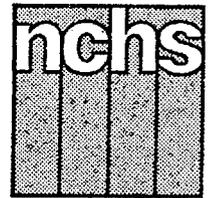


Advance Data



From Vital and Health Statistics of the National Center for Health Statistics

Contraceptive Use in the United States, 1973–88

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The percent of married couples using sterilization as a method of contraception increased dramatically between 1973 and 1982, and continued its increase until 1988—more than doubling in 15 years (figure 1). In contrast, the percent of married couples using the pill declined sharply between 1973 and 1982, but that decline did not continue between 1982 and 1988. Among never married women, the proportion using the pill increased between 1982 and 1988. The pill was the leading method among never married women in both 1982 and 1988. In contrast, female sterilization was the leading method among currently married couples and formerly married women in 1982 and 1988. Use of the condom has been suggested as a protection against human immunodeficiency virus (HIV) infection and other sexually transmitted diseases. The percent using the condom did not change significantly among married couples, but it did increase significantly among never married women, for whom it was the second leading method, after the pill. These findings are based on the 1973, 1982, and 1988 National

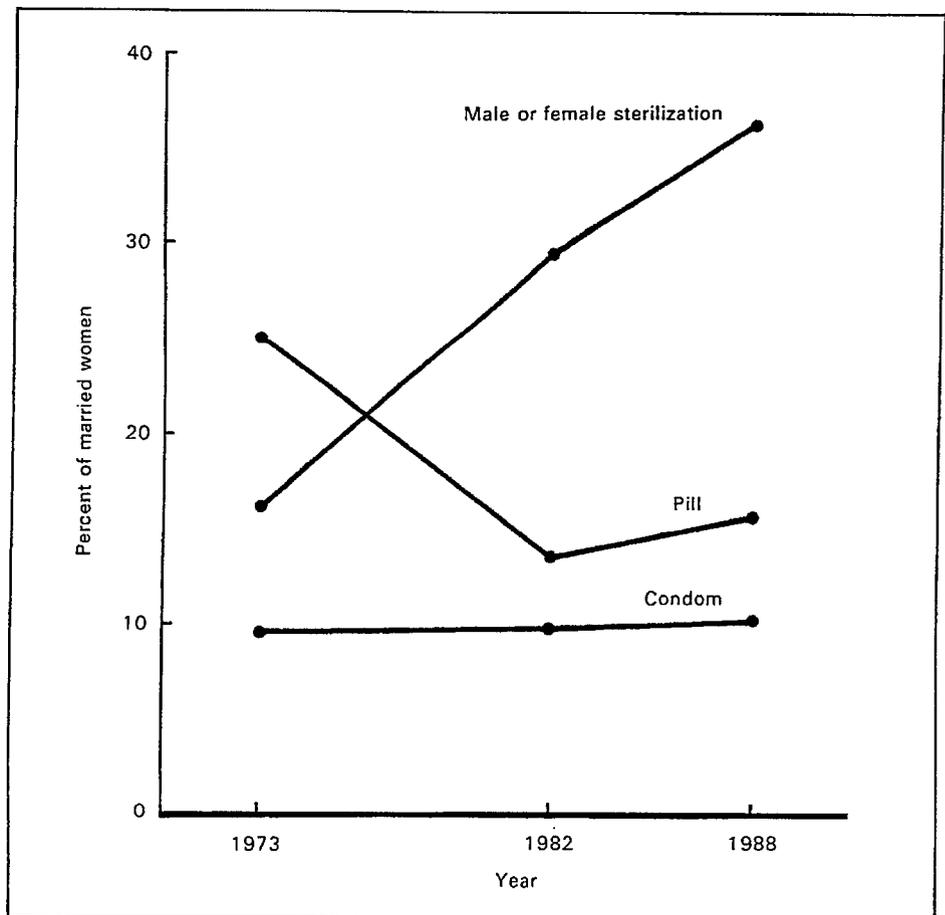


Figure 1. Percent of married couples (wives 15–44 years of age) using sterilization, the pill, and the condom: United States, 1973, 1982, and 1988



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
 Public Health Service
 Centers for Disease Control
 National Center for Health Statistics
 Manning Feinleib, M.D., Dr. P.H., Director

Table 1. Number of women 15-44 years of age and percent distribution by current contraceptive status and method, according to race: United States, 1982 and 1988

(Statistics are based on samples of the female population of the conterminous United States. See Technical notes for estimates of sampling variability and definitions of terms. Data for 1988 are preliminary)

Contraceptive status and method	All races ¹		White		Black	
	1988	1982	1988	1982	1988	1982
Number in thousands						
All women	57,900	54,099	47,077	45,367	7,679	6,985
Percent distribution						
Total.	100.0	100.0	100.0	100.0	100.0	100.0
Sterile.	29.7	27.2	30.5	27.7	29.6	23.7
Surgically sterile	28.3	25.7	29.2	26.1	27.8	22.2
Contraceptively sterile	23.6	19.0	24.5	19.4	22.1	16.3
Female	16.6	12.9	16.1	12.5	21.6	15.6
Male	7.0	6.1	8.4	6.9	*0.5	*0.7
Noncontraceptively sterile.	4.7	6.6	4.7	6.7	5.7	5.9
Female	4.7	6.3	4.6	6.3	5.7	5.9
Male	0.0	0.3	0.0	0.3	*0.0	0.0
Nonsurgically sterile.	1.4	1.5	1.3	1.6	1.8	1.5
Pregnant or post partum	4.8	5.0	4.8	4.8	5.0	5.6
Seeking pregnancy	3.8	4.2	3.7	4.0	3.9	5.4
Other nonuser ²	25.0	26.9	23.8	26.2	26.9	29.6
Never had intercourse	11.5	13.6	11.0	13.9	9.7	10.3
No intercourse in last 3 months.	6.2	5.9	6.2	6.0	6.3	5.8
Intercourse in last 3 months.	6.5	7.4	5.7	6.4	10.2	13.5
Nonsurgical contraceptors	36.7	36.7	37.2	37.2	34.6	35.7
Pill	18.5	15.6	18.4	15.1	21.6	19.8
IUD	1.2	4.0	1.1	3.9	1.7	4.7
Diaphragm	3.5	4.5	3.8	5.0	1.1	1.8
Condom	8.8	6.7	9.2	7.2	5.8	3.2
Foam	0.6	1.3	0.6	1.4	*0.6	1.4
Periodic abstinence ³	1.4	2.2	1.4	2.2	1.2	1.6
Natural family planning	0.4	0.3	0.4	0.4	*0.1	0.1
Withdrawal	1.3	1.1	1.3	1.2	0.8	0.7
Douche	0.1	0.1	0.0	0.0	*0.2	0.7
Other methods	1.2	1.3	1.2	1.2	1.6	1.7

¹Includes white, black, and other races.
²Includes women who had intercourse only once, not shown separately.
³Includes natural family planning and other types of periodic abstinence.

SOURCE: National Survey of Family Growth, National Center for Health Statistics. Data for 1988 are preliminary. Data for 1982 are based on a revised classification of the contraceptive intent of sterilization operations, intended to be comparable to the 1988 classification.

Surveys of Family Growth. The 1988 data are the most recent national estimates of contraceptive use in the United States.

The National Survey of Family Growth is conducted by the National Center for Health Statistics. The interview includes information on a number of topics related to childbearing, family planning, and related aspects of maternal and child health. The 1988 data in this report are from Cycle IV of this survey, which was based on personal interviews conducted between January and August 1988 with 8,450 women 15-44 years of age in the noninstitutional population of the United States. The other data in this report are from Cycle III of the National Survey of Family Growth, conducted in 1982, and Cycle I,

conducted in 1973. The design of the survey and estimates of sampling variability are discussed in the Technical notes.

Findings

In 1988 about 60 percent of women 15-44 years of age were currently using contraception: 24 percent were using contraceptive sterilization, and 37 percent were currently using other contraceptive methods (table 1). This means that of the 57.9 million women of reproductive age, about 35 million were using contraception in 1988. In 1982 about 30 million out of the 54 million women of reproductive age were using contraception (calculated from table 1).

Some women who usually use contraception were not currently using it, because they were currently pregnant, postpartum, trying to become pregnant, noncontraceptively sterile, or nonsurgically sterile. About 40 percent of women were not currently using contraception. Of this 40 percent, only 7 percent were at risk of having an unintended pregnancy—those who were classified as “other nonusers” who had “intercourse in the last 3 months.” The other 33 percent (out of 40 percent) who were not using contraception were not at risk of unintended pregnancy: 5 percent were sterilized for noncontraceptive (health) reasons; 1 percent, sterile for reasons other than surgery; 5 percent were currently pregnant or had been pregnant less than 2 months before they were interviewed (pregnant or postpartum); 4 percent were trying to become pregnant, 12 percent had never had intercourse, and 6 percent had not had intercourse in the 3 months before the interview.

Thus, many women of reproductive age are not at risk of unintended pregnancy. If we calculate the percent using contraception among those currently at risk of unintended pregnancy, the percentage currently using was 90 percent in 1988 and 88 percent in 1982. Those who are at risk of unintended pregnancy include those currently using contraception plus those classified as “other nonusers” who had “had intercourse in the last 3 months.”

Among the 6 percent of women in table 1 who were not trying to get pregnant but had intercourse without contraception in the last 3 months, about one-third of that 6 percent had had intercourse in the last 3 months, but were not having intercourse during the month of interview; about one-fourth had fecundity impairments and thought their chances of conceiving were low; others may have been indifferent to the possibility of a pregnancy, had personal objections to using contraception, or health concerns about contraceptive use.

If male and female sterilization are counted as one method, then the

leading method in 1988, as in 1982, was sterilization, used by 24 percent of women (or their husbands or partners), followed by the pill (19 percent). If male and female sterilization are counted as separate methods, then the leading method in 1988 (as in 1982) was the pill (19 percent), followed by female sterilization (17 percent). The other methods, in rank order, were the condom (9 percent), male sterilization (7 percent), the diaphragm (4 percent), periodic abstinence (which includes calendar rhythm, temperature rhythm, and natural family planning), withdrawal, and the IUD (1 percent each), and foam and douche with less than 1 percent each.

The number of contraceptors increased by 4.8 million between 1982 and 1988, an increase of 16 percent. The numbers of users of 3 methods

increased by more than 25 percent each: the pill, female sterilization, and the condom. About 10.7 million women were using the pill in 1988, compared with just 8.4 million in 1982. In 1988, 9.6 million women were using female sterilization, up from 7.0 million in 1982. About 5.1 million were using the condom, compared with 3.6 million in 1982—a 41-percent increase. The number using the intrauterine device (IUD) dropped by two-thirds, from 2.2 million in 1982 to 0.7 million in 1988, probably because some companies stopped distributing the IUD in the United States.

If we add the percents “contraceptively sterile” and “nonsurgical contraceptors” in tables 1–3, we get the percent using some form of contraception (these percents are also shown in the second column of table 4). The percent using a

method increased between 1982 and 1988, from 56 to 60 percent. For white women, the increase was from 57 percent using a method in 1982 to 62 percent in 1988. For black women, the percent currently using a method increased from 52 percent in 1982 to 57 percent in 1988. A look at the “contraceptively sterile” and “nonsurgical contraceptors” lines in table 1 shows that overall and for both white and black women separately, the increase in the percent using contraception was due to an increase in the use of sterilization, not in the percent using nonsurgical methods. This, in turn, is partially due to changing age composition: in 1988, 30 percent of all women 15–44 years of age were 35–44 years of age—the group most likely to be sterilized—compared with 26 percent in 1982.

Age

Current contraceptive use varies sharply by the age of the woman, as shown in table 2. The percent contraceptively sterile increased rapidly with age in both 1982 and 1988. For example in 1988, the percent contraceptively sterile was 2 percent at age 15–24, 23 percent at 25–34, and 47 percent at age 35–44. In contrast, the percent currently pregnant or postpartum was 5 percent at age 15–24, 8 percent at 25–34, and only 1 percent at age 35–44. The percent who had never had intercourse was 30 percent in the youngest age group and 2 percent in the oldest. For this reason, comparisons of the percents using particular methods are strongly affected by these different proportions who have never had intercourse; so comparisons between age groups should be made among women using contraception, as shown later in this report. However, the leading methods in each age group can be gleaned from table 2. The leading method in the youngest age group was the pill in both 1982 and 1988, followed by the condom. In the oldest age group—35–44 years of age—the leading method was female sterilization, followed by male sterilization and the condom.

Table 2. Number of women 15–44 years of age and percent distribution by current contraceptive status and method, according to age: United States, 1982 and 1988

(Statistics are based on samples of the female population of the conterminous United States. See Technical notes for estimates of sampling variability and definitions of terms. Data for 1988 are preliminary)

Contraceptive status and method	15–24 years		25–34 years		35–44 years	
	1988	1982	1988	1982	1988	1982
Number in thousands						
All women	18,592	20,150	21,726	19,644	17,582	14,305
Percent distribution						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Sterile	3.1	3.2	27.0	27.9	61.3	60.1
Surgically sterile	2.4	2.6	26.0	26.4	58.7	57.3
Contraceptively sterile	2.2	2.4	23.3	21.5	46.7	39.0
Female	1.6	1.3	16.6	14.8	32.5	26.8
Male	*0.6	1.1	6.7	6.7	14.2	12.2
Noncontraceptively sterile	*0.2	*0.2	2.7	4.9	12.0	18.3
Female	*0.2	0.2	2.7	4.6	11.9	17.4
Male	*0.0	*0.0	0.0	0.3	0.0	0.8
Nonsurgically sterile	0.7	*0.6	0.9	1.5	2.7	2.8
Pregnant or post partum	5.0	6.3	7.6	6.5	1.1	1.0
Seeking pregnancy	2.7	3.5	5.8	6.2	2.4	2.5
Other nonuser ¹	45.7	48.6	16.7	14.2	13.5	13.8
Never had intercourse	30.0	32.5	3.6	2.7	1.6	2.0
No intercourse in last						
3 months	5.4	6.9	6.4	5.1	6.8	5.8
Intercourse in last 3 months	7.8	9.2	6.4	6.5	5.0	6.0
Nonsurgical contraceptors	43.5	38.4	43.0	45.2	21.6	22.6
Pill	29.7	23.5	21.6	17.1	3.0	2.3
IUD	*0.1	1.4	1.4	6.5	2.1	4.2
Diaphragm	1.3	3.7	4.8	6.8	4.1	2.4
Condom	9.5	5.5	9.1	7.6	7.7	7.0
Foam	*0.3	0.8	0.8	1.5	0.8	1.8
Periodic abstinence ²	*0.6	1.2	1.7	2.8	1.8	2.6
Natural family planning	*0.2	*0.1	0.5	0.6	0.4	0.3
Withdrawal	1.5	1.2	1.9	1.2	0.6	0.8
Douche	*0.0	*0.1	0.0	0.1	0.2	0.3
Other methods	*0.5	1.0	1.7	1.6	1.4	1.1

¹Includes women who have had intercourse only once, not shown separately.

²Includes natural family planning and other types of periodic abstinence.

SOURCE: National Survey of Family Growth, National Center for Health Statistics. Data for 1988 are preliminary. Data for 1982 are based on a revised classification of the contraceptive intent of sterilization operations, intended to be comparable to the 1988 classification.

Table 3. Number of women 15–44 years of age and percent distribution by current contraceptive status and method, according to marital status: United States, 1982 and 1988

(Statistics are based on samples of the female population of the conterminous United States. See Technical notes for estimates of sampling variability and definitions of terms. Data for 1988 are preliminary)

Contraceptive status and method	Never married		Currently married			Widowed, divorced, or separated		
	1988	1982	1988	1982	1973	1988	1982	1973
Number in thousands								
All women	21,058	19,164	29,147	28,231	26,646	7,695	6,704	3,601
Percent distribution								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sterile	5.2	3.2	44.0	40.9	23.9	42.6	38.0	21.4
Surgically sterile	4.3	2.6	42.4	38.9	22.9	40.9	36.1	20.9
Contraceptively sterile	3.4	1.9	36.2	29.5	16.4	31.3	23.6	12.5
Female	2.7	1.3	23.4	18.7	8.6	29.2	21.8	12.3
Male	0.7	0.6	12.9	10.8	7.8	2.1	*1.9	*0.1
Noncontraceptively sterile	0.9	0.7	6.2	9.3	6.5	9.7	12.5	8.4
Female	0.9	0.7	6.1	8.7	6.3	9.7	12.5	8.4
Male	0.0	0.0	*0.0	0.6	0.2	0.0	*0.0	*0.0
Nonsurgically sterile	1.0	0.7	1.6	2.0	0.9	1.7	*1.9	*0.5
Pregnant or post partum	2.4	2.5	7.1	7.2	7.3	2.5	2.6	2.9
Seeking pregnancy	1.3	1.2	6.0	6.7	7.0	2.0	2.1	*0.0
Other nonuser ¹	52.5	59.7	4.8	5.0	8.7	26.6	25.6	45.3
Never had intercourse	31.5	38.4	—	—	—	—	—	—
No intercourse in last 3 months	9.4	11.2	*0.3	*0.2	---	19.5	15.1	---
Intercourse in last 3 months	9.0	10.1	4.5	4.8	---	7.1	10.4	---
Nonsurgical contraceptors	38.5	33.3	38.1	40.1	53.2	26.3	31.8	30.3
Pill	24.7	18.7	15.1	13.4	25.1	14.5	15.8	18.1
IUD	0.6	1.9	1.5	4.8	6.7	2.1	6.4	7.2
Diaphragm	2.1	4.7	4.6	4.5	2.4	3.0	3.7	1.3
Condom	8.2	4.1	10.6	9.8	9.4	3.4	*0.8	*0.9
Foam	0.2	0.4	1.0	2.0	3.5	0.5	*1.1	*0.7
Periodic abstinence	0.6	0.9	2.1	3.2	2.8	1.1	*1.4	*0.4
Withdrawal, douche, and other methods	2.1	2.6	3.2	2.3	3.4	1.7	2.7	1.7

¹Includes women who have had intercourse only once, not shown separately.

Marital status

Table 3 shows differences in contraceptive use by marital status. Trend data are shown for 1973, 1982, and 1988 for currently married and formerly married women. Data for never married women are shown only for 1982 and 1988 because most never married women were not represented in the 1973 survey. The “other nonuser” category in 1973 is not divided into those who had intercourse in the 3 months before the survey, and those who did not, because those data are not available for 1973. Finally, the question on whether a sterilization operation was done for contraceptive or noncontraceptive reasons was asked differently in 1973 than it was in 1982 and 1988, but this difference in question wording does not obscure the very large increase in sterilization that occurred between 1973 and 1988 (see the discussion of sterilization for currently married and formerly married, below). See the Definitions of terms for more details on how

sterilization operations were classified in each survey year.

If we add the categories “contraceptively sterile” and “nonsurgical contraceptors” in table 3, we obtain the percent using some form of contraception (the percent using any method is also shown in the second column of table 4). The percent currently using contraception varies sharply by marital status, from 42 percent of never married women to 74 percent of currently married women.

Among never married women, the proportion who had never had intercourse dropped markedly from 38 percent in 1982 to 32 percent in 1988. To compare the percentages using contraception in 1982 and 1988, then, we need to adjust for the higher proportion having intercourse in 1988, by computing the proportion using contraception as a percent of those having intercourse in the 3 months before the survey. If we set aside women who had never had intercourse

(31.5 percent in 1988) and those who did not have intercourse in the 3 months before the survey (9.4 percent in 1988), we are left with 59.1 percent who had intercourse in the last 3 months. If the percent using contraception (3.4 plus 38.5 equals 41.9 in 1988), is divided by the 59.1 percent who had intercourse in the last 3 months, the result is that 71 percent of sexually active never married women were using contraception in 1988. A similar procedure yields 70 percent of sexually active never married women using contraception in 1982, a small difference. Changes in contraceptive methods used by never married women will be discussed in connection with table 4.

Among currently married couples, the proportion surgically sterile (by vasectomy, tubal operation, hysterectomy, or other operation) for contraceptive reasons (“contraceptively sterile”) more than doubled between 1973 and 1988, from

Table 4. Number of women 15–44 years of age, percent using any method of contraception, and percent distribution of contraceptors by method of contraception, according to age, race, and marital status: United States, 1982 and 1988

(Statistics are based on samples of the female population of the conterminous United States. See Technical notes for estimates of sampling variability and definitions of terms. Data for 1988 are preliminary)

Age, race, and marital status	Number of women in thousands	Percent using any method	All methods	Female sterilization	Male sterilization	Percent distribution				
						Pill	IUD	Diaphragm	Condom	Other methods
1988										
All women	57,900	60.3	100.0	27.5	11.7	30.7	2.0	5.7	14.6	7.7
Age										
15–24	18,592	45.7	100.0	3.6	*1.3	64.9	*0.2	2.7	20.8	6.5
25–34	21,726	66.3	100.0	25.0	10.2	32.6	2.1	7.3	13.7	9.1
35–44	17,582	68.3	100.0	47.6	20.8	4.3	3.1	6.0	11.2	6.9
Race										
White	47,077	61.8	100.0	26.1	13.6	29.8	1.8	6.2	14.9	7.5
Black	7,679	56.7	100.0	38.1	*0.9	38.0	3.1	1.9	10.3	7.8
Marital status										
Never married	21,058	41.9	100.0	6.4	*1.8	59.0	1.3	4.9	19.6	7.0
Currently married	29,147	74.3	100.0	31.4	17.3	20.4	2.0	6.2	14.3	8.4
Formerly married	7,695	57.6	100.0	50.7	3.6	25.3	3.6	5.3	5.9	5.7
1982										
All women	54,099	55.7	100.0	23.2	10.9	28.0	7.1	8.1	12.0	10.7
Age										
15–24	20,150	40.8	100.0	3.2	*2.7	57.6	3.4	9.0	13.5	10.6
25–34	19,644	66.7	100.0	22.1	10.1	25.7	9.7	10.3	11.4	10.7
35–44	14,305	61.6	100.0	43.5	19.9	3.7	6.9	4.0	11.3	10.8
Race										
White	45,367	56.7	100.0	22.1	12.2	26.7	6.9	8.8	12.7	10.7
Black	6,985	52.0	100.0	30.0	*1.4	38.0	9.1	3.5	6.2	11.7
Marital status										
Never married	19,164	35.3	100.0	3.7	*1.8	53.0	5.4	13.4	11.6	11.1
Currently married	28,231	69.7	100.0	26.9	15.5	19.3	6.9	6.5	14.1	10.8
Formerly married	6,704	55.5	100.0	39.2	*3.4	28.4	11.5	6.7	*1.5	9.2

SOURCE: Data for 1982 are based on a revised classification of the contraceptive intent of sterilization operations, intended to be comparable to the 1988 classification.

16 percent in 1973 to 36 percent in 1988 (table 3 and figure 1). In turn, most of this increase was in female sterilization: 9 percent used female sterilization in 1973, 19 percent in 1982, and 23 percent in 1988. The proportion using male sterilization was 8 percent in 1973, 11 percent in 1982, and 13 percent in 1988.

As the proportion of married couples using sterilization increased from 1973 to 1988, the proportion using other methods of contraception declined, from 53 percent in 1973 to 40 percent in 1982 and 38 percent in 1988. The proportion using the pill declined from 25 percent in 1973 to 13 percent in 1982; the increase to 15 percent in 1988 was not statistically significant. Use of the IUD declined from 7 percent in 1973 to 5 percent in 1982 and 2 percent in 1988. Use of

the condom did not change significantly among married couples between 1982 and 1988.

The number of widowed, divorced, and separated (or formerly married) women more than doubled, from 3.6 million in 1973 to 7.7 million in 1988, as a result of increasing numbers of women aged 25–44, rising rates of separation and divorce and declining rates of remarriage, particularly in the 1970's (1). The proportion of women not using a method because they were not having intercourse in the 3 months before the interview increased from 15 percent in 1982 to 20 percent in 1988. At the same time, the proportion having intercourse but not using any method declined from 10 to 7 percent. Neither of these changes was statistically significant, but the increase in the percent using the condom was

statistically significant. These three changes are all in the direction of less exposure to HIV infection (AIDS) and other sexually transmitted diseases.

Three of the major changes in contraceptive practice among formerly married women were similar to those for currently married women: first, the proportion using female contraceptive sterilization rose sharply, from 22 percent in 1982 to 29 percent in 1988. Secondly, there was no significant change in the percent using the pill among formerly married women between 1982 and 1988. Thirdly, the proportion using the IUD decreased sharply, from 6 percent in 1982 to 2 percent in 1988. Changes in other categories were generally small.

Contraceptors

Groups classified by marital status, race, age, and other factors differ sharply in the percent currently using contraception. These differences are due primarily to the differing percentages of each group who had not had intercourse recently or ever, and the proportions pregnant or trying to become pregnant. Because these groups have differing proportions using any method, they will also have different proportions using particular methods. It is, therefore, often useful to compare method choices only among women who are using some method of contraception or "contraceptors." This kind of comparison is shown in table 4, for 1982 and 1988 (the years in which women of all marital statuses were interviewed).

Among contraceptors under 25 years of age and never married contraceptors, the leading method by far was the pill in both 1982 and 1988. For example, in 1988, 59 percent of never married contraceptors were using the pill, while only 20 percent were using the second leading method, the condom. Among currently married and formerly married women, the leading method was female sterilization in both 1982 and 1988. For example, in 1988, 31 percent of currently married and 51 percent of formerly married contraceptors were using female sterilization.

As shown in table 4, black women were less likely to be using contraception than white women (57 percent of black women and 62 percent of white women in 1988; 52 and 57 percent in 1982). Black women were more likely than white women to have had intercourse in the last 3 months and not be using a method (10 percent compared with 6 percent, table 1).

The data in table 4 show that in 1982 and 1988, black women were less likely than white women to use a method. But among those who did use a method, black women using contraception were significantly more likely than white contraceptors to use the two most effective female methods—female sterilization

(38 percent compared with 26 percent in 1988) and the pill (38 percent compared with 30 percent in 1988). In contrast, black contraceptors in 1988 were *less* likely to rely on male sterilization (1 percent compared with 14 percent), the diaphragm (2 percent compared with 6 percent), and the condom (10 percent compared with 15 percent).

Overall, between 1982 and 1988, the percent of contraceptors using female sterilization increased from 23 to 28 percent. The data suggest that the proportion using the pill rose from 28 to 31 percent. The proportion using the condom increased from 12 to 15 percent; and the proportion using the IUD dropped sharply, from 7 percent to 2 percent of contraceptors. The decrease in use of the IUD occurred in all groups, but the changes in female sterilization, the pill, and the condom occurred mainly in certain subgroups.

The largest increase in use of female sterilization occurred among formerly married contraceptors: from 39 percent in 1982 to 51 percent in 1988, an increase of 12 percentage points. Among currently married contraceptors, the increase was from 27 to 31 percent—only about 4 percentage points. Use of female sterilization increased by 8 percentage points—from 30 to 38 percent—among black contraceptors between 1982 and 1988. In contrast, the increase in the percent using female sterilization among white contraceptors was only 4 percentage points (22 to 26 percent).

The percent using the pill increased among contraceptors aged 15–24 (58 to 65 percent) and those aged 25–34 (26 to 33 percent). The data suggest that the percent using the pill also rose among never married women, from 53 percent in 1982 to 59 percent in 1988.

Given the increased concern in the 1980's about HIV infection, as well as other sexually transmitted diseases, the changes in condom use are of interest. By age, the percent using the condom increased significantly only among those 15–24, from 14 to 21 percent. By race, the percent using the condom increased from 6 to 10 percent among

black contraceptors. By marital status, the percent of never married contraceptors using the condom increased from 12 percent in 1982 to 20 percent in 1988, and from 2 to 6 percent of formerly married contraceptors. There was no significant change in the proportion of currently married contraceptors using the condom (14 percent in both years).

Current condom users

The measure used in this report, current contraceptive status, is designed to measure the exposure of women of reproductive age to the risk of pregnancy in the month of interview. Women coded as using more than one method are coded in the order that the methods are listed in tables 1 and 2: female sterilization, male sterilization, pill, IUD, diaphragm, condom, foam, periodic abstinence, withdrawal, douche, and other. Therefore if a woman is using the pill and the condom, she is coded as using the pill, because the pill is more effective in *preventing pregnancy* than the condom (2). To obtain a complete estimate of the numbers using the condom, the data were retabulated to show all those using the condom, regardless of what other methods they may have been using. This retabulation, not shown in the tables, reveals that, in addition to the 5.1 million using the condom under the contraceptive status classification used in tables 1–4 of this report, another 0.7 million were currently using the condom usually in combination with other methods, for a total of 5.8 million condom users in 1988. The comparable numbers in 1982 were 3.6 million using the condom under the contraceptive status classification, plus 0.5 million other current condom users, for a total number of 4.1 million current condom users in 1982. Thus, the total number of current condom users increased from 4.1 million in 1982 to about 5.8 million in 1988, or from about 7 percent of all women 15–44 years of age in 1982 to 10 percent in 1988.

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Technical notes

The National Survey of Family Growth (NSFG) is a periodic survey conducted by the National Center for Health Statistics to collect data on factors affecting childbearing, contraception, infertility, and related aspects of maternal and infant health. The survey is jointly funded by the National Center for Health Statistics, the National Institute for Child Health and Human Development, and the Office of Population Affairs, all of the U.S. Department of Health and Human Services. Fieldwork was conducted under contract by Westat, Inc., in 1982 and 1988, respectively.

For the 1988 survey (Cycle IV), personal interviews were conducted with a national sample of women who were 15-44 years of age on March 15, 1988. The interviews were conducted between January and August of 1988. In 1982 the population covered women 15-44 years of age living in the civilian noninstitutionalized population of the conterminous United States. In 1988 Alaska and Hawaii were included, so the population covered was the civilian noninstitutionalized population of the entire United States. Interviews were completed with 7,969 women in 1982 and 8,450 women in 1988. Further details on the sample design and procedures of the 1982 survey (Cycle III) are given in references 3 and 4. Fieldwork for Cycle I was conducted by the National Opinion Research Center in 1973. Interviews were completed with 9,797 women. Further details on the 1973 survey may be found in any of the reports based on it, such as reference 5.

Interviews for Cycle IV of the survey were conducted between January and August of 1988 from households which had been interviewed in the National Health Interview Survey (NHIS) between October of 1985 and March of 1987. The NHIS is also conducted by NCHS. As in previous cycles of the NSFG, black women were oversampled. Interviews were conducted in person in the respondent's home by trained female

Table I. Preliminary estimates of the parameters A and B for estimating standard errors for women, by race

Race	Parameter A	Parameter B
Total or white . . .	-0.00018	10738
Black.	-0.000626	5181

interviewers and lasted an average of about 70 minutes. The interview focused on the woman's pregnancy history; her past and current use of contraception; ability to bear children (fecundity and infertility); use of medical services for family planning, infertility, and prenatal care; her marital history, occupation and labor force participation, and a wide range of social, economic, and demographic characteristics.

Reliability of estimates

Because the statistics presented in this report are based on a sample, they may differ by chance variations from the statistics that would result if all 57.9 million women represented by the NSFG had been interviewed. The standard error of an estimate is a

measure of such differences. The standard error of a number or percent is calculated by using the appropriate values of A and B from table I in the equations,

$$SE(N) = \sqrt{(A + B/N)} \quad N$$

and

$$SE(P) = \sqrt{\frac{B P (100-P)}{X}}$$

where N = the number of women
 P = the percent
 X = the number of women in the denominator of the percent

The parameters shown in table I were used to generate table II, which shows preliminary estimates of standard errors for percents of total or white women, and table III, which shows preliminary estimates of standard errors for percents of black women.

A similar table for the Cycle III (1982) survey is given in reference 3.

The chances are about 68 out of 100 (about 2 out of 3) that a sample

Table II. Preliminary estimates of standard errors expressed in percentage points for percents of total or white women: 1988 National Survey of Family Growth

Base of percent	Estimated percent						
	2 or 98	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
	Standard error in percentage points						
100,000	4.6	7.1	9.8	13.1	15.0	16.1	16.4
500,000	2.1	3.2	4.4	5.9	6.7	7.2	7.3
1,000,000	1.5	2.3	3.1	4.1	4.7	5.1	5.2
5,000,000	0.6	1.0	1.4	1.9	2.1	2.3	2.3
10,000,000	0.5	0.7	1.0	1.3	1.5	1.6	1.6
30,000,000	0.3	0.4	0.6	0.8	0.9	0.9	0.9
50,000,000	0.2	0.3	0.4	0.6	0.7	0.7	0.7
58,000,000	0.2	0.3	0.4	0.5	0.6	0.7	0.7

Table III. Preliminary estimates of standard errors expressed in percentage points for percents of black women: 1988 National Survey of Family Growth

Base of percent	Estimated percent						
	2 or 98	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
	Standard error in percentage points						
100,000	3.2	5.0	6.8	9.1	10.4	11.2	11.4
500,000	1.4	2.2	3.1	4.1	4.7	5.0	5.1
1,000,000	1.0	1.6	2.2	2.9	3.3	3.5	3.6
5,000,000	0.5	0.7	1.0	1.3	1.5	1.6	1.6
7,500,000	0.4	0.6	0.8	1.1	1.2	1.3	1.3

estimate would fall within one standard error of a statistic based on a complete count of the population represented by the NSFG. The chances are about 95 in 100 that a sample estimate would fall within two standard errors of the same measure obtained if all people in the population were interviewed. Differences between percents discussed in this report were found to be statistically significant at the 5-percent level using a 2-tailed normal deviate test. This means that in repeated samples of the same type and size, a difference as large as the one observed would occur in only 5 percent of samples if there were, in fact, no difference between the percents in the population.

In the text, terms such as "greater," "less," "increase," or "decrease" indicate that the observed differences were statistically significant at the 0.05 level using a 2-tailed normal deviate test. Statements using the phrase "the data suggest" indicate that the difference was significant at the 0.10 (10 percent) level but not the 0.05 (5 percent) level. Lack of comment in the text about any two statistics does not mean that the difference was tested and found not to be significant.

The relative standard error (or coefficient of variation) of a statistic is the ratio of the standard error to the statistic and usually is expressed as a percent of the estimate. In this report statistics with a relative standard error of 30 percent or more are indicated with an asterisk (*). These estimates may be viewed as unreliable by themselves, but they may be combined with other estimates to make comparisons of greater precision.

Statistics in this report also may be subject to nonsampling error, that is, errors or omissions in responding to the interview, recording answers, and processing data. The data have been adjusted for nonresponse by means of adjustments to the sample weights assigned to each case. Other types of nonsampling error were minimized by a series of quality control measures as described in

reports on Cycle III (such as reference 3).

Definitions of terms

Current contraceptive status

Sterile—A currently married woman was classified as sterile under the current contraceptive status classification if she reported that it was impossible for her to have a baby, or her husband to father a child, for any reason, including sterilization operations or other causes. An unmarried woman was classified as sterile if she reported that it was impossible for her to have a baby, or if her current method of contraception was male sterilization.

Nonsurgical—A woman or couple was classified as nonsurgically sterile if she reported that it was impossible for her to have a baby, or impossible for her husband to father a child, for any reason other than surgical sterilization. Nonsurgical reasons for sterility include menopause, sterility from accident, illness, congenital causes, or unexplained inability to conceive.

Surgical—A woman (or couple) was classified as surgically sterile if she or her husband were completely sterile due to an operation.

Surgical sterilizations were classified as contraceptive or noncontraceptive because, while most are obtained because of their effectiveness in preventing pregnancy, some are obtained for therapeutic reasons. This classification in successive cycles of the survey has been affected by changes in the wording of questions. In the 1973 (Cycle I) survey, a sterilizing operation was classified as contraceptive if the respondent answered "yes" to the question "Was the operation done at least partly so that you would not have any more children?" However, since all sterilizing operations are contraceptive in effect, though not by intention, this question was ambiguous; for example, this question classified many hysterectomies as "contraceptive." In 1976 the question

was revised to reflect more clearly the motive of family limitation, asking: "Was one reason for the operation because you had all the children you wanted?" This question resulted in a lower proportion of hysterectomies reported as contraceptive, but it also resulted in lower proportions of other operations reported as contraceptive—because it excluded women who would have liked more children, but for whom pregnancy would be a health risk. This problem was investigated in the 1982 survey and rectified in the 1988 survey.

The figures for 1982 and 1988 are highly comparable. In this report, noncontraceptive operations in 1982 and 1988 are those for which the respondent reported that the main or only reason for the operation was "medical problems with my female organs (such as infections, cancer, etc.)." All other operations were classified as contraceptive, in its literal sense: to prevent pregnancy, regardless of why she wanted to prevent pregnancy. Reasons for contraceptive operations in 1982 and 1988 included the following: she had all the children she wanted, or wanted none; her husband wanted no more; a pregnancy would have been dangerous to her health; she could not carry the pregnancy to term; she could not afford or take care of more children; or she did not like her previous method of birth control. The data on the contraceptive intent of sterilization operations for 1973 may not be perfectly comparable to those in 1982 and 1988 because the later surveys contained these explicit answer categories for a number of reasons for sterilizations, while the 1973 question did not. It is not clear how women who had operations because pregnancy would be dangerous to their health would have answered the question in 1973.

It should be noted that the estimates of male contraceptive sterilization show the number of *women* relying on this method, and not necessarily the number of men who have been sterilized for contraceptive reasons.

Pregnant—A woman was classified as pregnant if she answered “yes” to the question, “Are you pregnant now?” or for those in doubt, “Well, do you think you are probably pregnant or not?” However, a woman who reported that the onset of her last menstrual period was within the last 30 days before the interview was automatically classified as not currently pregnant.

Seeking pregnancy—A woman was classified as seeking pregnancy if she reported that she was not using a method at the date of the interview because she wanted to become pregnant as soon as possible.

Post partum—A woman was classified as post partum if she reported that she was not currently using a method, was not trying to become pregnant, and her last pregnancy had terminated within 2 months before the date she was interviewed.

Other nonusers—Women (or couples) who reported that they were currently using no contraceptive method and could not be classified in any of the preceding categories of noncontraceptors were classified here. Among these are women who had never had intercourse, had had intercourse only once, had not had intercourse in the last 3 months, were indifferent to the chances of pregnancy, had a very low risk of pregnancy due to a fecundity impairment, or objected to contraceptive methods for personal or religious reasons.

Never had intercourse—A woman was classified as never having had intercourse if she was not currently using a method and she had never had sexual intercourse at any time up to the date of interview, or if she had had sexual intercourse, but not since her menstrual periods began.

Intercourse only once—These women reported that they had had intercourse only once. They are not shown as a separate category in tables 1–3, but they are included in the overall “other nonusers” category.

No intercourse in last 3 months—A woman was classified as not having had intercourse in the last 3 months if she was not currently using a method and reported not having sexual intercourse at all in any of the 3 months preceding the interview.

Intercourse in last 3 months—A woman (or couple) was classified as having intercourse in the last 3 months if she was not currently using a method and was having sexual intercourse currently or in any of the 3 months preceding the interview.

Contraceptors—A woman (or couple) who reported using a method at the date of interview was classified according to the specific method used. When more than one method was currently being used, they were coded using the following priority order: female sterilization, male sterilization,

pill, IUD, diaphragm, condom, foam, periodic abstinence, withdrawal, douche, and other. Methods used by extremely small proportions of the population, such as jelly, cream, suppositories, or abstinence, not in combination with any other methods, were grouped into the category “other.”

Demographic Terms

Age—Age is classified by the age of the respondent in completed years as of March 15, 1988, the approximate midpoint of interviewing.

Race—Race refers to the race of the woman interviewed and is classified as black, white, or other. In Cycles III (1982) and IV (1988), race was classified according to the woman’s report of the race that best described her.

Marital status—Women were classified by marital status as currently married, widowed, divorced, separated, or never married. In Cycles III (1982) and IV (1988), in order to improve the comparability of NSFG data on marital status over time and with other sources of data, informally married or cohabiting women—who reported that they were not married but living with their sexual partner—were classified by their legal marital status. In all NSFG surveys, women who were married but separated from their spouse were classified as separated if the reason for the separation was marital discord, and as currently married otherwise.

Cooperating agencies

Cycle IV of the National Survey of Family Growth was supported in part by the National Institute of Child Health and Human Development, National Institutes of Health, and the Office of Population Affairs, Office of the Assistant Secretary of Health. These agencies also participated in the design of the questionnaire.

Symbols

- - - Data not available
 - . . . Category not applicable
 - Quantity zero
 - 0.0 Quantity more than zero but less than 0.05
 - Z Quantity more than zero but less than 500 where numbers are rounded to thousands
 - * Figure does not meet standard of reliability or precision
 - # Figure suppressed to comply with confidentiality requirements
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