.9	9.5
Mexican	6.5	10.0	7.5	6.2	5.4	4.8	4.3	4.5	4.5	8.5
Puerto Rican	10.1	17.3	13.2	10.4	8.5	7.4	7.1	6.8	6.2	17.5
Cuban	7.0	14.1	10.6	7.9	6.1	6.5	5.5	3.8	4.4	12.0
Central and South American	6.6	11.5	8.2	6.8	5.8	4.5	4.2	4.9	4.9	9.7
Other and unknown Hispanic	8.2	12.6	9.9	7.7	6.8	6.7	6.5	5.2	5.7	13.7
Under 37 weeks										
All races ³	43.6	55.5	47.8	42.6	39.1	37.1	36.0	37.1	37.0	53.4
White total ⁴	41.3	52.1	45.6	40.6	37.2	35.6	35.1	36.4	36.6	50.6
Non-Hispanic white	42.8	54.9	48.3	42.4	38.8	36.7	36.6	37.4	37.8	54.6
Black total ⁴	51.4	62.9	54.6	49.9	46.3	44.0	40.6	40.9	39.3	61.0
Non-Hispanic black	51.6	63.0	54.8	50.1	46.6	44.3	40.6	41.2	39.3	61.1
Hispanic ⁵	36.6	45.7	38.6	35.1	31.8	31.0	29.5	31.3	29.7	43.4
37–39 weeks										
All races ³	4.0	5.9	5.1	4.4	3.7	3.3	3.0	3.1	3.2	5.0
White total ⁴	3.4	5.0	4.3	3.8	3.2	2.9	2.6	2.8	2.9	4.2
Non-Hispanic white	3.4	5.0	4.3	3.8	3.1	2.8	2.6	2.8	2.9	4.1
Black total ⁴	6.7	8.9	8.2	7.2	6.4	5.4	5.2	4.8	4.6	7.7
Non-Hispanic black	6.7	9.0	8.3	7.2	6.5	5.5	5.3	4.8	4.6	7.8
Hispanic ⁵	3.7	5.0	4.3	3.8	3.5	3.2	2.7	2.9	2.9	4.4
40 weeks and over										
All races ³	1.6	2.8	2.3	1.8	1.5	1.3	1.2	1.1	1.1	2.1
White total ⁴	1.3	2.3	1.9	1.5	1.3	1.1	1.0	0.9	1.0	1.6
Non-Hispanic white	1.3	2.3	2.0	1.5	1.2	1.1	0.9	0.9	0.9	1.5
Black total ⁴	3.0	4.6	4.0	3.4	2.9	2.3	2.3	1.9	1.7	3.8
Non-Hispanic black	3.1	4.7	4.0	3.4	3.0	2.3	2.3	1.9	1.8	3.8
Hispanic ⁵	1.5	2.6	1.9	1.6	1.4	1.1	1.1	1.0	1.1	1.9

¹Expressed in completed weeks.²Includes births with period of gestation not stated.³Includes races other than white and black and origin not stated.⁴Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."⁵Includes all persons of Hispanic origin of any race.

NOTE: Excludes data for California, which did not require reporting of weight gain during pregnancy.

Table 24. Percentage of births with selected medical or health characteristics, by race of mother, by place of birth of mother: United States, 2003

Characteristic	All races	White	Black	American Indian ¹	Asian or Pacific Islander
All births					
Mother					
Prenatal care beginning in the first trimester ²	84.1	85.7	75.9	70.8	85.4
Late or no prenatal care ²	3.5	3.0	6.0	7.6	3.1
Smoker ^{2,3}	10.7	11.6	8.1	18.1	2.2
Drinker ^{2,4}	0.7	0.8	0.7	2.2	0.3
Weight gain of less than 16 lbs ⁵	12.3	11.3	17.6	17.3	9.6
Median weight gain ⁵	30.5	30.7	29.9	29.8	30.2
Cesarean delivery rate	27.5	27.3	29.1	24.1	26.6
Infant					
Preterm births ⁶	12.3	11.5	17.6	13.5	10.5
Birthweight					
Very low birthweight ⁷	1.4	1.2	3.1	1.3	1.1
Low birthweight ⁸	7.9	6.9	13.4	7.4	7.8
4,000 grams or more ⁹	8.9	9.8	4.9	10.9	5.3
5-minute Apgar score of less than 7 ¹⁰	1.4	1.3	2.3	1.5	1.0
Births to mothers born in the 50 States and DC					
Mother					
Prenatal care beginning in the first trimester ²	85.7	88.0	75.9	70.5	83.7
Late or no prenatal care ²	3.0	2.4	5.8	7.7	3.2
Smoker ^{2,3}	13.1	13.9	9.3	19.0	7.3
Drinker ^{2,4}	0.9	0.8	0.8	2.3	0.6
Weight gain of less than 16 lbs ⁵	11.9	10.6	17.9	17.4	9.4
Median weight gain ⁵	30.7	30.9	30.0	30.0	30.8
Cesarean delivery rate	27.7	27.6	28.8	24.0	23.6
Infant					
Preterm births ⁶	12.7	11.6	18.2	13.6	12.2
Birthweight					
Very low birthweight ⁷	1.5	1.2	3.1	1.3	1.3
Low birthweight ⁸	8.3	7.2	13.9	7.3	8.8
4,000 grams or more ⁹	9.1	10.0	4.5	11.1	6.3
5-minute Apgar score of less than 7 ¹⁰	1.5	1.3	2.3	1.5	1.2
Births to mothers born outside the 50 States and DC					
Mother					
Prenatal care beginning in the first trimester ²	79.1	77.8	76.2	76.2	85.8
Late or no prenatal care ²	5.1	5.4	6.8	6.2	3.1
Smoker ^{2,3}	1.5	1.7	1.0	2.6	1.1
Drinker ^{2,4}	0.3	0.3	0.2	*	0.3
Weight gain of less than 16 lbs ⁵	13.8	14.6	15.6	16.0	9.7
Median weight gain ⁵	28.9	28.6	28.8	27.6	30.1
Cesarean delivery rate	26.9	26.3	31.0	26.6	27.2
Infant					
Preterm births ⁶	11.0	10.9	13.9	12.4	10.1
Birthweight					
Very low birthweight ⁷	1.1	1.0	2.4	1.1	1.0
Low birthweight ⁸	6.6	6.0	9.6	8.2	7.6
4,000 grams or more ⁹	8.2	9.0	7.7	6.8	5.1
5-minute Apgar score of less than 7 ¹⁰	1.1	1.0	1.8	1.4	1.0

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Includes births to Aleuts and Eskimos.²Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."³Excludes data for California, which did not report tobacco use on the birth certificate.⁴Excludes data for California, which did not report alcohol use on the birth certificate.⁵Excludes data for California, which did not report weight gain on the birth certificate. Median weight shown in pounds.⁶Born prior to 37 completed weeks of gestation.⁷Birthweight of less than 1,500 grams (3 lb 4 oz). ⁸Birthweight of less than 2,500 grams (5 lb 8 oz).⁹Equivalent to 8 lb 14 oz.¹⁰Excludes data for California and Texas, which did not report 5-minute Apgar score on the birth certificate.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 25. Percentage of births with selected medical or health characteristics, by Hispanic origin of mother and by race for mothers of non-Hispanic origin and by place of birth of mother: United States, 2003

Characteristic	All origins ¹	Origin of mother									
		Hispanic						Non-Hispanic			
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total ²	White	Black	
All births											
Mother											
Prenatal care beginning in the first trimester ³	84.1	77.5	76.5	81.2	92.1	79.2	77.0	86.1	89.0	75.9	
Late or no prenatal care ³	3.5	5.3	5.6	3.7	1.3	4.7	5.4	3.0	2.1	6.0	
Smoker ^{3,4}	10.7	2.7	2.0	7.9	2.4	1.1	6.6	12.6	14.3	8.3	
Drinker ^{3,5}	0.7	0.4	0.4	0.6	0.3	0.3	0.9	0.8	0.9	0.8	
Weight gain of less than 16 lbs ⁶	12.3	15.2	16.9	12.8	7.8	12.3	13.2	11.6	10.2	17.7	
Median weight gain ⁶	30.5	28.7	27.3	30.7	31.9	30.1	30.3	30.7	31.0	29.8	
Cesarean delivery rate	27.5	26.5	25.8	27.6	39.8	28.4	25.9	27.8	27.6	29.2	
Infant											
Preterm births ⁷	12.3	11.9	11.7	13.8	11.8	11.4	12.6	12.5	11.3	17.8	
Birthweight											
Very low birthweight ⁸	1.4	1.2	1.1	2.0	1.4	1.2	1.3	1.5	1.2	3.1	
Low birthweight ⁹	7.9	6.7	6.3	10.0	7.0	6.7	8.0	8.3	7.0	13.6	
4,000 grams or more ¹⁰	8.9	8.2	8.5	6.2	8.3	8.0	7.0	9.0	10.4	4.8	
5-minute Apgar score of less than 7 ¹¹	1.4	1.1	1.1	1.5	0.8	0.9	1.2	1.5	1.3	2.3	
Births to mothers born in the 50 States and DC											
Mother											
Prenatal care beginning in the first trimester ³	85.7	80.8	80.6	80.7	91.5	84.2	77.8	86.3	89.1	75.9	
Late or no prenatal care ³	3.0	4.1	4.1	3.9	1.4	3.1	5.2	2.9	2.1	5.8	
Smoker ^{3,4}	13.1	5.8	4.7	9.1	3.5	3.5	8.7	13.8	14.9	9.3	
Drinker ^{3,5}	0.9	0.8	0.8	0.6	0.5	0.5	1.1	0.9	0.9	0.8	
Weight gain of less than 16 lbs ⁶	11.9	13.6	14.7	12.2	7.9	9.0	13.1	11.7	10.2	18.0	
Median weight gain ⁶	30.7	30.3	30.1	30.8	32.6	31.0	30.5	30.8	31.0	30.0	
Cesarean delivery rate	27.7	26.8	26.6	27.0	35.8	26.8	25.6	27.8	27.7	28.9	
Infant											
Preterm births ⁷	12.7	13.0	13.0	13.6	12.4	11.6	13.3	12.7	11.4	18.3	
Birthweight											
Very low birthweight ⁸	1.5	1.4	1.3	2.0	1.7	1.6	1.3	1.5	1.2	3.2	
Low birthweight ⁹	8.3	7.8	7.4	10.0	7.8	7.6	8.7	8.4	7.1	14.0	
4,000 grams or more ¹⁰	9.1	7.3	7.6	6.3	7.3	7.4	6.8	9.3	10.4	4.4	
5-minute Apgar score of less than 7 ¹¹	1.5	1.2	1.2	1.4	0.9	1.0	1.2	1.5	1.3	2.4	
Births to mothers born in the 50 States and DC											
Mother											
Prenatal care beginning in the first trimester ³	79.1	75.6	74.1	82.3	92.6	78.5	75.2	84.5	86.9	76.5	
Late or no prenatal care ³	5.1	5.9	6.5	3.4	1.1	4.9	5.8	3.8	3.1	6.9	
Smoker ^{3,4}	1.5	0.9	0.5	5.7	1.5	0.8	1.5	2.4	4.5	1.0	
Drinker ^{3,5}	0.3	0.2	0.2	0.4	*	0.3	0.3	0.5	0.8	0.2	
Weight gain of less than 16 lbs ⁶	13.8	16.2	18.2	13.9	7.7	12.7	13.3	10.7	9.0	15.9	
Median weight gain ⁶	28.9	27.3	25.9	30.3	31.0	29.8	29.8	30.3	30.7	28.5	
Cesarean delivery rate	26.9	26.4	25.3	28.9	43.3	28.6	26.8	27.6	26.0	31.7	
Infant											
Preterm births ⁷	11.0	11.2	11.0	14.2	11.3	11.4	10.5	10.7	9.5	14.2	
Birthweight											
Very low birthweight ⁸	1.1	1.0	0.9	2.0	1.1	1.1	0.9	1.3	1.0	2.6	
Low birthweight ⁹	6.6	6.0	5.7	10.0	6.3	6.6	5.9	7.5	6.2	10.0	
4,000 grams or more ¹⁰	8.2	8.7	9.0	6.1	9.2	8.1	7.4	7.4	10.4	7.7	
5-minute Apgar score of less than 7 ¹¹	1.1	1.0	1.1	1.6	0.8	0.9	1.0	1.2	0.9	1.9	

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator. ¹Includes origin not stated. ²Includes races other than white and black.

³Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

⁴Excludes data for California, which did not report tobacco use on the birth certificate. ⁵Excludes data for California, which did not report alcohol use on the birth certificate.

⁶Excludes data for California, which did not report weight gain on the birth certificate. Median weight gain shown in pounds. ⁷Born prior to 37 completed weeks of gestation.

⁸Birthweight of less than 1,500 grams (3 lb 4 oz). ⁹Birthweight of less than 2,500 grams (5 lb 8 oz).

¹⁰ Equivalent to 8 lb 14 oz. ¹¹Excludes data for California and Texas, which did not report 5-minute Apgar score on the birth certificate.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race. See "Technical Notes."

Table 26. Live births to mothers with selected medical risk factors and rates by age of mother, by race of mother: United States, 2003

[Rates are number of live births with specified medical risk factor per 1,000 live births in specified group]

Medical risk factor and race of mother	All births ¹	Medical risk factor reported	Age of mother								Not stated ²
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years		
All races ³											
Anemia ⁴	3,863,502	91,535	23.8	33.0	28.3	22.1	19.6	19.1	19.6	21,412	
Cardiac disease ⁴	3,863,502	18,639	4.9	2.6	3.4	4.5	6.1	7.4	8.9	21,412	
Acute or chronic lung disease ⁴	3,863,502	46,356	12.1	14.5	12.6	11.6	11.2	11.5	12.5	21,412	
Diabetes	4,089,950	133,547	32.8	9.9	18.6	31.1	43.0	58.0	75.9	21,150	
Genital herpes ^{4,5}	3,486,026	31,567	9.1	6.3	8.0	8.3	10.2	12.6	13.1	19,121	
Hydramnios/Oligohydramnios ⁴	3,863,502	53,141	13.8	14.5	13.8	13.3	13.6	14.4	17.0	21,412	
Hemoglobinopathy ⁴	3,863,502	3,112	0.8	1.0	0.9	0.7	0.8	0.8	0.7	21,412	
Hypertension, chronic	4,089,950	35,953	8.8	2.9	5.0	8.0	10.9	16.3	26.1	21,150	
Hypertension, pregnancy-associated	4,089,950	152,268	37.4	41.2	36.9	36.9	35.5	37.9	47.8	21,150	
Eclampsia	4,089,950	12,059	3.0	4.1	3.1	2.6	2.6	3.0	3.7	21,150	
Incompetent cervix ⁴	3,863,502	11,464	3.0	1.5	2.1	2.9	3.8	4.6	5.1	21,412	
Previous infant 4,000+ grams ⁴	3,863,502	36,422	9.5	1.1	5.3	9.8	13.2	16.0	18.5	21,412	
Previous preterm or small-for-gestational-age infant ⁴	3,863,502	44,671	11.6	4.1	11.1	12.3	12.9	14.6	15.9	21,412	
Renal disease ⁴	3,863,502	11,668	3.0	3.2	3.3	3.2	2.8	2.5	2.5	21,412	
Rh sensitization ^{4,6}	3,824,026	26,040	6.8	5.4	6.2	6.7	7.7	7.8	7.4	21,401	
Uterine bleeding ^{4,5}	3,486,026	18,494	5.3	4.0	4.7	5.3	5.8	6.5	8.0	19,121	
White											
Anemia ⁴	3,040,873	63,274	20.9	29.0	24.6	19.4	17.9	17.4	17.8	17,412	
Cardiac disease ⁴	3,040,873	15,582	5.2	2.6	3.5	4.8	6.5	7.8	9.4	17,412	
Acute or chronic lung disease ⁴	3,040,873	34,801	11.5	12.6	11.7	11.2	11.1	11.3	12.4	17,412	
Diabetes	3,225,848	100,954	31.5	10.0	18.3	29.3	40.3	53.8	70.2	16,400	
Genital herpes ^{4,5}	2,719,331	24,126	8.9	5.6	7.0	7.8	10.5	13.3	14.3	15,506	
Hydramnios/Oligohydramnios ⁴	3,040,873	40,374	13.4	13.8	13.3	12.9	13.1	13.9	15.9	17,412	
Hemoglobinopathy ⁴	3,040,873	1,229	0.4	0.3	0.3	0.4	0.5	0.6	0.5	17,412	
Hypertension, chronic	3,225,848	24,422	7.6	2.5	4.3	7.0	9.4	13.3	21.0	16,400	
Hypertension, pregnancy-associated	3,225,848	121,834	38.0	40.4	37.4	38.4	36.2	37.9	46.9	16,400	
Eclampsia	3,225,848	8,772	2.7	3.6	2.9	2.5	2.5	2.7	3.6	16,400	
Incompetent cervix ⁴	3,040,873	7,660	2.5	1.3	1.7	2.3	3.2	4.0	4.5	17,412	
Previous infant 4,000+ grams ⁴	3,040,873	32,403	10.7	1.3	5.8	10.8	14.7	17.9	20.8	17,412	
Previous preterm or small-for-gestational-age infant ⁴	3,040,873	34,285	11.3	3.8	10.4	11.9	12.7	14.4	15.4	17,412	
Renal disease ⁴	3,040,873	10,098	3.3	3.6	3.7	3.5	3.0	2.7	2.8	17,412	
Rh sensitization ^{4,6}	3,005,866	23,384	7.8	6.3	7.1	7.6	8.8	9.0	8.4	17,402	
Uterine bleeding ^{4,5}	2,719,331	15,207	5.6	4.2	5.0	5.6	6.0	6.8	8.1	15,506	
Black											
Anemia ⁴	573,776	22,222	38.9	42.5	41.3	38.5	35.1	32.2	32.6	2,525	
Cardiac disease ⁴	573,776	2,221	3.9	2.6	3.0	3.9	5.1	6.4	8.0	2,525	
Acute or chronic lung disease ⁴	573,776	9,167	16.0	19.4	16.4	15.2	14.1	14.4	14.3	2,525	
Diabetes	599,847	18,352	30.7	9.0	18.2	33.0	49.7	67.2	89.4	2,655	
Genital herpes ^{4,5}	531,891	6,290	11.9	8.5	12.1	13.4	12.7	12.5	9.9	2,247	
Hydramnios/Oligohydramnios ⁴	573,776	9,305	16.3	16.6	15.2	15.5	17.2	18.7	23.7	2,525	
Hemoglobinopathy ⁴	573,776	1,708	3.0	3.0	3.2	2.9	3.1	2.6	2.3	2,525	
Hypertension, chronic	599,847	9,921	16.6	4.3	8.2	16.2	27.4	43.5	64.6	2,655	
Hypertension, pregnancy-associated	599,847	24,003	40.2	43.7	37.0	36.4	42.7	46.7	58.2	2,655	
Eclampsia	599,847	2,751	4.6	5.7	4.2	3.9	4.6	5.8	5.1	2,655	
Incompetent cervix ⁴	573,776	3,228	5.7	1.9	3.7	6.6	9.4	10.3	9.2	2,525	
Previous infant 4,000+ grams ⁴	573,776	2,371	4.2	0.6	2.8	5.2	6.7	7.8	8.2	2,525	
Previous preterm or small-for-gestational-age infant ⁴	573,776	8,000	14.0	4.8	13.7	16.9	17.8	17.6	19.3	2,525	
Renal disease ⁴	573,776	1,073	1.9	1.9	1.9	1.9	1.9	1.8	*	2,525	
Rh sensitization ^{4,6}	571,013	2,129	3.7	3.1	3.7	3.8	4.2	4.0	4.6	2,525	
Uterine bleeding ^{4,5}	531,891	2,253	4.3	3.4	3.7	4.1	5.4	5.3	8.2	2,247	

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Total number of births to residents of areas reporting specified medical risk factor.²No response reported for the medical risk factor item.³Includes races other than white and black.⁴Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."⁵Texas does not report this risk factor.⁶Kansas does not report this risk factor.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 27. Number and rate of live births to mothers with selected medical risk factors, complications of labor, and obstetric procedures, by race of mother: United States, 2003

[Rates are number of live births with specified risk factors, complications, or procedures per 1,000 live births in specified group]

Medical risk factor, complication, and obstetric procedure	All races	White	Black	American Indian ¹	Asian or Pacific Islander
Medical risk factors			Number		
Anemia ²	91,535	63,274	22,222	2,113	3,926
Diabetes	133,547	100,954	18,352	2,139	12,102
Hypertension, pregnancy-associated	152,268	121,834	24,003	2,120	4,311
Uterine bleeding ^{2,3}	18,494	15,207	2,253	263	771
Complications of labor and/or delivery					
Meconium, moderate or heavy	197,865	146,301	38,349	2,098	11,117
Premature rupture of membrane ²	83,103	62,759	14,401	1,331	4,612
Dysfunctional labor ²	109,836	85,039	16,027	1,515	7,255
Breech/Malpresentation	156,804	127,933	19,075	1,499	8,297
Cephalopelvic disproportion ²	56,111	45,314	6,074	588	4,135
Fetal distress ^{2,4}	132,377	98,501	25,049	1,372	7,455
Obstetric procedures					
Amniocentesis ²	66,901	54,686	6,092	435	5,688
Electronic fetal monitoring ²	3,289,703	2,591,505	493,605	34,831	169,762
Induction of labor	840,137	696,703	104,123	8,501	30,810
Ultrasound ²	2,592,258	2,069,050	355,001	24,983	143,224
Stimulation of labor ²	645,075	512,549	89,024	6,553	36,949
Medical risk factors			Rate		
Anemia ²	23.8	20.9	38.9	52.4	19.0
Diabetes	32.8	31.5	30.7	50.1	55.1
Hypertension, pregnancy-associated	37.4	38.0	40.2	49.7	19.6
Uterine bleeding ^{2,3}	5.3	5.6	4.3	6.7	4.0
Complications of labor and/or delivery					
Meconium, moderate or heavy	48.6	45.5	64.1	49.1	50.6
Premature rupture of membrane ²	21.6	20.7	25.2	33.0	22.2
Dysfunctional labor ²	28.5	28.1	28.0	37.5	35.0
Breech/Malpresentation	38.5	39.8	31.9	35.2	37.8
Cephalopelvic disproportion ²	14.6	15.0	10.6	14.6	19.9
Fetal distress ^{2,4}	38.1	36.4	47.2	34.8	38.4
Obstetric procedures					
Amniocentesis ²	17.4	18.0	10.6	10.8	27.4
Electronic fetal monitoring ²	854.2	855.1	862.1	861.7	817.6
Induction of labor	206.0	216.6	174.0	198.8	140.0
Ultrasound ²	673.1	682.7	620.1	618.0	689.8
Stimulation of labor ²	167.5	169.1	155.5	162.1	177.9

¹Includes births to Aleuts and Eskimos.²Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."³Texas does not report this risk factor.⁴Texas does not report this complication.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 28. Number and rate of live births to mothers with selected medical risk factors, complications of labor, and obstetric procedures, by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 2003

[Rates are number of live births with specified risk factors, complications, or procedures per 1,000 live births in specified group]

Medical risk factor, complication, and obstetric procedure	All origins ¹	Origin of mother								
		Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total ²	White	Black
Medical risk factors						Number				
Anemia ³	91,535	21,217	14,476	1,713	299	2,727	2,002	69,831	42,710	21,438
Diabetes	133,547	29,022	20,329	2,372	367	4,258	1,696	103,717	72,492	17,508
Hypertension, pregnancy-associated	152,268	23,569	15,982	1,847	479	3,576	1,685	127,766	98,511	23,229
Uterine bleeding ^{3,4}	18,494	2,697	1,525	241	42	454	435	15,691	12,565	2,143
Complications of labor and/or delivery										
Meconium, moderate/heavy	197,865	48,400	34,326	3,088	453	7,949	2,584	148,180	98,960	36,727
Premature rupture of membrane ³	83,103	14,667	9,897	1,151	215	2,367	1,037	67,889	48,231	13,985
Dysfunctional labor ³	109,836	22,822	14,880	1,796	591	3,953	1,602	86,477	62,538	15,442
Breech/Malpresentation	156,804	26,967	18,008	2,122	595	4,470	1,772	128,684	101,192	18,166
Cephalopelvic disproportion ³	56,111	9,239	6,479	646	140	1,439	535	46,495	36,034	5,901
Fetal distress ^{3,5}	132,377	19,509	11,896	1,922	360	4,028	1,303	112,108	79,272	24,346
Obstetric procedures										
Amniocentesis ³	66,901	7,831	3,934	843	305	2,075	674	58,579	46,892	5,763
Electronic fetal monitoring ³	3,289,703	726,986	517,951	45,579	12,777	110,643	40,036	2,546,356	1,873,108	476,993
Induction of labor	840,137	125,518	84,986	9,564	2,864	18,105	9,999	709,690	571,669	100,473
Ultrasound ³	2,592,258	537,689	371,064	35,760	9,561	87,677	33,627	2,040,502	1,537,340	341,764
Stimulation of labor ³	645,075	131,642	91,306	9,797	1,590	22,064	6,885	510,148	382,310	85,797
Medical risk factors						Rate				
Anemia ³	23.8	24.0	22.7	32.8	20.4	20.6	43.1	23.8	19.9	38.9
Diabetes	32.8	31.9	31.2	40.8	24.7	31.6	34.8	33.1	31.4	30.5
Hypertension, pregnancy-associated ³	37.4	25.9	24.5	31.7	32.3	26.5	34.5	40.8	42.6	40.5
Uterine bleeding ^{3,4}	5.3	3.8	3.2	4.7	2.9	3.7	11.0	5.7	6.3	4.2
Complications of labor and/or delivery										
Meconium, moderate/heavy	48.6	53.2	52.5	53.0	30.5	58.8	52.9	47.2	42.8	63.9
Premature rupture of membrane ³	21.6	16.5	15.5	22.0	14.7	17.8	22.3	23.1	22.5	25.3
Dysfunctional labor ³	28.5	25.7	23.2	34.4	40.4	29.7	34.5	29.4	29.1	28.0
Breech/Malpresentation	38.5	29.6	27.6	36.4	40.1	33.1	36.4	41.1	43.8	31.6
Cephalopelvic disproportion ³	14.6	10.4	10.1	12.4	9.6	10.8	11.5	15.8	16.8	10.7
Fetal distress ^{3,5}	38.1	27.7	25.0	37.6	25.2	32.8	33.1	40.9	39.4	47.6
Obstetric procedures										
Amniocentesis ³	17.4	8.8	6.1	16.1	20.8	15.6	14.5	19.9	21.8	10.4
Electronic fetal monitoring ³	854.2	819.6	808.6	872.4	872.7	831.2	861.2	866.0	871.2	862.8
Induction of labor	206.0	137.8	130.0	164.1	192.9	133.9	204.7	226.1	247.0	174.8
Ultrasound ³	673.1	606.2	579.3	684.4	653.0	658.7	723.4	694.0	715.0	618.2
Stimulation of labor ³	167.5	148.4	142.5	187.5	108.6	165.8	148.1	173.5	177.8	155.2

¹Includes origin not stated.²Includes races other than white and black.³Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."⁴Texas does not report this risk factor.⁵Texas does not report this complication.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race.

Table 29. Number of live births by smoking status of mother, percentage smokers, and percent distribution by average number of cigarettes smoked by mothers per day, according to age and race of mother: Total of 47 reporting States and the District of Columbia, 2003

Smoking status, smoking measure, and race of mother	Age of mother									
	All ages	Under 15 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–54 years
			Total	15–17 years	18–19 years					
All races ¹					Number					
Total	3,322,505	5,629	345,580	111,832	233,748	856,641	885,042	781,987	366,092	81,534
Smoker.	354,586	297	53,056	13,289	39,767	137,255	82,482	50,173	24,890	6,433
Nonsmoker	2,948,476	5,296	290,759	97,957	192,802	714,848	797,511	726,854	338,777	74,431
Not stated	19,443	36	1,765	586	1,179	4,538	5,049	4,960	2,425	670
White										
Total	2,602,499	2,919	241,936	74,469	167,467	644,521	706,918	642,021	298,724	65,460
Smoker.	301,069	241	45,649	11,252	34,397	117,011	69,662	42,757	20,568	5,181
Nonsmoker	2,285,689	2,661	194,980	62,795	132,185	523,983	633,134	595,112	276,101	59,718
Not stated	15,741	17	1,307	422	885	3,527	4,122	4,152	2,055	561
Black										
Total	541,427	2,506	91,881	33,516	58,365	178,617	126,098	87,215	44,107	11,003
Smoker.	43,739	44	5,741	1,569	4,172	16,661	10,479	6,045	3,686	1,083
Nonsmoker	495,364	2,444	85,852	31,848	54,004	161,241	115,054	80,712	40,203	9,858
Not stated	2,324	18	288	99	189	715	565	458	218	62
					Percent smokers					
Total ¹	10.7	5.3	15.4	11.9	17.1	16.1	9.4	6.5	6.8	8.0
White	11.6	8.3	19.0	15.2	20.6	18.3	9.9	6.7	6.9	8.0
Black	8.1	1.8	6.3	4.7	7.2	9.4	8.3	7.0	8.4	9.9
All races ¹					Percent distribution ²					
Smoker.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1–5 cigarettes	33.2	52.3	41.1	45.6	39.6	34.4	30.5	29.1	28.8	27.6
6–10 cigarettes	42.4	34.9	42.3	40.4	42.9	43.5	42.7	41.3	39.6	38.4
11–15 cigarettes	5.2	*	3.8	2.9	4.1	4.8	5.6	6.4	6.9	7.1
16–20 cigarettes	16.8	9.3	11.6	9.9	12.1	15.5	18.6	20.0	20.9	21.9
21–30 cigarettes	1.7	*	1.0	1.0	1.0	1.4	1.9	2.3	2.7	3.3
31–40 cigarettes	0.5	*	0.2	0.2	0.3	0.4	0.6	0.9	1.0	1.4
41 cigarettes or more	0.1	*	0.1	*	0.1	0.1	0.1	0.1	0.1	*
White										
Smoker.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1–5 cigarettes	30.0	47.8	37.5	41.5	36.1	30.7	27.4	26.5	26.0	24.2
6–10 cigarettes	43.7	37.8	44.5	43.4	44.9	45.2	43.6	41.6	39.5	38.5
11–15 cigarettes	5.7	*	4.1	3.2	4.4	5.2	6.1	6.9	7.5	7.9
16–20 cigarettes	18.1	11.0	12.5	10.7	13.1	16.9	20.1	21.4	22.7	23.8
21–30 cigarettes	1.8	*	1.1	1.0	1.1	1.5	2.1	2.5	3.1	3.8
31–40 cigarettes	0.6	*	0.3	0.2	0.3	0.4	0.6	0.9	1.1	1.6
41 cigarettes or more	0.1	*	0.1	*	0.1	0.1	0.1	0.1	0.2	*
Black										
Smoker.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1–5 cigarettes	52.8	73.7	66.1	70.6	64.5	56.8	48.9	44.7	41.8	42.7
6–10 cigarettes	34.5	*	26.1	22.3	27.6	32.8	36.9	38.9	40.0	37.9
11–15 cigarettes	2.5	*	1.6	1.6	1.7	2.1	2.7	3.2	4.1	3.7
16–20 cigarettes	8.9	*	5.2	4.7	5.4	7.4	10.1	11.6	12.5	14.0
21–30 cigarettes	0.8	*	0.6	*	0.5	0.6	0.9	1.0	1.0	*
31–40 cigarettes	0.3	*	*	*	*	0.2	0.4	0.6	*	*
41 cigarettes or more	0.1	*	*	*	*	*	*	*	*	*

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Includes races other than white and black.²Excludes data for Indiana and New York State (but includes New York City), and South Dakota, which did not report average number of cigarettes smoked per day in standard categories.

NOTES: Excludes data for California, which did not require reporting of tobacco use during pregnancy. Also excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes." Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 30. Number of live births by smoking status of mother and percentage of mothers who smoked cigarettes during pregnancy, by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: Total of 47 reporting States and the District of Columbia, 2003

Origin of mother	Smoking status				Age of mother									
	Total births	Smoker	Non- smoker	Not stated	All ages	Under 15 years	15–19 years							
							Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years
Percent smokers														
All origins ¹	3,322,505	354,586	2,948,476	19,443	10.7	5.3	15.4	11.9	17.1	16.1	9.4	6.5	6.8	8.0
Hispanic	618,472	16,401	599,698	2,373	2.7	1.8	3.3	2.8	3.6	3.3	2.2	1.9	2.2	2.7
Mexican	405,131	8,231	395,286	1,614	2.0	2.0	2.4	2.0	2.7	2.5	1.6	1.5	1.8	2.1
Puerto Rican	50,440	3,989	46,318	133	7.9	*	7.6	5.9	8.7	9.3	8.0	6.2	6.6	8.2
Cuban	13,927	334	13,574	19	2.4	*	5.5	*	6.4	3.4	1.9	1.5	2.2	*
Central and South American	107,826	1,158	106,399	269	1.1	*	1.5	1.3	1.7	1.3	1.0	0.8	1.0	1.3
Other and unknown Hispanic	41,148	2,689	38,121	338	6.6	*	7.9	7.6	8.1	8.5	5.7	4.3	4.8	6.2
Non-Hispanic ²	2,685,341	335,794	2,333,575	15,972	12.6	6.9	19.7	15.9	21.5	19.7	11.0	7.2	7.6	8.7
White	1,992,033	283,663	1,695,771	12,599	14.3	16.8	27.9	24.8	29.1	24.2	12.2	7.7	7.8	9.0
Black	523,062	43,068	477,853	2,141	8.3	1.8	6.3	4.7	7.2	9.5	8.6	7.2	8.6	10.1

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Includes origin not stated.

²Includes races other than white and black.

NOTES: Excludes data for California, which did not require reporting of tobacco use during pregnancy. Also excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes." Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 31. Number of live births, percentage of mothers who smoked cigarettes during pregnancy, and percent distribution by average number of cigarettes smoked by mothers per day, according to educational attainment and race and Hispanic origin of mother: Total of 47 reporting States and the District of Columbia, 2003

Smoking measure, and race and Hispanic origin of mother		Years of school completed by mother					
		0–8 years	9–11 years	12 years	13–15 years	16 years or more	Not stated
All births							
All races ¹	3,322,505	175,122	498,587	1,012,812	709,728	885,116	41,140
White total ²	2,602,499	154,199	362,569	756,306	552,072	747,611	29,742
Non-Hispanic white	1,992,033	32,235	202,124	578,389	472,654	689,864	16,767
Black total ²	541,427	14,277	116,208	208,564	123,642	70,565	8,171
Non-Hispanic black	523,062	12,111	112,612	202,330	119,981	68,522	7,506
Hispanic ³	618,472	124,347	163,545	182,241	81,246	56,079	11,014
Percent smokers							
Total	10.7	7.6	22.8	15.0	8.4	1.6	9.3
White total ²	11.6	7.5	25.3	17.4	9.5	1.7	9.9
Non-Hispanic white	14.3	31.0	41.9	21.7	10.7	1.8	15.6
Black total ²	8.1	9.2	16.2	7.9	4.6	1.2	9.1
Non-Hispanic black	8.3	10.5	16.5	8.1	4.7	1.2	9.3
Hispanic ³	2.7	1.2	4.2	3.0	2.3	0.8	2.2
All races ¹		Percent distribution ⁴					
Smoker.	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	75.7	70.5	75.6	75.3	77.0	80.5	75.7
11–20 cigarettes	22.0	25.7	21.8	22.5	21.1	18.0	22.0
21 cigarettes or more	2.3	3.8	2.6	2.2	1.9	1.5	2.3
White total ²							
Smoker.	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	73.7	68.5	72.9	73.4	75.6	79.8	74.0
11–20 cigarettes	23.8	27.4	24.2	24.2	22.4	18.6	23.4
21 cigarettes or more	2.5	4.0	2.9	2.4	2.1	1.5	2.6
Non-Hispanic white							
Smoker.	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	73.0	65.5	71.7	72.9	75.2	79.6	73.2
11–20 cigarettes	24.4	30.1	25.2	24.7	22.7	18.8	24.0
21 cigarettes or more	2.6	4.5	3.0	2.4	2.1	1.6	2.8
Black total ²							
Smoker.	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	87.3	84.6	87.0	88.0	87.7	88.6	80.9
11–20 cigarettes	11.5	13.3	11.7	10.9	11.3	10.7	17.5
21 cigarettes or more	1.2	2.1	1.3	1.1	1.0	*	*
Non-Hispanic black							
Smoker.	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	87.4	84.4	87.0	88.0	87.7	88.8	80.9
11–20 cigarettes	11.4	13.5	11.7	10.9	11.4	10.5	17.4
21 cigarettes or more	1.2	2.1	1.3	1.1	0.9	*	*
Hispanic ³							
Smoker.	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	86.7	88.4	87.2	86.4	85.3	86.1	83.1
11–20 cigarettes	12.2	10.3	11.6	12.8	13.5	13.4	16.3
21 cigarettes or more	1.0	*	1.2	0.7	1.2	*	*

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Includes races other than white and black and origin not stated.²Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."³Includes all persons of Hispanic origin of any race.⁴Excludes data for Indiana, New York State (but includes New York City), and South Dakota, which did not report average number of cigarettes smoked per day in standard categories.

NOTES: Excludes data for California, which did not require reporting of tobacco use during pregnancy. Also excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

Table 32. Percentage low birthweight by smoking status, age, and race and Hispanic origin of mother: Total of 47 reporting States and the District of Columbia, 2003

[Low birthweight is defined as weight of less than 2,500 grams (5 lb 8 oz)]

Smoking status and race of mother	All ages	Age of mother								
		Under 15 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–54 years
			Total	15–17 years	18–19 years					
All races ¹										
Total	8.2	13.0	10.0	10.8	9.7	8.3	7.3	7.6	8.9	11.4
Smoker	12.4	12.2	11.8	12.8	11.5	11.1	11.9	13.8	17.4	20.7
Nonsmoker	7.7	13.0	9.7	10.5	9.3	7.7	6.8	7.1	8.3	10.5
Not stated	11.9	*	13.8	12.6	14.4	11.8	10.6	11.3	12.8	16.4
White total ²										
Total	7.1	10.2	8.6	9.2	8.3	7.0	6.4	6.8	8.0	10.4
Smoker	11.3	12.9	11.2	12.2	10.9	10.2	10.8	12.5	15.3	18.3
Nonsmoker	6.5	9.8	7.9	8.7	7.5	6.2	5.9	6.3	7.4	9.7
Not stated	10.9	*	12.8	11.2	13.6	10.5	10.0	10.4	11.6	15.6
Non-Hispanic white										
Total	7.2	10.3	8.8	9.6	8.5	7.2	6.4	6.7	8.0	10.3
Smoker	11.2	11.9	11.2	12.2	10.8	10.1	10.7	12.3	15.2	18.1
Nonsmoker	6.5	9.9	7.8	8.8	7.5	6.2	5.8	6.2	7.3	9.5
Not stated	11.0	*	14.4	12.6	15.1	10.5	10.0	10.2	12.0	15.9
Black total ²										
Total	13.4	16.3	14.2	14.4	14.0	13.1	12.3	13.4	15.5	17.1
Smoker	20.2	*	17.5	17.4	17.5	17.4	19.2	23.9	30.1	31.9
Nonsmoker	12.8	16.4	13.9	14.2	13.7	12.6	11.7	12.6	14.2	15.4
Not stated	19.1	*	17.7	*	17.2	18.5	15.4	22.3	22.9	*
Non-Hispanic black										
Total	13.6	16.4	14.3	14.5	14.1	13.3	12.5	13.6	15.8	17.2
Smoker	20.3	*	17.6	17.5	17.6	17.5	19.3	24.0	30.2	31.9
Nonsmoker	13.0	16.4	14.0	14.3	13.8	12.8	11.8	12.8	14.4	15.6
Not stated	18.9	*	17.8	*	17.3	18.5	15.5	21.7	22.4	*
Hispanic ³										
Total	7.0	10.0	8.1	8.7	7.8	6.6	6.2	6.9	8.1	10.9
Smoker	13.0	*	12.1	12.5	11.9	12.2	12.7	14.0	16.7	21.1
Nonsmoker	6.8	9.7	8.0	8.6	7.6	6.4	6.1	6.8	7.9	10.6
Not stated	9.7	*	8.7	*	*	9.0	8.9	10.8	11.0	*

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Includes races other than white and black and origin not stated.²Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."³Includes all persons of Hispanic origin of any race.

NOTES: Excludes data for California, which did not require reporting of tobacco use during pregnancy. Also excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

Table 33. Live births by month of pregnancy prenatal care began and percentage of mothers beginning care in the first trimester and percentage with late or no care, by age and race and Hispanic origin of mother: Total of 48 States and the District of Columbia, 2003

Age and race and Hispanic origin of mother		Month of pregnancy prenatal care began								Percent	
		1st trimester			2d trimester		Late or no care				
		All births	Total	1st and 2d months	3d month	4th–6th months	Total	7th–9th months	No care	Not stated	1st trimester
Percent											
All races ¹	3,863,502	3,189,794	2,475,340	714,454	469,649	134,057	94,601	39,456	70,002	84.1	3.5
Under 15 years	6,341	3,030	1,841	1,189	2,174	944	660	284	193	49.3	15.4
15–19 years	394,919	273,266	187,884	85,382	88,202	24,681	17,774	6,907	8,770	70.8	6.4
15 years	17,344	9,841	6,257	3,584	5,279	1,768	1,263	505	456	58.3	10.5
16 years	39,332	24,502	16,090	8,412	10,741	3,120	2,297	823	969	63.9	8.1
17 years	71,353	47,805	32,343	15,462	17,086	4,821	3,479	1,342	1,641	68.6	6.9
18 years	112,293	78,836	54,512	24,324	24,398	6,618	4,693	1,925	2,441	71.8	6.0
19 years	154,597	112,282	78,682	33,600	30,698	8,354	6,042	2,312	3,263	74.2	5.5
20–24 years	980,514	759,481	562,335	197,146	157,910	44,162	31,506	12,656	18,961	79.0	4.6
25–29 years	1,025,666	872,030	688,793	183,237	106,103	30,065	21,249	8,816	17,468	86.5	3.0
30–34 years	916,840	810,907	656,825	154,082	70,583	20,604	14,399	6,205	14,746	89.9	2.3
35–39 years	438,771	385,989	310,514	75,475	34,663	10,452	6,947	3,505	7,667	89.5	2.4
40 years and over	100,451	85,091	67,148	17,943	10,014	3,149	2,066	1,083	2,197	86.6	3.2
White total ²	3,040,873	2,562,458	2,001,335	561,123	336,407	91,183	65,011	26,172	50,825	85.7	3.0
Under 15 years	3,512	1,847	1,138	709	1,106	465	319	146	94	54.0	13.6
15–19 years	284,360	202,977	140,494	62,483	59,211	16,214	11,768	4,446	5,958	72.9	5.8
15 years	10,963	6,656	4,304	2,352	3,014	1,024	719	305	269	62.2	9.6
16 years	26,861	17,549	11,691	5,858	6,760	1,932	1,425	507	620	66.9	7.4
17 years	50,615	34,997	23,871	11,126	11,288	3,225	2,367	858	1,105	70.7	6.5
18 years	81,801	58,994	40,990	18,004	16,727	4,376	3,138	1,238	1,704	73.7	5.5
19 years	114,120	84,781	59,638	25,143	21,422	5,657	4,119	1,538	2,260	75.8	5.1
20–24 years	750,290	592,950	440,831	152,119	113,198	30,583	22,093	8,490	13,559	80.5	4.2
25–29 years	821,227	709,352	563,020	146,332	78,104	20,883	14,789	6,094	12,888	87.8	2.6
30–34 years	745,992	668,973	544,438	124,535	52,039	13,990	9,861	4,129	10,990	91.0	1.9
35–39 years	355,111	317,145	256,476	60,669	25,332	6,929	4,762	2,167	5,705	90.8	2.0
40 years and over	80,381	69,214	54,938	14,276	7,417	2,119	1,419	700	1,631	87.9	2.7
Non-Hispanic white	2,158,797	1,892,768	1,501,689	391,079	189,306	45,721	33,333	12,388	31,002	89.0	2.1
Under 15 years	1,316	723	467	256	387	176	130	46	30	56.2	13.7
15–19 years	161,828	121,256	83,790	37,466	30,699	6,967	5,358	1,609	2,906	76.3	4.4
15 years	4,548	2,861	1,832	1,029	1,208	367	270	97	112	64.5	8.3
16 years	12,496	8,501	5,666	2,835	3,023	728	577	151	244	69.4	5.9
17 years	26,846	19,489	13,138	6,351	5,505	1,336	1,032	304	516	74.0	5.1
18 years	47,441	35,792	24,727	11,065	8,878	1,915	1,458	457	856	76.8	4.1
19 years	70,497	54,613	38,427	16,186	12,085	2,621	2,021	600	1,178	78.8	3.8
20–24 years	488,194	401,428	300,829	100,599	63,988	15,201	11,329	3,872	7,577	83.5	3.2
25–29 years	582,914	522,461	421,324	101,137	42,478	10,231	7,378	2,853	7,744	90.8	1.8
30–34 years	580,329	534,305	440,425	93,880	30,869	7,644	5,381	2,263	7,511	93.3	1.3
35–39 years	280,645	256,513	209,861	46,652	15,938	4,138	2,851	1,287	4,056	92.7	1.5
40 years and over	63,571	56,082	44,993	11,089	4,947	1,364	906	458	1,178	89.9	2.2
Black total ²	573,776	425,303	318,287	107,016	101,347	33,528	22,089	11,439	13,598	75.9	6.0
Under 15 years	2,588	1,075	638	437	992	430	306	124	91	43.1	17.2
15–19 years	96,294	61,815	41,936	19,879	24,865	7,223	5,057	2,166	2,391	65.8	7.7
15 years	5,744	2,901	1,789	1,112	2,031	654	478	176	158	51.9	11.7
16 years	11,047	6,233	3,958	2,275	3,492	1,021	750	271	301	58.0	9.5
17 years	18,180	11,379	7,539	3,840	4,986	1,364	928	436	451	64.2	7.7
18 years	26,567	17,494	12,014	5,480	6,535	1,905	1,301	604	633	67.5	7.3
19 years	34,756	23,808	16,636	7,172	7,821	2,279	1,600	679	848	70.2	6.7
20–24 years	187,923	136,035	99,971	36,064	36,443	11,101	7,457	3,644	4,344	74.1	6.0
25–29 years	133,853	104,614	80,760	23,854	19,523	6,697	4,419	2,278	3,019	80.0	5.1
30–34 years	93,416	74,937	58,777	16,160	11,669	4,627	2,912	1,715	2,183	82.1	5.1
35–39 years	47,722	37,704	29,281	8,423	6,146	2,665	1,487	1,178	1,207	81.1	5.7
40 years and over	11,980	9,123	6,924	2,199	1,709	785	451	334	363	78.5	6.8

See footnotes at end of table.

Table 33. Live births by month of pregnancy prenatal care began and percentage of mothers beginning care in the first trimester and percentage with late or no care, by age and race and Hispanic origin of mother: Total of 48 States and the District of Columbia, 2003—Con.

Age and race and Hispanic origin of mother		Month of pregnancy prenatal care began								Percent	
		1st trimester			2d trimester	Late or no care					
		All births	Total	1st and 2d months	3d month	4th–6th months	Total	7th–9th months	No care	Not stated	1st trimester
Percent											
Non-Hispanic black	553,987	411,013	307,917	103,096	97,826	32,406	21,258	11,148	12,742	75.9	6.0
Under 15 years	2,531	1,058	627	431	977	413	292	121	83	43.2	16.9
15–19 years	93,623	60,117	40,793	19,324	24,202	7,031	4,925	2,106	2,273	65.8	7.7
15 years	5,595	2,820	1,749	1,071	1,992	630	459	171	153	51.8	11.6
16 years	10,741	6,058	3,846	2,212	3,402	996	735	261	285	57.9	9.5
17 years	17,640	11,036	7,300	3,736	4,844	1,331	912	419	429	64.1	7.7
18 years	25,875	17,049	11,711	5,338	6,366	1,859	1,268	591	601	67.5	7.4
19 years	33,772	23,154	16,187	6,967	7,598	2,215	1,551	664	805	70.2	6.7
20–24 years	182,032	131,924	97,046	34,878	35,261	10,744	7,200	3,544	4,103	74.1	6.0
25–29 years	128,686	100,767	77,924	22,843	18,699	6,397	4,186	2,211	2,823	80.1	5.1
30–34 years	89,775	72,175	56,694	15,481	11,125	4,465	2,789	1,676	2,010	82.2	5.1
35–39 years	45,795	36,191	28,161	8,030	5,901	2,590	1,428	1,162	1,113	81.0	5.8
40 years and over	11,545	8,781	6,672	2,109	1,661	766	438	328	337	78.3	6.8
Hispanic ³	888,177	673,271	501,115	172,156	150,083	45,894	32,179	13,715	18,929	77.5	5.3
Under 15 years	2,250	1,142	685	457	734	305	201	104	69	52.4	14.0
15–19 years	124,616	83,053	57,576	25,477	29,156	9,384	6,514	2,870	3,023	68.3	7.7
15 years	6,569	3,882	2,515	1,367	1,853	676	464	212	158	60.6	10.5
16 years	14,645	9,228	6,143	3,085	3,808	1,235	871	364	374	64.7	8.7
17 years	24,201	15,775	10,922	4,853	5,932	1,908	1,345	563	586	66.8	8.1
18 years	34,864	23,542	16,493	7,049	7,999	2,484	1,704	780	839	69.2	7.3
19 years	44,337	30,626	21,503	9,123	9,564	3,081	2,130	951	1,066	70.8	7.1
20–24 years	265,614	193,954	141,562	52,392	50,259	15,556	10,933	4,623	5,845	74.7	6.0
25–29 years	239,989	187,974	142,265	45,709	36,343	10,773	7,562	3,211	4,899	80.0	4.6
30–34 years	165,152	134,008	103,173	30,835	21,561	6,348	4,530	1,818	3,235	82.8	3.9
35–39 years	74,008	60,201	46,119	14,082	9,545	2,785	1,925	860	1,477	83.0	3.8
40 years and over	16,548	12,939	9,735	3,204	2,485	743	514	229	381	80.0	4.6

¹Includes races other than white and black and origin not stated.²Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."³Includes all persons of Hispanic origin of any race.

NOTE: Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between prenatal care data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

Table 34. Percentage of mothers beginning prenatal care in the first trimester and percentage of mothers with late or no prenatal care, by race and Hispanic origin of mother: United States, each State and territory, 2003

[By place of residence]

State	Percent beginning care in first trimester						Percent late ¹ or no care					
	White			Black			White			Black		
	All races ²	Total ³	Non-Hispanic	Total ³	Non-Hispanic	Hispanic ⁴	All races ²	Total ³	Non-Hispanic	Total ³	Non-Hispanic	Hispanic ⁴
United States ⁵	84.1	85.7	89.0	75.9	75.9	77.5	3.5	3.0	2.1	6.0	6.0	5.3
Alabama	83.8	87.3	90.0	75.7	75.7	52.0	3.5	3.0	1.6	4.8	4.8	21.6
Alaska	79.8	83.7	82.9	81.8	81.0	79.6	5.2	4.7	5.1	*	*	5.2
Arizona	76.6	76.9	88.0	76.0	79.5	66.7	7.3	7.3	2.7	8.2	5.5	11.1
Arkansas	81.3	83.2	84.6	73.5	73.4	71.5	4.3	3.7	3.2	6.9	6.9	7.6
California	87.3	87.4	90.8	84.1	84.1	85.2	2.5	2.5	1.8	3.2	3.2	3.0
Colorado	79.3	79.8	86.1	70.9	70.7	67.0	4.4	4.3	2.8	6.8	6.8	7.4
Connecticut	88.7	89.8	92.7	81.0	81.4	78.2	1.5	1.3	0.9	3.0	2.9	2.8
Delaware	84.4	86.2	88.8	78.8	79.6	71.9	4.4	3.4	2.9	7.3	7.1	6.8
District of Columbia	76.1	86.4	89.6	71.1	71.0	69.6	6.6	2.5	2.0	8.5	9.1	4.7
Florida	85.8	88.1	90.1	77.9	77.8	84.2	2.8	2.3	1.8	4.8	4.8	3.1
Georgia	84.0	86.2	90.5	79.1	79.1	69.1	3.8	3.3	2.0	4.8	4.8	8.3
Hawaii	82.4	85.5	86.3	89.3	89.1	80.8	3.6	2.1	1.9	*	*	3.0
Idaho	81.4	81.6	83.9	87.8	87.4	68.3	3.4	3.4	2.8	*	*	6.9
Illinois	85.4	87.7	91.0	74.2	74.1	80.0	2.8	2.0	1.5	6.7	6.7	3.2
Indiana	81.5	83.0	84.7	69.3	69.3	66.0	3.8	3.3	2.9	8.1	8.1	7.7
Iowa	88.9	89.5	90.6	76.8	76.8	74.8	2.0	1.8	1.7	5.5	5.5	4.1
Kansas	87.8	88.5	90.5	80.1	80.2	77.2	2.3	2.1	1.7	4.4	4.5	4.7
Kentucky	87.0	87.7	88.2	80.7	80.7	74.0	2.6	2.4	2.2	4.8	4.8	6.4
Louisiana	84.1	90.0	90.3	75.5	75.5	83.3	3.4	1.7	1.6	5.8	5.8	3.8
Maine	87.5	87.9	87.9	74.9	75.6	80.7	1.7	1.6	1.6	*	*	*
Maryland	83.7	88.7	91.0	74.6	75.3	70.1	3.9	2.3	1.8	6.7	6.7	6.4
Massachusetts	90.0	91.4	92.4	81.5	80.3	83.9	2.0	1.6	1.4	5.2	6.0	2.6
Michigan	86.1	89.0	89.8	72.8	72.7	77.6	3.1	2.2	2.0	7.3	7.4	4.7
Minnesota	86.5	88.8	90.5	72.3	72.3	71.0	2.2	1.6	1.3	5.4	5.4	5.0
Mississippi	84.9	90.7	91.0	77.8	77.8	79.6	2.9	1.6	1.5	4.4	4.4	6.9
Missouri	88.4	89.7	90.2	81.0	80.9	81.0	2.2	1.8	1.6	4.4	4.4	3.9
Montana	84.4	86.9	87.4	86.0	87.8	80.6	2.7	2.0	1.9	*	*	*
Nebraska	83.4	84.4	86.9	72.7	72.8	69.8	2.8	2.6	2.0	3.8	3.6	6.3
Nevada	75.8	75.8	84.6	70.7	70.6	64.1	6.4	6.3	3.4	8.6	8.8	9.9
New Hampshire	92.8	93.0	93.4	85.1	85.5	84.4	1.1	1.0	0.9	*	*	*
New Jersey	80.2	83.4	89.2	64.4	63.5	68.6	4.7	3.6	2.3	10.6	11.2	6.8
New Mexico	68.9	70.2	77.0	68.7	69.1	66.2	8.1	7.5	5.0	5.9	5.5	9.1
New York	82.4	85.2	88.6	73.1	72.8	76.2	4.5	3.5	2.7	8.3	8.5	5.5
North Carolina	84.5	86.9	90.8	76.8	76.8	69.6	2.9	2.4	1.5	4.9	4.9	6.0
North Dakota	87.3	89.7	90.0	85.2	84.8	79.5	2.7	1.9	1.8	*	*	*
Ohio	87.7	89.3	89.8	78.8	78.8	79.0	3.0	2.4	2.3	6.1	6.1	4.6
Oklahoma	77.8	79.6	82.0	69.8	69.8	65.5	4.8	4.2	3.8	7.1	7.1	6.7
Oregon	81.2	81.5	84.5	78.0	77.6	70.0	4.0	3.9	3.3	5.5	5.6	6.2
Pennsylvania ⁶	76.0	79.2	80.4	57.2	57.4	61.2	5.6	4.5	4.2	12.6	12.7	8.8
Rhode Island	90.9	92.2	93.5	82.8	82.1	86.9	1.1	1.0	0.9	2.3	2.2	1.4
South Carolina	77.5	81.0	83.6	70.5	70.6	56.9	4.9	3.9	3.2	6.7	6.7	11.0
South Dakota	78.4	82.8	83.4	64.8	65.5	64.0	3.9	2.2	2.0	*	*	9.4
Tennessee	83.4	86.2	88.1	73.0	73.0	63.7	3.8	3.0	2.2	7.2	7.2	12.4
Texas	80.9	81.1	88.4	77.0	77.0	75.5	4.7	4.7	2.5	5.5	5.5	6.3
Utah	80.3	81.2	83.9	63.2	61.8	65.1	4.4	4.0	3.2	13.6	14.3	8.6
Vermont	90.6	90.8	90.8	74.0	73.5	81.5	1.6	1.6	1.5	*	*	*
Virginia	85.3	87.9	90.4	76.9	77.3	71.2	3.6	2.8	2.0	5.8	5.8	7.7
Washington ⁶	74.0	75.0	77.6	67.9	68.9	63.1	5.8	5.4	4.8	8.2	8.0	8.0
West Virginia	85.8	86.2	86.4	73.5	73.5	69.3	2.3	2.3	2.2	3.7	3.8	*
Wisconsin	84.9	86.9	88.5	73.6	73.7	70.7	3.1	2.6	2.3	6.4	6.3	5.9
Wyoming	86.4	87.0	87.9	96.2	96.2	80.1	2.5	2.3	2.2	*	*	*

See footnotes at end of table.

Table 34. Percentage of mothers beginning prenatal care in the first trimester and percentage of mothers with late or no prenatal care, by race and Hispanic origin of mother: United States, each State and territory, 2003—Con.

[By place of residence]

State	Percent beginning care in first trimester						Percent late ¹ or no care					
	White			Black			White			Black		
	All races ²	Total ³	Non-Hispanic	Total ³	Non-Hispanic	Hispanic ⁴	All races ²	Total ³	Non-Hispanic	Total ³	Non-Hispanic	Hispanic ⁴
Puerto Rico	82.4	83.2	---	74.7	---	---	2.6	2.4	---	4.6	---	---
Virgin Islands	63.4	71.1	76.0	60.8	60.5	65.8	11.4	8.3	*	12.5	12.4	9.4
Guam	62.2	87.2	86.7	89.7	91.4	87.0	12.0	*	*	*	*	*
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	29.9	*	---	*	---	---	27.8	*	---	*	---	---

*Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

--- Data not available.

¹Care beginning in 3d trimester.²Includes races other than white and black and origin not stated.³Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. California, Hawaii, Ohio (for December), Pennsylvania, Utah, and Washington reported multiple-race data in 2003. The multiple-race data for these States were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other States; see "Technical Notes." Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."⁴Includes all persons of Hispanic origin of any race.⁵Excludes data for the territories. Also excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."⁶Levels for Pennsylvania and Washington are not comparable with those of other states; see "Technical Notes."

Table 35. Live births by month of pregnancy prenatal care began, number of prenatal visits, and median number of visits, by race and Hispanic origin of mother: Total of 48 States and the District of Columbia, 2003

Number of prenatal visits and race and Hispanic origin of mother	All births	Month of pregnancy prenatal care began							Not stated
		1st trimester			2d trimester		Late or no care		
		Total	1st and 2d months	3d month	4th–6th months	Total	7th–9th months	No care	
All races ²	3,863,502	3,189,794	2,475,340	714,454	469,649	134,057	94,601	39,456	70,002
No visits.	39,537	...	...	...	...	39,456	...	39,456	81
1–2 visits	37,687	10,642	7,193	3,449	8,987	16,836	16,836	...	1,222
3–4 visits	76,376	24,488	14,677	9,811	26,761	23,485	23,485	...	1,642
5–6 visits	168,879	75,954	45,404	30,550	67,135	23,319	23,319	...	2,471
7–8 visits	321,019	202,657	127,146	75,511	101,612	13,504	13,504	...	3,246
9–10 visits	767,280	622,517	430,248	192,269	130,441	8,130	8,130	...	6,192
11–12 visits	1,027,397	943,826	733,402	210,424	75,703	3,470	3,470	...	4,398
13–14 visits	640,635	609,678	507,357	102,321	26,999	1,576	1,576	...	2,382
15–16 visits	453,807	434,410	379,868	54,542	16,884	1,138	1,138	...	1,375
17–18 visits	98,043	93,962	81,341	12,621	3,367	296	296	...	418
19 visits or more	139,116	132,828	118,201	14,627	5,233	437	437	...	618
Not stated.	93,726	38,832	30,503	8,329	6,527	2,410	2,410	...	45,957
Median number of visits	12.3	12.6	12.8	11.5	9.6	5.5	5.5	...	10.3
White total ³	3,040,873	2,562,458	2,001,335	561,123	336,407	91,183	65,011	26,172	50,825
No visits.	26,242	...	...	...	...	26,172	...	26,172	70
1–2 visits	24,920	7,418	5,110	2,308	5,614	11,031	11,031	...	857
3–4 visits	50,620	16,595	10,083	6,512	17,072	15,778	15,778	...	1,175
5–6 visits	117,974	54,079	32,260	21,819	45,963	16,173	16,173	...	1,759
7–8 visits	239,346	154,402	97,266	57,136	72,903	9,546	9,546	...	2,495
9–10 visits	594,969	490,312	340,664	149,648	94,878	5,811	5,811	...	3,968
11–12 visits	832,463	769,803	600,818	168,985	56,462	2,604	2,604	...	3,594
13–14 visits	526,824	503,244	419,726	83,518	20,419	1,188	1,188	...	1,973
15–16 visits	367,482	353,012	309,187	43,825	12,505	818	818	...	1,147
17–18 visits	79,797	76,824	66,915	9,909	2,416	221	221	...	336
19 visits or more	111,978	107,482	96,135	11,347	3,681	317	317	...	498
Not stated.	68,258	29,287	23,171	6,116	4,494	1,524	1,524	...	32,953
Median number of visits	12.3	12.6	12.8	11.6	9.7	5.6	5.6	...	10.5
Non-Hispanic white.	2,158,797	1,892,768	1,501,689	391,079	189,306	45,721	33,333	12,388	31,002
No visits.	12,449	...	...	...	...	12,388	...	12,388	61
1–2 visits	12,474	3,898	2,772	1,126	2,679	5,407	5,407	...	490
3–4 visits	26,664	9,845	6,145	3,700	8,570	7,597	7,597	...	652
5–6 visits	67,295	34,393	21,438	12,955	23,704	8,086	8,086	...	1,112
7–8 visits	151,199	104,571	67,779	36,792	39,918	5,081	5,081	...	1,629
9–10 visits	406,077	346,412	245,705	100,707	53,617	3,251	3,251	...	2,797
11–12 visits	627,661	588,479	464,577	123,902	34,862	1,596	1,596	...	2,724
13–14 visits	402,527	387,025	324,008	63,017	13,209	731	731	...	1,562
15–16 visits	267,029	258,718	228,341	30,377	6,974	450	450	...	887
17–18 visits	62,221	60,218	52,488	7,730	1,618	120	120	...	265
19 visits or more	86,458	83,593	75,594	7,999	2,298	201	201	...	366
Not stated.	36,743	15,616	12,842	2,774	1,857	813	813	...	18,457
Median number of visits	12.5	12.6	12.8	11.9	9.9	5.8	5.8	...	10.8
Black total ³	573,776	425,303	318,287	107,016	101,347	33,528	22,089	11,439	13,598
No visits.	11,447	...	...	...	...	11,439	...	11,439	8
1–2 visits	10,054	2,507	1,584	923	2,774	4,486	4,486	...	287
3–4 visits	20,020	6,183	3,593	2,590	7,578	5,919	5,919	...	340
5–6 visits	37,971	15,983	9,640	6,343	16,076	5,370	5,370	...	542
7–8 visits	57,620	32,639	19,993	12,646	21,569	2,883	2,883	...	529
9–10 visits	120,374	90,069	60,430	29,639	26,782	1,679	1,679	...	1,844
11–12 visits	126,893	111,531	83,781	27,750	14,315	546	546	...	501
13–14 visits	76,350	70,948	58,028	12,920	4,912	228	228	...	262
15–16 visits	60,834	56,904	49,134	7,770	3,560	210	210	...	160
17–18 visits	12,817	11,958	9,908	2,050	756	51	51	...	52
19 visits or more	20,370	18,895	16,318	2,577	1,285	92	92	...	98
Not stated.	19,026	7,686	5,878	1,808	1,740	625	625	...	8,975
Median number of visits	11.7	12.4	12.6	11.0	9.2	5.1	5.1	...	10.1

See footnotes at end of table.

Table 35. Live births by month of pregnancy prenatal care began, number of prenatal visits, and median number of visits, by race and Hispanic origin of mother: Total of 48 States and the District of Columbia, 2003—Con.

Number of prenatal visits and race and Hispanic origin of mother	All births	Month of pregnancy prenatal care began							Not stated
		1st trimester			2d trimester		Late or no care		
		Total	1st and 2d months	3d month	4th–6th months	Total	7th–9th months	No care	
Non-Hispanic black.	553,987	411,013	307,917	103,096	97,826	32,406	21,258	11,148	12,742
No visits.	11,156	...	...	...	...	11,148	...	11,148	8
1–2 visits.	9,745	2,427	1,541	886	2,697	4,342	4,342	...	279
3–4 visits.	19,441	6,019	3,492	2,527	7,369	5,731	5,731	...	322
5–6 visits.	36,638	15,427	9,301	6,126	15,538	5,157	5,157	...	516
7–8 visits.	55,410	31,403	19,266	12,137	20,745	2,754	2,754	...	508
9–10 visits.	115,300	86,443	58,007	28,436	25,743	1,605	1,605	...	1,509
11–12 visits.	122,353	107,542	80,807	26,735	13,824	519	519	...	468
13–14 visits.	73,892	68,710	56,272	12,438	4,729	212	212	...	241
15–16 visits.	59,256	55,431	47,899	7,532	3,481	197	197	...	147
17–18 visits.	12,506	11,670	9,662	2,008	741	45	45	...	50
19 visits or more.	19,934	18,492	15,968	2,524	1,261	89	89	...	92
Not stated.	18,356	7,449	5,702	1,747	1,698	607	607	...	8,602
Median number of visits.	11.7	12.4	12.6	11.1	9.2	5.1	5.1	...	10.0
Hispanic ⁴	888,177	673,271	501,115	172,156	150,083	45,894	32,179	13,715	18,929
No visits.	13,722	...	...	...	...	13,715	...	13,715	7
1–2 visits.	12,659	3,573	2,363	1,210	2,992	5,727	5,727	...	367
3–4 visits.	24,428	6,838	3,984	2,854	8,705	8,368	8,368	...	517
5–6 visits.	51,848	20,127	11,068	9,059	22,778	8,292	8,292	...	651
7–8 visits.	89,820	50,603	29,921	20,682	33,781	4,572	4,572	...	864
9–10 visits.	192,173	145,849	96,151	49,698	42,266	2,597	2,597	...	1,461
11–12 visits.	205,724	181,967	136,392	45,575	21,903	989	989	...	865
13–14 visits.	124,882	116,700	95,969	20,731	7,320	443	443	...	419
15–16 visits.	100,162	94,047	80,550	13,497	5,511	334	334	...	270
17–18 visits.	17,489	16,537	14,353	2,184	804	76	76	...	72
19 visits or more.	25,109	23,479	20,155	3,324	1,398	96	96	...	136
Not stated.	30,161	13,551	10,209	3,342	2,625	685	685	...	13,300
Median number of visits.	11.8	12.4	12.7	11.1	9.4	5.4	5.4	...	9.9

... Category not applicable.

¹Births occurring in Pennsylvania and Washington to residents of all other reporting areas are categorized as not stated.²Includes races other than white and black and origin not stated.³Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."⁴Includes all persons of Hispanic origin of any race.

NOTE: Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between prenatal care data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

Table 36. Live births to mothers with selected obstetric procedures and rates by age of mother, by race of mother: United States, 2003

[Rates are number of live births with specified procedure per 1,000 live births in specified group]

Obstetric procedure and race of mother	All births ¹	Obstetric procedure reported	Age of mother							Not stated ²
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	
All races ³										
Amniocentesis ⁴	3,863,502	66,901	17.4	4.8	5.8	7.7	13.2	66.8	101.3	12,272
Electronic fetal monitoring ⁴	3,863,502	3,289,703	854.2	866.6	862.5	856.6	848.3	837.8	825.6	12,272
Induction of labor	4,089,950	840,137	206.0	203.2	210.2	213.9	203.7	190.7	184.4	12,294
Stimulation of labor ⁴	3,863,502	645,075	167.5	186.9	175.5	170.6	160.9	146.2	132.6	12,272
Tocolysis	4,089,950	85,961	21.1	23.7	22.7	21.0	19.7	18.7	19.0	12,348
Ultrasound ⁴	3,863,502	2,592,258	673.1	639.6	658.2	676.2	689.2	693.2	686.2	12,272
White										
Amniocentesis ⁴	3,040,873	54,686	18.0	5.0	5.9	7.7	13.3	68.4	105.8	10,235
Electronic fetal monitoring ⁴	3,040,873	2,591,505	855.1	865.3	862.7	858.1	850.6	839.9	826.6	10,235
Induction of labor	3,225,848	696,703	216.6	213.8	222.2	224.9	213.7	199.7	192.6	9,491
Stimulation of labor ⁴	3,040,873	512,549	169.1	191.0	178.8	171.6	161.9	148.2	134.0	10,235
Tocolysis	3,225,848	68,200	21.2	24.2	22.9	21.3	19.8	18.6	18.8	9,538
Ultrasound ⁴	3,040,873	2,069,050	682.7	652.8	670.5	684.2	695.7	699.9	692.2	10,235
Black										
Amniocentesis ⁴	573,776	6,092	10.6	4.1	5.5	7.1	11.0	40.8	62.3	1,248
Electronic fetal monitoring ⁴	573,776	493,605	862.1	874.6	868.1	860.1	853.4	842.3	836.5	1,248
Induction of labor	599,847	104,123	174.0	180.1	174.3	176.4	171.1	161.8	162.4	1,382
Stimulation of labor ⁴	573,776	89,024	155.5	175.7	162.7	154.8	141.2	124.9	117.5	1,248
Tocolysis	599,847	12,651	21.1	21.2	21.5	20.7	21.4	20.7	19.8	1,377
Ultrasound ⁴	573,776	355,001	620.1	602.2	610.7	625.6	635.5	642.5	641.8	1,248

¹Total number of births to residents of areas reporting specified obstetric procedures.²No response reported for the obstetric procedures item.³Includes races other than white and black.⁴Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 37. Live births to mothers with selected complications of labor or delivery and rates by age of mother, by race of mother: United States, 2003

[Rates are number of live births with specified complication per 1,000 live births in specified group]

Complication and race of mother	All births ¹	Complication reported	Age of mother							Not stated ²
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	
All races ³										
Febrile ⁴	3,863,502	59,787	15.5	20.5	16.2	15.6	14.7	12.3	10.6	15,296
Meconium, moderate/heavy	4,089,950	197,865	48.6	55.2	49.7	47.7	46.3	46.9	47.4	15,320
Premature rupture of membrane ⁴	3,863,502	83,103	21.6	22.3	20.5	20.6	22.1	23.2	27.0	15,296
Abruptio placenta ⁴	3,863,502	20,386	5.3	5.2	5.1	4.8	5.4	6.2	8.0	15,296
Placenta previa ⁴	3,863,502	12,953	3.4	1.1	1.8	2.8	4.5	6.5	9.2	15,296
Other excessive bleeding ⁴	3,863,502	22,787	5.9	5.8	5.6	5.7	6.0	6.6	8.4	15,296
Seizures during labor ⁴	3,863,502	1,304	0.3	0.8	0.4	0.3	0.2	0.3	0.2	15,296
Precipitous labor	4,089,950	74,807	18.4	12.8	17.5	18.3	19.9	21.5	21.3	15,471
Prolonged labor ⁴	3,863,502	26,130	6.8	7.8	6.7	6.7	6.7	6.3	7.1	15,296
Dysfunctional labor ⁴	3,863,502	109,836	28.5	29.8	27.3	27.9	28.8	30.2	32.8	15,296
Breech/Malpresentation	4,089,950	156,804	38.5	27.8	30.7	37.5	44.5	51.0	58.8	19,563
Cephalopelvic disproportion ⁴	3,863,502	56,111	14.6	15.9	13.8	14.5	15.0	14.3	15.0	15,296
Cord prolapse ⁴	3,863,502	6,385	1.7	1.3	1.6	1.6	1.7	2.0	2.2	15,296
Anesthetic complication ^{4,5}	3,486,026	2,415	0.7	0.5	0.6	0.7	0.8	0.9	1.0	15,253
Fetal distress ^{4,5}	3,486,026	132,377	38.1	44.1	37.8	36.2	36.8	39.0	45.8	15,253
White										
Febrile ⁴	3,040,873	45,331	15.0	20.1	16.1	15.1	13.8	11.7	10.0	12,584
Meconium, moderate/heavy	3,225,848	146,301	45.5	51.2	46.6	44.7	43.7	44.4	45.2	11,842
Premature rupture of membrane ⁴	3,040,873	62,759	20.7	20.9	19.4	20.0	21.4	22.4	26.5	12,584
Abruptio placenta ⁴	3,040,873	15,392	5.1	4.9	4.8	4.6	5.2	5.9	8.0	12,584
Placenta previa ⁴	3,040,873	10,072	3.3	1.1	1.7	2.8	4.4	6.1	8.6	12,584
Other excessive bleeding ⁴	3,040,873	17,939	5.9	6.1	5.7	5.7	5.9	6.4	8.1	12,584
Seizures during labor ⁴	3,040,873	938	0.3	0.7	0.3	0.2	0.2	0.3	0.3	12,584
Precipitous labor	3,225,848	57,757	18.0	11.8	16.6	17.8	19.8	21.6	21.7	11,960
Prolonged labor ⁴	3,040,873	20,972	6.9	8.1	7.0	6.8	6.7	6.3	7.4	12,584
Dysfunctional labor ⁴	3,040,873	85,039	28.1	29.6	27.2	27.4	28.0	29.5	32.2	12,584
Breech/Malpresentation	3,225,848	127,933	39.8	29.3	31.7	38.5	45.7	51.8	59.4	15,418
Cephalopelvic disproportion ⁴	3,040,873	45,314	15.0	16.6	14.6	14.9	15.0	14.3	15.1	12,584
Cord prolapse ⁴	3,040,873	4,881	1.6	1.2	1.5	1.6	1.7	2.0	2.2	12,584
Anesthetic complication ^{4,5}	2,719,331	1,937	0.7	0.5	0.6	0.7	0.8	1.0	0.9	12,553
Fetal distress ^{4,5}	2,719,331	98,501	36.4	42.0	36.1	34.6	35.3	37.3	44.4	12,553
Black										
Febrile ⁴	573,776	8,666	15.1	21.6	15.4	13.2	13.0	11.8	8.7	1,669
Meconium, moderate/heavy	599,847	38,349	64.1	67.5	61.7	63.1	66.2	65.7	63.7	1,803
Premature rupture of membrane ⁴	573,776	14,401	25.2	25.1	24.0	23.5	27.1	29.8	30.3	1,669
Abruptio placenta ⁴	573,776	3,892	6.8	6.3	6.3	6.3	7.7	8.7	9.7	1,669
Placenta previa ⁴	573,776	1,680	2.9	1.1	1.7	2.9	4.4	7.4	9.0	1,669
Other excessive bleeding ⁴	573,776	2,657	4.6	3.9	4.0	4.6	5.4	6.5	8.0	1,669
Seizures during labor ⁴	573,776	288	0.5	0.9	0.5	0.3	0.3	0.5	*	1,669
Precipitous labor	599,847	11,818	19.8	14.6	20.0	21.5	21.7	20.8	20.2	1,815
Prolonged labor ⁴	573,776	3,006	5.3	6.2	5.1	4.8	5.5	4.9	5.1	1,669
Dysfunctional labor ⁴	573,776	16,027	28.0	29.5	26.4	27.0	29.3	31.4	29.8	1,669
Breech/Malpresentation	599,847	19,075	31.9	23.2	26.7	32.6	39.4	48.0	54.3	1,987
Cephalopelvic disproportion ⁴	573,776	6,074	10.6	13.7	10.2	9.4	10.4	9.4	11.2	1,669
Cord prolapse ⁴	573,776	1,119	2.0	1.7	1.7	2.0	2.3	2.5	2.4	1,669
Anesthetic complication ^{4,5}	531,891	312	0.6	0.5	0.5	0.6	0.7	0.6	*	1,660
Fetal distress ^{4,5}	531,891	25,049	47.2	50.8	45.0	44.6	48.1	51.5	58.7	1,660

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Total number of births to residents of areas reporting specified complication.²No response reported for the complications item.³Includes races other than white and black.⁴Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."⁵Texas does not report this complication.

NOTES: Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 38. Live births by attendant, place of delivery, and race and Hispanic origin of mother: United States, 2003

Place of delivery and race and Hispanic origin of mother	All births	Physician			Midwife				Unspecified
		Total	Doctor of medicine	Doctor of osteopathy	Total	Certified nurse midwife	Other midwife	Other	
All races ¹									
Total	4,089,950	3,733,750	3,554,819	178,931	328,153	310,342	17,811	20,599	7,448
In hospital ²	4,053,987	3,730,008	3,551,650	178,358	305,513	300,931	4,582	11,535	6,931
Not in hospital	35,723	3,622	3,049	573	22,588	9,362	13,226	9,015	498
Freestanding birthing center	9,779	923	611	312	8,664	5,828	2,836	185	7
Clinic or doctor's office	397	225	196	29	108	57	51	62	2
Residence	23,221	1,813	1,613	200	13,403	3,272	10,131	7,631	374
Other	2,326	661	629	32	413	205	208	1,137	115
Not specified	240	120	120	—	52	49	3	49	19
White total ³									
Total	3,225,848	2,940,517	2,787,768	152,749	262,462	246,108	16,354	16,513	6,356
In hospital ²	3,193,825	2,937,737	2,785,519	152,218	241,079	237,436	3,643	9,034	5,975
Not in hospital	31,829	2,681	2,150	531	21,335	8,626	12,709	7,445	368
Freestanding birthing center	9,096	908	597	311	8,021	5,337	2,684	160	7
Clinic or doctor's office	334	191	167	24	96	51	45	46	1
Residence	20,698	1,193	1,018	175	12,860	3,082	9,778	6,356	289
Other	1,701	389	368	21	358	156	202	883	71
Not specified	194	99	99	—	48	46	2	34	13
Non-Hispanic white									
Total	2,321,904	2,126,099	2,005,392	120,707	177,765	163,709	14,056	12,336	5,704
In hospital ²	2,293,934	2,123,733	2,003,534	120,199	158,723	156,009	2,714	6,013	5,465
Not in hospital	27,836	2,294	1,786	508	19,008	7,668	11,340	6,299	235
Freestanding birthing center	7,723	880	572	308	6,697	4,607	2,090	139	7
Clinic or doctor's office	289	168	145	23	82	44	38	38	1
Residence	18,556	981	817	164	11,917	2,897	9,020	5,455	203
Other	1,268	265	252	13	312	120	192	667	24
Not specified	134	72	72	—	34	32	2	24	4
Black total ³									
Total	599,847	552,884	534,344	18,540	43,433	42,539	894	2,726	804
In hospital ²	597,024	552,099	533,587	18,512	42,708	42,063	645	1,502	715
Not in hospital	2,788	769	741	28	723	474	249	1,212	84
Freestanding birthing center	430	6	5	1	406	316	90	18	—
Clinic or doctor's office	18	11	10	1	5	3	2	2	—
Residence	1,883	533	515	18	280	125	155	1,016	54
Other	457	219	211	8	32	30	2	176	30
Not specified	35	16	16	—	2	2	—	12	5
Non-Hispanic black									
Total	576,033	531,655	513,916	17,739	41,055	40,226	829	2,609	714
In hospital ²	573,347	530,913	513,201	17,712	40,376	39,783	593	1,427	631
Not in hospital	2,661	729	702	27	678	442	236	1,175	79
Freestanding birthing center	408	5	4	1	386	299	87	17	—
Clinic or doctor's office	17	10	10	—	5	3	2	2	—
Residence	1,803	503	485	18	257	112	145	993	50
Other	433	211	203	8	30	28	2	163	29
Not specified	25	13	13	—	1	1	—	7	4
Hispanic ⁴									
Total	912,329	822,611	790,349	32,262	85,070	82,968	2,102	3,975	673
In hospital ²	908,745	822,205	789,967	32,238	82,940	82,078	862	3,032	568
Not in hospital	3,549	390	366	24	2,116	876	1,240	939	104
Freestanding birthing center	1,341	29	26	3	1,291	692	599	21	—
Clinic or doctor's office	40	19	17	2	12	4	8	9	—
Residence	1,753	216	205	11	771	143	628	696	70
Other	415	126	118	8	42	37	5	213	34
Not specified	35	16	16	—	14	14	—	4	1

— Quantity zero. ¹Includes races other than white and black and origin not stated.²Includes births occurring en route to or on arrival at hospital.³Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."⁴Includes all persons of Hispanic origin of any race.

Table 39. Live births by method of delivery and rates of cesarean delivery and vaginal birth after previous cesarean delivery, by race and Hispanic origin of mother: United States, 1989–2003

Year and race and Hispanic origin of mother	Births by method of delivery							Cesarean delivery rate		Rate of vaginal birth after previous cesarean ⁵
	All births	Vaginal		Cesarean			Not stated	Total ³	Primary ⁴	
		Total ¹	After previous cesarean	Total ²	Primary	Repeat				
All races ⁶										
2003	4,089,950	2,949,853	51,602	1,119,388	684,484	434,699	20,709	27.5	19.1	10.6
2002	4,021,726	2,958,423	59,248	1,043,846	634,426	409,420	19,457	26.1	18.0	12.6
2001	4,025,933	3,027,993	74,048	978,411	601,383	377,028	19,529	24.4	16.9	16.4
2000	4,058,814	3,108,188	89,978	923,991	577,638	346,353	26,635	22.9	16.1	20.6
1999	3,959,417	3,063,870	97,680	862,086	542,080	320,006	33,461	22.0	15.5	23.4
1998	3,941,553	3,078,537	108,903	825,870	519,975	305,895	37,146	21.2	14.9	26.3
1997	3,880,894	3,046,621	112,145	799,033	502,526	296,507	35,240	20.8	14.6	27.4
1996	3,891,494	3,061,092	116,045	797,119	503,724	293,395	33,283	20.7	14.6	28.3
1995	3,899,589	3,063,724	112,439	806,722	510,104	296,618	29,143	20.8	14.7	27.5
1994	3,952,767	3,087,576	110,341	830,517	520,647	309,870	34,674	21.2	14.9	26.3
1993	4,000,240	3,098,796	103,581	861,987	539,251	322,736	39,457	21.8	15.3	24.3
1992	4,065,014	3,100,710	97,549	888,622	554,662	333,960	75,682	22.3	15.6	22.6
1991	4,110,907	3,100,891	90,690	905,077	569,195	335,882	104,939	22.6	15.9	21.3
1990 ⁷	4,110,563	3,111,421	84,299	914,096	575,066	339,030	85,046	22.7	16.0	19.9
1989 ⁸	3,798,734	2,793,463	71,019	826,955	521,873	305,082	178,316	22.8	16.1	18.9
White total ⁹										
2003	3,225,848	2,332,605	39,696	876,595	531,486	344,954	16,648	27.3	18.8	10.3
2002	3,174,760	2,340,512	46,004	818,347	493,002	325,345	15,901	25.9	17.7	12.4
2001	3,177,626	2,394,930	58,053	766,771	467,285	299,486	15,925	24.3	16.7	16.2
2000	3,194,005	2,449,264	70,414	723,209	449,161	274,048	21,532	22.8	15.9	20.4
1999	3,132,501	2,426,092	77,158	678,952	424,148	254,804	27,457	21.9	15.3	23.2
1998	3,118,727	2,440,113	86,495	649,987	406,439	243,548	28,627	21.0	14.7	26.2
1997	3,072,640	2,415,236	89,522	630,613	393,603	237,010	26,791	20.7	14.5	27.4
1996	3,093,057	2,434,079	93,783	631,409	395,851	235,558	27,569	20.6	14.5	28.5
1995	3,098,885	2,435,191	90,940	639,818	401,098	238,720	23,876	20.8	14.6	27.6
1994	3,121,004	2,435,965	88,471	656,400	407,946	248,454	28,639	21.2	14.8	26.3
1993	3,149,833	2,435,229	82,995	682,355	423,540	258,815	32,249	21.9	15.3	24.3
1992	3,201,678	2,434,959	77,977	705,841	437,398	268,443	60,878	22.5	15.7	22.5
1991	3,241,273	2,434,900	72,564	723,088	452,534	270,554	83,285	22.9	16.1	21.1
1990 ⁷	3,252,473	2,453,857	67,191	732,713	458,656	274,057	65,903	23.0	16.1	19.7
1989 ⁸	3,022,537	2,212,843	56,851	667,114	418,177	248,937	142,580	23.2	16.2	18.6
Non-Hispanic white										
2003	2,321,904	1,671,414	28,751	637,482	398,368	238,990	13,008	27.6	19.5	10.7
2002	2,298,156	1,687,144	33,440	598,682	370,339	228,343	12,330	26.2	18.3	12.8
2001	2,326,578	1,746,551	43,215	567,488	353,977	213,511	12,539	24.5	17.2	16.8
2000	2,362,968	1,804,550	52,912	540,794	342,732	198,062	17,624	23.1	16.4	21.1
1999	2,346,450	1,810,682	59,480	514,051	327,106	186,945	21,717	22.1	15.7	24.1
1998	2,361,462	1,842,420	67,787	495,550	315,138	180,412	23,492	21.2	15.1	27.3
1997	2,333,363	1,829,213	70,284	481,982	305,605	176,377	22,168	20.9	14.8	28.5
1996	2,358,989	1,851,058	73,973	485,530	308,482	177,048	22,401	20.8	14.8	29.5
1995	2,382,638	1,867,024	72,124	496,103	313,933	182,170	19,511	21.0	14.9	28.4
1994	2,438,855	1,896,609	71,597	518,021	324,236	193,785	24,225	21.5	15.1	27.0
1993	2,472,031	1,902,433	67,536	542,013	338,236	203,777	27,585	22.2	15.6	24.9
1992 ¹⁰	2,527,207	1,916,414	63,828	566,788	352,470	214,318	44,005	22.8	16.0	22.9
1991 ¹⁰	2,589,878	1,941,726	60,174	587,802	368,721	219,081	60,350	23.2	16.4	21.5
1990 ^{7,11}	2,626,500	1,972,754	55,952	603,467	378,508	224,959	50,279	23.4	16.5	19.9
1989 ^{8,11}	2,526,367	1,806,753	47,559	556,585	349,858	206,727	163,029	23.6	16.6	18.7

See footnotes at end of table.

Table 39. Live births by method of delivery and rates of cesarean delivery and vaginal birth after previous cesarean delivery, by race and Hispanic origin of mother: United States, 1989–2003—Con.

Year and race and Hispanic origin of mother	Births by method of delivery							Cesarean delivery rate		Rate of vaginal birth after previous cesarean ⁵
	All births	Vaginal		Cesarean			Not stated	Total ³	Primary ⁴	
		Total ¹	After previous cesarean	Total ²	Primary	Repeat				
Black total ⁹										
2003	599,847	423,033	8,484	173,834	107,603	66,217	2,980	29.1	20.6	11.4
2002	593,691	427,801	9,567	163,295	100,621	62,674	2,595	27.6	19.4	13.2
2001	606,156	447,458	11,747	156,071	97,429	58,642	2,627	25.9	18.3	16.7
2000	622,598	468,497	14,382	150,401	94,767	55,634	3,700	24.3	17.3	20.5
1999	605,970	462,401	15,438	139,471	88,269	51,202	4,098	23.2	16.5	23.2
1998	609,902	470,088	17,062	135,727	86,438	49,289	4,087	22.4	16.0	25.7
1997	599,913	466,001	16,986	130,142	83,025	47,117	3,770	21.8	15.6	26.5
1996	594,781	462,378	16,866	128,357	82,646	45,711	4,046	21.7	15.6	27.0
1995	603,139	468,984	16,224	130,482	84,441	46,041	3,673	21.8	15.7	26.1
1994	636,391	493,879	16,970	138,067	88,636	49,431	4,445	21.8	15.7	25.6
1993	658,875	509,816	16,179	143,452	91,677	51,775	5,607	22.0	15.7	23.8
1992	673,633	514,929	15,382	146,480	93,165	53,315	12,224	22.1	15.7	22.4
1991	682,602	519,047	14,213	145,583	92,645	52,938	17,972	21.9	15.5	21.2
1990 ⁷	679,236	516,581	13,496	146,472	93,476	52,996	16,183	22.1	15.7	20.3
1989 ⁸	611,147	452,921	11,104	127,907	82,695	45,212	30,319	22.0	15.8	19.7
Non-Hispanic black										
2003	576,033	405,671	8,109	167,506	103,694	63,802	2,856	29.2	20.7	11.3
2002	578,335	416,516	9,317	159,297	98,245	61,052	2,522	27.7	19.4	13.2
2001	589,917	435,455	11,417	151,908	94,912	56,996	2,554	25.9	18.3	16.7
2000	604,346	454,736	13,910	146,042	92,044	53,998	3,568	24.3	17.3	20.5
1999	588,981	449,580	14,999	135,508	85,898	49,610	3,893	23.2	16.5	23.2
1998	593,127	457,186	16,510	131,999	84,169	47,830	3,942	22.4	16.0	25.7
1997	581,431	451,744	16,353	126,138	80,599	45,539	3,549	21.8	15.6	26.4
1996	578,099	449,544	16,322	124,836	80,457	44,379	3,719	21.7	15.7	26.9
1995	587,781	457,104	15,721	127,171	82,395	44,776	3,506	21.8	15.7	26.0
1994	619,198	480,551	16,478	134,526	86,411	48,115	4,121	21.9	15.7	25.5
1993	641,273	496,333	15,675	139,702	89,315	50,387	5,238	22.0	15.7	23.7
1992 ¹⁰	657,450	502,669	14,950	143,153	91,086	52,067	11,628	22.2	15.7	22.3
1991 ¹⁰	666,758	507,522	13,847	142,417	90,664	51,753	16,819	21.9	15.5	21.1
1990 ^{7,11}	661,701	503,720	13,157	142,838	91,175	51,663	15,143	22.1	15.7	20.3
1989 ^{8,12}	611,269	440,310	10,726	125,290	81,177	44,113	45,669	22.2	15.9	19.6
Hispanic ¹³										
2003	912,329	667,656	11,153	241,159	134,231	106,912	3,514	26.5	17.0	9.4
2002	876,642	653,516	12,610	219,777	122,603	97,174	3,349	25.2	16.1	11.5
2001	851,851	648,821	14,846	199,874	113,529	86,345	3,156	23.6	15.2	14.7
2000	815,868	633,220	17,062	179,583	104,597	74,986	3,065	22.1	14.5	18.5
1999	764,339	599,118	16,915	161,035	94,433	66,602	4,186	21.2	14.0	20.3
1998	734,661	580,143	17,803	150,317	88,763	61,554	4,201	20.6	13.6	22.4
1997	709,767	563,114	17,942	142,907	84,410	58,497	3,746	20.2	13.4	23.5
1996	701,339	558,105	18,491	139,554	83,392	56,162	3,680	20.0	13.4	24.8
1995	679,768	539,731	17,396	136,640	82,662	53,978	3,397	20.2	13.7	24.4
1994	665,026	525,928	16,206	135,569	81,961	53,608	3,529	20.5	13.9	23.2
1993	654,418	514,493	14,586	136,279	82,576	53,703	3,646	20.9	14.2	21.4
1992 ¹⁰	643,271	494,338	13,111	133,369	81,211	52,158	15,564	21.2	14.4	20.1
1991 ¹⁰	623,085	472,126	11,615	129,752	80,228	49,524	21,207	21.6	14.8	19.0
1990 ^{7,11}	595,073	458,242	10,395	122,969	76,027	46,942	13,862	21.2	14.5	18.1
1989 ^{8,12}	532,249	385,462	8,549	105,268	64,905	40,363	41,519	21.5	14.7	17.5

¹For 2003 includes unknown type of vaginal delivery; see "Technical Notes."²For 2003 includes unknown type of cesarean delivery; see "Technical Notes."³Percent of all live births by cesarean delivery.⁴Number of primary cesareans per 100 live births to women who have not had a previous cesarean.⁵Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.⁶Includes races other than white and black and origin not stated.⁷Excludes data for Oklahoma, which did not report method of delivery on the birth certificate.⁸Excludes data for Louisiana, Maryland, Nebraska, Nevada, and Oklahoma, which did not report method of delivery on the birth certificate.⁹Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."¹⁰Excludes data for New Hampshire, which did not report Hispanic origin.¹¹Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.¹²Excludes data for Louisiana, New Hampshire, and Oklahoma, which did not report Hispanic origin.¹³Includes all persons of Hispanic origin of any race.

Table 40. Live births by method of delivery and rates of cesarean delivery and vaginal birth after previous cesarean delivery, by age and race and Hispanic origin of mother: United States, 2003

Age and race and Hispanic origin of mother	Births by method of delivery							Cesarean delivery rate		
	All births	Vaginal		Cesarean			Not stated	Total ³	Primary ⁴	Rate of vaginal birth after previous cesarean ⁵
		Total ¹	After previous cesarean	Total ²	Primary	Repeat				
All races ⁶	4,089,950	2,949,853	51,602	1,119,388	684,484	434,699	20,709	27.5	19.1	10.6
Under 20 years	421,241	339,393	1,171	80,182	70,150	10,030	1,666	19.1	17.2	10.5
20–24 years	1,032,305	795,078	9,003	232,579	154,407	78,157	4,648	22.6	16.4	10.3
25–29 years	1,086,366	795,736	14,123	285,231	172,845	112,353	5,399	26.4	18.1	11.2
30–34 years	975,546	665,025	16,004	305,102	170,728	134,296	5,419	31.4	20.8	10.6
35–39 years	467,642	293,643	9,194	171,142	90,685	80,403	2,857	36.8	24.2	10.3
40–54 years	106,850	60,978	2,107	45,152	25,669	19,460	720	42.5	30.4	9.8
White total ⁷	3,225,848	2,332,605	39,696	876,595	531,486	344,954	16,648	27.3	18.8	10.3
Under 20 years	302,024	244,706	708	56,101	49,264	6,835	1,217	18.7	16.8	9.4
20–24 years	790,910	612,917	6,360	174,405	116,293	58,102	3,588	22.2	16.1	9.9
25–29 years	871,496	640,765	10,764	226,343	136,887	89,434	4,388	26.1	17.8	10.7
30–34 years	795,902	544,355	12,646	247,011	136,885	110,068	4,536	31.2	20.5	10.3
35–39 years	379,773	240,412	7,495	137,017	71,959	65,015	2,344	36.3	23.6	10.3
40–54 years	85,743	49,450	1,723	35,718	20,198	15,500	575	41.9	29.7	10.0
Non-Hispanic white	2,321,904	1,671,414	28,751	637,482	398,368	238,990	13,008	27.6	19.5	10.7
Under 20 years	174,019	140,063	326	33,137	29,808	3,327	819	19.1	17.6	8.9
20–24 years	522,275	403,708	3,719	115,906	80,222	35,680	2,661	22.3	16.7	9.4
25–29 years	627,437	462,787	7,202	161,278	103,308	57,952	3,372	25.8	18.5	11.1
30–34 years	626,315	431,212	9,848	191,321	110,359	80,912	3,782	30.7	20.8	10.9
35–39 years	303,354	193,777	6,212	107,661	58,334	49,293	1,916	35.7	23.7	11.2
40–54 years	68,504	39,867	1,444	28,179	16,337	11,826	458	41.4	29.8	10.9
Black total ⁷	599,847	423,033	8,484	173,834	107,603	66,217	2,980	29.1	20.6	11.4
Under 20 years	103,677	81,467	430	21,813	18,862	2,951	397	21.1	18.9	12.7
20–24 years	196,268	145,662	2,217	49,712	31,975	17,733	894	25.4	18.2	11.1
25–29 years	139,947	98,252	2,502	40,995	23,174	17,817	700	29.4	19.5	12.3
30–34 years	97,529	62,270	2,077	34,694	19,106	15,583	565	35.8	24.1	11.8
35–39 years	49,889	28,710	1,019	20,839	11,154	9,684	340	42.1	28.7	9.5
40–54 years	12,537	6,672	239	5,781	3,332	2,449	84	46.4	34.1	8.9
Non-Hispanic black	576,033	405,671	8,109	167,506	103,694	63,802	2,856	29.2	20.7	11.3
Under 20 years	100,151	78,599	414	21,165	18,288	2,877	387	21.2	19.0	12.6
20–24 years	189,020	140,017	2,129	48,132	30,843	17,287	871	25.6	18.3	11.0
25–29 years	133,821	93,804	2,383	39,351	22,249	17,098	666	29.6	19.6	12.2
30–34 years	93,346	59,483	1,987	33,324	18,381	14,940	539	35.9	24.2	11.7
35–39 years	47,661	27,374	966	19,972	10,716	9,255	315	42.2	28.9	9.5
40–54 years	12,034	6,394	230	5,562	3,217	2,345	78	46.5	34.3	8.9
Hispanic ⁸	912,329	667,656	11,153	241,159	134,231	106,912	3,514	26.5	17.0	9.4
Under 20 years	130,880	106,994	394	23,487	19,916	3,571	399	18.0	15.7	9.9
20–24 years	273,311	212,886	2,728	59,513	36,802	22,707	912	21.8	14.9	10.7
25–29 years	246,361	179,603	3,650	65,781	33,872	31,907	977	26.8	16.1	10.3
30–34 years	169,054	112,629	2,835	55,702	26,397	29,300	723	33.1	19.4	8.8
35–39 years	75,801	46,157	1,272	29,246	13,467	15,775	398	38.8	23.1	7.5
40–54 years	16,922	9,387	274	7,430	3,777	3,652	105	44.2	29.3	7.0

¹Includes unknown type of vaginal delivery; see "Technical Notes."²Includes unknown type of cesarean delivery; see "Technical Notes."³Percent of all live births by cesarean delivery.⁴Number of primary cesareans per 100 live births to women who have not had a previous cesarean.⁵Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.⁶Includes races other than white and black and origin not stated.⁷Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."⁸Includes all persons of Hispanic origin of any race.

Table 41. Rates of cesarean delivery and vaginal birth after previous cesarean delivery, by race and Hispanic origin of mother: United States, each State and territory, 2003

[By place of residence]

State	Cesarean delivery rate ¹						Rate of vaginal births after previous cesarean ²					
	All races ³	White		Black		Hispanic ⁵	All races ³	White		Black		Hispanic ⁵
		Total ⁴	Non-Hispanic	Total ⁴	Non-Hispanic			Total ⁴	Non-Hispanic	Total ⁴	Non-Hispanic	
United States ⁶	27.5	27.3	27.6	29.1	29.2	26.5	10.6	10.3	10.7	11.4	11.3	9.4
Alabama	29.6	29.4	29.9	30.3	30.3	22.9	6.9	6.9	6.5	7.0	6.9	12.1
Alaska	21.4	24.3	23.9	27.0	29.2	22.0	16.5	11.1	10.5	*	*	*
Arizona	22.2	22.2	23.7	24.7	25.5	20.8	7.8	7.1	8.1	8.2	8.1	6.0
Arkansas	29.5	29.1	29.7	31.3	31.3	24.3	8.7	8.8	7.7	7.9	7.8	16.7
California	27.9	27.8	28.5	31.3	31.4	27.2	6.6	6.3	6.8	7.1	7.1	6.1
Colorado	22.2	22.1	22.9	24.4	24.4	20.6	14.9	14.3	13.6	25.6	25.5	15.5
Connecticut	27.2	27.3	28.1	27.9	28.2	24.0	11.2	10.7	10.6	13.0	13.5	10.5
Delaware	29.1	28.5	28.5	31.4	31.6	27.5	10.9	10.5	9.6	11.0	11.0	14.9
District of Columbia	27.4	28.9	29.2	26.8	28.2	20.2	10.3	12.1	*	10.1	9.5	*
Florida	30.8	31.0	29.8	30.2	30.1	33.3	5.7	5.4	6.2	6.4	6.5	4.1
Georgia	27.2	26.9	28.4	28.1	28.1	21.0	9.2	9.1	8.2	8.9	8.7	13.3
Hawaii	22.0	21.1	21.1	20.2	21.1	22.3	16.7	12.9	13.3	*	*	13.2
Idaho	21.1	21.1	21.0	*	*	21.6	14.1	14.3	13.6	*	*	17.6
Illinois	25.7	25.5	26.5	26.2	26.2	23.1	13.5	13.5	12.7	13.1	13.1	15.3
Indiana	25.6	25.5	25.5	26.2	26.3	25.3	10.2	10.1	9.9	11.0	10.9	12.8
Iowa	25.4	25.5	25.4	26.9	27.0	26.6	10.4	10.3	10.5	11.8	12.0	7.9
Kansas	26.5	26.6	26.9	27.2	27.2	25.1	9.0	8.7	8.6	8.9	9.1	9.3
Kentucky	30.1	30.2	30.3	29.4	29.4	27.7	6.6	6.4	6.0	8.6	8.6	14.5
Louisiana	31.7	32.8	32.8	30.3	30.3	33.0	5.1	3.9	3.9	6.8	6.8	*
Maine	26.3	26.3	26.3	25.1	26.1	30.7	8.2	7.9	8.1	*	*	*
Maryland	28.5	27.4	27.7	30.7	31.2	24.2	15.4	15.6	15.2	14.7	14.5	18.4
Massachusetts	29.2	29.4	30.0	29.6	30.4	25.8	12.6	12.3	12.1	14.0	15.8	12.7
Michigan	26.4	26.5	26.7	25.8	25.9	25.1	11.4	11.5	11.3	10.9	10.9	13.3
Minnesota	23.3	23.6	23.8	23.9	23.9	22.2	13.9	12.8	11.9	22.8	23.4	20.2
Mississippi	32.5	33.0	33.2	31.9	31.9	24.6	5.8	4.8	4.8	6.9	6.9	*
Missouri	27.3	27.4	27.6	26.5	26.5	23.9	11.2	10.7	10.5	14.2	14.4	13.7
Montana	23.6	23.2	23.1	*	*	24.3	15.8	17.2	17.2	*	*	*
Nebraska	27.7	27.9	28.2	25.4	25.2	26.6	8.6	8.3	7.8	13.0	12.7	11.7
Nevada	27.5	26.8	29.4	31.6	31.8	23.6	8.0	8.0	7.0	10.1	10.1	9.4
New Hampshire	26.5	26.2	26.4	33.3	35.3	25.5	11.2	11.2	11.1	*	*	*
New Jersey	33.1	33.0	33.6	34.4	34.2	31.8	14.3	13.7	13.7	16.5	17.9	12.9
New Mexico	20.3	20.9	21.8	21.1	21.0	20.4	18.7	17.1	17.8	*	*	16.5
New York	28.4	28.5	29.1	29.1	29.3	27.1	16.2	15.9	16.1	17.3	17.5	15.4
North Carolina	27.4	26.9	28.1	29.2	29.2	22.0	10.7	10.8	9.8	10.1	10.1	15.5
North Dakota	24.3	24.3	24.1	21.1	21.7	30.4	13.7	13.7	13.7	*	*	*
Ohio	25.1	24.9	25.0	25.7	25.7	23.1	14.6	13.9	13.9	17.7	17.8	15.8
Oklahoma	29.4	29.1	29.8	32.5	32.6	24.9	7.6	7.5	7.2	5.7	5.8	9.8
Oregon	24.9	24.6	25.1	30.3	30.1	22.8	13.6	13.7	12.1	*	*	19.6
Pennsylvania ⁷	26.1	26.2	26.3	25.9	26.4	24.6	20.4	19.3	19.4	26.4	26.2	18.3
Rhode Island	28.3	29.0	30.3	25.7	25.4	26.1	11.2	10.3	10.2	15.3	*	11.5
South Carolina	29.9	29.7	30.3	30.3	30.3	25.3	8.3	8.2	7.4	8.2	8.2	15.4
South Dakota	25.4	25.6	25.8	23.0	24.1	20.2	14.6	13.8	13.5	*	*	*
Tennessee	28.6	28.9	29.3	27.7	27.7	24.2	9.6	8.3	8.1	14.2	14.2	11.2
Texas	30.2	29.8	31.0	33.2	33.3	28.9	6.6	6.6	5.7	5.9	5.9	7.3
Utah	19.2	19.0	18.5	27.3	28.9	21.9	21.8	21.7	22.1	*	*	20.4
Vermont	22.6	22.4	22.4	*	*	*	24.0	23.5	23.5	*	*	*
Virginia	28.3	28.0	28.4	28.3	28.5	25.0	10.7	10.0	9.5	12.3	12.1	13.5
Washington ⁷	25.5	25.3	25.5	28.2	28.7	23.8	17.7	17.3	16.5	20.9	20.0	21.6
West Virginia	31.6	31.5	31.5	34.0	34.3	28.8	8.8	8.8	8.8	*	*	*
Wisconsin	21.9	22.2	22.3	21.2	21.1	21.1	15.4	14.7	14.6	18.3	18.3	15.7
Wyoming	23.8	23.9	23.9	*	*	24.4	13.4	13.4	13.7	*	*	*

See footnotes at end of table.

Table 41. Rates of cesarean delivery and vaginal birth after previous cesarean delivery, by race and Hispanic origin of mother: United States, each State and territory, 2003—Con.

[By place of residence]

State	Cesarean delivery rate ¹						Rate of vaginal births after previous cesarean ²					
	All races ³	White		Black		Hispanic ⁵	All races ³	White		Black		Hispanic ⁵
		Total ⁴	Non-Hispanic	Total ⁴	Non-Hispanic			Total ⁴	Non-Hispanic	Total ⁴	Non-Hispanic	
Puerto Rico	46.1	46.3	---	44.2	---	---	3.2	3.1	---	3.3	---	---
Virgin Islands	26.6	29.3	21.2	25.5	24.8	30.6	24.3	*	*	22.5	24.3	*
Guam	24.4	16.1	16.3	*	*	*	10.8	*	*	*	*	*
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	20.3	*	---	*	---	---	*	*	---	*	---	---

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator. --- Data not available. ¹Percent of all live births by cesarean delivery.²Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery. ³Includes races other than white and black and origin not stated.⁴Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. California, Hawaii, Ohio (for December), Pennsylvania, Utah, and Washington reported multiple-race data in 2003. The multiple-race data for these States were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other States; see "Technical Notes." Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes." ⁵Includes all persons of Hispanic origin of any race. ⁶Excludes data for the territories.⁷Rate of vaginal birth after cesarean delivery for Pennsylvania and Washington may be over-reported because of changes resulting from their implementation of the 2003 Revision of the U.S. Standard Certificate of Live Birth; see "Technical Notes."**Table 42. Rates of cesarean delivery and vaginal birth after previous cesarean delivery, by selected maternal medical risk factors and complications of labor and/or delivery: United States, 2003**

Medical risk factor and complication	All births to mothers with specified condition and/or procedure	Cesarean delivery rate		Rate of vaginal birth after previous cesarean ³
		Total ¹	Primary ²	
Medical risk factors				
Anemia ⁴	91,535	28.2	19.2	13.4
Cardiac disease ⁴	18,639	32.2	23.0	11.3
Acute or chronic lung disease ⁴	46,356	31.1	22.3	12.4
Diabetes	133,547	43.0	31.2	8.0
Genital herpes ^{4,5}	31,567	36.6	29.2	13.4
Hydramnios/Oligohydramnios ⁴	53,141	41.4	35.3	9.5
Hemoglobinopathy ⁴	3,112	31.2	22.4	11.8
Hypertension, chronic	35,953	47.8	37.1	6.4
Hypertension, pregnancy-associated	152,268	43.1	37.1	6.9
Eclampsia	12,059	55.4	49.7	4.6
Incompetent cervix ⁴	11,464	41.6	33.4	14.2
Renal disease ⁴	11,668	29.3	20.9	12.7
Rh sensitization ^{4,6}	26,040	27.7	19.5	12.6
Uterine bleeding ^{4,5}	18,494	37.9	29.8	13.2
Complications of labor and/or delivery				
Febrile ⁴	59,787	32.2	31.1	39.2
Meconium, moderate/heavy	197,865	23.5	20.5	30.8
Premature rupture of membrane ⁴	83,103	30.8	26.8	21.9
Abruptio placenta ⁴	20,386	64.3	59.7	8.0
Placenta previa ⁴	12,953	81.7	77.5	2.3
Other excessive bleeding ⁴	22,787	33.7	26.5	15.1
Seizures during labor ⁴	1,304	58.6	55.3	*
Precipitous labor (less than 3 hours)	74,807	2.7	1.8	73.0
Prolonged labor (more than 20 hours) ⁴	26,130	38.2	37.6	41.4
Dysfunctional labor ⁴	109,836	72.3	71.2	10.9
Breech/Malpresentation	156,804	87.2	85.7	2.9
Cephalopelvic disproportion ⁴	56,111	96.0	95.9	1.9
Cord prolapse ⁴	6,385	68.4	66.6	8.0
Anesthetic complication ^{4,5}	2,415	45.2	37.1	8.0
Fetal distress ^{4,5}	132,377	63.2	61.6	14.0

*Figure does not meet standards of reliability or precision; based on fewer than 20 births in numerator.

¹Percent of all live births by cesarean delivery.²Number of primary cesareans per 100 live births to women who have not had a previous cesarean.³Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.⁴Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of "Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."⁵Texas does not report this risk factor or complication.⁶Kansas does not report this risk factor.

Table 43. Live births by birthweight and percentage very low and low birthweight, by period of gestation and race and Hispanic origin of mother: United States, 2003

Birthweight ¹ and race and Hispanic origin of mother		Period of gestation ²										
		Preterm						Term			Postterm	
		Total under 37 weeks	Under 28 weeks	28–31 weeks	32–35 weeks	36 weeks	Total 37–41 weeks	37–39 weeks	40 weeks	41 weeks	42 weeks and over	Not stated
Number												
All races ³	4,089,950	499,008	30,061	49,545	234,074	185,328	3,288,548	2,097,771	807,157	383,620	258,552	43,842
Less than 500 grams	6,307	6,132	5,857	247	23	5	6	2	3	1	1	168
500–999 grams	22,980	22,319	16,587	5,172	528	32	183	133	35	15	19	459
1,000–1,499 grams	29,930	27,759	3,905	16,085	7,179	590	1,508	1,080	297	131	213	450
1,500–1,999 grams	63,791	53,171	957	12,259	34,790	5,165	8,984	7,419	1,095	470	794	842
2,000–2,499 grams	201,056	105,163	612	4,193	68,175	32,183	88,377	73,882	9,883	4,612	5,175	2,341
2,500–2,999 grams	711,003	133,242	908	4,162	60,025	68,147	537,339	412,555	87,702	37,082	32,922	7,500
3,000–3,499 grams	1,557,864	100,835	–	4,827	41,100	54,908	1,340,828	888,504	314,513	137,811	99,990	16,211
3,500–3,999 grams	1,131,577	39,471	–	2,461	17,514	19,496	993,872	559,499	290,910	143,463	86,878	11,356
4,000–4,499 grams	309,721	7,721	–	–	3,805	3,916	271,493	132,782	88,291	50,420	27,172	3,335
4,500–4,999 grams	46,690	1,243	–	–	577	666	40,228	18,893	12,804	8,531	4,720	499
5,000 grams or more	5,431	211	–	–	98	113	4,577	2,324	1,306	947	566	77
Not stated	3,600	1,741	1,235	139	260	107	1,153	698	318	137	102	604
Percent												
Very low birthweight ⁴	1.4	11.3	91.4	43.5	3.3	0.3	0.1	0.1	0.0	0.0	0.1	2.5
Low birthweight ⁵	7.9	43.1	96.9	76.8	47.3	20.5	3.0	3.9	1.4	1.4	2.4	9.9
Number												
White total ⁶	3,225,848	365,358	17,967	34,155	172,141	141,095	2,618,961	1,659,139	648,700	311,122	206,544	34,985
Less than 500 grams	3,593	3,475	3,299	159	14	3	4	1	2	1	–	114
500–999 grams	14,096	13,618	9,947	3,292	356	23	138	102	28	8	12	328
1,000–1,499 grams	20,173	18,698	2,460	10,984	4,847	407	1,012	733	202	77	155	308
1,500–1,999 grams	44,419	37,217	575	8,780	24,316	3,546	6,035	5,014	699	322	548	619
2,000–2,499 grams	141,331	75,862	378	2,804	49,885	22,795	60,221	50,388	6,660	3,173	3,568	1,680
2,500–2,999 grams	511,317	99,112	564	2,735	44,617	51,196	383,324	295,407	61,647	26,270	23,389	5,492
3,000–3,499 grams	1,220,632	77,218	–	3,400	30,561	43,257	1,052,594	699,863	244,945	107,786	77,864	12,956
3,500–3,999 grams	951,782	31,556	–	1,909	13,722	15,925	837,969	472,654	244,546	120,769	72,640	9,617
4,000–4,499 grams	270,180	6,300	–	–	3,087	3,213	237,343	115,942	77,176	44,225	23,626	2,911
4,500–4,999 grams	41,156	1,020	–	–	467	553	35,514	16,540	11,415	7,559	4,174	448
5,000 grams or more	4,664	171	–	–	78	93	3,930	1,969	1,132	829	495	68
Not stated	2,505	1,111	744	92	191	84	877	526	248	103	73	444
Percent												
Very low birthweight ⁴	1.2	9.8	91.2	42.4	3.0	0.3	0.0	0.1	0.0	0.0	0.1	2.2
Low birthweight ⁵	6.9	40.9	96.7	76.4	46.2	19.0	2.6	3.4	1.2	1.2	2.1	8.8
Number												
Non-Hispanic white	2,321,904	260,947	12,639	24,251	121,222	102,835	1,904,575	1,211,016	469,198	224,361	144,119	12,263
Less than 500 grams	2,529	2,485	2,352	117	13	3	2	1	1	–	–	42
500–999 grams	9,998	9,785	7,048	2,475	245	17	94	70	18	6	6	113
1,000–1,499 grams	14,882	13,981	1,751	8,240	3,680	310	661	490	121	50	111	129
1,500–1,999 grams	32,915	27,963	354	6,567	18,396	2,646	4,302	3,611	483	208	377	273
2,000–2,499 grams	103,007	57,100	245	1,891	37,837	17,127	42,794	36,111	4,558	2,125	2,493	620
2,500–2,999 grams	356,232	72,108	362	1,635	31,901	38,210	266,678	207,843	41,369	17,466	15,627	1,819
3,000–3,499 grams	858,305	51,795	–	2,047	18,736	31,012	749,648	503,605	171,317	74,726	52,630	4,232
3,500–3,999 grams	700,819	20,131	–	1,206	8,064	10,861	625,749	355,104	181,568	89,077	51,528	3,411
4,000–4,499 grams	206,407	4,033	–	–	1,879	2,154	183,514	89,671	59,815	34,028	17,709	1,151
4,500–4,999 grams	31,570	654	–	–	282	372	27,533	12,691	8,892	5,950	3,201	182
5,000 grams or more	3,415	110	–	–	48	62	2,901	1,401	862	638	380	24
Not stated	1,825	802	527	73	141	61	699	418	194	87	57	267
Percent												
Very low birthweight ⁴	1.2	10.1	92.1	44.8	3.3	0.3	0.0	0.0	0.0	0.0	0.1	2.4
Low birthweight ⁵	7.0	42.8	97.0	79.8	49.7	19.6	2.5	3.3	1.1	1.1	2.1	9.8

See footnotes at end of table.

Table 43. Live births by birthweight and percentage very low and low birthweight, by period of gestation and race and Hispanic origin of mother: United States, 2003—Con.

Birthweight ¹ and race and Hispanic origin of mother	All births	Period of gestation ²										
		Preterm						Term			Postterm	
		Total under 37 weeks	Under 28 weeks	28–31 weeks	32–35 weeks	36 weeks	Total 37–41 weeks	37–39 weeks	40 weeks	41 weeks	42 weeks and over	Not stated
Number												
Black total ⁶	599,847	105,101	10,675	12,789	48,486	33,151	454,209	299,385	106,021	48,803	36,234	4,303
Less than 500 grams	2,427	2,382	2,300	72	8	2	2	1	1	–	1	42
500–999 grams	7,765	7,630	5,865	1,625	133	7	37	27	6	4	7	91
1,000–1,499 grams	8,204	7,656	1,248	4,329	1,923	156	406	290	69	47	49	93
1,500–1,999 grams	15,654	12,919	331	2,902	8,436	1,250	2,383	1,934	326	123	203	149
2,000–2,499 grams	46,038	23,077	192	1,161	14,472	7,252	21,283	17,656	2,499	1,128	1,278	400
2,500–2,999 grams	143,176	26,071	303	1,160	11,945	12,663	108,977	82,712	18,483	7,782	7,132	996
3,000–3,499 grams	228,356	17,831	–	1,097	8,137	8,597	193,652	126,959	46,445	20,248	15,460	1,413
3,500–3,999 grams	117,889	5,795	–	405	2,802	2,588	101,871	56,971	30,108	14,792	9,457	766
4,000–4,499 grams	25,428	1,026	–	–	501	525	21,955	10,967	7,020	3,968	2,246	201
4,500–4,999 grams	3,546	151	–	–	73	78	3,040	1,529	901	610	333	22
5,000 grams or more	504	30	–	–	13	17	426	236	115	75	46	2
Not stated	860	533	436	38	43	16	177	103	48	26	22	128
Percent												
Very low birthweight ⁴	3.1	16.9	91.9	47.3	4.3	0.5	0.1	0.1	0.1	0.1	0.2	5.4
Low birthweight ⁵	13.4	51.3	97.0	79.1	51.5	26.2	5.3	6.7	2.7	2.7	4.2	18.6
Number												
Non-Hispanic black	576,033	101,984	10,386	12,452	47,067	32,079	435,340	287,620	101,268	46,452	34,669	4,040
Less than 500 grams	2,350	2,310	2,229	71	8	2	2	1	1	–	1	37
500–999 grams	7,575	7,444	5,715	1,593	129	7	37	27	6	4	7	87
1,000–1,499 grams	7,998	7,466	1,215	4,216	1,885	150	391	279	66	46	48	93
1,500–1,999 grams	15,211	12,553	320	2,819	8,202	1,212	2,320	1,884	316	120	196	142
2,000–2,499 grams	44,813	22,477	187	1,133	14,098	7,059	20,717	17,189	2,425	1,103	1,239	380
2,500–2,999 grams	138,440	25,295	298	1,131	11,596	12,270	105,299	79,977	17,817	7,505	6,894	952
3,000–3,499 grams	218,901	17,220	–	1,064	7,873	8,283	185,532	121,808	44,413	19,311	14,824	1,325
3,500–3,999 grams	112,139	5,555	–	391	2,678	2,486	96,862	54,274	28,606	13,982	8,998	724
4,000–4,499 grams	23,992	975	–	–	473	502	20,738	10,406	6,618	3,714	2,094	185
4,500–4,999 grams	3,340	147	–	–	71	76	2,869	1,453	844	572	305	19
5,000 grams or more	484	29	–	–	13	16	408	227	111	70	45	2
Not stated	790	513	422	34	41	16	165	95	45	25	18	94
Percent												
Very low birthweight ⁴	3.1	17.0	91.9	47.4	4.3	0.5	0.1	0.1	0.1	0.1	0.2	5.5
Low birthweight ⁵	13.6	51.5	97.0	79.2	51.7	26.3	5.4	6.7	2.8	2.7	4.3	18.7
Number												
Hispanic ⁷	912,329	105,688	5,378	10,026	51,536	38,748	721,266	452,575	181,123	87,568	63,292	22,083
Less than 500 grams	1,037	965	922	42	1	–	2	–	1	1	–	70
500–999 grams	4,140	3,884	2,948	821	109	6	41	31	8	2	6	209
1,000–1,499 grams	5,366	4,778	736	2,766	1,174	102	363	252	83	28	44	181
1,500–1,999 grams	11,655	9,383	231	2,237	5,996	919	1,767	1,425	227	115	171	334
2,000–2,499 grams	38,775	18,963	140	930	12,163	5,730	17,685	14,491	2,142	1,052	1,102	1,025
2,500–2,999 grams	157,583	27,359	202	1,118	12,859	13,180	118,701	89,047	20,682	8,972	7,944	3,579
3,000–3,499 grams	366,508	25,760	–	1,382	11,982	12,396	306,547	198,452	74,561	33,534	25,679	8,522
3,500–3,999 grams	252,230	11,569	–	710	5,755	5,104	213,311	118,177	63,258	31,876	21,274	6,076
4,000–4,499 grams	63,688	2,310	–	–	1,236	1,074	53,687	26,170	17,352	10,165	5,958	1,733
4,500–4,999 grams	9,619	368	–	–	184	184	8,002	3,870	2,516	1,616	984	265
5,000 grams or more	1,246	62	–	–	30	32	1,029	573	266	190	114	41
Not stated	482	287	199	20	47	21	131	87	27	17	16	48
Percent												
Very low birthweight ⁴	1.2	9.1	88.9	36.3	2.5	0.3	0.1	0.1	0.1	0.0	0.1	2.1
Low birthweight ⁵	6.7	36.0	96.1	67.9	37.8	17.4	2.8	3.6	1.4	1.4	2.1	8.3

— Quantity zero. 0.0 Quantity more than zero but less than 0.05.

¹Equivalents of the gram weights in pounds and ounces are shown in the "Technical Notes."²Expressed in completed weeks.³Includes races other than white and black and origin not stated.⁴Birthweight of less than 1,500 grams (3 lb 4 oz).⁵Birthweight of less than 2,500 grams (5 lb 8 oz).⁶Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."⁷Includes all persons of Hispanic origin of any race.

Table 44. Percentage of live births very preterm and preterm and percentage of live births of very low birthweight and low birthweight, by race and Hispanic origin of mother: United States, 1981–2003

Year	Very preterm ¹						Preterm ²					
	White			Black			White			Black		
	All races ³	Non-Hispanic		Total ⁴	Non-Hispanic		All races ³	Non-Hispanic		Total ⁴	Non-Hispanic	
		Total ⁴	Hispanic ⁵		Total ⁴	Hispanic ⁵		Total ⁴	Hispanic ⁵		Total ⁴	Hispanic ⁵
2003	1.97	1.63	1.60	3.94	3.99	1.73	12.3	11.5	11.3	17.6	17.8	11.9
2002	1.96	1.60	1.56	4.01	4.04	1.72	12.1	11.1	11.0	17.5	17.7	11.6
2001	1.95	1.59	1.55	4.02	4.05	1.69	11.9	11.0	10.8	17.5	17.6	11.4
2000	1.93	1.55	1.51	4.04	4.09	1.69	11.6	10.6	10.4	17.3	17.4	11.2
1999	1.96	1.57	1.54	4.13	4.18	1.68	11.8	10.7	10.5	17.5	17.6	11.4
1998	1.96	1.57	1.52	4.11	4.15	1.72	11.6	10.5	10.2	17.5	17.6	11.4
1997	1.94	1.53	1.49	4.17	4.19	1.68	11.4	10.2	9.9	17.5	17.6	11.2
1996	1.89	1.48	1.43	4.13	4.17	1.66	11.0	9.8	9.5	17.4	17.5	10.9
1995	1.89	1.46	1.41	4.25	4.29	1.66	11.0	9.7	9.4	17.7	17.8	10.9
1994	1.91	1.45	1.39	4.32	4.36	1.67	11.0	9.6	9.3	18.1	18.2	10.9
1993	1.93	1.45	1.39	4.41	4.45	1.67	11.0	9.5	9.1	18.5	18.6	11.0
1992 ⁶	1.91	1.40	1.33	4.47	4.50	1.64	10.7	9.1	8.7	18.4	18.5	10.7
1991 ⁶	1.94	1.41	1.35	4.62	4.65	1.65	10.8	9.1	8.7	18.9	19.0	11.0
1990 ⁷	1.92	1.39	1.33	4.61	4.63	1.69	10.6	8.9	8.5	18.8	18.9	11.0
1989 ⁸	1.95	1.41	1.34	4.64	4.68	1.76	10.6	8.8	8.4	18.9	19.0	11.1
1988	1.96	1.42	---	4.72	---	---	10.2	8.5	---	18.7	---	---
1987	1.96	1.44	---	4.61	---	---	10.2	8.5	---	18.4	---	---
1986	1.90	1.41	---	4.47	---	---	10.0	8.4	---	18.0	---	---
1985	1.88	1.42	---	4.37	---	---	9.8	8.2	---	17.8	---	---
1984	1.83	1.38	---	4.22	---	---	9.4	7.9	---	17.1	---	---
1983	1.86	1.40	---	4.34	---	---	9.6	8.0	---	17.7	---	---
1982	1.84	1.40	---	4.22	---	---	9.5	8.0	---	17.4	---	---
1981	1.81	1.37	---	4.13	---	---	9.4	7.9	---	17.3	---	---
Year	Very low birthweight ⁹						Low birthweight ¹⁰					
	White			Black			White			Black		
	All races ³	Non-Hispanic		Total ⁴	Non-Hispanic		All races ³	Non-Hispanic		Total ⁴	Non-Hispanic	
		Total ⁴	Hispanic ⁵		Total ⁴	Hispanic ⁵		Total ⁴	Hispanic ⁵		Total ⁴	Hispanic ⁵
2003	1.45	1.17	1.18	3.07	3.12	1.16	7.9	6.9	7.0	13.4	13.6	6.7
2002	1.46	1.17	1.17	3.13	3.15	1.17	7.8	6.8	6.9	13.3	13.4	6.5
2001	1.44	1.16	1.17	3.04	3.08	1.14	7.7	6.7	6.8	13.0	13.1	6.5
2000	1.43	1.14	1.14	3.07	3.10	1.14	7.6	6.5	6.6	13.0	13.1	6.4
1999	1.45	1.15	1.15	3.14	3.18	1.14	7.6	6.6	6.6	13.1	13.2	6.4
1998	1.45	1.15	1.15	3.08	3.11	1.15	7.6	6.5	6.6	13.0	13.2	6.4
1997	1.42	1.13	1.12	3.04	3.05	1.13	7.5	6.5	6.5	13.0	13.1	6.4
1996	1.37	1.09	1.08	2.99	3.02	1.12	7.4	6.3	6.4	13.0	13.1	6.3
1995	1.35	1.06	1.04	2.97	2.98	1.11	7.3	6.2	6.2	13.1	13.2	6.3
1994	1.33	1.02	1.01	2.96	2.99	1.08	7.3	6.1	6.1	13.2	13.3	6.2
1993	1.33	1.01	1.00	2.96	2.99	1.06	7.2	6.0	5.9	13.3	13.4	6.2
1992 ⁶	1.29	0.96	0.94	2.96	2.97	1.04	7.1	5.8	5.7	13.3	13.4	6.1
1991 ⁶	1.29	0.96	0.94	2.96	2.97	1.02	7.1	5.8	5.7	13.6	13.6	6.1
1990 ⁷	1.27	0.95	0.93	2.92	2.93	1.03	7.0	5.7	5.6	13.3	13.3	6.1
1989 ⁸	1.28	0.95	0.93	2.95	2.97	1.05	7.0	5.7	5.6	13.5	13.6	6.2
1988	1.24	0.93	---	2.86	---	---	6.9	5.7	---	13.3	---	---
1987	1.24	0.94	---	2.79	---	---	6.9	5.7	---	13.0	---	---
1986	1.21	0.93	---	2.73	---	---	6.8	5.7	---	12.8	---	---
1985	1.21	0.93	---	2.71	---	---	6.8	5.7	---	12.6	---	---
1984	1.19	0.93	---	2.60	---	---	6.7	5.6	---	12.6	---	---
1983	1.19	0.92	---	2.60	---	---	6.8	5.7	---	12.8	---	---
1982	1.18	0.91	---	2.56	---	---	6.8	5.6	---	12.6	---	---
1981	1.16	0.91	---	2.52	---	---	6.8	5.7	---	12.7	---	---

--- Data not available.

¹Births of less than 32 completed weeks of gestation.²Births of less than 37 completed weeks of gestation.³Includes races other than white and black and origin not stated.⁴Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."⁵Includes all persons of Hispanic origin of any race.⁶Data by Hispanic origin exclude New Hampshire, which did not report Hispanic origin.⁷Data by Hispanic origin exclude New Hampshire and Oklahoma, which did not report Hispanic origin.⁸Data by Hispanic origin exclude New Hampshire, Oklahoma, and Louisiana, which did not report Hispanic origin.⁹Less than 1,500 grams (3 lb 4 oz).¹⁰Less than 2,500 grams (5 lb 8 oz).

Table 45. Number and percentage low birthweight and number of live births by birthweight, by age and race and Hispanic origin of mother: United States, 2003

Age and race and Hispanic origin of mother	Low birthweight ¹		Birthweight ²												
	Number	Percent	Total	Less than 500 grams	500– 999 grams	1,000– 1,499 grams	1,500– 1,999 grams	2,000– 2,499 grams	2,500– 2,999 grams	3,000– 3,499 grams	3,500– 3,999 grams	4,000– 4,499 grams	4,500– 4,999 grams	5,000 grams or more	Not stated
All races³															
All ages	324,064	7.9	4,089,950	6,307	22,980	29,930	63,791	201,056	711,003	1,557,864	1,131,577	309,721	46,690	5,431	3,600
Under 15 years	848	12.7	6,661	32	85	87	149	495	1,698	2,694	1,220	179	14	1	7
15–19 years	40,211	9.7	414,580	804	3,152	3,637	7,462	25,156	92,531	169,390	91,699	18,154	2,014	178	403
15 years	2,103	11.5	18,238	50	191	210	412	1,240	4,423	7,548	3,524	553	59	2	26
16 years	4,402	10.7	41,344	77	381	414	825	2,705	9,843	16,996	8,390	1,502	146	19	46
17 years	7,549	10.1	74,802	161	622	670	1,383	4,713	16,990	30,720	16,087	3,053	295	32	76
18 years	11,268	9.6	117,750	234	858	981	2,066	7,129	26,522	48,060	26,044	5,127	574	43	112
19 years	14,889	9.2	162,446	282	1,100	1,362	2,776	9,369	34,753	66,066	37,654	7,919	940	82	143
20–24 years	82,494	8.0	1,032,305	1,604	5,732	7,084	15,167	52,907	199,835	412,228	264,313	63,142	8,526	878	889
25–29 years	76,631	7.1	1,086,366	1,522	5,399	6,943	14,862	47,905	178,150	415,463	314,316	86,511	12,886	1,477	932
30–34 years	71,477	7.3	975,546	1,454	4,944	6,822	14,636	43,621	148,022	357,144	293,569	88,696	14,155	1,701	782
35–39 years	40,550	8.7	467,642	685	2,863	4,059	8,797	24,146	72,708	164,600	137,185	43,764	7,397	991	447
40–44 years	10,655	10.6	101,005	194	730	1,151	2,403	6,177	16,858	34,639	27,995	8,908	1,626	198	126
45–54 years	1,198	20.5	5,845	12	75	147	315	649	1,201	1,706	1,280	367	72	7	14
White total⁴															
All ages	223,612	6.9	3,225,848	3,593	14,096	20,173	44,419	141,331	511,317	1,220,632	951,782	270,180	41,156	4,664	2,505
Under 15 years	378	10.3	3,677	8	41	42	68	219	838	1,573	752	124	10	1	1
15–19 years	24,774	8.3	298,347	409	1,771	2,193	4,604	15,797	61,144	123,409	72,095	14,884	1,666	138	237
15 years	1,107	9.6	11,484	26	93	107	221	660	2,503	4,899	2,522	396	45	2	10
16 years	2,536	9.0	28,151	30	199	247	482	1,578	6,120	11,844	6,301	1,197	119	12	22
17 years	4,669	8.8	52,941	78	357	418	849	2,967	11,026	21,981	12,452	2,487	249	27	50
18 years	7,054	8.2	85,734	127	496	596	1,281	4,554	17,756	35,474	20,627	4,246	467	33	77
19 years	9,408	7.8	120,037	148	626	825	1,771	6,038	23,739	49,211	30,193	6,558	786	64	78
20–24 years	53,600	6.8	790,910	824	3,323	4,447	9,751	35,255	140,299	316,971	217,687	53,701	7,340	717	595
25–29 years	54,143	6.2	871,496	901	3,401	4,750	10,617	34,474	130,541	330,559	267,011	75,912	11,397	1,267	666
30–34 years	52,407	6.6	795,902	882	3,209	4,927	10,888	32,501	110,515	287,041	252,401	78,817	12,650	1,503	568
35–39 years	29,593	7.8	379,773	435	1,791	2,878	6,520	17,969	54,448	132,207	117,123	38,636	6,593	854	319
40–44 years	7,751	9.6	81,031	125	500	824	1,718	4,584	12,592	27,513	23,658	7,799	1,436	177	105
45–54 years	966	20.6	4,712	9	60	112	253	532	940	1,359	1,055	307	64	7	14

See footnotes at end of table.

Table 45. Number and percentage low birthweight and number of live births by birthweight, by age and race and Hispanic origin of mother: United States, 2003—Con.

Age and race and Hispanic origin of mother	Low birthweight ¹		Birthweight ²												
	Number	Percent	Total	Less than 500 grams	500– 999 grams	1,000– 1,499 grams	1,500– 1,999 grams	2,000– 2,499 grams	2,500– 2,999 grams	3,000– 3,499 grams	3,500– 3,999 grams	4,000– 4,499 grams	4,500– 4,999 grams	5,000 grams or more	Not stated
Non-Hispanic white															
All ages	163,331	7.0	2,321,904	2,529	9,998	14,882	32,915	103,007	356,232	858,305	700,819	206,407	31,570	3,415	1,825
Under 15 years	144	10.3	1,399	3	19	18	30	74	309	551	323	67	5	–	–
15–19 years	14,904	8.6	172,620	258	1,122	1,369	2,811	9,344	33,960	69,160	43,514	9,726	1,120	75	161
15 years	525	10.8	4,878	10	46	53	113	303	994	1,973	1,152	208	21	–	5
16 years	1,266	9.5	13,375	16	111	119	232	788	2,703	5,432	3,208	684	68	4	10
17 years	2,666	9.3	28,550	49	218	253	509	1,637	5,654	11,474	6,991	1,556	159	16	34
18 years	4,316	8.6	50,484	88	321	380	789	2,738	10,061	20,199	12,708	2,795	323	21	61
19 years	6,131	8.1	75,333	95	426	564	1,168	3,878	14,548	30,082	19,455	4,483	549	34	51
20–24 years	36,764	7.0	522,275	571	2,273	3,141	6,777	24,002	91,307	204,117	146,151	37,745	5,273	497	421
25–29 years	39,730	6.3	627,437	615	2,438	3,503	7,900	25,274	92,116	233,898	194,930	56,873	8,508	904	478
30–34 years	41,263	6.6	626,315	661	2,383	3,849	8,613	25,757	85,088	223,247	201,188	63,791	10,175	1,132	431
35–39 years	23,634	7.8	303,354	319	1,334	2,282	5,231	14,468	42,777	104,440	94,704	31,608	5,284	665	242
40–44 years	6,083	9.4	64,600	95	380	628	1,340	3,640	9,895	21,760	19,149	6,344	1,152	137	80
45–54 years	809	20.8	3,904	7	49	92	213	448	780	1,132	860	253	53	5	12
Black total⁴															
All ages	80,088	13.4	599,847	2,427	7,765	8,204	15,654	46,038	143,176	228,356	117,889	25,428	3,546	504	860
Under 15 years	437	16.1	2,726	20	42	41	76	258	807	1,016	416	41	3	–	6
15–19 years	14,092	14.0	100,951	359	1,281	1,328	2,620	8,504	27,963	39,811	16,167	2,493	246	33	146
15 years	913	15.1	6,056	21	92	93	178	529	1,777	2,361	852	125	13	–	15
16 years	1,686	14.5	11,654	41	172	154	312	1,007	3,374	4,565	1,739	243	20	6	21
17 years	2,648	13.8	19,145	74	249	238	483	1,604	5,349	7,643	3,020	436	22	4	23
18 years	3,861	13.9	27,817	100	329	348	729	2,355	7,808	10,877	4,474	678	81	8	30
19 years	4,984	13.8	36,279	123	439	495	918	3,009	9,655	14,365	6,082	1,011	110	15	57
20–24 years	25,500	13.0	196,268	730	2,228	2,386	4,856	15,300	49,599	76,813	36,184	6,970	838	114	250
25–29 years	17,182	12.3	139,947	557	1,733	1,816	3,341	9,735	31,287	53,465	29,962	6,744	958	146	203
30–34 years	13,021	13.4	97,529	495	1,431	1,471	2,601	7,023	20,197	35,739	21,850	5,546	907	120	149
35–39 years	7,712	15.5	49,889	200	865	904	1,652	4,091	10,553	17,226	10,784	2,965	476	76	97
40–44 years	2,007	16.9	11,895	64	171	237	470	1,065	2,632	4,086	2,400	632	114	15	9
45–54 years	137	21.3	642	2	14	21	38	62	138	200	126	37	4	–	–

See footnotes at end of table.

Table 45. Number and percentage low birthweight and number of live births by birthweight, by age and race and Hispanic origin of mother: United States, 2003—Con.

Age and race and Hispanic origin of mother	Low birthweight ¹		Birthweight ²												
	Number	Percent	Total	Less than 500 grams	500– 999 grams	1,000– 1,499 grams	1,500– 1,999 grams	2,000– 2,499 grams	2,500– 2,999 grams	3,000– 3,499 grams	3,500– 3,999 grams	4,000– 4,499 grams	4,500– 4,999 grams	5,000 grams or more	Not stated
Non-Hispanic black															
All ages	77,947	13.6	576,033	2,350	7,575	7,998	15,211	44,813	138,440	218,901	112,139	23,992	3,340	484	790
Under 15 years	423	16.0	2,642	20	40	40	75	248	784	986	402	38	3	–	6
15–19 years	13,738	14.1	97,509	342	1,250	1,296	2,562	8,288	27,154	38,392	15,462	2,364	229	32	138
15 years	884	15.1	5,852	21	90	88	175	510	1,726	2,279	818	120	13	–	12
16 years	1,637	14.6	11,247	37	165	151	307	977	3,277	4,396	1,660	234	17	6	20
17 years	2,575	14.0	18,431	70	238	230	472	1,565	5,169	7,352	2,884	406	20	3	22
18 years	3,779	14.1	26,915	98	323	343	710	2,305	7,601	10,502	4,282	639	76	8	28
19 years	4,863	13.9	35,064	116	434	484	898	2,931	9,381	13,863	5,818	965	103	15	56
20–24 years	24,899	13.2	189,020	707	2,179	2,333	4,735	14,945	48,011	73,795	34,567	6,620	786	109	233
25–29 years	16,668	12.5	133,821	544	1,694	1,772	3,228	9,430	30,194	51,072	28,330	6,332	895	142	188
30–34 years	12,667	13.6	93,346	480	1,396	1,432	2,523	6,836	19,462	34,164	20,738	5,202	865	112	136
35–39 years	7,484	15.7	47,661	195	837	872	1,606	3,974	10,166	16,383	10,230	2,798	446	74	80
40–44 years	1,933	16.9	11,419	60	165	232	445	1,031	2,532	3,923	2,290	605	112	15	9
45–54 years	135	22.0	615	2	14	21	37	61	137	186	120	33	4	–	–
Hispanic⁵															
All ages	60,973	6.7	912,329	1,037	4,140	5,366	11,655	38,775	157,583	366,508	252,230	63,688	9,619	1,246	482
Under 15 years	244	10.4	2,356	5	24	24	36	155	556	1,045	444	61	5	–	1
15–19 years	10,120	7.9	128,524	160	669	853	1,834	6,604	27,891	55,455	29,109	5,255	565	60	69
15 years	610	9.0	6,818	16	50	60	110	374	1,552	3,021	1,409	194	25	2	5
16 years	1,303	8.6	15,151	15	91	129	256	812	3,520	6,566	3,163	524	57	8	10
17 years	2,054	8.2	24,986	28	147	171	348	1,360	5,533	10,756	5,573	952	93	11	14
18 years	2,791	7.8	35,927	40	174	226	503	1,848	7,866	15,574	8,050	1,472	146	12	16
19 years	3,362	7.4	45,642	61	207	267	617	2,210	9,420	19,538	10,914	2,113	244	27	24
20–24 years	17,173	6.3	273,311	254	1,075	1,339	3,052	11,453	50,176	114,882	72,521	16,079	2,105	225	150
25–29 years	14,624	5.9	246,361	274	975	1,266	2,780	9,329	38,964	97,748	72,557	19,065	2,921	364	118
30–34 years	11,122	6.6	169,054	209	813	1,075	2,277	6,748	25,497	63,815	50,866	14,839	2,460	370	85
35–39 years	5,914	7.8	75,801	104	455	601	1,272	3,482	11,665	27,649	22,118	6,939	1,281	190	45
40–44 years	1,641	10.2	16,172	29	119	190	374	929	2,692	5,689	4,432	1,399	272	35	12
45–54 years	135	18.0	750	2	10	18	30	75	142	225	183	51	10	2	2

– Quantity zero.

¹Less than 2,500 grams (5 lb 8 oz).²Equivalents of gram weights in terms of pounds and ounces are shown in "Technical Notes."³Includes races other than white and black and origin not stated.⁴Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."⁵Includes all persons of Hispanic origin of any race.

Table 46. Number and percentage of births of low birthweight, by race and Hispanic origin of mother: United States, each State and territory, 2003

[By place of residence. Low birthweight is birthweight of less than 2,500 grams (5 lb 8 oz)]

State	Number						Percent					
	All races ¹	White		Black		Hispanic ³	All races ¹	White		Black		Hispanic ³
		Total ²	Non-Hispanic	Total ²	Non-Hispanic			Total ²	Non-Hispanic	Total ²	Non-Hispanic	
United States ⁴	324,064	223,612	163,331	80,088	77,947	60,973	7.9	6.9	7.0	13.4	13.6	6.7
Alabama	5,923	3,271	3,084	2,588	2,583	194	10.0	8.0	8.1	14.4	14.5	6.7
Alaska	600	369	255	39	24	39	6.0	5.7	5.2	9.7	9.1	5.1
Arizona	6,414	5,410	2,696	368	320	2,727	7.1	6.9	6.9	11.3	12.1	6.9
Arkansas	3,348	2,247	2,044	1,053	1,048	205	8.9	7.6	7.7	14.6	14.6	6.3
California	35,628	26,554	10,183	3,965	3,842	16,172	6.6	6.1	6.1	12.3	12.4	6.0
Colorado	6,224	5,432	3,720	457	439	1,783	9.0	8.6	8.8	15.6	15.7	8.3
Connecticut	3,218	2,435	1,791	617	600	651	7.5	6.9	6.4	11.9	12.5	8.6
Delaware	1,068	616	511	411	407	106	9.4	7.8	7.8	14.2	14.3	7.7
District of Columbia	833	136	113	677	627	73	10.9	6.5	6.1	12.9	13.7	7.6
Florida	18,007	11,231	7,532	6,206	6,103	3,791	8.5	7.1	7.2	13.1	13.2	6.9
Georgia	12,205	6,223	5,104	5,606	5,480	1,047	9.0	7.1	7.4	13.0	13.0	5.7
Hawaii	1,554	339	277	71	64	219	8.6	6.7	6.5	12.2	13.3	8.4
Idaho	1,413	1,363	1,163	8	8	191	6.5	6.5	6.5	*	*	6.5
Illinois	15,081	9,780	7,098	4,546	4,518	2,709	8.3	6.9	7.1	14.4	14.4	6.4
Indiana	6,767	5,404	4,993	1,239	1,236	400	7.9	7.2	7.3	13.3	13.3	5.9
Iowa	2,512	2,242	2,087	168	168	155	6.6	6.3	6.3	13.1	13.3	6.2
Kansas	2,908	2,406	2,068	354	349	334	7.4	6.9	7.1	12.8	12.8	6.1
Kentucky	4,809	4,071	3,949	660	659	121	8.7	8.2	8.3	13.6	13.7	6.2
Louisiana	6,944	2,885	2,760	3,910	3,901	133	10.7	7.7	7.7	14.9	14.9	7.9
Maine	904	874	863	13	13	10	6.5	6.5	6.6	*	*	*
Maryland	6,782	3,148	2,766	3,250	3,145	490	9.1	7.0	7.1	12.7	13.0	7.0
Massachusetts	6,095	4,745	4,024	903	773	812	7.6	7.2	7.0	10.5	11.8	8.3
Michigan	10,706	7,134	6,473	3,171	3,149	504	8.2	6.9	6.9	14.1	14.1	6.6
Minnesota	4,374	3,430	3,152	550	539	252	6.2	5.8	5.8	10.3	10.3	5.1
Mississippi	4,846	1,988	1,948	2,825	2,825	39	11.4	8.6	8.6	15.2	15.2	7.2
Missouri	6,169	4,538	4,340	1,492	1,473	214	8.0	7.1	7.2	13.4	13.4	6.1
Montana	776	650	606	7	7	35	6.8	6.6	6.5	*	*	9.2
Nebraska	1,792	1,547	1,318	168	166	212	6.9	6.6	6.8	11.5	11.5	6.1
Nevada	2,716	2,053	1,204	381	366	855	8.1	7.4	7.7	13.1	13.3	7.0
New Hampshire	895	832	772	26	21	31	6.2	6.1	6.1	10.7	12.2	5.9
New Jersey	9,498	6,095	4,350	2,543	2,345	1,935	8.1	7.1	7.0	12.6	13.3	7.3
New Mexico	2,346	1,984	707	82	75	1,288	8.5	8.5	8.2	15.6	16.0	8.7
New York	19,985	12,534	8,745	5,748	5,347	4,124	7.9	6.8	6.6	12.0	12.2	7.5
North Carolina	10,631	6,348	5,368	3,852	3,837	990	9.0	7.3	7.6	14.2	14.2	6.2
North Dakota	517	436	417	10	9	8	6.5	6.3	6.4	*	*	*
Ohio	12,477	9,124	8,727	3,060	3,021	387	8.3	7.4	7.4	13.5	13.6	7.2
Oklahoma	3,951	2,913	2,579	632	621	347	7.8	7.3	7.5	13.7	13.6	6.1
Oregon	2,822	2,470	2,018	119	113	449	6.1	5.9	6.1	11.7	11.6	5.3
Pennsylvania	11,718	8,278	7,464	2,985	2,629	960	8.1	7.0	6.9	13.7	14.0	8.9
Rhode Island	1,127	891	566	149	137	221	8.5	8.0	7.8	11.9	12.3	8.9
South Carolina	5,595	2,758	2,533	2,750	2,740	235	10.1	7.6	7.8	15.0	15.0	6.4
South Dakota	732	581	552	9	9	32	6.6	6.5	6.4	*	*	9.4
Tennessee	7,380	4,858	4,565	2,404	2,391	302	9.4	8.0	8.1	14.8	14.8	6.1
Texas	29,745	22,937	10,054	5,692	5,631	12,886	7.9	7.1	7.3	13.6	13.7	7.0
Utah	3,260	3,054	2,556	58	52	496	6.5	6.5	6.4	15.2	15.3	7.0
Vermont	460	451	445	2	2	4	7.0	7.1	7.1	*	*	*
Virginia	8,297	4,890	4,287	2,887	2,835	652	8.2	6.8	6.9	12.8	13.0	6.3
Washington	4,843	3,756	3,001	404	338	744	6.0	5.7	5.6	10.1	11.1	5.6
West Virginia	1,808	1,705	1,686	86	86	10	8.6	8.5	8.5	12.0	12.1	*
Wisconsin	4,764	3,638	3,314	884	873	341	6.8	6.0	6.0	13.6	13.6	6.2
Wyoming	597	558	503	3	3	58	8.9	8.9	8.9	*	*	8.7
Puerto Rico	5,815	5,266	---	545	---	---	11.5	11.4	---	11.9	---	---
Virgin Islands	164	28	6	134	103	32	10.8	8.0	*	11.7	11.3	9.4
Guam	301	13	11	2	2	2	9.2	*	*	*	*	*
American Samoa	67	---	---	---	---	---	4.2	*	---	*	---	---
Northern Marianas	103	---	---	---	---	---	7.6	*	---	*	---	---

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

--- Data not available.

-- Quantity zero.

¹Includes races other than white and black and origin not stated.²Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. California, Hawaii, Ohio (for December), Pennsylvania, Utah, and Washington reported multiple-race data in 2003. The multiple-race data for these States were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other States; see "Technical Notes." Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."³Includes all persons of Hispanic origin of any race.⁴Excludes data for the territories.

Table 47. Number and percentage of births of very low birthweight, by race and Hispanic origin of mother: United States, each State and territory, 2003

[By place of residence. Very low birthweight is birthweight of less than 1,500 grams (3 lb 4 oz)]

State	Number						Percent					
	All races ¹	White		Black		Hispanic ³	All races ¹	White		Black		Hispanic ³
		Total ²	Non-Hispanic	Total ²	Non-Hispanic			Total ²	Non-Hispanic	Total ²	Non-Hispanic	
United States ⁴	59,217	37,862	27,409	18,396	17,923	10,543	1.4	1.2	1.2	3.1	3.1	1.2
Alabama	1,197	568	530	622	620	39	2.0	1.4	1.4	3.5	3.5	1.3
Alaska	95	57	31	4	2	5	0.9	0.9	0.6	*	*	*
Arizona	994	837	429	66	63	415	1.1	1.1	1.1	2.0	2.4	1.0
Arkansas	610	373	346	229	229	27	1.6	1.3	1.3	3.2	3.2	0.8
California	6,293	4,694	1,726	842	810	2,929	1.2	1.1	1.0	2.6	2.6	1.1
Colorado	890	757	499	98	93	267	1.3	1.2	1.2	3.4	3.3	1.2
Connecticut	626	441	323	161	160	118	1.5	1.2	1.2	3.1	3.3	1.6
Delaware	231	121	101	102	102	20	2.0	1.5	1.5	3.5	3.6	1.4
District of Columbia	169	21	14	144	140	12	2.2	1.0	*	2.7	3.1	*
Florida	3,292	1,847	1,185	1,355	1,331	678	1.6	1.2	1.1	2.9	2.9	1.2
Georgia	2,373	1,030	839	1,290	1,251	184	1.7	1.2	1.2	3.0	3.0	1.0
Hawaii	252	51	40	19	19	46	1.4	1.0	0.9	*	*	1.8
Idaho	224	214	180	1	1	32	1.0	1.0	1.0	*	*	1.1
Illinois	2,914	1,741	1,265	1,062	1,056	479	1.6	1.2	1.3	3.4	3.4	1.1
Indiana	1,211	895	834	301	301	59	1.4	1.2	1.2	3.2	3.2	0.9
Iowa	436	395	361	34	34	34	1.1	1.1	1.1	2.6	2.7	1.4
Kansas	441	356	303	71	71	55	1.1	1.0	1.0	2.6	2.6	1.0
Kentucky	847	688	670	148	148	18	1.5	1.4	1.4	3.1	3.1	*
Louisiana	1,398	455	438	919	915	20	2.2	1.2	1.2	3.5	3.5	1.2
Maine	159	157	152	2	2	5	1.1	1.2	1.2	*	*	*
Maryland	1,386	536	462	812	794	90	1.9	1.2	1.2	3.2	3.3	1.3
Massachusetts	1,093	815	690	216	189	130	1.4	1.2	1.2	2.5	2.9	1.3
Michigan	2,155	1,332	1,210	771	764	99	1.6	1.3	1.3	3.4	3.4	1.3
Minnesota	742	563	508	118	115	46	1.1	0.9	0.9	2.2	2.2	0.9
Mississippi	952	314	305	633	633	9	2.2	1.4	1.3	3.4	3.4	*
Missouri	1,215	811	770	380	375	45	1.6	1.3	1.3	3.4	3.4	1.3
Montana	120	100	90	1	1	6	1.1	1.0	1.0	*	*	*
Nebraska	310	261	223	37	36	37	1.2	1.1	1.1	2.5	2.5	1.1
Nevada	431	314	194	74	72	117	1.3	1.1	1.2	2.6	2.6	1.0
New Hampshire	165	150	138	9	8	7	1.1	1.1	1.1	*	*	*
New Jersey	1,840	1,101	751	629	586	390	1.6	1.3	1.2	3.1	3.3	1.5
New Mexico	318	263	119	14	12	146	1.1	1.1	1.4	*	*	1.0
New York	3,846	2,207	1,468	1,385	1,299	792	1.5	1.2	1.1	2.9	3.0	1.4
North Carolina	2,099	1,111	927	924	922	185	1.8	1.3	1.3	3.4	3.4	1.2
North Dakota	86	74	70	4	4	1	1.1	1.1	1.1	*	*	*
Ohio	2,325	1,545	1,462	729	717	77	1.6	1.3	1.2	3.2	3.2	1.4
Oklahoma	608	433	378	117	114	58	1.2	1.1	1.1	2.5	2.5	1.0
Oregon	465	417	339	24	23	76	1.0	1.0	1.0	2.4	2.4	0.9
Pennsylvania	2,252	1,524	1,336	671	583	201	1.5	1.3	1.2	3.1	3.1	1.9
Rhode Island	227	179	115	30	27	42	1.7	1.6	1.6	2.4	2.4	1.7
South Carolina	1,149	507	470	628	625	40	2.1	1.4	1.4	3.4	3.4	1.1
South Dakota	120	92	85	1	1	7	1.1	1.0	1.0	*	*	*
Tennessee	1,316	778	738	521	517	44	1.7	1.3	1.3	3.2	3.2	0.9
Texas	5,121	3,734	1,680	1,237	1,231	2,053	1.4	1.2	1.2	3.0	3.0	1.1
Utah	516	479	395	14	13	84	1.0	1.0	1.0	*	*	1.2
Vermont	75	74	73	1	1	1	1.1	1.2	1.2	*	*	*
Virginia	1,590	869	773	643	635	104	1.6	1.2	1.2	2.8	2.9	1.0
Washington	790	613	485	73	52	128	1.0	0.9	0.9	1.8	1.7	1.0
West Virginia	282	264	261	14	14	1	1.3	1.3	1.3	*	*	*
Wisconsin	897	639	572	215	211	76	1.3	1.1	1.0	3.3	3.3	1.4
Wyoming	74	65	56	1	1	9	1.1	1.0	1.0	*	*	*
Puerto Rico	706	618	---	88	---	---	1.4	1.3	---	1.9	---	---
Virgin Islands	37	6	---	30	19	5	2.4	*	*	2.6	*	*
Guam	45	2	2	---	---	---	1.4	*	*	*	*	*
American Samoa	10	---	---	---	---	---	*	*	---	*	---	---
Northern Marianas	9	---	---	---	---	---	*	*	---	*	---	---

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator. -- Quantity zero. --- Data not available.

¹Includes races other than white and black and origin not stated.²Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. California, Hawaii, Ohio (for December), Pennsylvania, Utah, and Washington reported multiple-race data in 2003. The multiple-race data for these States were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other States; see "Technical Notes." Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."³Includes all persons of Hispanic origin of any race.⁴Excludes data for the territories.

Table 48. Live births with selected abnormal conditions of the newborn and rates by age of mother, by race of mother: Total of 48 States and the District of Columbia, 2003

[Rates are number of live births with specified abnormal condition per 1,000 live births in specified group]

Abnormal condition and race of mother	All births ¹	Abnormal condition reported	Age of mother								Not stated ²
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years		
All races ³											
Anemia	3,863,502	3,604	0.9	1.0	0.9	0.9	0.9	1.0	1.2	22,046	
Birth injury ⁴	3,460,109	9,774	2.8	3.1	3.0	2.8	2.9	2.4	2.5	21,979	
Fetal alcohol syndrome ⁵	3,793,462	132	0.0	*	0.0	0.0	0.0	0.0	*	21,963	
Hyaline membrane disease/RDS.	3,863,502	23,214	6.0	6.6	6.3	5.8	5.7	6.1	6.9	22,046	
Meconium aspiration syndrome	3,863,502	4,788	1.2	1.5	1.4	1.2	1.1	1.2	1.5	22,046	
Assisted ventilation less than 30 minutes ⁶	3,743,733	79,727	21.4	21.6	20.3	20.8	22.2	23.1	24.1	21,364	
Assisted ventilation 30 minutes or longer ⁶	3,743,733	34,699	9.3	10.8	9.2	8.6	8.9	10.1	12.0	21,364	
Seizures	3,863,502	1,755	0.5	0.5	0.5	0.4	0.4	0.4	0.6	22,046	
White											
Anemia	3,040,873	2,668	0.9	0.9	0.8	0.9	0.9	1.0	1.1	18,133	
Birth injury ⁴	2,695,955	8,043	3.0	3.4	3.2	3.0	3.0	2.5	2.5	18,081	
Fetal alcohol syndrome ⁵	2,980,629	90	0.0	*	*	*	0.0	*	*	18,053	
Hyaline membrane disease/RDS.	3,040,873	18,626	6.2	6.5	6.3	6.0	5.9	6.3	7.1	18,133	
Meconium aspiration syndrome	3,040,873	3,583	1.2	1.5	1.4	1.1	1.1	1.0	1.5	18,133	
Assisted ventilation less than 30 minutes ⁶	2,971,066	64,570	21.9	21.6	20.4	21.2	22.9	23.9	24.8	17,639	
Assisted ventilation 30 minutes or longer ⁶	2,971,066	26,782	9.1	10.3	8.9	8.5	8.8	9.8	12.1	17,639	
Seizures	3,040,873	1,415	0.5	0.5	0.5	0.5	0.4	0.4	0.6	18,133	
Black											
Anemia	573,776	724	1.3	1.0	1.1	1.3	1.5	1.5	1.8	2,356	
Birth injury ⁴	530,423	897	1.7	1.8	1.8	1.6	1.6	1.7	*	2,345	
Fetal alcohol syndrome ⁵	567,282	28	0.0	*	*	*	*	*	*	2,355	
Hyaline membrane disease/RDS.	573,776	3,702	6.5	6.9	6.6	5.9	6.4	7.0	6.7	2,356	
Meconium aspiration syndrome	573,776	909	1.6	1.5	1.4	1.7	1.6	2.1	1.8	2,356	
Assisted ventilation less than 30 minutes ⁶	540,060	11,323	21.1	22.1	20.4	20.5	20.9	22.7	23.5	2,274	
Assisted ventilation 30 minutes or longer ⁶	540,060	6,309	11.7	12.0	11.1	10.9	12.5	14.2	13.0	2,274	
Seizures	573,776	247	0.4	0.4	0.4	0.4	0.4	0.5	*	2,356	

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

0.0 Quantity more than zero but less than 0.05.

¹Total number of births to residents of areas reporting specified abnormal condition.²No response reported for the abnormal condition item.³Includes races other than white and black.⁴Nebraska and Texas do not report this condition.⁵Wisconsin does not report this condition.⁶New York City does not report this condition.

NOTES: Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes." Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 49. Live births with selected congenital anomalies and rates by age of mother, by race of mother: Total of 49 reporting States and the District of Columbia, 2003

[Rates are number of live births with specified congenital anomaly per 100,000 live births in specified group]

Congenital anomaly and race of mother	All births ¹	Congenital anomaly reported	Age of mother							Not stated ²
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	
All races ³										
Anencephalus	4,062,129	460	11.4	14.0	12.7	10.1	12.5	8.0	*	20,877
Spina bifida/Meningocele.	4,062,129	755	18.7	18.3	20.6	19.7	16.2	15.8	26.5	20,877
Hydrocephalus ⁴	3,835,681	847	22.2	28.4	23.5	20.5	20.9	20.1	24.2	22,705
Microcephalus ⁴	3,835,681	214	5.6	6.6	5.7	4.6	4.7	7.6	*	22,705
Other central nervous system anomalies ⁴	3,835,681	803	21.1	21.5	21.2	19.6	18.7	27.7	25.2	22,705
Heart malformations ⁴	3,835,681	4,916	128.9	107.6	118.9	123.1	131.9	150.9	247.4	22,705
Other circulatory/respiratory anomalies ⁴	3,835,681	4,807	126.1	113.5	121.1	115.4	123.2	158.1	220.1	22,705
Rectal atresia/stenosis ⁴	3,835,681	298	7.8	6.1	8.6	6.7	7.6	9.5	*	22,705
Tracheo-esophageal fistula/Esophageal atresia ⁴	3,835,681	411	10.8	11.6	10.7	10.9	8.1	13.8	*	22,705
Omphalocele/Gastroschisis	4,062,129	1,313	32.5	84.4	47.8	20.9	15.3	16.9	24.6	20,877
Other gastrointestinal anomalies ⁴	3,835,681	1,259	33.0	40.8	33.4	31.2	28.0	35.3	52.5	22,705
Malformed genitalia ⁴	3,835,681	3,038	79.7	72.9	76.5	84.4	78.8	82.4	84.8	22,705
Renal agenesis ⁴	3,835,681	533	14.0	14.2	13.8	13.3	15.7	12.5	*	22,705
Other urogenital anomalies ⁴	3,835,681	3,438	90.2	79.5	84.3	87.2	95.9	104.8	104.0	22,705
Cleft lip/palate	4,062,129	3,066	75.9	73.8	86.4	76.4	64.4	73.3	92.9	20,877
Polydactyly/Syndactyly/Adactyly ⁴	3,835,681	2,915	76.4	102.1	87.8	72.5	63.8	60.9	87.8	22,705
Clubfoot ⁴	3,835,681	2,198	57.6	64.6	65.3	58.4	49.0	51.2	55.5	22,705
Diaphragmatic hernia ⁴	3,835,681	436	11.4	9.1	10.8	12.0	11.0	14.1	*	22,705
Other musculoskeletal/integumental anomalies ⁴	3,835,681	7,937	208.2	248.4	222.5	202.6	190.0	186.9	223.1	22,705
Down's syndrome.	4,062,129	1,881	46.5	25.1	26.0	26.1	37.4	111.6	336.5	20,877
Other chromosomal anomalies ⁴	3,835,681	1,147	30.1	21.5	22.7	24.1	26.8	54.2	122.2	22,705
White										
Anencephalus	3,202,564	364	11.4	13.8	12.3	11.0	12.1	8.5	*	16,132
Spina bifida/Meningocele.	3,202,564	630	19.8	20.5	20.5	21.0	17.5	17.8	27.2	16,132
Hydrocephalus ⁴	3,017,589	660	22.0	29.3	23.8	19.9	20.5	20.0	*	18,140
Microcephalus ⁴	3,017,589	148	4.9	*	5.0	4.1	3.8	7.1	*	18,140
Other central nervous system anomalies ⁴	3,017,589	642	21.4	20.5	21.9	20.0	19.3	27.1	29.0	18,140
Heart malformations ⁴	3,017,589	3,688	123.0	102.5	113.1	117.8	125.2	142.1	234.8	18,140
Other circulatory/respiratory anomalies ⁴	3,017,589	3,759	125.3	115.6	124.5	112.5	119.5	155.2	220.9	18,140
Rectal atresia/stenosis ⁴	3,017,589	251	8.4	*	8.5	7.3	8.3	10.8	*	18,140
Tracheo-esophageal fistula/Esophageal atresia ⁴	3,017,589	350	11.7	14.1	10.8	12.3	8.3	14.5	*	18,140
Omphalocele/Gastroschisis	3,202,564	1,039	32.6	96.3	48.7	20.7	15.2	15.7	*	16,132
Other gastrointestinal anomalies ⁴	3,017,589	1,002	33.4	41.0	35.4	30.8	29.0	34.8	48.0	18,140
Malformed genitalia ⁴	3,017,589	2,543	84.8	76.7	81.4	89.8	83.4	89.9	83.3	18,140
Renal agenesis ⁴	3,017,589	438	14.6	16.6	14.1	13.1	16.6	13.7	*	18,140
Other urogenital anomalies ⁴	3,017,589	2,855	95.2	85.6	89.2	90.4	99.9	115.0	103.5	18,140
Cleft lip/palate	3,202,564	2,617	82.1	85.8	97.2	83.0	67.7	74.6	89.8	16,132
Polydactyly/Syndactyly/Adactyly ⁴	3,017,589	1,620	54.0	64.0	59.7	51.4	50.3	44.8	66.9	18,140
Clubfoot ⁴	3,017,589	1,872	62.4	72.1	71.7	61.9	53.6	57.1	51.7	18,140
Diaphragmatic hernia ⁴	3,017,589	366	12.2	9.9	12.0	12.8	11.7	14.3	*	18,140
Other musculoskeletal/integumental anomalies ⁴	3,017,589	5,152	171.8	206.1	180.7	168.1	157.4	158.6	194.4	18,140
Down's syndrome.	3,202,564	1,631	51.2	30.0	27.3	28.7	41.0	120.9	360.3	16,132
Other chromosomal anomalies ⁴	3,017,589	916	30.5	22.6	24.4	21.3	27.1	57.3	123.7	18,140"

See footnotes at end of table.

Table 49. Live births with selected congenital anomalies and rates by age of mother, by race of mother: Total of 49 reporting States and the District of Columbia, 2003—Con.

[Rates are number of live births with specified congenital anomaly per 100,000 live births in specified group]

Congenital anomaly and race of mother	All births ¹	Congenital anomaly reported	Age of mother							Not stated ²
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	
Black										
Anencephalus	599,315	61	10.2	*	12.3	*	*	*	*	2,532
Spina bifida/Meningocele.	599,315	95	15.9	*	21.0	16.5	*	*	*	2,532
Hydrocephalus ⁴	573,244	144	25.2	24.4	24.6	25.5	26.9	*	*	2,613
Microcephalus ⁴	573,244	51	8.9	*	*	*	*	*	*	2,613
Other central nervous system anomalies ⁴	573,244	112	19.6	24.4	14.4	19.5	*	*	*	2,613
Heart malformations ⁴	573,244	915	160.3	119.9	135.8	168.3	195.0	208.9	327.8	2,613
Other circulatory/respiratory anomalies ⁴	573,244	677	118.6	104.6	98.4	120.9	137.9	162.5	201.7	2,613
Rectal atresia/stenosis ⁴	573,244	33	5.8	*	*	*	*	*	*	2,613
Tracheo-esophageal fistula/Esophageal atresia ⁴	573,244	43	7.5	*	*	*	*	*	*	2,613
Omphalocele/Gastroschisis	599,315	224	37.5	54.2	42.5	26.6	23.7	*	*	2,532
Other gastrointestinal anomalies ⁴	573,244	189	33.1	36.6	27.3	36.8	23.7	46.4	*	2,613
Malformed genitalia ⁴	573,244	323	56.6	59.9	56.2	57.1	51.7	54.9	*	2,613
Renal agenesis ⁴	573,244	67	11.7	*	11.8	16.5	*	*	*	2,613
Other urogenital anomalies ⁴	573,244	358	62.7	54.9	56.2	69.9	73.3	57.0	*	2,613
Cleft lip/palate	599,315	244	40.9	28.1	36.9	43.1	45.4	48.4	*	2,532
Polydactyly/Syndactyly/Adactyly ⁴	573,244	1181	207.0	211.3	209.1	212.6	195.0	189.9	235.3	2,613
Clubfoot ⁴	573,244	238	41.7	43.7	44.9	45.1	31.2	*	*	2,613
Diaphragmatic hernia ⁴	573,244	52	9.1	*	*	*	*	*	*	2,613
Other musculoskeletal/integumental anomalies ⁴	573,244	2291	401.5	375.9	386.7	421.4	417.0	405.1	487.5	2,613
Down's syndrome	599,315	168	28.2	*	21.0	15.8	22.7	76.6	265.0	2,532
Other chromosomal anomalies ⁴	573,244	163	28.6	*	17.6	38.3	32.3	*	*	2,613

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Total number of births to residents of areas reporting specified congenital anomaly.²No response reported for the congenital anomalies item.³Includes races other than white and black.⁴Excludes data for Pennsylvania and Washington, which implemented the 2003 Revision to the U.S. Standard Certificate of Live Birth for data year 2003. This change has resulted in a lack of comparability between data based on the 2003 Revision and data based on the 1989 Revision to the U.S. Certificate of Live Birth; see "Technical Notes."

NOTES: Excludes data for New Mexico, which did not report congenital anomalies. Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 50. Live births by plurality of birth and ratios, by age and race and Hispanic origin of mother: United States, 2003

Plurality and race and Hispanic origin of mother	Age of mother										
	All ages	Under 15 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–54 years
			Total	15–17 years	18–19 years						
All live births						Number					
All races ¹	4,089,950	6,661	414,580	134,384	280,196	1,032,305	1,086,366	975,546	467,642	101,005	5,845
White total ²	3,225,848	3,677	298,347	92,576	205,771	790,910	871,496	795,902	379,773	81,031	4,712
Non-Hispanic white	2,321,904	1,399	172,620	46,803	125,817	522,275	627,437	626,315	303,354	64,600	3,904
Black total ²	599,847	2,726	100,951	36,855	64,096	196,268	139,947	97,529	49,889	11,895	642
Non-Hispanic black	576,033	2,642	97,509	35,530	61,979	189,020	133,821	93,346	47,661	11,419	615
Hispanic ³	912,329	2,356	128,524	46,955	81,569	273,311	246,361	169,054	75,801	16,172	750
Live births in single deliveries											
All races ¹	3,953,622	6,588	408,155	132,574	275,581	1,008,698	1,052,490	934,283	443,355	95,493	4,560
White total ²	3,117,818	3,646	294,172	91,462	202,710	774,749	844,743	761,360	359,261	76,293	3,594
Non-Hispanic white	2,234,291	1,389	170,035	46,168	123,867	510,878	606,336	596,838	285,449	60,464	2,902
Black total ²	578,564	2,684	98,908	36,224	62,684	189,610	134,532	93,244	47,536	11,492	558
Non-Hispanic black	555,392	2,605	95,521	34,923	60,598	182,516	128,575	89,208	45,399	11,037	531
Hispanic ³	892,073	2,332	126,892	46,454	80,438	268,472	240,679	164,105	73,291	15,631	671
Live births in twin deliveries											
All races ¹	128,665	73	6,371	1,794	4,577	23,107	32,150	38,248	22,372	5,178	1,166
White total ²	101,297	31	4,134	1,101	3,033	15,801	25,270	31,812	18,773	4,463	1,013
Non-Hispanic white	81,691	10	2,565	628	1,937	11,115	19,805	27,041	16,356	3,890	909
Black total ²	20,633	42	2,032	628	1,404	6,538	5,231	4,114	2,234	369	73
Non-Hispanic black	20,010	37	1,977	604	1,373	6,390	5,067	3,975	2,143	348	73
Hispanic ³	19,472	24	1,611	495	1,116	4,761	5,492	4,673	2,326	515	70
Live births in higher order multiple deliveries ⁴											
All races ¹	7,663	–	54	16	38	500	1,726	3,015	1,915	334	119
White total ²	6,733	–	41	13	28	360	1,483	2,730	1,739	275	105
Non-Hispanic white	5,922	–	20	7	13	282	1,296	2,436	1,549	246	93
Black total ²	650	–	11	3	8	120	184	171	119	34	11
Non-Hispanic black	631	–	11	3	8	114	179	163	119	34	11
Hispanic ³	784	–	21	6	15	78	190	276	184	26	9
All multiple births						Ratio per 1,000 live births					
All races ¹	33.3	11.0	15.5	13.5	16.5	22.9	31.2	42.3	51.9	54.6	219.8
White total ²	33.5	8.4	14.0	12.0	14.9	20.4	30.7	43.4	54.0	58.5	237.3
Non-Hispanic white	37.7	*	15.0	13.6	15.5	21.8	33.6	47.1	59.0	64.0	256.7
Black total ²	35.5	15.4	20.2	17.1	22.0	33.9	38.7	43.9	47.2	33.9	130.8
Non-Hispanic black	35.8	14.0	20.4	17.1	22.3	34.4	39.2	44.3	47.5	33.5	136.6
Hispanic ³	22.2	10.2	12.7	10.7	13.9	17.7	23.1	29.3	33.1	33.5	105.3
Twin births											
All races ¹	31.5	11.0	15.4	13.3	16.3	22.4	29.6	39.2	47.8	51.3	199.5
White total ²	31.4	8.4	13.9	11.9	14.7	20.0	29.0	40.0	49.4	55.1	215.0
Non-Hispanic white	35.2	*	14.9	13.4	15.4	21.3	31.6	43.2	53.9	60.2	232.8
Black total ²	34.4	15.4	20.1	17.0	21.9	33.3	37.4	42.2	44.8	31.0	113.7
Non-Hispanic black	34.7	14.0	20.3	17.0	22.2	33.8	37.9	42.6	45.0	30.5	118.7
Hispanic ³	21.3	10.2	12.5	10.5	13.7	17.4	22.3	27.6	30.7	31.8	93.3
Higher-order multiple births ⁴						Ratio per 100,000 live births					
All races ¹	187.4	*	13.0	*	13.6	48.4	158.9	309.1	409.5	330.7	2,035.9
White total ²	208.7	*	13.7	*	13.6	45.5	170.2	343.0	457.9	339.4	2,228.4
Non-Hispanic white	255.0	*	11.6	*	*	54.0	206.6	388.9	510.6	380.8	2,382.2
Black total ²	108.4	*	*	*	*	61.1	131.5	175.3	238.5	285.8	*
Non-Hispanic black	109.5	*	*	*	*	60.3	133.8	174.6	249.7	297.7	*
Hispanic ³	85.9	*	16.3	*	*	28.5	77.1	163.3	242.7	160.8	*

– Quantity zero.

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

¹Includes races other than white and black and origin not stated.²Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget standards. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."³Includes all persons of Hispanic origin of any race.⁴Births in greater than twin deliveries.

Technical Notes

Source of data

Data shown in this report for 2003 are based on 100 percent of the birth certificates in all States and the District of Columbia. The data are provided to the National Center for Health Statistics (NCHS) through the Vital Statistics Cooperative Program (VSCP). In 1984 and earlier years the VSCP included varying numbers of States that provided data based on 100 percent of their birth certificates. Data for States not in the VSCP were based on a 50-percent sample of birth certificates filed in those States. Information on the percentage of records with missing information for maternal and infant characteristics included in this report is shown by State in [table I](#). Data are not shown for the following variables: race, age, and marital status of mother. Missing data are imputed in these cases; see separate sections in the “Technical Notes” for more information.

The 1989 and 2003 Revisions of the U.S. Standard Certificates of Live Birth

This report is based on data items from the 1989 revision of the U.S. Standard Certificate of Live Birth but includes data for two States, Pennsylvania and Washington, which implemented the 2003 revision of the U.S. Standard Certificate of Live Birth in 2003 (revised), as well as data from the other 48 States and the District of Columbia, which collected and reported 2003 data based on the 1989 revision of the U.S. Standard Certificate of Live Birth (unrevised). The 2003 revision is described in detail elsewhere (5,6); a forthcoming report will present information on the new data items. Where comparable, revised data from Pennsylvania and Washington are combined with data from the remaining 48 States and the District of Columbia. Where data for the 1989 and 2003 certificate revisions are not comparable (e.g., educational attainment of the mother), data for Pennsylvania and Washington are excluded from the national totals for 2003 and any earlier years discussed. Each table and figure includes information on nonreporting areas for all items and specific checkboxes. The 48 States reporting area and the District of Columbia, which reported based on the 1989 revision, accounted for 94 percent of U.S. births in 2003. Comparability of selected data items is discussed below.

This report excludes information on **mother’s educational attainment** for Pennsylvania and Washington. The 1989 and 2003 certificate items on educational attainment are too dissimilar for these data to be reliably combined. The 1989 certificate item asks for the highest *grade* completed, whereas the 2003 certificate item asks for the highest *degree* or level of school completed (e.g., high school diploma or bachelor’s degree). See [tables 13, 14, 21, and 31](#).

Pennsylvania and Washington data on **tobacco use during pregnancy** are also excluded from this report. The 2003 standard certificate asks for the number of cigarettes smoked at different intervals before and during the pregnancy. In comparison, the 1989 standard certificate tobacco-use-during-pregnancy question had a yes or no option and asked for the average number of cigarettes per day without specifying timing during pregnancy. See [section on “Tobacco use” in these notes and tables 24, 25, and 29–32](#).

For this report, measures of **prenatal care** exclude data for Pennsylvania and Washington. The exclusion of data for these States

from the U.S. totals was necessary because of changes in the wording of the prenatal care item on the 2003 certificate and also likely substantive changes in the sources of these data. The timing of the prenatal care item was modified from Month prenatal care began to Date of first prenatal visit. In addition, the 2003 revision process resulted in the recommendation that information on prenatal care be gathered from the prenatal care or medical records, whereas the 1989 revision did not recommend a source for this data. See [tables 24, 25, 33–35](#).

Despite substantive changes to the **method of delivery** item between the 1989 and 2003 revisions of the birth certificate, data for revised and unrevised States are combined for all national figures shown in this report. The total numbers and percentages of vaginal and cesarean deliveries appear to be very consistent between revisions. However, information on whether the delivery is a VBAC, primary cesarean, or repeat cesarean appears to be less comparable. This is because of wording and formatting changes designed to collect data on whether the mother had a previous cesarean delivery. The new format includes a direct question on whether the mother had had a previous cesarean delivery, whereas the old did not. In brief, revised data for Pennsylvania and Washington show higher-than-expected VBAC and primary cesarean rates and lower-than-expected repeat cesarean rates. These slight incongruities for Pennsylvania and Washington data have no appreciable impact on national rates and are included in national figures shown in this report. However, measures that incorporate these data to compare changes across revisions for individual States should be interpreted with caution.

Both the 1989 and 2003 Standard Certificates of Live Birth use a checkbox format for collecting much of the **medical and health information** available on the birth certificate. However, a number of individual checkbox items included on the 1989 certificate were dropped from the revised certificate. In addition, definitions for some items were modified for the 2003 revision, resulting in data that are not comparable across revisions. Tables are footnoted to identify reporting areas for the specific checkboxes. See [tables 26–28, 36, 37, 42, 48, and 49](#).

Age of mother

Age of mother is computed in most cases from the mother’s and infant’s dates of birth as reported on the birth certificate. The mother’s age is directly reported by five States (Kentucky, Nevada, North Dakota, Virginia, and Wyoming) and American Samoa. From 1964 to 1996 mother’s age was edited for ages 10–49 years. Births reported to occur to mothers younger than age 10 or over 49 years had age imputed according to the age of mother from the previous record with the same race and total birth order (total of live births and fetal deaths). Beginning in 1997 age of mother is imputed for ages 9 years or under and 55 years and over. A review and verification of unedited birth data for 1996 showed that the vast majority of births reported as occurring to women aged 50 years and over were to women aged 50–54 years. The numbers of births to women aged 50–54 years are too small for computing age-specific birth rates. These births have been included with births to women aged 45–49 years for computing birth rates.

In 2003 age of mother was not reported on 0.02 percent of the records; for these records age of mother was imputed according to the last record with the same race and total birth order.

Table I. Percentage of birth records on which specified items were not stated: United States and each State and territory, 2003

[By place of residence]

Area	All births	Place of birth	Attendant at birth	Mother's birthplace	Father's age	Father's race	Hispanic origin	
							Mother	Father
Total of reporting areas ¹	4,089,950	0.0	0.2	0.4	13.4	14.7	0.7	14.1
Alaska	10,086	0.0	0.3	0.8	11.5	15.3	17.6	20.5
Alabama	59,552	—	0.0	0.0	20.2	20.3	0.1	20.1
Arkansas	37,784	—	0.0	0.3	19.7	21.1	0.2	19.8
Arizona	90,967	0.0	0.0	0.1	23.0	26.2	1.8	24.3
California	540,997	0.0	0.0	0.4	7.2	7.5	1.1	7.1
Colorado	69,339	0.0	—	0.5	8.0	8.6	0.0	8.6
Connecticut	42,873	0.0	0.1	0.5	9.8	10.9	0.5	10.3
Delaware	11,329	0.0	0.1	0.3	32.6	33.7	0.4	32.7
District of Columbia	7,619	0.0	—	0.0	35.3	44.6	0.2	35.4
Florida	212,250	0.0	0.0	0.1	16.8	17.1	0.2	18.3
Georgia	135,979	0.0	0.0	0.2	16.9	17.6	1.7	18.4
Hawaii	18,100	—	0.1	0.2	8.9	12.5	0.2	8.9
Iowa	38,174	—	0.0	0.0	13.8	15.3	0.2	15.1
Idaho	21,800	0.0	0.0	0.5	9.2	12.3	0.7	11.8
Illinois	182,495	0.0	0.0	0.2	13.5	14.7	0.1	14.6
Indiana	86,434	0.0	0.1	0.1	13.0	13.0	0.4	13.3
Kansas	39,476	—	0.0	0.1	9.7	10.4	1.1	11.4
Kentucky	55,236	0.0	0.2	0.0	19.2	21.9	0.1	22.3
Louisiana	65,040	0.0	0.0	0.0	19.5	19.6	0.1	19.5
Massachusetts	80,184	—	0.0	0.0	7.3	8.0	0.5	7.2
Maryland	74,930	—	0.0	0.2	12.3	16.0	0.1	12.9
Maine	13,855	—	0.0	—	8.9	12.7	0.4	13.1
Michigan	131,094	0.0	0.1	0.1	14.0	16.5	1.9	17.5
Minnesota	70,050	—	0.0	0.2	10.2	13.5	0.9	13.7
Missouri	77,045	0.0	0.0	0.3	16.7	19.0	0.1	18.0
Mississippi	42,380	0.0	0.1	0.1	20.6	20.9	0.1	13.7
Montana	11,422	0.0	0.1	0.0	9.6	11.0	1.7	12.4
North Carolina	118,323	—	0.0	0.0	15.7	15.9	0.1	15.8
North Dakota	7,972	—	—	—	8.5	8.7	2.1	10.6
Nebraska	25,917	—	—	—	12.5	14.5	2.2	14.6
New Hampshire	14,393	—	—	0.0	5.5	7.7	4.2	11.1
New Jersey	116,983	0.0	0.0	0.2	7.4	8.9	0.2	7.7
New Mexico	27,821	—	—	1.2	21.0	20.7	0.0	20.7
Nevada	33,647	—	0.0	0.6	22.3	23.9	0.9	22.7
New York	253,714	0.0	0.0	0.4	12.8	13.2	0.3	13.0
Ohio	149,679	0.0	0.0	0.3	15.3	16.0	0.3	15.4
Oklahoma	50,981	0.0	0.0	0.0	16.0	17.4	0.2	17.1
Oregon	45,953	—	0.0	0.2	9.8	5.5	0.6	5.6
Pennsylvania	145,959	0.0	4.4	4.0	6.3	9.4	1.3	5.7
Rhode Island	13,209	0.0	—	0.4	13.1	13.7	12.9	22.6
South Carolina	55,649	0.0	0.0	0.2	27.0	27.2	0.1	27.0
South Dakota	11,027	—	0.0	0.0	10.1	10.9	0.1	13.8
Tennessee	78,890	—	0.0	0.1	15.3	15.6	0.0	15.3
Texas	377,476	0.0	0.0	0.4	13.8	14.2	0.3	14.1
Utah	49,860	0.0	0.0	0.2	8.9	10.3	0.4	9.7
Virginia	101,254	—	0.0	0.1	16.1	18.5	0.2	16.2
Vermont	6,589	—	—	0.2	6.8	9.1	0.7	9.4
Washington	80,489	0.0	0.1	0.1	9.1	23.3	2.7	12.9
Wisconsin	70,040	—	—	0.1	30.0	30.1	0.0	30.0
West Virginia	20,935	0.1	0.0	0.1	14.2	14.4	0.4	14.4
Wyoming	6,700	—	0.0	0.1	15.4	15.7	0.3	15.7
Puerto Rico	50,696	—	0.1	—	3.1	4.1	—	—
Virgin Islands	1,522	0.1	0.9	—	18.1	18.7	9.2	56.4
Guam	3,281	0.1	1.2	0.4	20.8	21.0	2.3	28.2
American Samoa	1,608	0.1	0.6	3.5	37.9	37.9	—	—
Northern Marianas	1,349	—	0.7	—	9.4	8.5	—	—

See footnotes at end of table.

Table I. Percentage of birth records on which specified items were not stated: United States and each State and territory, 2003—Con.

[By place of residence]

Area	Educational attainment of mother	Live-birth order	Length of gestation	Month prenatal care began	Number of prenatal visits
Total of reporting areas ¹	1.4	0.3	1.1	² 1.8	2.9
Alabama	0.2	0.0	0.1	0.3	0.4
Alaska	3.9	4.8	0.8	5.9	11.3
Arizona	1.6	0.2	0.1	1.4	2.6
Arkansas	0.6	0.1	0.3	1.4	2.1
California	2.4	0.1	³ 6.9	1.7	2.9
Colorado	0.9	0.0	0.0	1.5	2.0
Connecticut	0.6	0.0	0.1	0.7	1.8
Delaware	3.0	0.3	0.1	2.6	0.6
District of Columbia	6.4	0.2	0.2	9.1	5.6
Florida	0.9	0.0	0.1	1.1	2.0
Georgia	2.4	0.2	0.1	1.1	1.0
Hawaii	1.1	0.1	0.2	2.5	2.3
Idaho	5.1	0.2	0.2	3.7	2.0
Illinois	1.3	0.5	0.2	4.0	4.4
Indiana	0.7	0.1	0.0	1.1	1.6
Iowa	0.2	0.0	0.1	0.3	0.4
Kansas	0.3	0.0	0.1	0.7	1.0
Kentucky	0.4	0.1	0.1	1.0	1.4
Louisiana	0.1	0.1	0.2	0.3	0.3
Maine	1.0	0.3	0.0	0.3	0.4
Maryland	1.5	0.4	0.2	1.5	2.1
Massachusetts	0.3	0.2	0.1	1.7	0.5
Michigan	2.3	0.4	0.1	2.4	3.3
Minnesota	1.8	0.5	0.3	4.4	5.5
Mississippi	0.3	0.1	0.2	0.8	1.6
Missouri	0.9	1.0	0.2	2.1	4.7
Montana	0.5	0.1	0.1	0.6	0.6
Nebraska	0.1	0.0	0.1	0.3	0.2
Nevada	2.9	1.2	0.9	6.3	7.7
New Hampshire	1.4	0.2	0.1	1.2	1.2
New Jersey	2.4	0.1	0.1	2.2	1.3
New Mexico	2.5	0.9	0.3	4.8	4.9
New York	1.2	0.3	0.1	2.9	1.9
North Carolina	0.3	0.1	0.0	0.9	1.0
North Dakota	0.3	0.1	0.1	0.9	0.8
Ohio	1.3	0.5	0.0	1.2	2.6
Oklahoma	0.4	0.1	0.2	2.3	2.4
Oregon	2.9	0.0	0.0	1.3	0.1
Pennsylvania	⁴ †	1.1	0.9	⁴ 19.4	8.9
Rhode Island	2.6	1.9	0.3	8.3	14.0
South Carolina	0.7	0.1	0.1	1.6	1.7
South Dakota	0.0	0.0	0.0	0.2	0.3
Tennessee	0.4	0.1	0.3	2.3	2.7
Texas	1.5	0.4	0.4	1.4	3.7
Utah	1.5	0.4	0.0	3.3	3.3
Vermont	0.5	0.1	0.1	4.5	0.9
Virginia	1.3	0.0	0.0	0.2	1.2
Washington	⁴ †	1.3	0.3	⁴ 27.1	13.7
West Virginia	1.5	0.1	0.1	2.9	1.0
Wisconsin	0.4	0.0	0.0	0.2	0.3
Wyoming	0.6	0.0	0.1	0.8	0.9
Puerto Rico	0.3	0.0	0.1	0.2	0.1
Virgin Islands	1.3	0.5	0.3	0.5	1.4
Guam	0.7	0.8	0.0	0.7	0.7
American Samoa	---	—	---	---	---
Northern Marianas	6.2	1.3	0.3	1.0	0.5

See footnotes at end of table.

Table I. Percentage of birth records on which specified items were not stated: United States and each State and territory, 2003—Con.

[By place of residence]

Area	Birthweight	5-minute Apgar score	Medical risk factors	Tobacco use	Alcohol use	Weight gain
Total of reporting areas ¹	0.1	0.4	0.5	0.6	0.6	5.8
Alabama	0.1	0.2	0.0	0.0	0.1	2.1
Alaska	0.2	1.6	8.2	1.3	1.4	9.2
Arizona	0.1	0.5	0.0	1.9	2.1	14.6
Arkansas	0.0	3.2	0.1	0.3	0.4	9.0
California	0.0	---	0.0	---	---	---
Colorado	0.1	0.3	0.0	0.1	0.1	2.3
Connecticut	0.0	0.1	0.2	0.1	0.1	1.4
Delaware	0.0	0.2	0.0	2.5	2.5	0.9
District of Columbia	0.0	0.3	0.0	0.1	0.1	11.5
Florida	0.0	0.2	0.0	0.1	0.1	5.5
Georgia	0.0	0.4	0.4	0.2	0.2	8.0
Hawaii	0.1	0.5	0.0	0.1	0.1	13.0
Idaho	0.1	0.5	0.2	2.2	2.2	6.1
Illinois	0.1	0.3	0.0	0.2	0.1	5.4
Indiana	0.4	0.3	0.0	⁵ 0.2	0.2	2.1
Iowa	0.1	0.3	0.0	0.1	0.1	0.5
Kansas	0.0	0.6	⁶ 0.0	0.1	0.1	0.2
Kentucky	0.1	0.4	2.5	2.0	2.5	6.3
Louisiana	0.1	0.4	0.2	0.2	0.2	4.7
Maine	0.1	0.2	0.1	0.5	0.7	1.0
Maryland	0.0	0.3	0.0	0.4	0.4	2.9
Massachusetts	0.1	0.2	0.3	0.2	0.2	0.7
Michigan	0.1	0.3	0.0	1.0	1.0	6.5
Minnesota	0.1	0.3	5.6	4.6	4.7	11.8
Mississippi	0.1	0.2	0.2	0.2	0.2	4.9
Missouri	0.1	0.5	0.1	0.4	0.4	4.1
Montana	0.1	0.4	0.0	0.8	1.2	1.4
Nebraska	0.0	0.1	0.0	0.1	0.1	1.7
Nevada	0.0	1.6	1.4	2.2	2.3	8.9
New Hampshire	0.1	0.1	0.0	0.3	0.3	3.5
New Jersey	0.1	0.3	0.3	1.6	1.7	1.3
New Mexico	0.3	3.5	0.0	1.6	1.7	6.5
New York	0.1	0.2	1.4	⁵ 0.5	0.5	5.0
North Carolina	0.1	0.3	0.0	0.1	0.2	2.6
North Dakota	0.1	0.3	0.3	0.3	0.7	2.6
Ohio	0.1	0.2	0.0	0.5	0.5	3.3
Oklahoma	0.1	0.9	2.0	1.0	1.1	3.3
Oregon	0.0	0.4	0.8	2.3	2.4	2.5
Pennsylvania	0.4	1.0	0.0	†	---	13.6
Rhode Island	0.2	0.3	6.5	2.0	2.2	15.4
South Carolina	0.0	0.2	0.0	0.2	0.2	2.2
South Dakota	0.0	0.2	—	⁷ 0.1	⁷ 0.1	0.7
Tennessee	0.1	0.3	0.0	0.2	0.2	10.0
Texas	0.1	---	⁸ 0.6	0.2	0.2	8.9
Utah	0.1	0.2	0.2	0.9	0.9	3.6
Vermont	0.6	0.2	0.0	0.7	0.3	1.2
Virginia	0.1	0.2	0.0	0.1	0.1	2.8
Washington	0.4	0.4	5.4	†	---	14.2
West Virginia	0.1	0.3	0.3	1.3	1.5	6.1
Wisconsin	0.1	0.4	0.1	0.1	0.1	1.9
Wyoming	0.1	0.2	0.0	0.2	0.3	1.9
Puerto Rico	0.0	0.2	0.0	0.0	0.0	0.0
Virgin Islands	0.3	2.9	5.9	2.5	2.5	19.8
Guam	0.2	1.2	0.6	0.4	0.4	1.6
American Samoa	—	---	---	---	---	---
Northern Marianas	0.1	1.1	1.1	⁷ —	⁷ —	---

See footnotes at end of table.

Table I. Percentage of birth records on which specified items were not stated: United States and each State and territory, 2003—Con.

[By place of residence]

Area	Obstetric procedures ⁹	Complications of labor and/or delivery ¹⁰	Method of delivery	Abnormal conditions of newborn	Congenital anomalies
Total of reporting areas ¹	0.3	0.4	0.5	0.6	0.5
Alabama	0.0	0.0	0.6	0.0	0.0
Alaska	7.7	8.4	0.3	9.4	9.5
Arizona	0.0	0.0	0.5	0.0	0.3
Arkansas	0.0	0.0	0.4	0.0	0.0
California	0.0	0.0	0.0	0.0	0.0
Colorado	0.0	0.0	0.0	0.0	0.1
Connecticut	0.0	0.0	0.2	0.8	0.9
Delaware	0.0	0.0	0.0	2.4	0.0
District of Columbia	0.0	0.0	0.1	0.1	0.0
Florida	0.0	0.0	0.7	0.0	0.0
Georgia	0.0	0.0	0.6	0.0	0.0
Hawaii	0.0	0.0	0.7	0.1	0.0
Idaho	0.2	0.4	0.4	2.1	0.3
Illinois	0.0	0.0	0.6	0.0	0.0
Indiana	0.0	0.0	0.6	0.0	0.0
Iowa	0.0	0.0	0.7	0.1	0.1
Kansas	0.0	0.0	0.2	0.0	0.1
Kentucky	1.7	2.4	2.3	3.4	2.7
Louisiana	0.2	0.2	0.2	0.2	0.2
Maine	0.1	0.1	0.2	0.1	0.1
Maryland	0.0	—	0.3	0.3	0.0
Massachusetts	0.3	0.3	0.3	0.3	0.8
Michigan	0.0	0.0	0.5	0.0	0.0
Minnesota	3.8	5.6	1.3	7.3	7.4
Mississippi	0.1	0.1	0.5	0.1	0.1
Missouri	0.1	0.1	0.7	0.1	0.1
Montana	0.0	0.0	0.3	0.2	0.0
Nebraska	0.0	0.0	0.3	¹¹ 0.0	0.0
Nevada	1.0	1.7	1.4	1.3	1.4
New Hampshire	0.0	0.0	0.3	0.0	0.0
New Jersey	0.0	0.1	0.9	1.9	0.5
New Mexico	0.0	0.0	0.4	0.0	—
New York	0.3	0.4	0.5	¹² 1.4	1.2
North Carolina	0.0	0.0	0.5	0.0	0.0
North Dakota	0.3	0.3	1.9	0.8	0.5
Ohio	0.0	0.0	0.8	0.3	0.0
Oklahoma	1.2	2.0	1.5	4.0	4.5
Oregon	0.0	0.0	0.5	1.3	0.0
Pennsylvania	0.0	0.0	0.2	⁴ †	0.0
Rhode Island	6.4	6.5	0.2	14.9	14.0
South Carolina	0.0	0.0	1.0	0.0	0.0
South Dakota	0.0	0.0	0.6	0.0	0.0
Tennessee	0.0	0.0	0.7	0.0	0.0
Texas	0.0	¹³ 0.0	0.7	¹¹ 0.0	0.0
Utah	0.0	0.0	0.5	0.1	0.1
Vermont	0.0	0.0	0.2	0.0	0.0
Virginia	0.0	0.0	0.5	0.2	0.0
Washington	5.9	6.0	0.0	⁴ †	3.5
West Virginia	0.2	0.3	0.4	0.9	0.1
Wisconsin	0.0	0.0	0.0	¹⁴ 0.1	0.1
Wyoming	0.0	0.0	0.2	0.0	0.0

See footnotes at end of table.

Table I. Percentage of birth records on which specified items were not stated: United States and each State and territory, 2003—Con.

[By place of residence]

Area	Obstetric procedures ⁹	Complications of labor and/or delivery ¹⁰	Method or delivery	Abnormal conditions of newborn	Congenital anomalies
Puerto Rico	0.0	0.0	0.0	0.0	0.0
Virgin Islands	2.0	7.6	1.9	7.7	8.5
Guam.	0.3	0.8	0.1	0.2	0.4
American Samoa	---	---	---	---	---
Northern Marianas	0.6	0.6	2.4	2.3	1.2

0.0 Quantity more than zero but less than 0.05.

— Quantity zero.

--- Data not available.

† Data not shown.

¹Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas.²Excludes data for Pennsylvania and Washington.³California reports date last normal menses began but does not report clinical estimate of gestation.⁴Data for Pennsylvania and Washington, which were implemented the 2003 Revision to the U.S. Certificate for 2003, are not compatible with data for all other jurisdictions, which are based on the 1989 Revision.⁵Indiana and New York State report tobacco use but do not report the average number of cigarettes smoked per day in standard categories; data for New York City are reported in standard categories.⁶Kansas does not report Rh sensitization.⁷South Dakota and the Commonwealth of the Northern Marianas report tobacco and alcohol use but do not report the average number of cigarettes smoked per day or the average number of drinks per week.⁸Texas does not report genital herpes and uterine bleeding.⁹The percent not stated for induction of labor and tocolysis may differ slightly from levels shown here because of formatting differences between the 1989 and 2003 revisions of the Certificate of Live Birth.¹⁰The percent not stated for meconium, precipitous labor, and malpresentation may differ slightly from levels shown here because of formatting differences between the 1989 and 2003 revisions of the Certificate of Live Birth.¹¹Nebraska and Texas do not report birth injury.¹²New York City does not report assisted ventilation less than 30 minutes and assisted ventilation of 30 minutes or more.¹³Texas does not report anesthetic complications and fetal distress.¹⁴Wisconsin does not report fetal alcohol syndrome.

Hispanic origin and race

Hispanic origin

Hispanic origin and race are reported separately on the birth certificate. Data for specified Hispanic groups are shown in most cases for five groups: Mexican, Puerto Rican, Cuban, Central and South American, and other and unknown Hispanic. In tabulations of birth data by race and Hispanic origin, data for persons of Hispanic origin are not further classified by race because the vast majority of births to Hispanic women are reported as white. In tabulations of birth data by race only, data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race. In these tabulations, data for non-Hispanic persons are classified according to the race of the mother because of substantial differences in fertility and maternal and infant health characteristics between Hispanic and non-Hispanic white women.

Items asking for the Hispanic origin of the mother and the father have been included on the birth certificates of all States and the District of Columbia, the Virgin Islands, and Guam since 1993 (132). Puerto Rico, American Samoa, and the Northern Marianas do not collect this information. The percentage of records for which Hispanic origin of the parents was not reported in 2003 is shown by State in [table I](#).

Single, multiple, and bridged race of mother and father

In 1997 the Office of Management and Budget (OMB) issued "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity," which revised the "1977 Statistical Policy Directive 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting" (8-10). These documents specify guidelines for collection, tabulation, and presentation of race and ethnicity data within the Federal statistical system. The 1997 revised standards incorporated two major changes designed to reflect the changing racial and ethnic profile of the United States. First, the revision increased from four to five the minimum set of categories to be used by Federal agencies for identification of race. The 1977 standards required Federal agencies to report race-specific tabulations using a minimum set of four single-race categories: American Indian or Alaska Native (AIAN), Asian or Pacific Islander (API), black, and white. The five categories for race specified in the 1997 standards are as follows: AIAN, Asian, black or African American, Native Hawaiian or Other Pacific Islander, and white. The revised standards called for reporting Asians separately from Native Hawaiians or Other Pacific Islanders. Collection of additional detail on race and ethnicity is permitted, as before, so long as the additional categories can be aggregated into the minimum categories. The revised standards also require Federal data collection programs to allow respondents to select *one or more race categories*.

For the 2000 decennial census, the U.S. Census Bureau collected race and ethnicity data in accordance with the 1997 revised standards. However, the National Vital Statistics System, which is based on data collected by the States, will not be fully compliant with the new standards until all of the States revise their birth certificates to reflect the new standards. Thus, beginning with the 2000 data year, the numerators (births) for birth rates are incompatible with the denominators (populations) (see "Population denominators"). In order to compute rates, it is necessary to bridge population data for multiple-race

persons to single-race categories. This has been done for birth rates by race presented in this report. Once all States revise their birth registration systems to comply with the 1997 OMB standards, the use of bridged populations can be discontinued.

Beginning with the 2003 data year, multiple race was reported by Pennsylvania and Washington, which used the 2003 revision of the U.S. Standard Certificate of Live Birth, as well as California, Hawaii, Ohio (for births occurring in December only), and Utah, which used the 1989 revision of the U.S. Standard Certificate of Live Birth. These six States, which account for 20.7 percent of births in the United States in 2003, reported 2.6 percent of the mothers as multiracial, with levels varying from 0.7 percent (Ohio) to 37.5 percent (Hawaii). Data from the vital records of the remaining 44 States and the District of Columbia followed the 1977 OMB standards in which a single race is reported (8,9). In addition, these areas also report the minimum set of four races as stipulated in the 1977 standards, compared with the minimum of five races for the 1997 standards.

In order to provide uniformity and comparability of the data during the transition period before multiple-race data are available for all reporting areas, it is necessary to bridge the responses of those who reported more than one race to a single race. The bridging procedure for multiple-race mothers and fathers is based on the procedure used to bridge the multiracial population estimates (see "Population denominators") (10,11). Multiple race is imputed to a single race (one of the following: AIAN, API, black, or white) according to the combination of races, Hispanic origin, sex, and age indicated on the birth certificate of the mother or father. The imputation procedure is described in detail elsewhere (12,13).

As noted previously, the bridging procedure imputes multiple race of mothers to one of the four minimum races stipulated in the 1977 OMB standards: AIAN, API, black, or white. Mothers of a specified API subgroup (i.e., Chinese, Japanese, Hawaiian, or Filipino) in combination with another race (i.e., AIAN, black, or white) or another API subgroup cannot be imputed to a single API subgroup. API mothers are disproportionately represented in the six States reporting multiple race (44 percent in 2003.) For this report, data are not shown for the specified API subgroups because the bridging technique cannot be applied in this detail (14). However, data for the API subgroups, reported alone or in combination with other races or API subgroups, are available in the 2003 Natality public-use data file. In addition, a report on births in 2003 to multiple-race women, which will include births to single- and multiple-race women of the API subgroups, is forthcoming.

Race of mother is reported by 44 States and the District of Columbia in at least eight single-race categories: white, black, AIAN, Chinese, Japanese, Hawaiian, Filipino, and other API. Of these, eight States (Illinois, Minnesota, Missouri, New Jersey, New York, Texas, Virginia, and West Virginia) report data on the expanded API subgroups included in the other API category (Asian Indian, Korean, Samoan, Vietnamese, Guamanian, and remaining API). Finally, six States that report multiple-race data (California, Hawaii, Ohio, Pennsylvania, Utah, and Washington) report a minimum of 14 categories (white, black, AIAN, Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, other Asian, Hawaiian, Guamanian, Samoan, and other Pacific Islander). For this report, as discussed above, the multiple-race combinations (e.g., white and AIAN or black and Chinese) were bridged to one of four broad categories (bridged white, bridged black, bridged

AIAN, and bridged API). Detailed data on race (single or multiple) as reported in the six States are available on the 2003 Natality public-use file.

In 2003 race of mother was not reported for 0.5 percent of births. In these cases, if the race of the father was known, the race of the father was assigned to the mother. When information was not available for either parent, the race of the mother was imputed according to the specific race of the mother on the preceding record with a known race of mother. This was necessary for just 0.4 percent of births in 2003.

Beginning with the 1989 data year NCHS started tabulating its birth data primarily by race of the mother. In 1988 and prior years births were tabulated by the race of the child, which was determined from the race of the parents as entered on the birth certificate. The reasons for this change are summarized in the *2002 Technical Appendix* (4).

Trend data by race shown in this report are by race of mother for all years beginning with the 1980 data year. Text references to white births and white mothers or black births and black mothers are used interchangeably for ease in writing.

Marital status

National estimates of births to unmarried women are based on two methods of determining marital status. For 1994–96 birth certificates in 45 States and the District of Columbia included a question about the mother's marital status. Beginning in 1997 the marital status of women giving birth in California and Nevada is determined by a direct question in the birth registration process. Beginning June 15, 1998, Connecticut discontinued inferring the mother's marital status and added a direct question on mother's marital status to the State's birth certificate.

In the two States (Michigan and New York) that use inferential procedures to compile birth statistics by marital status in 2003, a birth is inferred as nonmarital if any of these factors, listed in priority-of-use order, is present: a paternity acknowledgment was received or the father's name is missing. In recent years a number of States have extended their efforts to identify the fathers when the parents are not married in order to enforce child support obligations. The presence of a paternity acknowledgment, therefore, is the most reliable indicator that the birth is nonmarital in the States not reporting this information directly; this is now the key indicator in the nonreporting States. Details of the changes in reporting procedures are described in previous reports (32,133).

The mother's marital status was not reported in 2003 on 0.04 percent of the birth records in the 48 States and the District of Columbia where this information is obtained by a direct question. Marital status is imputed for these records: If father's age was known, the mother was considered married; if the father's age was unknown, the mother was considered unmarried. Prior to 2003, unreported marital status was imputed as married in all cases. Only 834 records were imputed as unmarried in 2003 as a result of the change in imputation, and there was essentially no impact on percentages and rates of nonmarital births.

Tobacco use

In this report data on whether or not the mother smoked during pregnancy are presented for all States except California, Pennsylvania, and Washington. California did not report this item, and Pennsylvania and Washington implemented the revised birth

certificate (see section on "The comparability of items between the 1989 and 2003 U.S. Standard Certificates of Live Birth"). The areas reporting whether or not the mother smoked during pregnancy make up 81 percent of U.S. births in 2003. Data on the number of cigarettes smoked daily were available in a comparable format for 44 States, the District of Columbia, and New York City. Indiana, New York State (except New York City), Pennsylvania, South Dakota, and Washington reported the number of cigarettes smoked in a format that was not comparable with the 1989 revision of the U.S. Standard Certificate of Live Birth, used by the other reporting areas. California did not report this item. The areas reporting the number of cigarettes smoked made up 76 percent of U.S. births in 2003.

Gestation

The primary measure used to determine the gestational age of the newborn is the interval between the first day of the mother's last normal menstrual period (LMP) and the date of birth. It is subject to error for several reasons, including imperfect maternal recall or misidentification of the LMP because of postconception bleeding, delayed ovulation, or intervening early miscarriage. These data are edited for LMP-based gestational ages that are clearly inconsistent with the infant's plurality and birthweight (see below), but reporting problems for this item persist and may occur more frequently among some subpopulations and among births with shorter gestations (134,135).

The U.S. Standard Certificate of Live Birth includes a clinical estimate of gestation item that was compared with length of gestation computed from the date the LMP began when the latter appeared to be inconsistent with birthweight. This was done for normal weight births of apparently short gestations and very low birthweight births reported to be full term. The clinical estimate was also used if the LMP date was not reported. The period of gestation for 4.6 percent of the births in 2003 was based on the clinical estimate of gestation. For 97 percent of these records the clinical estimate was used because the LMP date was not reported. For the remaining 3 percent the clinical estimate was used because it was compatible with the reported birthweight, whereas the LMP-based gestation was not. In cases where the reported birthweight was inconsistent with both the LMP-computed gestation and the clinical estimate of gestation, the LMP-computed gestation was used, and birthweight was reclassified as not stated. This was necessary for 247 births or 0.006 percent of all birth records in 2003. The levels of the adjustments in 2003 data were similar to those for earlier years (14). Despite these edits, substantial incongruities in these data persist; research is ongoing to address these data deficiencies.

Birthweight

Birthweight is reported in some areas in pounds and ounces rather than in grams. However, the metric system has been used in tabulating and presenting the statistics to facilitate comparison with data published by other groups. Equivalents of the gram weights in terms of pounds and ounces are as follows:

Less than 500 grams = 1 lb 1 oz or less
 500–999 grams = 1 lb 2 oz–2 lb 3 oz
 1,000–1,499 grams = 2 lb 4 oz–3 lb 4 oz
 1,500–1,999 grams = 3 lb 5 oz–4 lb 6 oz
 2,000–2,499 grams = 4 lb 7 oz–5 lb 8 oz

2,500–2,999 grams = 5 lb 9 oz–6 lb 9 oz
 3,000–3,499 grams = 6 lb 10 oz–7 lb 11 oz
 3,500–3,999 grams = 7 lb 12 oz–8 lb 13 oz
 4,000–4,499 grams = 8 lb 14 oz–9 lb 14 oz
 4,500–4,999 grams = 9 lb 15 oz–11 lb 0 oz
 5,000 grams or more = 11 lb 1 oz or more

Method of delivery

Several rates are computed for method of delivery. The overall cesarean section rate or *total cesarean* rate is computed as the percentage of all births that were delivered by cesarean section. The *primary cesarean* rate is a measure that relates the number of women having a first cesarean delivery to all women giving birth who have never had a cesarean delivery. The denominator for this rate includes the sum of primary cesareans and vaginal births without previous cesarean. The rate for VBAC delivery is computed by relating all VBAC deliveries to the sum of VBAC and repeat cesarean deliveries, that is, to women with a previous cesarean section. Also, see section on “The comparability of items between the 1989 and 2003 U.S. Standard Certificates of Live Birth.”

Computations of percentages, percent distributions, and medians

Births for which a particular characteristic is unknown were subtracted from the figures for total births that were used as denominators before percentages, percent distributions, and medians were computed. The percentage of records with missing information for each item is shown by State in [table I](#). The median number of prenatal visits also excludes births to mothers who had no prenatal care. Computations of the median years of school completed and the median number of prenatal visits were based on ungrouped data. An asterisk (*) is shown in place of any derived statistic based on fewer than 20 births in the numerator or denominator.

Population denominators

Birth and fertility rates for 2003 shown in [tables 1, 3–6, 8, 9, 13, 14, A, B, and C](#) are based on populations estimated from the 2000 census, as of July 1, 2003. These populations are shown in [tables II and III](#). The population estimates have been provided by the U.S. Census Bureau (16) and are based on the 2000 census counts by age, race, and sex, which have been modified to be consistent with OMB racial categories as of 1977 and historical categories for birth data. The modification procedures are described in detail elsewhere (10,11).

Birth and fertility rates by State shown in [table 10](#) are based on State-level population estimates projected from the 2000 census provided by the U.S. Census Bureau (16). Rates by State shown in this report may differ from rates computed on the basis of other population estimates. Birth and fertility rates by month shown in [table 15](#) are based on monthly population estimates also based on the 2003 estimates. Rates for unmarried women shown in [tables 17 and 18](#) are based on distributions of the population by marital status as of March 2003 as reported by the U.S. Census Bureau in the March Current Population Survey (CPS) (34), which have been adjusted to July 2003 population levels (16) by the Division of Vital Statistics, NCHS (32). Birth and fertility rates for the Hispanic population, shown in [tables 6, 8, 9, and 14](#), are based on estimates of the total Hispanic population as of July 1, 2003 (16). Rates for Hispanic subgroups are based on special population estimates that are presented in [table III](#) in the “Technical Notes.” More information about the populations for Hispanic subgroups is presented elsewhere (137).

The populations by race used in this report were produced under a collaborative arrangement with the U.S. Census Bureau and are based on the 2000 census counts. Reflecting the new guidelines issued in 1997 by OMB, the 2000 census included an option for individuals to report more than one race as appropriate for themselves and household members (9). In addition, the 1997 OMB guidelines called for reporting of Asian persons separately from Native Hawaiians or other Pacific Islanders. In the earlier 1977 OMB guidelines, data for API persons were collected as a single group (8). Except for six States, birth

Table II. Estimated total population by race and estimated female population by age and race: United States, 2003

[Populations estimated as of July 1]

Age	All races	White	Black	American Indian	Asian or Pacific Islander
Total population	290,810,789	236,349,420	38,148,112	3,111,067	13,202,190
Female population					
15–44 years	61,910,608	48,781,745	9,054,043	737,138	3,337,682
10–14 years	10,336,612	8,000,163	1,749,239	150,708	436,502
15–19 years	9,959,789	7,795,394	1,583,322	144,926	436,147
15–17 years	5,997,800	4,687,044	965,207	87,450	258,099
18–19 years	3,961,989	3,108,350	618,115	57,476	178,048
20–24 years	10,063,772	7,862,961	1,556,595	133,130	511,086
25–29 years	9,395,243	7,294,715	1,394,320	112,534	593,674
30–34 years	10,254,869	8,015,352	1,467,416	111,871	660,230
35–39 years	10,681,456	8,478,198	1,503,136	114,337	585,785
40–44 years	11,555,479	9,335,125	1,549,254	120,340	550,760
45–49 years	11,030,309	9,005,159	1,408,560	108,883	507,707

NOTE: These population counts are estimated based on the 2000 census; see “Technical Notes.” Race categories are consistent with the 1977 Office of Management and Budget standards.

SOURCE: U.S. Census Bureau. See reference 16.

Table III. Estimated total population by specified Hispanic origin and estimated female population by age and specified Hispanic origin and by race for women of non-Hispanic origin: United States, 2003

[Populations estimated as of July 1]

Age	Hispanic					Non-Hispanic		
	Total	Mexican	Puerto Rican	Cuban	Other Hispanic ¹	Total ²	White	Black
Total population	39,899,063	26,526,961	3,861,862	1,496,974	8,013,241	250,911,726	199,214,378	36,508,902
Female population								
15–44 years	9,413,358	6,201,474	947,551	240,901	2,023,444	52,497,250	40,061,288	8,639,424
10–14 years	1,788,726	1,263,091	186,328	44,904	294,411	8,547,886	6,356,246	1,664,204
15–19 years	1,562,601	1,055,394	168,451	28,609	310,150	8,397,188	6,355,772	1,513,477
15–17 years	944,433	637,856	106,359	21,225	178,999	5,053,367	3,818,116	922,089
18–19 years	618,168	417,538	62,092	7,384	131,151	3,343,821	2,537,656	591,388
20–24 years	1,672,471	1,149,488	148,559	34,138	340,289	8,391,301	6,317,351	1,482,135
25–29 years	1,706,215	1,171,860	163,684	38,601	332,064	7,689,028	5,711,126	1,319,339
30–34 years	1,656,952	1,098,812	167,168	31,143	359,838	8,597,917	6,476,430	1,394,425
35–39 years	1,493,028	958,105	152,952	51,382	330,592	9,188,428	7,092,435	1,437,765
40–44 years	1,322,091	767,815	146,737	57,028	350,511	10,233,388	8,108,174	1,492,283
45–49 years	1,072,103	641,391	104,809	46,835	279,069	9,958,206	8,009,801	1,362,200

¹Includes Central and South American and other and unknown Hispanic.²Includes races other than white and black.

NOTES: These population counts are estimated based on the 2000 census; see “Technical Notes.” Race categories are consistent with the 1977 Office of Management and Budget standards.

SOURCE: U.S. Census Bureau. See reference 16.

certificates currently report only one race for each parent in the categories specified in the 1977 OMB guidelines (see “Race and Hispanic origin”). In addition, birth certificate data do not report Asians separately from Native Hawaiians or other Pacific Islanders. Thus, birth certificate data by race (the numerators for birth and fertility rates) currently are largely incompatible with the population data collected in the 2000 census (the denominators for the rates).

To produce birth and fertility rates for 1991 through 2003, it was necessary to bridge the reported population data for multiple-race persons back to single-race categories. In addition, the 2000 census counts were modified to be consistent with the 1977 OMB racial categories, that is, to report the data for Asian persons and Native Hawaiians or other Pacific Islanders as a combined category, APIs (138,139). The procedures used to produce the bridged populations are described in separate publications (10,11). Beginning with births occurring in 2003, several States began reporting multiple-race data. Once all States revise their birth certificates to be compliant with the 1997 OMB standards, the use of bridged populations can be discontinued.

Populations used to calculate the rates for 1991–99 are based on population estimates as of July 1 of each year and were produced by the U.S. Census Bureau, with support from the National Cancer Institute (10,25,139). These intercensal population estimates for 1991–99 are revised based on the April 1, 2000 census. The rates for 1990 and 2000 are based on populations from the censuses in those years as of April 1.

Readers should keep in mind that the population data used to compile birth and fertility rates by race and ethnicity shown in this report are based on special estimation procedures and are not actual counts. This is the case even for the 2000 populations that are based on the 2000 census. As a result, the estimation procedures used to develop these populations may contain some errors. Smaller populations (e.g., American Indians) are likely to be affected much more than larger populations by potential measurement error (10). Although the nature and magnitude of error is unknown, the potential for error should be

kept in mind when evaluating trends and differentials. As more accurate information becomes available, further revisions of the estimates may be necessary.

Computation of rates

In computing birth rates by live-birth order, births with birth order not stated were distributed in the same proportion as births of known live-birth order. This procedure is done separately by race.

In computing birth and fertility rates for the Hispanic population, births with origin of mother not stated are included with non-Hispanic births rather than being distributed. Thus, rates for the U.S. Hispanic population are underestimates of the true rates to the extent that the births with origin of mother not stated (0.7 percent) were actually to Hispanic mothers (see [table I](#)). In computing the rates, the census-based populations with origin not stated are imputed. The effect on the rates is believed to be small.

An asterisk (*) is shown in place of any derived rate based on fewer than 20 births in the numerator, or a population denominator of less than 50 (unweighted) for decennial years and 75,000 (weighted) for all other years for the Hispanic subgroups. Rates based on populations below these minimum levels lack sufficient reliability for analytic purposes. These guidelines follow the suggestions of the U.S. Census Bureau (140,141). The population estimates for some Hispanic subgroups, especially Cubans, do not meet the above minimum. Therefore, age-specific rates are not shown for some groups. However, summary fertility measures (i.e., crude birth rate, general fertility rate, and total fertility rate) are possible, and these have been included.

Age of father—Information on age of father is often missing on birth certificates of children born to unmarried women ([table I](#)). In computing birth rates by age of father, births where age of father is not stated are distributed in the same proportions as births with known age within each 5-year-age classification of mother. This procedure is followed because, although father's age is missing on 13 percent of the

birth certificates, one-quarter of these were on records where the mother is a teenager. This distribution procedure is done separately by race. The resulting distributions are summed to form a composite frequency distribution that is the basis for computing birth rates by age of father. This procedure avoids the distortion in rates that would result if the relationship between age of mother and age of father were disregarded.

Graphic presentation

Trend data shown in figures 1, 5, and 12 are plotted using a logarithmic scale. This approach is taken to facilitate comparison of the relative change in rates over time for each series of rates as well as the differentials among rates for different series.

Random variation and significance testing for natality data

The number of births reported for an area is essentially a complete count, because more than 99 percent of all births are registered. Although this number is not subject to sampling error, it may be affected by nonsampling errors in the registration process such as mistakes in recording the mother's residence or age during the registration process.

When the number of births is used for analytic purposes (i.e., the comparison of numbers, rates, and percentages over time, for different areas, or among different groups), the number of events that *actually* occurred can be thought of as one outcome in a large series of possible results that *could have* occurred under the same (or similar) circumstances. When considered in this way, the number of births is subject to random variation and a probable range of values estimated from the actual figures, according to certain statistical assumptions.

The confidence interval is the range of values for the number of births, birth rates, or percentage of births that you could expect in 95 out of 100 cases. The confidence limits are the end points of this range of values (the highest and lowest values). Confidence limits show how much the number of events or rates could vary under the same (or similar) circumstances.

Confidence limits for numbers, rates, and percentages can be estimated from the actual number of vital events. Procedures differ for rates and percentages and also differ depending on the number of births on which these statistics are based. Below are detailed procedures and examples for each type of case.

When the number of vital events is large, the distribution is assumed to follow a normal distribution (where the relative standard error is small). When the number of events is small and the probability of the event is small, the distribution is assumed to follow a Poisson probability distribution. Considerable caution should be observed in interpreting the occurrence of infrequent events.

95-percent confidence limits for numbers less than 100

When the number of births is less than 100 and the rate is small, the data are assumed to follow a Poisson probability distribution (142). Confidence limits are estimated using the following formulas:

$$\text{Lower limit} = B \times L$$

$$\text{Upper limit} = B \times U$$

where

B = number of births

L = the value in table IV that corresponds to the number B

U = the value in table IV that corresponds to the number B

Example

Suppose that the number of first births to American Indian women aged 40–44 years was 47. The confidence limits for this number would be as follows:

$$\begin{aligned}\text{Lower limit} &= 47 \times 0.73476 \\ &= 35\end{aligned}$$

$$\begin{aligned}\text{Upper limit} &= 47 \times 1.32979 \\ &= 63\end{aligned}$$

This means that the chances are 95 out of 100 that the actual number of first births to American Indian women aged 40–44 years would lie between 35 and 63.

95-percent confidence limits for numbers of 100 or more

When the number of events is greater than 100, the data are assumed to approximate a normal distribution. Formulas for 95-percent confidence limits are as follows:

$$\text{Lower limit} = B - (1.96 \times \sqrt{B})$$

$$\text{Upper limit} = B + (1.96 \times \sqrt{B})$$

where

B = number of births

Example

Suppose that the number of first births to white women aged 40–44 years was 14,108. The 95-percent confidence limits for this number would be as follows:

$$\begin{aligned}\text{Lower limit} &= 14,108 - (1.96 \times \sqrt{14,108}) \\ &= 14,108 - 233 \\ &= 13,875\end{aligned}$$

$$\begin{aligned}\text{Upper limit} &= 14,108 + (1.96 \times \sqrt{14,108}) \\ &= 14,108 + 233 \\ &= 14,341\end{aligned}$$

This means that the chances are 95 out of 100 that the actual number of first births to white women aged 40–44 years would lie between 13,875 and 14,341.

Computing confidence intervals for rates

The same statistical assumptions can be used to estimate the variability in birth rates. Again, one formula is used for rates based on numbers of events less than 100, and another formula is used for rates based on numbers of 100 or greater. For our purposes, assume that the denominators of these rates (the population estimates) have no error. Although this assumption is technically correct *only* for

Table IV. Values of L and U for calculating 95-percent confidence limits for numbers of events and rates when the number of events is less than 100

<i>N</i>	<i>L</i>	<i>U</i>	<i>N</i>	<i>L</i>	<i>U</i>
1.	0.02532	5.57164	51.	0.74457	1.31482
2.	0.12110	3.61234	52.	0.74685	1.31137
3.	0.20622	2.92242	53.	0.74907	1.30802
4.	0.27247	2.56040	54.	0.75123	1.30478
5.	0.32470	2.33367	55.	0.75334	1.30164
6.	0.36698	2.17658	56.	0.75539	1.29858
7.	0.40205	2.06038	57.	0.75739	1.29562
8.	0.43173	1.97040	58.	0.75934	1.29273
9.	0.45726	1.89831	59.	0.76125	1.28993
10.	0.47954	1.83904	60.	0.76311	1.28720
11.	0.49920	1.78928	61.	0.76492	1.28454
12.	0.51671	1.74680	62.	0.76669	1.28195
13.	0.53246	1.71003	63.	0.76843	1.27943
14.	0.54671	1.67783	64.	0.77012	1.27698
15.	0.55969	1.64935	65.	0.77178	1.27458
16.	0.57159	1.62394	66.	0.77340	1.27225
17.	0.58254	1.60110	67.	0.77499	1.26996
18.	0.59266	1.58043	68.	0.77654	1.26774
19.	0.60207	1.56162	69.	0.77806	1.26556
20.	0.61083	1.54442	70.	0.77955	1.26344
21.	0.61902	1.52861	71.	0.78101	1.26136
22.	0.62669	1.51401	72.	0.78244	1.25933
23.	0.63391	1.50049	73.	0.78384	1.25735
24.	0.64072	1.48792	74.	0.78522	1.25541
25.	0.64715	1.47620	75.	0.78656	1.25351
26.	0.65323	1.46523	76.	0.78789	1.25165
27.	0.65901	1.45495	77.	0.78918	1.24983
28.	0.66449	1.44528	78.	0.79046	1.24805
29.	0.66972	1.43617	79.	0.79171	1.24630
30.	0.67470	1.42756	80.	0.79294	1.24459
31.	0.67945	1.41942	81.	0.79414	1.24291
32.	0.68400	1.41170	82.	0.79533	1.24126
33.	0.68835	1.40437	83.	0.79649	1.23965
34.	0.69253	1.39740	84.	0.79764	1.23807
35.	0.69654	1.39076	85.	0.79876	1.23652
36.	0.70039	1.38442	86.	0.79987	1.23499
37.	0.70409	1.37837	87.	0.80096	1.23350
38.	0.70766	1.37258	88.	0.80203	1.23203
39.	0.71110	1.36703	89.	0.80308	1.23059
40.	0.71441	1.36172	90.	0.80412	1.22917
41.	0.71762	1.35661	91.	0.80514	1.22778
42.	0.72071	1.35171	92.	0.80614	1.22641
43.	0.72370	1.34699	93.	0.80713	1.22507
44.	0.72660	1.34245	94.	0.80810	1.22375
45.	0.72941	1.33808	95.	0.80906	1.22245
46.	0.73213	1.33386	96.	0.81000	1.22117
47.	0.73476	1.32979	97.	0.81093	1.21992
48.	0.73732	1.32585	98.	0.81185	1.21868
49.	0.73981	1.32205	99.	0.81275	1.21746
50.	0.74222	1.31838			

denominators based on the census that occurs every 10 years, the error in intercensal population estimates is usually small, difficult to measure, and therefore not considered. (See however, discussion of population denominators earlier in the "Technical Notes.")

95-percent confidence limits for rates based on fewer than 100 events

When the number of events in the numerator is less than 20 (or the population denominator is less than 50 for decennial years and 75,000 for all other years for the Hispanic subgroups), an asterisk (*) is shown in place of the rate because there were too few births or the population is too small to compute a statistically reliable rate. When the number of events in the numerator is greater than 20 but less

than 100 (and the population denominator for the Hispanic subgroups is above the minimum), the confidence interval for a rate can be estimated using the two formulas that follow and the values in [table IV](#).

$$\text{Lower limit} = R \times L$$

$$\text{Upper limit} = R \times U$$

where

R = birth rate

L = the value in [table IV](#) that corresponds to the number of events B

U = the value in [table IV](#) that corresponds to the number of events B

Example

Suppose that the first birth rate for American Indian women aged 40–44 years was 0.50 per thousand, based on 47 births in the numerator. Using [table IV](#):

$$\text{Lower limit} = 0.50 \times 0.73476 = 0.37$$

$$\text{Upper limit} = 0.50 \times 1.32979 = 0.66$$

This means that the chances are 95 out of 100 that the actual first birth rate for American Indian women aged 40–44 years lies between 0.37 and 0.66.

95-percent confidence limits for rates when the numerator is 100 or more

In this case use the following formula for the birth rate R based on the number of births B :

$$\text{Lower limit} = R - [1.96 \times (R / \sqrt{B})]$$

$$\text{Upper limit} = R + [1.96 \times (R / \sqrt{B})]$$

where

R = birth rate

B = number of births

Example

Suppose that the first birth rate for white women 40–44 years of age was 1.55 per thousand, based on 14,108 births in the numerator. Therefore, the 95-percent confidence interval would be:

$$\begin{aligned} \text{Lower limit} &= 1.55 - [1.96 \times (1.55 / \sqrt{14,108})] \\ &= 1.55 - 0.026 \\ &= 1.52 \end{aligned}$$

$$\begin{aligned} \text{Upper limit} &= 1.55 + [1.96 \times (1.55 / \sqrt{14,108})] \\ &= 1.55 + 0.026 \\ &= 1.58 \end{aligned}$$

This means that the chances are 95 out of 100 that the actual first birth rate for white women aged 40–44 years lies between 1.52 and 1.58.

Computing 95-percent confidence intervals for percentages

In many instances we need to compute the confidence intervals for percentages. Percentages derive from a binomial distribution. As with birth rates, an asterisk (*) will be shown for any percentage that is based on fewer than 20 births in the numerator. We easily compute a 95-percent confidence interval for a percentage when the following conditions are met:

$$B \times p \geq 5 \text{ and } B \times q \geq 5$$

where

B = number of births in the denominator

p = percent divided by 100

$q = 1 - p$

For natality data, these conditions will be met except for very rare events in small subgroups. If the conditions are not met, the variation in the percentage will be so large as to render the confidence intervals meaningless. When these conditions are met the 95-percent confidence interval can be computed using the normal approximation of the binomial. The 95-percent confidence intervals are computed by the following formulas:

$$\text{Lower limit} = p - [1.96 \times (\sqrt{p \times q / B})]$$

$$\text{Upper limit} = p + [1.96 \times (\sqrt{p \times q / B})]$$

where

p = percent divided by 100

$q = 1 - p$

B = number of births in the denominator

Example

Suppose that the percentage of births to Hispanic women in Arizona that were to unmarried women was 49.7 percent. This was based on 14,751 births in the numerator and 29,682 births in the denominator. First we test to make sure we can use the normal approximation of the binomial:

$$29,682 \times 0.497 = 14,752$$

$$29,682 \times (1 - 0.497) = 29,682 \times 0.503 = 14,930$$

Both 14,752 and 14,930 are greater than 5 so we can proceed. The 95-percent confidence interval would be:

$$\begin{aligned} \text{Lower limit} &= 0.497 - [1.96 \times (\sqrt{0.497 \times 0.503 / 29,682})] \\ &= 0.497 - 0.006 \\ &= 0.491 \text{ or } 49.1 \text{ percent} \end{aligned}$$

$$\begin{aligned} \text{Upper limit} &= 0.497 + [1.96 \times (\sqrt{0.497 \times 0.503 / 29,682})] \\ &= 0.497 + 0.006 \\ &= 0.503 \text{ or } 50.3 \text{ percent} \end{aligned}$$

This means that the chances are 95 out of 100 that the actual percentage of births to unmarried Hispanic women in Arizona lies between 49.1 and 50.3 percent.

Significance testing**One or both of the rates is based on fewer than 100 cases**

To compare two rates when one or both of those rates are based on less than 100 cases, you first compute the confidence intervals for both rates. Then you check to see if those intervals overlap. If they **do** overlap, the difference is not statistically significant at the 95-percent level. If they **do not** overlap, the difference is indeed statistically significant.

Example

Suppose that the first birth rate for American Indian women aged 40–44 years was 0.70 per 1,000 in year X and 0.57 in year Y. Is the rate for year X significantly higher than the rate for year Y? The two rates are based on 63 events in year X and 54 events in year Y. Both

rates are based on fewer than 100 events; therefore, the first step is to compute the confidence intervals for both rates.

	Lower Limit	Upper Limit
Year X	0.54	0.90
Year Y	0.43	0.74

These two confidence intervals overlap. Therefore, the first birth rate for American Indian women aged 40–44 in year X is not significantly higher (at the 95-percent confidence level) than the rate in year Y.

This method of comparing confidence intervals is a conservative test for statistical significance. That is, the difference between two rates may, in fact, be statistically significant even though confidence intervals for the two rates overlap (143). Thus, caution should be observed when interpreting a nonsignificant difference between two rates, especially when the lower and upper limits being compared overlap only slightly.

Both rates are based on 100 or more events

When both rates are based on 100 or more events, the difference between the two rates, irrespective of sign (+/-), is considered statistically significant if it exceeds the statistic in the formula below. This statistic equals 1.96 times the standard error for the difference between two rates.

$$1.96 \times \sqrt{\frac{R_1^2}{N_1} + \frac{R_2^2}{N_2}}$$

where

R_1 = first rate

R_2 = second rate

N_1 = first number of births

N_2 = second number of births

If the difference is **greater** than this statistic, then the difference would occur by chance less than 5 times out of 100. If the difference is **less than or equal** to this statistic, the difference might occur by chance more than 5 times out of 100. The difference is said to be not statistically significant at the 95-percent confidence level.

Example

Is the first birth rate for black women aged 40–44 years (1.08 per 1,000) significantly lower than the comparable rate for white women (1.55)? Both rates are based on more than 100 births (1,535 for black women and 14,108 for white women). The difference between the rates is $1.55 - 1.08 = 0.47$. The statistic is then calculated as follows:

$$\begin{aligned} & 1.96 \times \sqrt{\frac{1.08^2}{1,535} + \frac{1.55^2}{14,108}} \\ &= 1.96 \times \sqrt{([1.166/1,535] + [2.403/14,108])} \\ &= 1.96 \times \sqrt{0.00076 + 0.00017} \\ &= 1.96 \times \sqrt{0.00093} \\ &= 1.96 \times 0.03 \\ &= 0.06 \end{aligned}$$

The difference between the rates (0.47) is greater than this statistic (0.06). Therefore, the difference is statistically significant at the 95-percent confidence level.

Testing differences between two percentages

When testing the difference between two percentages, both percentages must meet the following conditions:

$$B \times p \geq 5 \text{ and } B \times q \geq 5$$

where

B = number of births in the denominator

p = percent divided by 100

$q = 1 - p$

When both percentages meet these conditions, then the difference between the two percentages is considered statistically significant if it is greater than the statistic in the formula below. This statistic equals 1.96 times the standard error for the difference between two percentages.

$$1.96 \times \sqrt{p(1-p) \times \left(\frac{1}{B_1} + \frac{1}{B_2} \right)}$$

where

B_1 = number of births in the denominator of the first percent

B_2 = number of births in the denominator of the second percent

$$p = \frac{B_1 \times p_1 + B_2 \times p_2}{B_1 + B_2}$$

p_1 = the first percent

p_2 = the second percent

Example

Is the percentage of births to Hispanic women that were to unmarried women higher in New Mexico (50.2) than in Arizona (49.7)? Suppose that the number in the denominator was 13,714 in New Mexico and 29,682 in Arizona. The necessary conditions are met for both percentages (calculations not shown). The difference between the two percentages is $0.502 - 0.497 = 0.005$. The statistic is then calculated as follows:

$$\begin{aligned} 1.96 \times \sqrt{0.499 \times (0.501) \times (0.000106609)} &= 1.96 \times \sqrt{0.000026652} \\ &= 1.96 \times 0.005162563 \\ &= 0.010 \end{aligned}$$

The difference between the percentages (0.005) is less than this statistic (0.010). Therefore, the difference is not statistically significant at the 95-percent confidence level.

Information on computing confidence intervals for and testing differences among rates for Hispanic subgroups is available elsewhere (137).

Definitions of medical terms

The 1989 revision of the U.S. Standard Certificate of Live Birth includes several maternal and infant health items in checkbox format, including obstetric procedures, medical risk factors, complications of labor and delivery, abnormal conditions of the newborn, and

congenital anomalies of the child (figure I). The definitions that follow are adapted and abbreviated from a set of definitions compiled by a committee of Federal and State health statistics officials for the National Association of Public Health Statistics and Information Systems, formerly known as the Association for Vital Records and Health Statistics (144).

Medical risk factors for this pregnancy

Anemia—Hemoglobin level of less than 10.0 g/dL during pregnancy or a hematocrit of less than 30 percent during pregnancy.

Cardiac disease—Disease of the heart.

Acute or chronic lung disease—Disease of the lungs during pregnancy.

Diabetes—Metabolic disorder characterized by excessive discharge of urine and persistent thirst; includes juvenile onset, adult onset, and gestational diabetes during pregnancy.

Genital herpes—Infection of the skin of the genital area by herpes simplex virus.

Hydramnios/Oligohydramnios—Any noticeable excess (hydramnios) or lack (oligohydramnios) of amniotic fluid.

Hemoglobinopathy—A blood disorder caused by alteration in the genetically determined molecular structure of hemoglobin (e.g., sickle cell anemia).

Hypertension, chronic—Blood pressure persistently greater than 140/90, diagnosed prior to onset of pregnancy or before the 20th week of gestation.

Hypertension, pregnancy-associated—An increase in blood pressure of at least 30 mm Hg systolic or 15 mm Hg diastolic on two measurements taken 6 hours apart after the 20th week of gestation.

Eclampsia—The occurrence of convulsions or coma unrelated to other cerebral conditions in women with signs and symptoms of pre-eclampsia.

Incompetent cervix—Characterized by painless dilation of the cervix in the second trimester or early in the third trimester of pregnancy, with premature expulsion of membranes through the cervix and ballooning of the membranes into the vagina, followed by rupture of the membranes and subsequent expulsion of the fetus.

Previous infant 4,000+ grams—The birthweight of a previous live-born child was over 4,000+ grams (8 lb 14 oz).

Previous preterm or small-for-gestational-age infant—Previous birth of an infant prior to term (before 37 completed weeks of gestation) or of an infant weighing less than the tenth percentile for gestational age using a standard weight for age chart.

Renal disease—Kidney disease.

Rh sensitization—The process or state of becoming sensitized to the Rh factor, as when an Rh-negative woman is pregnant with an Rh-positive fetus.

38a. MEDICAL RISK FACTORS FOR THIS PREGNANCY (Check all that apply) Anemia (Hct. <30/Hgb. <10) 01 ☐ Cardiac disease 02 ☐ Acute or chronic lung disease 03 ☐ Diabetes 04 ☐ Genital herpes 05 ☐ Hydramnios/Oligohydramnios 06 ☐ Hemoglobinopathy 07 ☐ Hypertension, chronic 08 ☐ Hypertension, pregnancy-associated 09 ☐ Eclampsia 10 ☐ Incompetent cervix 11 ☐ Previous infant 4000+ grams 12 ☐ Previous preterm or small-for-gestational-age infant 13 ☐ Renal disease 14 ☐ Rh sensitization 15 ☐ Uterine bleeding 16 ☐ None 00 ☐ Other 17 ☐ (Specify) _____	40. COMPLICATIONS OF LABOR AND/OR DELIVERY (Check all that apply) Fever (>100°F. or 38°C.) 01 ☐ Meconium, moderate/heavy 02 ☐ Premature rupture of membrane (>12 hours) 03 ☐ Abruptio placenta 04 ☐ Placenta previa 05 ☐ Other excessive bleeding 06 ☐ Seizures during labor 07 ☐ Precipitous labor (<3 hours) 08 ☐ Prolonged labor (>20 hours) 09 ☐ Dysfunctional labor 10 ☐ Breech/Malpresentation 11 ☐ Cephalopelvic disproportion 12 ☐ Cord prolapse 13 ☐ Anesthetic complications 14 ☐ Fetal distress 15 ☐ None 00 ☐ Other 16 ☐ (Specify) _____	43. CONGENITAL ANOMALIES OF CHILD (Check all that apply) Anencephalus 01 Spina bifida/Meningocele 02 Hydrocephalus 03 Microcephalus 04 Other central nervous system anomalies (Specify) _____ 05 Heart malformations 06 Other circulatory/respiratory anomalies (Specify) _____ 07 Rectal atresia/stenosis 08 Tracheo-esophageal fistula/ Esophageal atresia 09 Omphalocele/ Gastroschisis 10 Other gastrointestinal anomalies (Specify) _____ 11 Malformed genitalia 12 Renal agenesis 13 Other urogenital anomalies (Specify) _____ 14 Cleft lip/palate 15 Polydactyly/Syndactyly/Adactyly 16 Club foot 17 Diaphragmatic hernia 18 Other musculoskeletal/integumental anomalies (Specify) _____ 19 Down's syndrome 20 Other chromosomal anomalies (Specify) _____ 21 None 00 Other 22 (Specify) _____
38b. OTHER RISK FACTORS FOR THIS PREGNANCY (Complete all items) Tobacco use during pregnancy Yes ☐ No ☐ Average number cigarettes per day _____ Alcohol use during pregnancy Yes ☐ No ☐ Average number drinks per week _____ Weight gained during pregnancy _____ lbs.	41. METHOD OF DELIVERY (Check all that apply) Vaginal 01 ☐ Vaginal birth after previous C-section 02 ☐ Primary C-section 03 ☐ Repeat C-section 04 ☐ Forceps 05 ☐ Vacuum 06 ☐	
39. OBSTETRIC PROCEDURES (Check all that apply) Amniocentesis 01 ☐ Electronic fetal monitoring 02 ☐ Induction of labor 03 ☐ Stimulation of labor 04 ☐ Tocolysis 05 ☐ Ultrasound 06 ☐ None 00 ☐ Other 07 ☐ (Specify) _____	42. ABNORMAL CONDITIONS OF THE NEWBORN (Check all that apply) Anemia (Hct. <39/Hgb. <13) 01 ☐ Birth injury 02 ☐ Fetal alcohol syndrome 03 ☐ Hyaline membrane disease/RDS 04 ☐ Meconium aspiration syndrome 05 ☐ Assisted ventilation <30 min 06 ☐ Assisted ventilation ≥30 min 07 ☐ Seizures 08 ☐ None 00 ☐ Other 09 ☐ (Specify) _____	

Figure I. Selected maternal and infant health items from the 1989 revision of the U.S. Standard Certificate of Live Birth

Uterine bleeding—Any clinically significant bleeding during the pregnancy, taking into consideration the stage of pregnancy; any second or third trimester bleeding of the uterus prior to the onset of labor.

Obstetric procedures

Amniocentesis—Surgical transabdominal perforation of the uterus to obtain amniotic fluid to be used in the detection of genetic disorders, fetal abnormalities, and fetal lung maturity.

Electronic fetal monitoring (EFM)—Monitoring with external devices applied to the maternal abdomen or with internal devices with an electrode attached to the fetal scalp and a catheter through the cervix into the uterus, to detect and record fetal heart tones and uterine contractions.

Induction of labor—The initiation of uterine contractions before the spontaneous onset of labor by medical or surgical means for the purpose of delivery.

Stimulation of labor—Augmentation of previously established labor by use of oxytocin.

Tocolysis—Use of medications to inhibit preterm uterine contractions to extend the length of pregnancy and, therefore, avoid a preterm birth.

Ultrasound—Visualization of the fetus and the placenta by means of sound waves.

Complications of labor and/or delivery

Febrile—A fever greater than 100 degrees F. or 38 degrees C. occurring during labor or delivery.

Meconium, moderate/heavy—Meconium consists of undigested debris from swallowed amniotic fluid, various products of secretion, excretion, and shedding by the gastrointestinal tract; moderate to heavy amounts of meconium in the amniotic fluid noted during labor or delivery.

Premature rupture of membranes (more than 12 hours)—Rupture of the membranes at any time during pregnancy and more than 12 hours before the onset of labor.

Abruptio placenta—Premature separation of a normally implanted placenta from the uterus.

Placenta previa—Implantation of the placenta over or near the internal opening of the cervix.

Other excessive bleeding—The loss of a significant amount of blood from conditions other than abruptio placenta or placenta previa.

Seizures during labor—Maternal seizures occurring during labor from any cause.

Precipitous labor (less than 3 hours)—Extremely rapid labor and delivery lasting less than 3 hours.

Prolonged labor (more than 20 hours)—Abnormally slow progress of labor lasting more than 20 hours.

Dysfunctional labor—Failure to progress in a normal pattern of labor.

Breech/Malpresentation—At birth, the presentation of the fetal buttocks rather than the head, or other malpresentation.

Cephalopelvic disproportion—The relationship of the size, presentation, and position of the fetal head to the maternal pelvis that prevents dilation of the cervix or descent of the fetal head.

Cord prolapse—Premature expulsion of the umbilical cord in labor before the fetus is delivered.

Anesthetic complications—Any complication during labor or delivery brought on by an anesthetic agent or agents.

Fetal distress—Signs indicating fetal hypoxia (deficiency in amount of oxygen reaching fetal tissues).

Abnormal conditions of the newborn

Anemia—Hemoglobin level of less than 13.0 g/dL or a hematocrit of less than 39 percent.

Birth injury—Impairment of the infant's body function or structure because of adverse influences that occurred at birth.

Fetal alcohol syndrome (FAS)—A syndrome of altered prenatal growth and development occurring in infants born of women who consumed excessive amounts of alcohol during pregnancy.

Hyaline membrane disease/RDS—A disorder primarily of prematurity, manifested clinically by respiratory distress and pathologically by pulmonary hyaline membranes and incomplete expansion of the lungs at birth.

Meconium aspiration syndrome—Aspiration of meconium by the fetus or newborn, affecting the lower respiratory system.

Assisted ventilation (less than 30 minutes)—A mechanical method of assisting respiration for newborns with respiratory failure.

Assisted ventilation (30 minutes or more)—Newborn placed on assisted ventilation for 30 minutes or longer.

Seizures—A seizure of any etiology.

Congenital anomalies of child

Anencephalus—Absence of the cerebral hemispheres.

Spina bifida/meningocele—Developmental anomaly characterized by defective closure of the bony encasement of the spinal cord, through which the cord and meninges may or may not protrude.

Hydrocephalus—Excessive accumulation of cerebrospinal fluid within the ventricles of the brain with consequent enlargement of the cranium.

Microcephalus—A significantly small head.

Other central nervous system anomalies—Other specified anomalies of the brain, spinal cord, and nervous system.

Heart malformations—Congenital anomalies of the heart.

Other circulatory/respiratory anomalies—Other specified anomalies of the circulatory and respiratory systems.

Rectal atresia/stenosis—Congenital absence, closure, or narrowing of the rectum.

Tracheo-esophageal fistula/Esophageal atresia—An abnormal passage between the trachea and the esophagus; esophageal atresia is the congenital absence or closure of the esophagus.

Omphalocele/Gastroschisis—An omphalocele is a protrusion of variable amounts of abdominal viscera from a midline defect at the base of the umbilicus. In gastroschisis, the abdominal viscera protrude through an abdominal wall defect, usually on the right side of the umbilical cord insertion.

Other gastrointestinal anomalies—Other specified congenital anomalies of the gastrointestinal system.

Malformed genitalia—Congenital anomalies of the reproductive organs.

Renal agenesis—One or both kidneys are completely absent.

Other urogenital anomalies—Other specified congenital anomalies of the organs concerned in the production and excretion of urine, together with organs of reproduction.

Cleft lip/palate—Cleft lip is a fissure or elongated opening of the lip; cleft palate is a fissure in the roof of the mouth. These are failures of embryonic development.

Polydactyly/Syndactyly/Adactyly—Polydactyly is the presence of more than five digits on either hands or feet; syndactyly is having fused or webbed fingers or toes; adactyly is the absence of fingers or toes.

Club foot—Deformities of the foot, which is twisted out of shape or position.

Diaphragmatic hernia—Herniation of the abdominal contents through the diaphragm into the thoracic cavity, usually resulting in respiratory distress.

Other musculoskeletal/integumental anomalies—Other specified congenital anomalies of the muscles, skeleton, or skin.

Down's syndrome—The most common chromosomal defect, with most cases resulting from an extra chromosome (trisomy 21).

Other chromosomal anomalies—All other chromosomal aberrations.

Related reports

Many of the topics discussed in this report are covered in more analytic detail in other reports published by NCHS. Topics include age of mother (145); Hispanic origin births (132); twin births (120); trends in teenage and young teen births (15,29); cesarean deliveries (146), attendant at birth, place of delivery, and obstetric procedures (88); births to unmarried mothers (32); trends in pregnancies and pregnancy rates (19,20); trends in smoking (147); trends in characteristics of births by State (30); birth outcome (130,148); and trends in reproduction and intrinsic rates (149).

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Suggested citation

Martin JA, Hamilton BE, Sutton PD, et al. Births: Final data for 2003. National vital statistics reports; vol 54 no 2. Hyattsville, MD: National Center for Health Statistics. 2005.

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U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

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DHHS Publication No. (PHS) 2005-1120
05-0408 (9/2005)

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