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# Vital and Health Statistics

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## Health Promotion and Disease Prevention United States, 1990

Series 10:  
Data From the National Health Survey  
No. 185

Shows proportion of the U.S. population having selected health practices and knowledge by sex and age, according to level of education, family, income, race, Hispanic origin, geographic region, marital status, and employment status. Trends in selected practices between 1985 and 1990 are also discussed.

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# Contents

Introduction.....	1
General health habits .....	1
Blood pressure and blood cholesterol .....	1
Stress .....	1
Exercise .....	1
Smoking and smoking during pregnancy .....	1
Alcohol.....	2
Dental care.....	2
Mammography .....	2
Injury control .....	2
Radon .....	2
Highlights.....	3
Sources and limitations of data .....	4
Findings .....	6
General health habits .....	6
High blood pressure .....	7
Stress .....	7
Exercise .....	8
Smoking.....	8
Alcohol .....	9
Dental .....	10
Mammography .....	10
Smoking during pregnancy.....	11
Injury control .....	11
Radon .....	12
Child health and safety.....	12
Trends .....	15
Overweight .....	15
Exercise .....	15
Cancer prevention .....	15
Blood pressure .....	16
Stress .....	16
Smoking.....	17
Smoking during pregnancy.....	17
Alcohol .....	17
Injury control .....	18
Demographic characteristics .....	18
References.....	21
List of detailed tables .....	23

## Appendixes

I.	Technical notes on methods .....	67
II.	Definitions of certain terms used in this report .....	84
III.	Questionnaire—selected items .....	87

### Text tables

A.	Percent of children 4 years of age and under who were brought home from the hospital in a car seat following birth and percent who wore seatbelts or were buckled in a car safety seat all or most of the time when riding in a car, by selected characteristics: United States, 1990 .....	12
B.	Percent of children 5–17 years of age who wore seatbelts all or most of the time when riding in a car, by selected characteristics: United States, 1990 .....	12
C.	Percent of children 9 years of age and under who were living in households where the telephone number of a poison control center was available and percent living in households where ipecac syrup was available, by selected characteristics: United States, 1990 .....	13
D.	Percent of children 4 years of age and under who were ever breast fed and percent 6 months–4 years of age who were breast fed for at least 6 months, by selected characteristics: United States, 1990 .....	13
E.	Percent of women aged 40 and over who ever had a mammogram, by age, education, and income: United States, 1987 and 1990 .....	15
F.	Changes between 1985 and 1990 in the proportion of U.S. adults aged 18 and over, reporting selected unfavorable health practices: Ratio of the proportion reporting the practice in 1990 to the proportion reporting the practice in 1985 .....	18
G.	Changes between 1985 and 1990 in the proportion of U.S. adults aged 18 and over, reporting selected favorable health practices: Ratio of the proportion reporting the practice in 1990 to the proportion reporting the practice in 1985 .....	19

### Figures

1.	Percent of women aged 40 years and over who ever had a mammogram, by education and income: United States, 1987 and 1990 .....	16
2.	Percent of women 18–44 years of age who smoked 12 months prior to birth of last child: United States, 1985 and 1990 .....	17

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#### 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 (more than 30-percent relative standard error in numerator of percent)
#	Figure suppressed to comply with confidentiality requirements

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# Health Promotion and Disease Prevention: United States, 1990

by Andrea L. Piani, M.A., and Charlotte A. Schoenborn, M.P.H., Division of Health Interview Statistics

## Introduction

Reducing morbidity and mortality through health promotion and disease prevention (HPDP) measures gained momentum with the release of *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention* (1). Based on the Surgeon General's findings, national health objectives were set for 1990 (2); implementation plans for attaining the objectives were designed (3); and progress was measured using data collected in the 1985 National Health Interview Survey (NHIS) of Health Promotion and Disease Prevention (4). (See 1985 series 10 #163 for history.) Because substantial progress was made toward achieving the 1990 objectives, new health objectives were set for the year 2000. The new objectives are outlined in *Healthy People 2000: National Health Promotion and Disease Prevention Objectives* (5).

This report presents an update of the *Health Promotion and Disease Prevention: United States, 1985* series 10 publication (6). As with the 1985 report, the 1990 report measures the prevalence of selected health promotion and disease prevention knowledge and practices. Data from this report can be used to assess achievement of some of the 1990 health objectives. An additional section discusses trends between 1985 and 1990 for selected topics.

A brief literature review follows, covering the health promotion and disease prevention topics included in this report: general health habits, high blood pressure, stress, exercise, smoking, alcohol consumption, dental care, mammography, smoking during pregnancy, injury control, and radon.

### General health habits

General health habits presented in this report are: eating breakfast, snacking between meals, obesity, and breast self-examinations (BSE). Eating breakfast, not eating between meals, and maintaining desirable weight have been found to be associated with lower rates of mortality in earlier studies (7). Monthly BSE increases chances of early detection of breast cancer. Studies have shown that among women who do BSE, tumors at diagnosis are generally smaller and breast cancer mortality is reduced (8).

### Blood pressure and blood cholesterol

High blood pressure and high blood cholesterol have been linked to coronary heart disease, hypertension, and stroke (5). Studies have shown that hypertension is more prevalent among minorities and older persons (9,10). In recognition of the importance of these conditions, national education programs have been implemented to reduce high blood pressure and high blood cholesterol in the United States population (11,12).

### Stress

Lazarus defined stress as "an inharmonious fit between the person and the environment, one in which the person's resources are taxed or exceeded, forcing the person to struggle, usually in complex ways, to cope" (13). Life events and hassles of everyday living have been identified as the two main sources of stress (13,14). Several recent studies have examined the effect of occupational stress on individuals (15,16). Other studies have focused on the relationship between stress and illness (17-19). This report examines personal perceptions of stress in one's life and the effect of stress on one's health.

### Exercise

The role of exercise in maintaining health and preventing disease has been well documented (5). Risks of developing coronary heart disease, hypertension, and osteoporosis are higher among physically inactive individuals (20). Obesity and depression are also associated with lower levels of physical activity (5,21). Shephard suggests that exercise may act as a catalyst in promoting healthy lifestyle changes (22).

Some studies have indicated that moderate intensity exercises (such as walking, climbing stairs, and gardening) are preferred over high intensity exercises (such as jogging) (23). One moderate intensity activity, walking for exercise, has gained popularity among U.S. adults.

### Smoking and smoking during pregnancy

Deaths from lung cancer, coronary heart disease, stroke, and obstructive pulmonary disease are more likely to occur among smokers than nonsmokers (24). Many

deaths could be prevented and the onset of life-threatening diseases delayed by reducing the numbers of persons who smoke.

Furthermore, smoking during pregnancy can adversely affect the unborn child. Low birth weight, fetal and perinatal mortality, congenital malformations, and long-term effects on mental development are more likely among babies born to mothers who smoke than babies whose mothers abstain from smoking while pregnant (24–26).

Data from the 1987 NHIS on Cancer indicated that health concerns were the most common reasons given by current smokers and former smokers for quitting or trying to quit smoking. The same report found that smokers knew less about specific health consequences of smoking than nonsmokers (27). Programs geared toward educating current smokers on the consequences of smoking may help to further reduce the number of persons in the United States who smoke.

## **Alcohol**

The association between alcohol and the following health conditions is well documented: liver cirrhosis (28–30), cancer (31,32), pancreatitis (33,34), and neurological disorders (35–38). Alcohol misuse has been shown to be positively associated with the prevalence of other health risk behaviors (39).

Another adverse health consequence of alcohol use is Fetal Alcohol Syndrome (FAS). Babies born to mothers who drink heavily while pregnant are at a higher risk of suffering from FAS. In 1990, the rate of infants born with FAS was .40 per 1,000 births (40).

Alcohol was involved in almost one-half of all automobile-related deaths (5). Media coverage and improved legislation have helped to reduce prevalence of driving after drinking and consequently the number of automobile deaths associated with this behavior (5).

## **Dental care**

Prevalence of having had a recent dental visit, prevalence of edentulism, and knowledge of the importance of dental sealants in preventing tooth decay are examined in this report. The utilization of dental services on a regular basis can greatly enhance oral health. “Dental visits provide not only access to routine diagnosis and treatment, but also exposure to education and prevention measures” (5). Income and education have been shown to be positively associated with annual dental visits (41). Black persons and Hispanic persons have been found to be less likely to have had a dental visit in the last 12 months compared with white persons and non-Hispanic persons (41).

Edentulism, or complete tooth loss, is most prevalent among low income persons aged 65 years and older (5). Health objectives for the year 2000 are aimed at reducing edentulism among persons in this older age group. Permanent tooth loss “can be prevented through education, regular

dental care, and early diagnosis and prompt treatment of diseases and conditions that lead to tooth loss” (5).

Dental sealants have been shown to reduce the incidence of tooth decay, especially among children (5). Although still quite low among all children, evidence suggests that dental sealants are more common among white children (12.4 percent of children aged 2–17) than black children (4.2 percent) (41).

## **Mammography**

“In 1990, an estimated 44,000 women will die of breast cancer, while 150,000 new female cases will be diagnosed” (42). These statistics from the American Cancer Society demonstrate the need for early detection of breast cancer. Mammography, a procedure that can detect lumps about 2–3 years sooner than would be possible by manual breast self-examination (42), can significantly aid in the early detection of breast cancer. The American Cancer Society recommends that all women have a baseline mammogram between the ages of 35 and 40 years. Between ages 40 and 49 years, they recommend mammograms every 1 to 2 years, depending on the presence of risk factors. At ages 50 years and over, annual mammograms are recommended (42).

## **Injury control**

The use of two injury control devices, smoke detectors and seatbelts, are examined in this report. The importance of smoke detectors is underscored by statistics that show that fatalities from fires are less common in homes with working smoke detectors than in homes without a working smoke detector (5,43).

Wearing seatbelts substantially reduces the risks of death and serious injuries associated with automobile crashes (5). Legal sanctions have been passed in many States that require the use of seatbelts while riding in a car (5). States without mandatory seatbelt laws are being encouraged to implement legislation requiring the use of seatbelts (5).

## **Radon**

Radon is a tasteless, odorless, colorless, radioactive gas formed from the natural decay of uranium in the soil (44). Members of the National Academy of Sciences with support from the U.S. Environmental Protection Agency and the U.S. Nuclear Regulatory Commission examined the relationship between radon and lung cancer (45). After reviewing data collected on coal miners in four geographical areas and examining the results of radon laboratory tests, they concluded that exposure to radon is associated with higher risks of developing lung cancer. It is estimated that radon causes about 14,000 deaths per year (44).

# Highlights

Highlights of the data contained in this report for 1990 are summarized in the following statements:

- Forty percent of black women compared with 24 percent of white women were significantly overweight.
- In the past year, 50 percent of women had had a Pap smear and 53 percent of women reported having had a breast examination by a health professional.
- Eighty-eight percent of U.S. women reported that they knew how to do breast self-examinations (BSE), but only 43 percent actually did the procedure 12 or more times a year.
- Thirty-two percent of men and 40 percent of women aged 65 years and over reported having had two or more elevated blood pressure readings.
- Over one-half (53 percent) of persons 18 years of age and older reported having ever had their blood cholesterol checked.
- Fifty-seven percent of U.S. adults experienced at least a moderate amount of stress in the past 2 weeks; 41 percent felt that stress had had at least some effect on their health.
- Twenty-eight percent of men currently smoked cigarettes compared with 23 percent of women.
- Ten percent of men and 2 percent of women drank an average of two or more alcoholic drinks per day.
- About 87 percent of female college graduates had heard of fetal alcohol syndrome compared with 53 percent of women who had not finished high school.
- Only 1 percent of men aged 18–29 had no permanent teeth compared with 31 percent of men aged 65 and over.
- Thirty-eight percent of college graduates knew that dental sealants helped prevent tooth decay compared with about 7 percent of persons who had not finished high school.
- In 1990, 58 percent of women 35 years of age and over had ever had a mammogram and 51 percent had had a mammogram in the past 3 years.
- Among women aged 18–24 years, 35 percent of white women had smoked during pregnancy in contrast with 13 percent of black women.
- About 82 percent of college graduates wore seatbelts regularly compared with about 56 percent of persons who had not graduated from high school.
- Seventy-four percent of white adults and 49 percent of black adults had heard of radon.

- Rates of seatbelt use among children 5–9 years of age were lower (76 percent) than rates for use of child safety seats for infants and preschoolers (87 percent).
- Among children 9 years of age and under, 58 percent lived in households where the respondent reported having the telephone number of a poison control center in their area and 31 percent lived in households with ipecac syrup available.

Highlights of trends between 1985 and 1990 are summarized in the following statements:

- White children were more than twice as likely as black children to have been breast fed and almost three times more likely to have been breast fed 6 months or longer.
- The percent of adults who were 20 percent or more above desirable weight increased from 24.0 percent in 1985 to 27.5 percent in 1990.
- Among women who knew how to do BSE, the percent who actually did the procedure at least 12 times a year increased 5.8 percentage points between 1985 and 1990.
- Prevalence of ever having had a mammogram increased approximately 23 percentage points among women aged 40 and over, from 38 percent in 1987 to 61 percent in 1990.
- Mammogram procedures increased more among women living in households with incomes of \$35,000 or more than among women living in households with incomes of less than \$10,000.
- The percent of persons 18 years of age and over who currently smoked cigarettes decreased from 30.1 percent in 1985 to 25.5 percent in 1990.
- Driving after having had too much to drink declined among current drinkers from 16.9 percent in 1985 to 12.3 percent in 1990.
- In 1985, 36 percent of U.S. adults wore seatbelts the majority of the time while riding in a car, while in 1990, 67 percent of persons wore seatbelts regularly.
- In 1990, 91 percent of children 4 years of age and under were brought home from the hospital in a car seat following birth, up from 61 percent in 1985.
- The number of persons who were protected by at least one working smoke detector in their home increased from 60.2 percent in 1985 to 78.6 percent in 1990.



# Sources and limitations of data

The data presented in this report are based on the 1990 National Health Interview Survey of Health Promotion and Disease Prevention (HPDP). The NHIS is a continuous, nationwide, household interview survey of the civilian noninstitutionalized population of the United States, conducted by the National Center for Health Statistics (NCHS). Interviews are conducted for NCHS by the interviewing staff of the U.S. Bureau of the Census. The sample is selected so that a national probability sample of households is interviewed each week throughout the year, permitting production of annual estimates without seasonal bias. Information is obtained about the health and socio-demographic characteristics of each household member.

The NHIS consists of two parts: The basic health and sociodemographic section, which remains the same every year; and the special topics section, which changes from year to year. In 1985, and again in 1990, Health Promotion and Disease Prevention was a special topic.

The interviewed sample for 1990 for the basic health questionnaire was composed of 46,476 households containing 119,631 persons. The total noninterview rate was 4.5 percent: 2.7 percent was the result of respondent refusal, and the remainder was primarily the result of failure to locate an eligible respondent at home after repeated calls. For the HPDP section, one adult per family was randomly selected to respond and self-response was required. There were 41,104 completed HPDP questionnaires, representing an estimated 87.3 percent of eligible respondents. The final response rate, including both core and HPDP (95.5 x 87.3) was 83.4 percent.

The HPDP section was a collaborative effort of a number of Federal agencies. The following agencies provided partial funding, participated in the planning and development of the questionnaire, or both:

Office of the Assistant Secretary for Health  
Office of Disease Prevention and Health Promotion  
Office of Smoking and Health  
Alcohol, Drug Abuse, and Mental Health Administration  
National Institute on Alcohol Abuse and Alcoholism  
National Institutes of Health  
National Heart, Lung, and Blood Institute  
National Cancer Institute  
National Institute of Dental Research  
National Institute of Child Health and Human Development  
National Institute of Mental Health

Health Resources Administration  
Division of Maternal and Child Health  
Centers for Disease Control  
Center for Chronic Disease Prevention and Health Promotion  
Center for Environmental Health and Injury Control  
Center for Prevention Services  
Center for Infectious Diseases  
Center for Health Promotion and Education  
Environmental Protection Agency  
Radon Division  
Food and Drug Administration  
Office of Nutrition and Food Services  
Department of Transportation  
Office of Driver and Pedestrian Research  
The President's Council on Physical Fitness

In 1985, the NHIS adopted several new sample design features although, conceptually, the sampling plan remained the same as in the previous design. Details on these changes are given in appendix I.

A description of the survey design, the methods used in estimation, and general qualifications of the data obtained from the survey are presented in appendix I. Because the estimates shown in this report are based on a sample of the population, they are subject to sampling errors. Therefore, particular attention should be paid to the section "Reliability of estimates." Sampling errors are generally low. However, for some statistics where the subgroup is particularly small or the percentages are very low, sampling errors may be quite high. Formulas for computing sampling errors are shown in appendix I.

For some tables, such as desirable weight and alcohol consumption, a number of questions were combined into a constructed variable in order to allow for a more meaningful interpretation of the data. These constructed variables, along with other terms used in this report, are defined in appendix II.

The HPDP sample consisted of adults 18 years of age and over, randomly selected from the basic NHIS household sample. One adult per family was selected. For the most part, the HPDP questionnaire contained questions concerning behaviors and opinions of the sample person — with two exceptions. The first exception was the section on smoking during pregnancy. Here the sample person was asked if there were any females aged 18–44 years in the

household and, if so, if they had given birth during the past 5 years or were currently pregnant. If, according to the HPDP respondent, any household member met these criteria, the interviewer administered the smoking-in-pregnancy questions directly to her. All appropriate female household members were interviewed and self-response was required. Callbacks and telephone contacts were made as necessary.

The second exception was the section on child health and safety. When the question pertained to children's behavior, such as the use of seatbelts or breast feeding, information was obtained (from the HPDP respondent) for each child in the household. For each question concerning children, the relationship between the HPDP respondent and the child (parent or nonparent) was obtained. For 79 percent of the children, information was based on parental report. In this report all data for children are limited to information provided by the child's parent. Data from respondents other than the child's parent were excluded on the assumption that other household members would not be sufficiently knowledgeable about health behaviors affecting other people's children.

In 1985, and again in 1990, the HPDP questionnaire covered a wide range of topics. Subjects of interest in the 1990 HPDP survey include: pregnancy and smoking, general health habits (such as nutrition and preventive health care), mammography, injury control and child safety and health, radon, high blood pressure, stress, exercise, smoking, alcohol use, and dental care. The 1990 HPDP closely follows the format and content of the 1985 HPDP. (See appendix I for discussion of questionnaire availability.) The two surveys, although very similar, do differ in a few respects. One topic covered in 1985, occupational health and safety, was omitted in 1990. New topics for 1990 include mammography and radon (appendix III). In this report, data on these health-related behaviors and knowledge are presented according to sex, age, and other selected characteristics. The emphasis is on detailing sociodemographic variations in knowledge and behaviors.

Because of space limitations, this report does not show full detail on the health promotion variables; in-

stead, a key behavior or attitude is described in each area, such as the proportion who ate breakfast "almost every day" in the area of breakfast. It should be kept in mind that interpretations might have differed somewhat if a different category of the variable had been selected for presentation. For example, in the question on perceived physical activity level, three response categories were possible—less active, more active, and about the same. If a large portion of Group 1 reported "the same," and very few in Group 2 gave this response, Group 2 might appear to be both more active and less active than Group 1.

For most tables, persons for whom information is missing are excluded from the analysis. The exception is questions of knowledge in which "don't know" is a valid response. Because of the exclusion of unknowns, the denominators for each cell vary from table to table. Due to the large number of tables in this report, it is impossible to present exact cell sizes for all tables for the calculations of standard errors. There are 14 different subpopulations (for example, overweight persons, current smokers, current drinkers, and so forth) in text tables A-G and tables 1-41. Fourteen population tables are included in appendix I, showing the size of each subpopulation, including unknowns. The four subpopulations of children are shown in table XII. Using these population figures, standard errors calculated with the formulas provided in appendix I will be slightly underestimated. As unknowns are relatively few in most cases, the impact of this underestimation is negligible.

In this report, terms such as "similar" and "no difference" mean that there is no statistically significant difference between the measures being compared. Terms relating to difference (for example, "greater than" or "less than") indicate that differences are statistically significant. The t-test, with a critical value of 1.96 (0.05 level of significance), was used to test all comparisons. Lack of comment regarding the difference between any two statistics does not mean the difference was tested and found to be not significant.

# Findings

## General health habits

### Nutrition

More than one-half of U.S. adults (56 percent) ate breakfast almost every day (table 1). Prevalence of eating breakfast was higher in the older age groups: Persons 65 years of age and over were almost twice as likely as adults under age 30 to eat breakfast daily. White persons were more likely to eat breakfast daily than black persons, the racial differences being particularly striking for women; about 60 percent of white women compared with 47 percent of black women reported eating breakfast almost every day.

Table 2 shows that about one-fourth (26 percent) of adults rarely or never ate snacks. The percent of persons who rarely or never ate snacks increased with age. For example, 19 percent of men aged 18–29 years claimed to rarely or never eat snacks compared with 34 percent of men aged 65 and over. Overall, men and women living in the West were less likely to eat snacks than persons living in other regions of the country. In most age groups, formerly married persons were less likely to eat snacks than either currently married or never married individuals.

According to a national consensus of experts, being significantly overweight may be defined as 20 percent above desirable body weight for height (46). The two terms are used interchangeably in this discussion. In 1990, almost one-third (28 percent) of U.S. adults were 20 percent or more above their desirable weight (table 3). Prevalence of significant overweight varied according to sociodemographic characteristics. For example, about one-third of men and women in the middle years, aged 45–64, were 20 percent or more above desirable weight compared with 20 percent of men and 16 percent of women in the age group 18–29. Marked racial differences in prevalence of overweight were noted for women: 40 percent of black women compared with 24 percent of white women were significantly overweight; 54 percent of middle-aged black women were significantly overweight compared with 32 percent of white women in the same age group. For regional groups, persons living in the West were least likely to be overweight (25 percent). Finally, overweight was associated with marital status for men but not for women. Currently married men were more likely to be overweight (33 percent) than either formerly married (26 percent) or

never married (19 percent) men. Although for the total adult female population, overweight was more prevalent among formerly married women; the association was not consistent across age groups.

Snacking habits of overweight adults (table 4) closely parallel those of the general population discussed earlier (table 2). Eating fewer snacks was somewhat less common among overweight persons than among adults in general, but the differences were not great. Of overweight adults, 22 percent rarely or never ate snacks (table 4) compared with 26 percent of all adults (table 2).

Data on attempts by overweight persons to lose weight are shown in table 5. In 1990, about 53 percent of overweight persons were trying to lose weight. Overweight women were more likely to be currently trying to lose weight (62 percent) than were overweight men (45 percent). Among men, overweight persons with more years of education were more likely to be trying to lose weight than overweight persons with fewer years of education. Overweight persons in the South, both men and women, were less likely to be trying to lose weight than their counterparts in other regions of the country.

### Preventive care

Table 6 indicates that one-half of U.S. women had had a Pap smear within the past year, with younger women much more likely than older women to have had one within this interval. Women with higher levels of education were more likely to have had a Pap smear in the past year than women with fewer years of education. Among women aged 18–29, black women were more likely than white women to have had a Pap smear in the past year.

More than one-half (53 percent) of U.S. women reported having had a breast examination by a health professional in the past year. Younger women were more likely to have had one than older women. The percentages ranged from 62 percent of women aged 18–29 years to 42 percent of women aged 65 years and over. Having had a breast examination was positively associated with years of education: 43 percent of women with less than 12 years of education had had a breast examination compared with 60 percent of women with post-high-school education. Black women aged 18–29 were more likely than white women in the same age group to have had a breast examination in the past year.

In combination with examination by a health professional, BSE is widely recognized as an important practice for early cancer detection. In 1990, 88 percent of female respondents said they knew how to do BSE, but only 43 percent of those who knew the procedure said they did it 12 or more times a year (table 7). Knowledge of BSE was highest among college graduates (94 percent) and lowest among women who had not completed high school (77 percent). Actual practice of BSE among those who knew how to do it, however, did not show any clear association with level of educational attainment. Racial differences in the prevalence of knowledge of BSE were not found for women in the younger age groups, but among women 65 years and over, white women were more likely to know the procedure (82 percent) than black women (68 percent). Interestingly, among women who knew how to examine their own breasts, black women were more likely (51 percent) than white women (42 percent) to actually do so. Hispanic women were less likely to know BSE (75 percent) than non-Hispanic women (89 percent), but among those who knew the procedure, Hispanic and non-Hispanic women were about equally as likely to practice it regularly.

## High blood pressure

In 1990, 87 percent of U.S. adults had had their blood pressure checked within the past year (table 8). Women were more likely (91 percent) than men (83 percent) to have had their blood pressure checked within this period. The sex difference was particularly marked among persons under the age of 30: 78 percent of young men had had their blood pressure checked compared with 92 percent of young women. Young Hispanic men had the lowest reporting of blood pressure checkups of all ethnic or racial groups studied: 69 percent of Hispanic men aged 18–29 years had had their blood pressure checked in the past year compared with 79 percent of young non-Hispanic men and 83 percent of men overall.

About 16 percent of adults (15 percent of men and 17 percent of women) reported that they had been told on at least two occasions that they had high blood pressure (table 9). Persons without a high school education were more likely to report high blood pressure readings (25 percent) compared with persons with a high school education or more (16 and 13 percent, respectively). In this discussion, persons who have ever had two elevated blood pressure readings will also be referred to as “ever-hypertensive.”

In the age group 65 years and over, 32 percent of men and 40 percent of women reported having had elevated blood pressure readings at least twice. Elevated blood pressure readings were less common among persons under 30 years of age—only 4 percent of persons in this age group reported two or more high readings. Black persons were more likely to report high blood pressure than were white persons. Among black women aged 45–64 years, 41 percent reported having had two elevated blood pres-

sure readings compared with 23 percent of white women in the same age group. Formerly married persons were more likely to report high blood pressure readings (27 percent) than either currently married (16 percent) or never married (7 percent) individuals.

Table 10 shows that about 62 percent of ever-hypertensive men and about 71 percent of ever-hypertensive women were currently taking medicine for hypertension. Medication use was higher in the older age groups: About 13 percent of ever-hypertensive men under age 30 years were taking medication compared with 80 percent of men aged 65 years and over. Similarly, 15 percent of ever-hypertensive women under age 30 years take high blood pressure medication compared with 85 percent of women aged 65 and over.

Ninety-six percent of U.S. adults were aware that high blood pressure increases the risk of heart disease (table 11). Persons with higher education and higher income were more likely to recognize the association between high blood pressure and heart disease than persons in lower socioeconomic groups. Persons living in the West were somewhat less likely (93 percent) to be aware of this association compared with persons living in other regions.

About one-half (53 percent) of persons 18 years of age and older reported having ever had their blood cholesterol checked (table 12). Prevalence of blood cholesterol checks increased with age. Persons aged 45 and over were significantly more likely to have had their blood cholesterol levels checked than persons in the younger age groups. Persons with less than 12 years of education (45 percent) were less likely to report ever having had this test than college graduates (68 percent). Forty-one percent of low-income individuals reported having ever had their blood cholesterol checked compared with 65 percent of individuals with an income of \$50,000 or more. Significant racial and ethnic differences were found for both sexes, but were particularly noticeable among men: A higher percent of white males aged 65 and older had at least one cholesterol check (73 percent) compared with their black counterparts (50 percent). Among men of all age groups, 52 percent of non-Hispanics compared with 30 percent of Hispanics reported they ever had their blood cholesterol checked.

## Stress

More than one-half of U.S. adults (57 percent) experienced at least a moderate amount of stress in the 2 weeks preceding the date of interview (table 13). Persons with higher education and higher income were more likely to feel that they experienced stress than persons with lower education and income. White persons were substantially more likely to have experienced stress (59 percent) than black persons (48 percent). A similar difference exists among ethnic groups. Non-Hispanic persons were more likely to report at least a moderate amount of stress (58 percent) compared with Hispanic persons (45 percent). Currently employed men and women were more

likely to have experienced stress (63 percent) than unemployed persons (55 percent) or persons not in the labor force (45 percent).

Four in ten adults (41 percent) felt that stress had had at least some effect on their health in the past year (table 14). Women were more likely (47 percent) than men (34 percent) to believe their health had been affected by stress. Persons aged 65 years and over were less likely to report health effects from stress than persons in the younger age groups.

Despite the relatively high prevalence of stress in the population, only 13 percent of adults had sought help in the past year (either from a professional or nonprofessional source) for a personal or emotional problem (table 15). Women were almost twice as likely (16 percent) as men (9 percent) to have sought help for a personal or emotional problem. Men and women who had completed college were about twice as likely to have sought help (11 percent and 23 percent, respectively) as men and women with less than a high school diploma (6 percent and 11 percent, respectively). Twenty-nine percent of formerly married women aged 18–29 and 37 percent of formerly married women aged 30–44 had sought some kind of help in the past year. These two population groups had the highest rate of all population subgroups.

## Exercise

Forty-one percent of U.S. adults exercised or played sports regularly in 1990 (table 16). Across all age groups, persons with higher levels of education were more likely to exercise regularly than those with fewer years of education. Regular exercise was more prevalent among men (44 percent) than among women (38 percent). Differences in patterns of regular exercise were present among racial and ethnic groups. White persons were more likely to exercise or play sports regularly than black persons, with one exception: A higher percent of black males aged 18–29 (62 percent) reported they exercised regularly compared with white males in the same age group (55 percent). Additionally, non-Hispanic persons were more likely to exercise or play sports regularly (41 percent) than persons with Hispanic origin (35 percent).

Walking for exercise (table 17) was more prevalent among women than men: 49 percent of women had walked for exercise in the past 2 weeks compared with 41 percent of men. Young women, particularly, engaged in this activity—51 percent of women aged 18–29 years compared with 34 percent of men in the same age group. Persons in the Northeast and Midwest were more likely to walk for exercise (48 and 47 percent, respectively) than persons living in the South (44 percent) and West (43 percent).

Table 18 shows the prevalence of very physically active persons. The measure of physical activity used for this table was based on an approximation of average daily energy expenditure (leisure time activities only) over a 2-week period. The measure is described in detail in appendix II.

In 1990, about 29 percent of adults were very physically active in the 2 weeks prior to the interview, expending an average of 3 or more kilocalories per kilogram of body weight per day. Men were more likely to be active (37 percent) than women (23 percent). Among persons 30 years of age and over, college graduates were about twice as likely to be active as were persons with less than 12 years of education. Men and women living in the West were more likely to be active than persons living in other geographic regions of the country.

About 39 percent of the U.S. population had jobs or a main daily activity that required at least a moderate amount of physical work (table 19). A higher percent of men (44 percent) had a physically demanding job than women (35 percent). Among men under 45 years of age, about two-thirds of those with 12 years of education or less had physically demanding jobs in contrast with about one-fifth of college graduates.

Perceived level of physical activity relative to that of other persons the same age, shown in table 20, measures both people's perceptions of their own activity level and that of their peers and, as such, is a subjective assessment. About 38 percent of men and 28 percent of women judged themselves to be more physically active than other persons their own age (table 20). Persons with higher education and higher income were more likely to perceive themselves to be more physically active than were persons with lower education and income.

Although large numbers of Americans are exercising, knowledge of the level of exercise required for cardiovascular fitness is very limited. Many experts believe that exercise should be performed three times a week for 20 minutes per session in order to strengthen the heart and lungs. Slightly more than 5 percent of adults specified this level in the 1990 HPDP survey (table 21). Knowledge was more prevalent in the higher income and education groups but, even here, less than 10 percent of respondents were knowledgeable about the experts' recommendation. It should be noted that because of the very low prevalence of knowledge, data for several subgroups in table 21 are statistically unreliable.

## Smoking

About 26 percent of persons 18 years of age and over smoked cigarettes in 1990 (table 22). Men continue to have higher smoking rates than women. Twenty-eight percent of men compared with 23 percent of women were current smokers. Of all sex-age groups, men aged 30–44 years showed the highest smoking prevalence (34 percent). Lowest smoking rates were found among women aged 65 and over (12 percent). Overall, persons of Hispanic origin were less likely to report they currently smoked cigarettes than persons not of Hispanic origin. Hispanic women were less likely to say they smoked cigarettes (16 percent) than non-Hispanic women (23 percent). Smoking rates of Hispanic men and non-Hispanic men were not statistically different. Educational differ-

ences in smoking behavior were striking. For both men and women, those under 45 years of age who had not completed high school were 3 to 4 times as likely to be smokers as college graduates the same age. For example, 54 percent of men with less than 12 years of education aged 30–44 years were current smokers compared with 16 percent of men who had graduated from college. A similar relationship may be noted between smoking and income levels: Persons with lower family incomes were more likely to be smokers than persons with higher family incomes.

Smoking status also was found to be associated with marital status and employment status. Formerly married persons were more likely to smoke (30 percent) than either currently married (25 percent) or never married individuals (24 percent), and unemployed men and women were more likely to smoke than either currently employed persons or persons not in the labor force.

About one-fifth of current smokers smoked 25 cigarettes or more per day, considered here to be heavy smoking (table 23). Male smokers were more likely to smoke at this level (29 percent) than were female smokers (17 percent). Among both men and women, white smokers were significantly more likely than black smokers to smoke 25 cigarettes or more per day. Non-Hispanic smokers had substantially higher rates of heavy smoking (24 percent) than Hispanic smokers (7 percent).

Knowledge of the association between cigarette smoking and heart disease (table 24) was quite high in the general population. Ninety-one percent of U.S. adults recognized that smoking increases one's chances of getting heart disease. Younger persons and persons with higher education and higher income were more likely to be knowledgeable on this topic than older persons and persons with lower education and lower income. Even among population subgroups with relatively low prevalence of knowledge, however, estimates rarely fell below 80 percent. Awareness of the relationship was more prevalent among white than black adults and among non-Hispanic than Hispanic adults.

Table 25 shows the same data presented in table 24 but for smokers only. Overall, prevalence of knowledge of the association between smoking and heart disease was slightly lower among smokers (89 percent) than the prevalence in the total population (91 percent). Smokers aged 65 years and over, however, were much less likely to be aware of the heart disease risk associated with their smoking (about 75 percent) than the total population aged 65 and over (about 85 percent).

## Alcohol

Drinking an average of 1 ounce or more of ethanol per day (two drinks or more) was termed "heavier drinking" by the National Institute on Alcohol Abuse and Alcoholism in the mid-1980's (47–48). The same definition is used here for comparability with the 1985 report. Based on this definition, 10 percent of men and 2 percent of

women were heavier drinkers in 1990 (table 26). Heavier drinking was more prevalent among white men (10 percent) than among black men (8 percent). Among marital status groups, formerly married men under 65 years of age had the highest prevalence of heavier alcohol consumption (15–17 percent). Among men aged 18–29, the unemployed were more likely to engage in heavier drinking (21 percent) compared with currently employed men (10 percent) and men not in the labor force (10 percent).

Sixty-one percent of persons 18 years of age and over had had at least one drink of beer, wine, or liquor in the past year (table 27). Men were more likely to have had at least one alcoholic beverage (72 percent) than women (51 percent). Alcohol consumption is associated with education and income. Persons with higher socioeconomic status were more likely to be current drinkers than persons with less education and lower income. A significantly smaller percent of black persons reported they had had a drink in the past year (46 percent) than did their white counterparts (63 percent). Non-Hispanics (61 percent) were more likely than Hispanics (52 percent) to report they were current drinkers. The Hispanic/non-Hispanic differences were greater for women than men. Regional differences in alcohol consumption were evident. Persons who lived in the South (52 percent) were less likely to drink than persons who resided in the Northeast (66 percent), Midwest (66 percent), and West (63 percent). Across all age groups, currently employed and unemployed persons were more likely to have consumed one or more drinks during the last 12 months than individuals not in the labor force.

Data on self-reports of driving after having had too much to drink are shown in table 28. Twelve percent of current drinkers said they had driven a car one or more times in the past year after they had too much to drink. Male drinkers were more likely to have done so (16 percent) than female drinkers (8 percent). Rates for this practice were particularly high among male drinkers under 30 years of age—25 percent of this group said they had driven a car at least once after having too much to drink. Racial differences were noted, with white drinkers (13 percent) somewhat more likely to have driven a car after drinking too much than black drinkers (9 percent). Drinking and driving was more prevalent in the Midwest than in the Northeast, South, or West.

Heavy drinking is associated with increased risk of developing throat cancer. Table 29 shows that about 43 percent of U.S. adults were aware of this association, with knowledge among women slightly higher (45 percent) than among men (41 percent). Contrary to popular notions regarding the effects of socioeconomic status on health knowledge, persons with less than 12 years of education and persons earning less than \$10,000 were slightly more knowledgeable about the relationship between drinking and throat cancer than were persons at the higher ends of the education and income ranges. Also interesting was the finding that black persons were more likely to be aware of the association between heavy drinking and throat cancer

than were white persons. Knowledge was highest in the Northeast (47 percent) and lowest in the West (39 percent).

Respondents aged 18–44 years were asked whether they had ever heard of fetal alcohol syndrome (FAS), a syndrome associated with heavy drinking during pregnancy (table 30). Slightly more than one-half of men (55 percent) and about 73 percent of women had heard of the syndrome. Awareness increased with age. As one might expect, awareness of FAS was highest among persons with higher levels of education. About 87 percent of female college graduates had heard of FAS compared with 53 percent of women who had not finished high school. Educational differences were similar for men: 73 percent of college graduates had heard of FAS compared with 32 percent of those who had not graduated from high school. Awareness was also higher in the higher income groups compared with lower income groups (a range of 73 percent to 56 percent). Racial differences were observed: 67 percent of white adults aged 18–44 years were aware of FAS compared with 51 percent of black adults. Differences between Hispanic and non-Hispanic adults were even greater than differences between black and white adults. Only 35 percent of Hispanic men and 52 percent of Hispanic women had heard of FAS in contrast with 57 percent of non-Hispanic men and 75 percent of non-Hispanic women.

## Dental

As indicated in table 31, 63 percent of persons 18 years of age and over had gone to the dentist at least once in the past 12 months. Women were more likely to visit the dentist (66 percent) than men (59 percent). Persons with higher levels of education and income were more likely to have gone to the dentist than persons with lower socioeconomic status. Significant differences regarding the occurrence of at least one dental visit in the last 12 months are present among racial and ethnic groups. White and non-Hispanic persons were more likely to have had a dental checkup than black and Hispanic persons. Persons in the South were the least likely to have visited the dentist (57 percent) compared with persons living in the Northeast (67 percent), Midwest (65 percent), and the West (64 percent). Formerly married men and women were significantly less likely to have had a dental checkup than persons of other marital statuses. Compared with unemployed persons and persons not in the labor force, currently employed persons were notably more likely to report they had gone to the dentist at least once in the past 12 months.

In 1990, 11 percent of U.S. adults had lost all their permanent teeth (table 32). As expected, persons without any permanent teeth were concentrated in the oldest age group (65 and over). For example, only 1 percent of men aged 18–29 had no permanent teeth compared with 31 percent of men aged 65 and over. Similarly, 2 percent of women aged 18–29 years and 34 percent of women aged 65 years and older reported having lost all their teeth.

Having lost all of one's permanent teeth was associated with both education and income: Persons with less education and lower incomes were more likely to have lost all their permanent teeth compared with persons with more education and higher incomes. A significant racial difference was present among women aged 65 and over; 42 percent of black females in this age group were without any permanent teeth compared with 33 percent of their white counterparts.

In 1990, only 23 percent of U.S. adults were aware that dental sealants help prevent tooth decay (table 33). Knowledge was highest among persons 30–44 years of age and lowest among those aged 65 years and over. Thirty-eight percent of college graduates knew that dental sealants helped prevent tooth decay compared with about 7 percent of persons who had not finished high school. A similar association was found with income: 35 percent of persons in the highest income group were aware of the function of dental sealants compared with 10 percent of persons in the lowest income group. White persons and non-Hispanic individuals were about twice as likely to know about dental sealants as black persons or persons of Hispanic origin. Regional differences were also observed, with knowledge being highest in the Midwest. Finally, currently married individuals exhibited higher prevalence of knowledge (27 percent) than formerly married persons (17 percent) and those who had never been married (17 percent).

## Mammography

Mammogram questions were asked of women aged 35 years of age and over. In 1990, 58 percent of women 35 years of age and over had ever had a mammogram (table 34). The percent of women who ever had a mammogram increased with age until age 60, at which age, the percent of women reporting this procedure declined. Sixty-eight percent of women aged 50–59 reported they ever had a mammogram—the highest rate of any age group. Women with higher levels of education and more income were more likely to have ever had a mammogram than women with lower levels of education and less income. A higher percent of white women (59 percent) had ever had a mammogram compared with black women (51 percent). A similar pattern emerges among ethnic groups. While 58 percent of non-Hispanic women had ever had a mammogram, only 49 percent of Hispanic women reported ever having had one. Currently married women were most likely to report they had a mammogram (62 percent) compared with both formerly married women (52 percent) and never-married women (47 percent). Sixty-one percent of currently employed women had ever had a mammogram compared with 53 percent of unemployed women and 55 percent of women not in the labor force.

Fifty-one percent of women had a mammogram in the past 3 years (table 35). Racial and ethnic differences in prevalence of having had a mammogram in the past 3 years were found. White women (52 percent) and non-



Hispanic women (51 percent) were more likely than black women (45 percent) and Hispanic women (42 percent) to have had this procedure done in the 3 years prior to the interview. Ethnic differences were particularly striking among women aged 40–49 years. Socioeconomic status was associated with the likelihood of having had a mammogram in the past 3 years. Women whose household income was \$50,000 or more were twice as likely to have had a mammogram within this time period as women whose household income was less than \$10,000. Additionally, college educated women were more likely than women with less education to have had a mammogram in the past 3 years.

Women who had ever had a mammogram were asked the following question, “Was your most recent mammogram done because of some breast symptom or condition, or as part of a routine checkup?” Table 36 shows that 78 percent of women who had ever had a mammogram reported having had the procedure done strictly as part of a routine checkup. Black women (83 percent) were more likely than white women (77 percent) to report having had a mammogram strictly as part of a routine checkup.

## Smoking during pregnancy

Questions related to smoking during pregnancy were asked of women aged 18–44 years who had given birth to a child within the past 5 years or who were currently pregnant. This analysis was limited to women who had already given birth. Table 37 shows that 24 percent of women who had given birth to a child in the past 5 years had smoked at some time during the 12 months preceding the birth. Sociodemographic differentials in this behavior were noteworthy. Thirty-nine percent of women 18–24 years of age with less than 12 years of education had smoked in the year before the birth of their last child compared with 7 percent of women aged 30–34 years with 16 years of education or more. Low income women were more than twice as likely to have smoked during their pregnancy (37 percent) as women in the highest income group (14 percent). Racial differences in smoking during pregnancy were found among young women. Among women aged 18–24 years, 35 percent of white women had smoked during pregnancy in contrast with 13 percent of black women. Non-Hispanic women were about twice as likely as Hispanic women to have smoked during pregnancy (26 percent versus 12 percent), with substantial differences persisting across all age groups. Finally, smoking during pregnancy was most common among women in the Midwest (29 percent) and least common among women in the West (18 percent).

Among women who were smoking when they learned they were pregnant (table 38), 23 percent quit smoking and 38 percent reduced the number of cigarettes they smoked. Women with more education were more likely to have quit than women with less education, but were not more likely to have reduced the number of cigarettes smoked. Many sociodemographic comparisons made for

other behaviors discussed in this report cannot be made for smoking during pregnancy because of the small number of women at risk (smoking when learned of pregnancy within past 5 years) and the resulting unreliability of the statistics.

## Injury control

Smoke detectors are well recognized as preventing unnecessary injury and death due to residential fires. In the HPDP, questions were asked about both ownership of smoke detectors and whether detectors were currently working. This report shows data on the owners of currently working smoke detectors. Table 39 shows that about 79 percent of persons 18 years of age and over had at least one working smoke detector in the home. Men and women did not differ significantly in this practice. Smoke detector ownership was most prevalent among persons 30–44 years of age. Ownership was associated with years of education: Persons with more years of education were more likely to have a working smoke detector than persons with fewer years of schooling. The difference between persons who were not high school graduates and persons who had completed high school and beyond is noteworthy. Only 67 percent of persons with less than 12 years of education had a working smoke detector compared with 78 percent of persons with 12 years and 85 percent of those with more than 12 years. Smoke detector ownership was related to family income, with persons in the highest income group significantly more likely to have a working smoke detector than persons in the lowest income group (88 percent versus 65 percent).

White adults were more likely (80 percent) to have a working smoke detector than black adults (71 percent) and non-Hispanic persons more likely (80 percent) than persons of Hispanic origin (66 percent). Regional differences in this injury control measure were also found. Persons living in the Northeast region of the country were most likely (84 percent) and persons living in the South were least likely (73 percent) to have a working smoke detector. Finally, currently married individuals were more likely to have a detector (81 percent) than formerly married (73 percent) or never married (75 percent) individuals.

In 1990, 67 percent of U.S. adults wore seatbelts all or most of the time when riding in a car (table 40). Women were more likely to wear seatbelts (71 percent) than were men (62 percent). Persons with higher levels of education were more likely to engage in this behavior than persons with fewer years of education: About 82 percent of college graduates wore seatbelts regularly compared with about 56 percent of persons who had not graduated from high school. The relationship between seatbelt use and family income paralleled that found for education. Persons at the highest income level were more likely to wear seatbelts (77 percent) compared with low income individuals (58 percent). Overall, black persons were less likely to wear seatbelts (58 percent) than white persons (68 percent). Racial differences were particularly great among women



**Table A. Percent of children 4 years of age and under who were brought home from the hospital in a car seat following birth and percent who wore seatbelts or were buckled in a car safety seat all or most of the time when riding in a car, by selected characteristics: United States, 1990**

Characteristic	Brought home in car seat	Wears seatbelts regularly
Total	91.0	86.9
<b>Sex</b>		
Male	90.9	86.5
Female	91.2	87.3
<b>Age</b>		
Less than 1 year	92.8	93.1
1 year	91.9	91.7
2 years	91.8	86.7
3 years	89.7	82.6
4 years	88.6	80.0
<b>Income</b>		
Less than \$10,000	79.3	73.5
\$10,000-\$19,999	87.0	80.4
\$20,000-\$34,999	92.7	87.1
\$35,000-\$49,999	95.6	93.6
\$50,000 or more	97.1	95.1
<b>Race</b>		
White	92.3	88.2
Black	84.6	78.9
<b>Hispanic origin</b>		
Hispanic	74.3	70.9
Non-Hispanic	93.9	89.6
<b>Geographic region</b>		
Northeast	88.3	86.6
Midwest	94.8	89.3
South	90.4	86.3
West	90.1	85.5

aged 30-44 years: 61 percent of black women in this age group wore seatbelts regularly compared with 75 percent of white women. Persons living in the West exhibited the highest rates of seatbelt use (73 percent) and persons living in the Northeast showed the lowest (60 percent). Married persons were more likely to wear seatbelts (69 percent) than were formerly married (66 percent) or never married (62 percent) persons. Unemployed individuals were less likely to wear seatbelts (58 percent) than either currently employed persons (67 percent) or those not in the labor force (67 percent).

## Radon

Approximately 71 percent of the U.S. population 18 years of age and over had heard of radon, a colorless, odorless gas found in nature that may cause cancer (table 41). Compared with men (75 percent) women were less likely (67 percent) to have ever heard of radon. Persons aged 30-64 years were more likely than younger or older adults to have heard of radon. Individuals with

**Table B. Percent of children 5-17 years of age who wore seatbelts all or most of the time when riding in a car, by selected characteristics: United States, 1990**

Characteristic	Wears seatbelts regularly
Total	71.0
<b>Sex</b>	
Male	70.0
Female	72.0
<b>Age</b>	
5-9 years	76.0
10-14 years	67.0
15-17 years	68.0
<b>Income</b>	
Less than \$10,000	53.0
\$10,000-\$19,999	59.0
\$20,000-\$34,999	70.0
\$35,000-\$49,999	77.0
\$50,000 or more	83.0
<b>Race</b>	
White	73.0
Black	59.0
<b>Hispanic origin</b>	
Hispanic	62.0
Non-Hispanic	72.0
<b>Geographic region</b>	
Northeast	71.0
Midwest	69.0
South	69.0
West	77.0

higher levels of education and income were more likely to have knowledge of radon than persons with lower levels of education and income. Racial and ethnic group differences in radon awareness were found. Only 49 percent of black persons had heard of radon compared with 74 percent of white persons. The ethnic differences were more pronounced: 34 percent of Hispanic persons knew of radon compared with 74 percent of individuals not of Hispanic origin. Currently married men and women were more likely to have knowledge of radon than both formerly married or never married individuals. Persons living in the Northeast (77 percent) and the Midwest (82 percent) were more likely to have heard of radon than persons living in either the South (65 percent) or the West (61 percent).

## Child health and safety

Table A shows the percent of children 4 years of age and under who were brought home from the hospital in a car safety seat and the percent who were buckled in a car safety seat or seatbelt all or most of the time when riding in a car. Ninety-one percent of children 4 years of age and under were brought home after birth in a car safety seat. Among children under 1 year of age, 93 percent had been

**Table C. Percent of children 9 years of age and under who were living in households where the telephone number of a poison control center was available and percent living in households where ipecac syrup was available, by selected characteristics: United States, 1990**

<i>Characteristic</i>	<i>Poison control number in household</i>	<i>Has ipecac in household</i>
Total	58.3	50.5
<b>Sex</b>		
Male	57.9	30.4
Female	58.7	30.6
<b>Age</b>		
0-2 years	57.3	31.1
3-4 years	57.9	32.7
5-6 years	60.9	31.5
7-9 years	57.7	27.6
<b>Income</b>		
Less than \$10,000	40.2	14.2
\$10,000-\$19,999	46.4	20.9
\$20,000-\$34,999	61.6	29.8
\$35,000-\$49,999	70.0	39.4
\$50,000 or more	69.2	44.9
<b>Race</b>		
White	61.5	33.5
Black	42.3	14.8
<b>Hispanic origin</b>		
Hispanic	33.6	13.0
Non-Hispanic	62.3	33.3
<b>Geographic region</b>		
Northeast	64.2	36.0
Midwest	66.7	33.4
South	50.9	26.0
West	55.4	29.6

transported in a car seat compared with 89 percent of those who were currently 4 years of age. Use of car safety seats immediately after birth was strongly related to level of family income: 79 percent of children from families with incomes less than \$10,000 were brought home from the hospital in a car seat, rising steadily to 97 percent among children whose families earned \$50,000 or more. White children were more likely than black children to have been transported in a car seat immediately after birth (92 percent versus 85 percent). Similarly, non-Hispanic children were more likely (94 percent) than Hispanic children (74 percent) to have been protected by child safety restraints at this earliest possible time.

Sociodemographic variations in current use of seatbelts among children 4 years of age and under paralleled those for use of safety seats immediately after birth: 87 percent of children in this age group rode in either a car safety seat or a seatbelt all or most of the time, ranging from 93 percent of children under 1 year of age to 80 percent of children aged 4 years. Higher income, white, and non-Hispanic children were more likely to be protected by seatbelts than were lower income, black, and Hispanic children.

**Table D. Percent of children 4 years of age and under who were ever breast fed and percent 6 months-4 years of age who were breast fed for at least 6 months, by selected characteristics: United States, 1990**

<i>Characteristics</i>	<i>Ever breast fed</i>	<i>Breast fed 6 months or more</i>
Total	52.1	24.0
<b>Sex</b>		
Male	52.5	23.6
Female	51.6	24.5
<b>Age</b>		
Less than 1 year	54.5	22.4
1 year	50.1	22.4
2 years	51.0	23.6
3 years	54.4	26.2
4 years	50.1	24.9
<b>Income</b>		
Less than \$10,000	30.3	9.8
\$10,000-\$19,999	45.5	20.9
\$20,000-\$34,999	50.1	22.2
\$35,000-\$49,999	63.5	31.3
\$50,000 or more	68.9	34.7
<b>Race</b>		
White	56.4	26.4
Black	24.6	9.7
<b>Hispanic origin</b>		
Hispanic	50.6	19.6
Non-Hispanic	52.6	24.9
<b>Geographic region</b>		
Northeast	50.5	23.7
Midwest	53.1	23.5
South	43.8	19.4
West	64.6	31.8

Rates of seatbelt use among children 5-17 years of age were lower (table B) than rates for use of child safety seats for infants and preschoolers shown in table A. Prevalence of seatbelt use was 76 percent among children aged 5-9 years, 67 percent among children aged 10-14 years, and 68 percent among children aged 15-17 years. As was the case with younger children, higher income, white, and non-Hispanic children were more likely to wear seatbelts than were lower income, black, and Hispanic children. Prevalence of seatbelt use among children aged 5-17 years was highest in the West (77 percent).

Another important area for child injury prevention is accidental poisonings. Data for two important poison control measures, knowledge of local poison control telephone numbers, and availability of syrup of ipecac in the household are shown in table C. Overall, 58 percent of children 9 years of age and under were living in households where the respondent reported having the telephone number of a poison control center in their area. Marked racial and ethnic differences in this practice were found. White children were more likely to be protected

(62 percent) than black children (42 percent) and non-Hispanic children more likely (62 percent) than Hispanic children (34 percent). Children living in the South were less likely to live in households in which a poison control number was available (51 percent) than in other regions of the country. Having a poison control number was also associated with family income: 40 percent of children in the lowest income group were living in households where a poison control number was known compared with about 62 percent of children in middle-income families (\$20,000–\$34,999) and about 70 percent of children in the highest income groups. Overall, 31 percent of children 9 years of age and under lived in households with ipecac syrup available. Only 15 percent of black children and 13 percent of Hispanic children were so protected compared with 34 percent of white children and 33 percent of non-Hispanic children.

Table D shows the percent of children 4 years of age and under who were ever breast fed and percent of children aged 6 months through 4 years who were breast fed for at least 6 months. Over one-half (52 percent) of

children under 5 years of age were breast fed for some period of time, but less than one-fourth (24 percent) of children aged 6 months to 4 years old were breast fed 6 months or longer. Prevalence of breast feeding increased steadily with income: 30 percent of children from families with incomes less than \$10,000 were ever breast fed (10 percent were breast fed 6 months or longer) compared with 69 percent of children from families with incomes of \$50,000 or more (35 percent of these children were breast fed at least 6 months). White children were more than twice as likely as black children to have been breast fed (56 percent versus 25 percent) and almost three times more likely to have been breast fed 6 months or longer (26 percent versus 10 percent). Differences between Hispanic and non-Hispanic children were small: 51 percent of Hispanic children had been breast fed at some time compared with 53 percent of non-Hispanic children. Among regions, children in the South were least likely to have been breast fed (44 percent). Children in the West were most likely to have been breast fed (65 percent) and to have been breast fed at least 6 months (32 percent).

# Trends

The following section discusses trends in prevalence of selected knowledge and behaviors presented in this report. It attempts to document the Nation's achievements in reaching some of the health promotion and disease prevention objectives set forth in 1980. Data from the 1985 HPDP are compared with data from the 1990 HPDP. Since mammography was not covered in 1985, data from the 1987 NHIS Cancer were used for these trend comparisons.

## Overweight

The percent of persons 18 years of age and older who were 20 percent or more above desirable body weight increased 3.5 percentage points, from 24.0 percent in 1985 to 27.5 percent in 1990. There were large racial differences among women in both years: Black women were much more likely to be 20 percent or more above desirable weight than white women. In 1990, black men were more likely to be overweight (35.1 percent) than white men (29.7 percent); in 1985, black and white men did not differ in prevalence of overweight.

Overweight persons were less likely to be currently trying to lose weight in 1990 (53.1 percent) than in 1985 (55.8 percent). In both 1985 and 1990, overweight women were more likely than overweight men to report they were currently trying to lose weight.

## Exercise

Overall, the percent of persons 18 years of age and older who exercised or played sports regularly remained fairly constant from 1985 to 1990. The largest increases in regular exercise were found among men aged 45 and over, the group of men least likely to exercise or participate in sports on a regular basis. The percent of persons who walked for exercise in the 2 weeks prior to the interview increased only slightly for all persons during the 5-year period. Women were still more likely than men to walk for exercise.

## Cancer prevention

Cancer prevention campaigns, on a national as well as a community level, appear to have encouraged more women to participate in preventive practices such as BSE and mammograms (49,50).

The percent of women 18 years of age and over who had had a Pap smear within the past 12 months increased from 45.6 percent in 1985 to 50.1 percent in 1990. The racial gap found in 1985 was also present in 1990: Black women (54.3 percent) were still more likely than white women (49.7 percent) to have had a Pap smear in 1990. The percent of women who had had a breast examination by a health professional also increased slightly during this time period.

Knowledge of BSE procedures remained fairly constant from 1985 to 1990 (87 percent and 88 percent, respectively). Of those who knew how to do BSE, the percent who actually did the procedure at least 12 times a year increased 5.8 percentage points between 1985 and 1990.

A significant rise in the percent of women aged 40 and over who had ever had a mammogram occurred between 1987 and 1990 (table E). Prevalence of ever having had a mammogram increased 22 percentage points among women aged 40 and over, from 39.3 percent in 1987 to 61.3 percent in 1990. The NHIS prevalence estimates are consistent with findings from the 1990 Behavioral Risk Factor

**Table E. Percent of women aged 40 and over who ever had a mammogram, by age, education, and income: United States, 1987 and 1990**

<i>Age, education, and income</i>	<i>1987</i>	<i>1990</i>	<i>Percentage point increase</i>	<i>Ratio of 1990 to 1987</i>
<i>Age</i>				
Total 40 years and over . . .	39.3	61.3	22.0	1.56
40-49 years . . . . .	42.2	64.3	22.1	1.52
50-59 years . . . . .	45.1	67.9	22.8	1.51
60-69 years . . . . .	39.2	61.7	22.5	1.57
70 years and over . . . . .	28.7	50.1	21.4	1.75
<i>Educational level</i>				
Less than 12 years . . . . .	26.0	46.1	20.1	1.77
12 years . . . . .	41.9	63.0	21.1	1.50
More than 12 years . . . . .	50.5	74.3	23.8	1.47
<i>Income</i>				
Less than \$10,000 . . . . .	25.4	42.5	17.1	1.67
\$10,000-\$19,999 . . . . .	33.8	53.3	19.5	1.58
\$20,000-\$34,999 . . . . .	43.4	63.6	20.2	1.47
\$35,000 or more . . . . .	51.3	74.5	23.2	1.45

NOTES: The 1987 statistics differ from those shown in Series 10, No. 172, which included unknowns in the denominator and were adjusted for race and age. The statistics in this table are unadjusted and excluded unknowns.

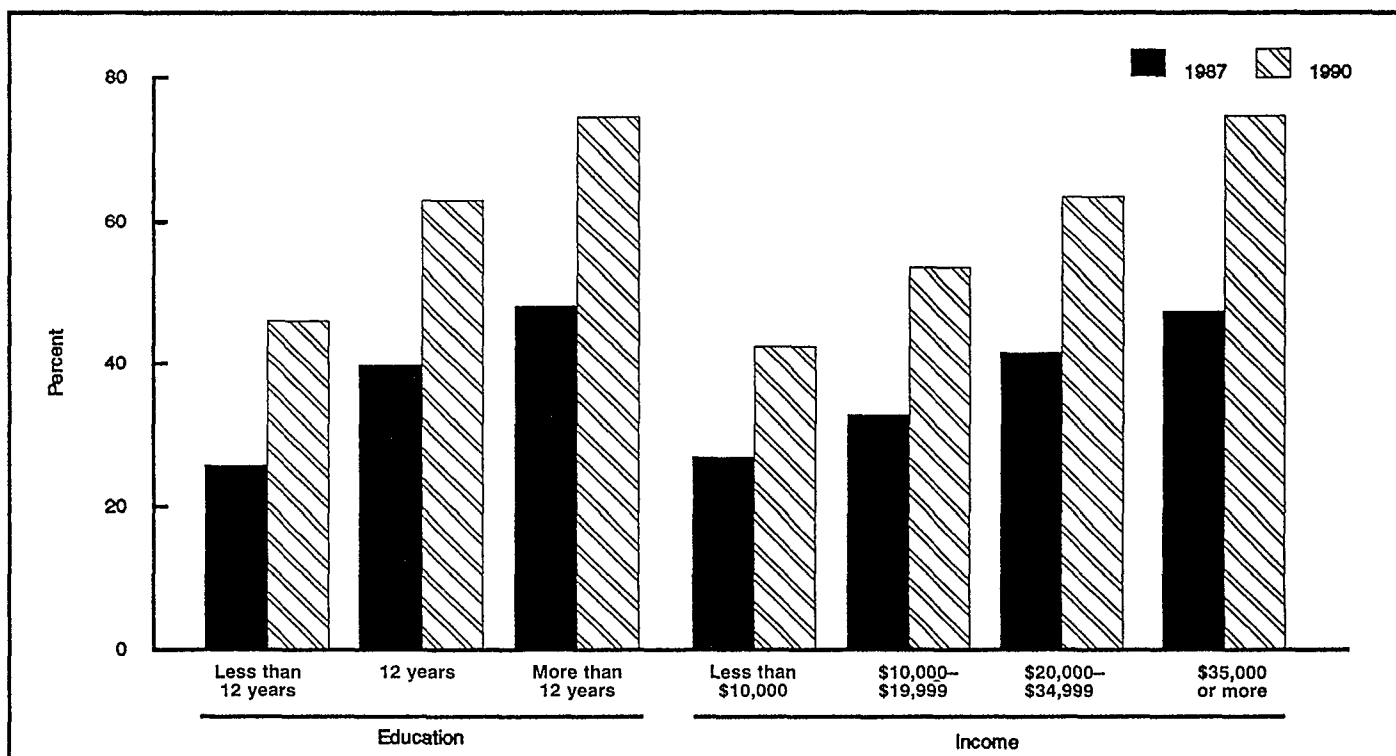


Figure 1. Percent of women aged 40 years and over who ever had a mammogram, by education and income: United States, 1987 and 1990

Surveillance Survey (BRFSS) (51), a survey which collects State-level health data. Currently, 33 States and the District of Columbia have a BRFSS in the field. This notable increase in mammograms during this short 3-year period may have resulted from the strong campaigns promoting mammograms on both community and national levels (49,50). Physicians are strongly encouraged to recommend mammography to patients. Training sessions have been designed to educate medical personnel on the importance of mammograms and to improve the skills of these professionals in detecting cancer through mammograms (52). Additionally, programs to subsidize mammograms have been implemented in many areas.

Higher levels of education and higher levels of income were associated with greater gains in the prevalence of mammograms among women aged 40 and over (figure 1). Larger percentage point increases occurred among women with more than 12 years of education (23.8 percent) compared with women with less than 12 years of education (20.1 percent). Women living in households with incomes of \$35,000 or more had a 23.2 percentage point increase in ever having had a mammogram from 51.3 percent in 1987 to 74.5 percent in 1990. The percent of women living in households with incomes of less than \$10,000 who ever had a mammogram increased only 17.1 percentage points from 25.4 percent in 1987 to 42.5 percent in 1990.

### Blood pressure

The data show only a 2.1 percentage point increase between 1985 and 1990 in the percent of persons 18 years

of age and over who had had their blood pressure checked in the past year. The large sex differences in prevalence of blood pressure checkups found in 1985 were again present in 1990. In 1990, 82.7 percent of men stated they had had their blood pressure checked in the past 12 months compared with 90.8 percent of women.

The percent of persons 18 years of age and over who were aware that high blood pressure increases one's chances of getting heart disease rose from 91.1 percent in 1985 to 95.6 percent in 1990. Large increases in awareness of the association between blood pressure and heart disease appeared among groups who were the least likely to know of this relationship in 1985: persons aged 65 and over, persons with less than 12 years of schooling, persons earning less than \$10,000, black persons, and persons of Hispanic origin. In 1990, awareness among these groups was at least 90 percent.

### Stress

The percent of persons aged 18 and over who had experienced at least a moderate amount of stress in the 2 weeks prior to the interview increased from 51.4 percent in 1985 to 57.1 percent in 1990. In 1990, women were still more likely (59.8 percent) than men (54.0 percent) to report experiencing at least a moderate amount of stress within the specified 2-week period.

Although compared with 1985, U.S. adults were more likely to report experiencing at least a moderate amount of stress in 1990, they were less likely to feel that stress had had some effect on their health in the past year. The

percent of persons who felt that stress had had at least some effect on their health in the past year decreased from 44.2 percent in 1985 to 40.6 percent in 1990.

The percent of persons who had sought help for a personal or emotional problem in the past year in 1985 (11.1 percent) stayed about the same in 1990 (12.5 percent).

## Smoking

The percent of persons 18 years of age and over who currently smoked cigarettes decreased from 30.1 percent in 1985 to 25.5 percent in 1990. In 1985, black persons were about 5.3 percentage points more likely (34.9 percent) than white persons (29.6 percent) to be current smokers. During the 5-year period, however, black persons showed a larger decrease (8.7 percentage points) than white persons (4.0 percentage points). Because of the large percentage point decline among black persons, the percent of black persons (25.6 percent) and white persons (26.2 percent) who reported they smoked in 1990 was about the same. The considerable decline in smoking among black persons can be attributed to the large percentage point decline in smoking among black women. Large racial differences still persisted between white and black men aged 30 and over.

The percent of current smokers 18 years of age and older who currently smoked 25 cigarettes or more per day declined from 26.6 percent to 22.9 percent between 1985 and 1990. In both years, black smokers and Hispanic smokers were much less likely to smoke 25 cigarettes or more per day than white smokers and non-Hispanic smokers.

Awareness that smoking increases one's chances of getting heart disease increased marginally (less than 2 percentage points) over the trend period. Among persons aged 18 and over, knowledge of this association was 89.8 percent in 1985 compared with 91.4 percent in 1990. A similar pattern in awareness of the relationship between smoking and heart disease was evident for current smokers aged 18 and over. Awareness of the higher chances of getting lung cancer associated with smoking was 87.5 percent for current smokers in 1985 and 88.9 percent in 1990.

## Smoking during pregnancy

The following trend data show a reduction in the proportion of women who smoked during the 12 months prior to the birth of their last child. Among women aged 18–44 who had given birth to a child in the past 5 years, in 1985 32 percent had smoked in the 12-month period prior to the birth compared with 24 percent in 1990. A large decline occurred among younger women aged 18–24 (10.8 percentage points), the age group of women most likely to smoke (figure 2). Significant racial and ethnic differences present in 1985 were still evident in 1990. White women and non-Hispanic women were still more likely to smoke during the 12-month period prior to the birth of their child than either black women or Hispanic women.

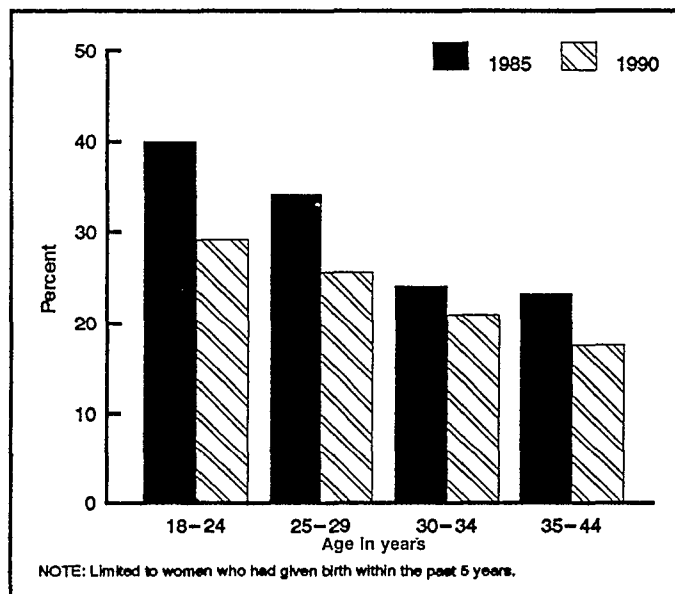


Figure 2. Percent of women 18–44 years of age who smoked in the 12 months prior to birth of last child: United States, 1985 and 1990

## Alcohol

Overall, the trends with respect to alcohol consumption and knowledge of some alcohol-related relationships and conditions look promising. The percent of persons 18 years of age and over who had consumed an average of 1 ounce or more of ethanol a day (the equivalent of two or more drinks a day of beer, wine, or liquor) declined between 1985 and 1990. In 1985, 7.7 percent of persons consumed this amount of alcohol compared with 5.5 percent of persons in 1990. In both 1985 and 1990, men were more likely than women to have had two or more alcoholic drinks a day in the specified 2-week period. The percent of men who consumed this much alcohol decreased from 13.1 percent in 1985 to 9.7 percent in 1990.

“The combination of drinking and driving,” as reported by the Surgeon General, C. Everett Koop, “claims one life every 20 minutes and injures hundreds every day” (53). The percent of current drinkers 18 years of age and over who had driven a car at least once in the past year after having had too much to drink declined from 16.9 percent in 1985 to 12.3 percent in 1990. Tougher legislation as well as the determination of various groups such as Mothers Against Drunk Drivers (MADD) to crack down on drinking and driving may have helped deter individuals from this potentially destructive behavior. A 16.5 percentage point decline was evident among men aged 18–29, earning \$50,000 or more. In 1985, this group was most likely to have driven after they had consumed too much alcohol: 42.0 percent of men in this age group with this income level reported they had driven a car in the past year when they thought they might have had too much to drink; in 1990, 25.5 percent stated they had driven under these conditions.

Knowledge of the relationship between heavy drinking and getting throat cancer increased from 39.6 per-

cent of adults in 1985 to 43.2 percent in 1990. Furthermore, in 1985, 55.6 percent of persons 18–44 years of age had heard of fetal alcohol syndrome (FAS), while in 1990, 64.3 percent had heard of this condition. Overall, awareness of FAS and knowledge of the relationship between heavy drinking and throat cancer is increasing among U.S. adults.

## Injury control

In 1985, 36 percent of all persons aged 18 and over wore seatbelts the majority of the time while riding in a car. In 1990, 67 percent of persons wore seatbelts all or most of the time when riding in a car. This rise in seatbelt usage coincides with the implementation of mandatory seatbelt laws in many States. As stated in *Healthy People 2000*, “Examination of motor vehicle crash deaths has proven that rates are reduced in those States with mandatory seatbelt use laws. An estimated 4,500 lives were saved in 1988 as a result of the 45-percent seatbelt use rate obtained nationwide, and 3,800 of those were in States that have mandatory laws” (5).

The percent of children 4 years of age and under who were brought home from the hospital in a car seat following birth increased greatly from 1985 to 1990. In 1990, 91 percent of children in this age group had left the hospital in a car seat, up from 61 percent in 1985. Racial

and ethnic differences still persist despite the dramatic increase in use of car seats across all groups. Black children and Hispanic children were still less likely to leave the hospital buckled-up in a car seat than white children and non-Hispanic children. Regular seat belt use among children 4 years of age and under rose 5.3 percentage points from 81.6 in 1985 to 86.9 in 1990.

As with the younger children, regular seatbelt usage among older children aged 5–17 rose during the 5-year period. Still, in 1990, a lower percent of older children aged 5–17 wore seatbelts all or most of the time (71 percent) compared with children aged 0–4 (86.9 percent). Income differences found in 1985 were still distinguishable in 1990.

“The risk of dying in homes without smoke detectors is approximately twice that of dying in homes protected with detectors” (5). Trends on the presence of smoke detectors in the home are favorable. The number of persons with at least 1 working smoke detector increased from 60.2 percent in 1985 to 78.6 percent in 1990.

## Demographic characteristics

Tables F and G show changes between 1985 and 1990 in the proportion of persons reporting selected health practices by sex, race, Hispanic origin, income, and education, expressed as a ratio of the proportion reporting a

**Table F. Changes between 1985 and 1990 in the proportion of U.S. adults aged 18 and over, reporting selected unfavorable health practices: Ratio of the proportion reporting the practice in 1990 to the proportion reporting the practice in 1985**

Characteristic	Unfavorable health practices				
	20 percent or more above desirable weight	Current smoker	Heavy drinker <sup>1</sup>	Drinking and driving <sup>1</sup>	Experienced at least moderate amount of stress
	Ratio of the proportion reporting practice in 1990 to the proportion reporting practice in 1985				
All persons 18 years of age and over . . . . .	1.15	0.85	0.71	0.73	1.11
Sex					
Male . . . . .	1.14	0.87	0.74	0.71	1.09
Female . . . . .	1.15	0.82	0.59	0.78	1.13
Race					
Black . . . . .	1.23	0.75	0.83	1.03	1.22
White . . . . .	1.14	0.86	0.72	0.72	1.11
Hispanic origin					
Hispanic . . . . .	1.18	0.89	0.70	0.70	1.12
Non-Hispanic . . . . .	1.15	0.85	0.72	0.73	1.12
Income					
Less than \$10,000 . . . . .	1.13	0.98	0.83	0.79	1.14
\$10,000–\$19,999 . . . . .	1.10	0.90	0.70	0.71	1.14
\$20,000–\$34,999 . . . . .	1.18	0.88	0.74	0.79	1.07
\$35,000–\$49,999 . . . . .	1.25	0.84	0.62	0.77	1.05
\$50,000 or more . . . . .	1.27	0.82	0.60	0.69	1.08
Education					
Less than 12 years . . . . .	1.07	0.90	0.75	0.83	1.13
12 years . . . . .	1.18	0.88	0.77	0.75	1.13
More than 12 years . . . . .	1.23	0.79	0.65	0.68	1.06

<sup>1</sup>Among current drinkers.

**Table G. Changes between 1985 and 1990 in the proportion of U.S. adults aged 18 and over, reporting selected favorable health practices: Ratio of the proportion reporting the practice in 1990 to the proportion reporting the practice in 1985**

Characteristic	Favorable health practices				
	Currently trying to lose weight <sup>1</sup>	Exercised or played sports regularly	Heard of fetal alcohol syndrome <sup>2</sup>	Wore seatbelts all or most of the time	One or more working smoke detectors in home
	Ratio of the proportion reporting practice in 1990 to proportion reporting the practice in 1985				
All persons 18 years of age and over . . . . .	0.95	1.02	1.16	1.87	1.31
Sex					
Male . . . . .	0.94	1.03	1.14	1.84	1.31
Female . . . . .	0.96	1.00	1.17	1.90	1.31
Race					
Black . . . . .	0.93	0.92	1.17	2.02	1.38
White . . . . .	0.96	1.02	1.15	1.86	1.29
Hispanic origin					
Hispanic . . . . .	0.90	0.98	1.36	1.70	1.48
Non-Hispanic . . . . .	0.95	1.02	1.16	1.89	1.30
Income					
Less than \$10,000 . . . . .	0.98	0.98	1.15	2.13	1.41
\$10,000–\$19,999 . . . . .	0.96	0.88	1.09	2.01	1.34
\$20,000–\$34,999 . . . . .	0.95	0.99	1.08	1.78	1.25
\$35,000–\$49,999 . . . . .	0.87	1.00	1.13	1.62	1.19
\$50,000 or more . . . . .	0.93	0.98	1.16	1.49	1.19
Education					
Less than 12 years . . . . .	0.95	1.06	1.23	2.25	1.40
12 years . . . . .	0.96	0.98	1.16	2.02	1.28
More than 12 years . . . . .	0.91	0.99	1.12	1.60	1.27

<sup>1</sup>Among overweight adults.

<sup>2</sup>Ages 18–44.

particular practice in 1990 to the proportion reporting the same practice in 1985. Thus, ratios greater than 1.00 represent increases in the prevalence of the practice over the 5-year period, and ratios of less than 1.00 represent decreases. In table F, ratios below 1.00 are considered positive steps toward reducing the prevalence of unfavorable health conditions and practices (for example, obesity, smoking, heavy smoking, drinking and driving, and stress). In table G, however, ratios above 1.00 are considered positive: increases in the prevalence of persons who are currently trying to lose weight, exercise regularly, have heard of FAS, use seatbelts regularly, and report the presence of at least one working smoke detector in the home.

Table F shows changes in the prevalence of the five unfavorable health practices and characteristics between 1985 and 1990. Findings were similar for men and women. On the negative side, prevalence of overweight went up for both men (1.14) and women (1.15); increases in stress were also found for both men (1.09) and women (1.13). The prevalence of other unhealthy behaviors (smoking, heavy drinking, and drunk drinking) declined for men and women.

Racial differences in the changes of these five health practices were observed. Increases in the percent of persons 20 percent or more overweight were greater for black persons (1.23) than for white persons (1.14). A large

decline in the prevalence of drinking and driving was found for white persons (.72), while the prevalence of this behavior stayed approximately the same for black persons (1.03).

Changes in the prevalence of selected health practices and conditions among Hispanic and non-Hispanic persons were similar in direction and magnitude. Both groups experienced large declines in the prevalence of smoking, heavy drinking, and driving after having had too much to drink.

Changes in the prevalence of selected health behaviors varied among persons with different levels of education and income. Increases in the percent of persons 20 percent or more above desirable weight were found among persons with all levels of education: persons with more than 12 years of education (1.23), high school graduates (1.18), and persons with less than 12 years of education (1.07). Heavy drinking declined among persons with all levels of income. The declines were greater for persons earning \$50,000 or more compared with persons earning less than \$10,000.

Table G shows changes between 1985 and 1990 in five favorable health practices. Changes in the prevalence of these practices were similar for men and women. While there was a decline overall in the prevalence of persons currently trying to lose weight, the prevalence of persons



who exercised regularly stayed about the same for men (1.03) and women (1.00). Both sexes showed substantial increases in regular seatbelt usage and in the likelihood of living in homes with a working smoke detector.

Changes in the prevalence of these five favorable health practices were similar for black persons and white persons. The percent of persons currently trying to lose weight declined among both black persons (.93) and white persons (.96). The prevalence of regular exercise decreased among black persons (.92) and stayed approximately the same for white persons (1.02). Increases in regular seatbelt use were substantial for black persons (2.02) and for white persons (1.86).

Changes in the prevalence of the health practices were evident among both Hispanic persons and non-Hispanic persons. The percent of persons currently trying to lose weight declined among persons of Hispanic origin (.90) and non-Hispanic persons (.95). Both ethnic groups showed increases in awareness of FAS and regular seatbelt use. Increases in the percent of persons in homes with

one or more working smoke detectors are shown for Hispanic persons (1.48) and non-Hispanic persons (1.30).

While seatbelt use rose dramatically among all education and income groups, a larger increase in the prevalence of regular seatbelt use was found among persons with less income compared with persons with more income. Changes in awareness of FAS were observed for persons with less than 12 years of education (1.23), high school graduates (1.16), and persons with more than 12 years of education (1.12).

An interesting pattern appears in the trend data. The data show that the greatest progress in reducing unhealthy practices and increasing healthy ones has been observed in behaviors most influenced by legislative action: installation of smoke detectors, seatbelt use, and drunk driving. Drunk driving decreased dramatically, possibly because the consequences were greater in 1990 than in 1985, with stricter laws governing this type of behavior (5,53). Similarly, seatbelt use was required in many States, and working smoke detectors were required to be present in homes (5).

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# List of Detailed Tables

## General health habits

1. Percent of persons 18 years of age and over who ate breakfast almost every day, by sex, age, and selected characteristics: United States, 1990 . . . . . 25
2. Percent of persons 18 years of age and over who rarely or never ate snacks, by sex, age, and selected characteristics: United States, 1990 . . . . . 26
3. Percent of persons 18 years of age and over who were 20 percent or more above desirable body weight, by sex, age, and selected characteristics: United States, 1990 . . . . . 27
4. Percent of overweight persons 18 years of age and over who rarely or never ate snacks, by sex, age, and selected characteristics: United States, 1990 . . . . . 28
5. Percent of overweight persons 18 years of age and over who were currently trying to lose weight, by sex, age, and selected characteristics: United States, 1990 . . . . . 29
6. Percent of women 18 years of age and over who had had a Pap smear and who had had a breast examination by a health professional in the past year, by age and selected characteristics: United States, 1990 . . . . . 30
7. Percent of women 18 years of age and over who knew how to do breast self-examination and percent of those who knew how to do breast self-examination who did the procedure at least 12 times a year, by age and selected characteristics: United States, 1990 . . . . . 31

## Blood pressure

8. Percent of persons 18 years of age and over who had had their blood pressure checked in the past year, by sex, age, and selected characteristics: United States, 1990 . . . . . 32
9. Percent of persons 18 years of age and over who had been told 2 or more different times that they had high blood pressure, by sex, age, and selected characteristics: United States, 1990 . . . . . 33
10. Percent of persons 18 years of age and over with 2 or more high blood pressure readings who were currently taking medicine for hypertension, by sex, age, and selected characteristics: United States, 1990 . . . . . 34
11. Percent of persons 18 years of age and over who were aware that high blood pressure increases one's chances of getting heart disease, by sex, age, and selected characteristics: United States, 1990 . . . . . 35
12. Percent of persons 18 years of age and over who ever had their blood cholesterol checked, by sex, age, and selected characteristics: United States, 1990 . . . . . 36

## Stress

13. Percent of persons 18 years of age and over who had experienced at least a moderate amount of stress in the past 2 weeks, by sex, age, and selected characteristics: United States, 1990 . . . . . 37
14. Percent of persons 18 years of age and over who feel that stress has had at least some effect on their health in the past year, by sex, age, and selected characteristics: United States, 1990 . . . . . 38
15. Percent of persons 18 years of age and over who had sought help for a personal or emotional problem in the past year, by sex, age, and selected characteristics: United States, 1990 . . . . . 39

## Exercise

16. Percent of persons 18 years of age and over who exercised or played sports regularly, by sex, age, and selected characteristics: United States, 1990 . . . . . 40
17. Percent of persons 18 years of age and over who had walked for exercise in the past 2 weeks, by sex, age, and selected characteristics: United States, 1990 . . . . . 41
18. Percent of persons 18 years of age and over who had been very physically active in leisure time sports (expending an average of 3 or more kilocalories per kilogram per day) in the past 2 weeks, by sex, age, and selected characteristics: United States, 1990 . . . . . 42
19. Percent of persons 18 years of age and over whose job or main daily activity required at least a moderate amount of physical work, by sex, age, and selected characteristics: United States, 1990 . . . . . 43
20. Percent of persons 18 years of age and over who judged themselves to be more physically active than other persons their own age, by sex, age, and selected characteristics: United States, 1990 . . . . . 44
21. Percent of persons 18 years of age and over who specified that exercise needs to be performed 3 times per week and maintained 20 minutes per session in order to strengthen the heart and lungs, by sex, age, and selected characteristics: United States, 1990 . . . . . 45

## Smoking

22. Percent of persons 18 years of age and over who currently smoked cigarettes, by sex, age, and selected characteristics, United States, 1990 . . . . . 46
23. Percent of current smokers 18 years of age and over who currently were smoking 25 cigarettes or more per day, by sex, age, and selected characteristics: United States, 1990 . . . . . 47

- 24. Percent of persons 18 years of age and over who were aware that smoking increases one's chances of getting heart disease, by sex, age, and selected characteristics: United States, 1990 . . . . . 48
- 25. Percent of current smokers 18 years of age and over who were aware that smoking increases one's chances of getting heart disease, by sex, age, and selected characteristics: United States, 1990 . . . . . 49

**Alcohol**

- 26. Percent of persons 18 years of age and over who had consumed an average of 1 ounce or more of ethanol a day (two or more drinks a day of beer, wine, or liquor) in the past 2 weeks, by sex, age, and selected characteristics: United States, 1990 . . . . . 50
- 27. Percent of persons 18 years of age and over who had at least one drink of beer, wine, or liquor in the past year, by sex, age, and selected characteristics: United States, 1990 . . . . . 51
- 28. Percent of current drinkers 18 years of age and over who had driven a car at least once in the past year when they thought they might have had too much to drink, by sex, age, and selected characteristics: United States, 1990 . . . . . 52
- 29. Percent of persons 18 years of age and over who were aware that heavy drinking increases one's chances of getting throat cancer, by sex, age, and selected characteristics: United States, 1990 . . . . . 53
- 30. Percent of persons 18–44 years of age who had heard of fetal alcohol syndrome, by sex, age, and selected characteristics: United States, 1990 . . . . . 54

**Dental**

- 31. Percent of persons 18 years of age and over who had gone to the dentist at least once in the past 12 months, by sex, age, and selected characteristics: United States, 1990 . . . . . 55
- 32. Percent of persons 18 years of age and over who had lost all their permanent teeth, by sex, age, and selected characteristics: United States, 1990 . . . . . 56
- 33. Percent of persons 18 years of age and over who were aware that dental sealants help prevent tooth decay, by sex, age, and selected characteristics: United States, 1990 . . . . . 57

**Mammography**

- 34. Percent of women 35 years of age and over who had ever had a mammogram, by age and selected characteristics: United States, 1990 . . . . . 58
- 35. Percent of women 35 years of age and over who had a mammogram in the past 3 years, by age and selected characteristics: United States, 1990 . . . . . 59
- 36. Percent of women 35 years of age and over who ever had a mammogram and had it done strictly as part of a routine checkup, by age and selected characteristics: United States, 1990 . . . . . 60

**Smoking and pregnancy**

- 37. Percent of women 18–44 years of age who had given birth to a child within the past 5 years who reported having smoked cigarettes at any time in the 12 months preceding the birth, by age and selected characteristics: United States, 1990 . . . . . 61
- 38. Percent of women 18–44 years of age who had given birth to a child within the past 5 years and were smoking before they learned they were pregnant who quit smoking and percent who reduced the number of cigarettes they smoked after learning they were pregnant, by age and selected characteristics: United States, 1990 . . . . . 62

**Injury control**

- 39. Percent of persons 18 years of age and over who had at least 1 working smoke detector in their home, by sex, age, and selected characteristics: United States, 1990 . . . . . 63
- 40. Percent of persons 18 years of age and over who wore seatbelts all or most of the time when riding in a car, by sex, age, and selected characteristics: United States, 1990 . . . . . 64

**Radon**

- 41. Percent of persons 18 years of age and over who had ever heard of radon, by sex, age, and selected characteristics: United States, 1990 . . . . . 65

**Table 1. Percent of persons 18 years of age and over who ate breakfast almost every day, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	56.4	54.6	45.1	45.1	59.1	86.2	58.0	42.7	49.8	63.5	84.8
Education level											
Less than 12 years . . . . .	58.6	57.6	43.7	40.3	54.3	84.6	59.5	36.6	37.9	59.1	82.7
12 years . . . . .	52.6	50.6	43.4	40.1	56.4	85.3	54.2	40.3	42.7	62.1	84.7
More than 12 years . . . . .	58.8	56.6	47.5	49.7	63.8	89.9	61.0	47.5	58.7	68.3	89.0
13-15 years . . . . .	53.5	50.6	45.4	43.0	56.9	88.3	56.1	44.2	51.6	65.7	86.7
16 years or more . . . . .	64.2	61.9	51.1	54.9	68.2	91.1	67.0	53.6	65.6	70.9	92.1
Income											
Less than \$10,000 . . . . .	54.1	51.5	40.9	40.1	52.6	81.4	55.5	37.2	34.0	58.7	82.8
\$10,000-\$19,999 . . . . .	56.6	56.1	41.3	43.8	56.3	86.0	56.9	39.0	42.4	59.8	84.8
\$20,000-\$34,999 . . . . .	55.2	54.2	46.7	42.8	59.6	88.5	56.2	43.2	48.9	62.7	87.3
\$35,000-\$49,999 . . . . .	53.7	51.3	44.8	47.2	54.2	86.3	56.4	49.2	50.8	64.3	87.6
\$50,000 or more . . . . .	57.2	54.1	44.9	45.5	61.9	89.5	60.5	46.6	58.8	66.2	86.5
Race											
White . . . . .	57.8	55.6	45.5	45.7	59.4	87.4	59.8	43.9	51.6	64.8	85.8
Black . . . . .	46.9	47.0	41.6	38.3	53.0	75.8	46.7	37.0	38.7	55.0	73.8
Hispanic origin											
Hispanic . . . . .	52.5	52.7	50.9	47.2	57.5	80.5	52.2	44.1	47.5	63.6	80.4
Non-Hispanic . . . . .	56.7	54.8	44.4	44.9	59.2	86.4	58.4	42.5	50.0	63.5	84.9
Geographic region											
Northeast . . . . .	59.9	57.8	48.7	47.6	63.5	86.6	61.8	45.6	54.8	65.8	84.9
Midwest . . . . .	55.9	53.8	41.7	44.1	59.2	87.6	57.9	40.9	48.9	63.7	87.8
South . . . . .	54.5	53.2	42.4	45.1	56.6	84.6	55.7	41.5	46.2	61.4	83.2
West . . . . .	56.6	55.1	50.3	43.9	58.7	87.1	58.0	44.1	52.0	64.5	83.4
Marital status											
Currently married . . . . .	57.8	56.9	45.7	45.1	60.2	87.6	58.6	45.6	51.8	65.0	85.6
Formerly married . . . . .	61.5	54.0	37.2	43.1	51.2	78.7	64.6	37.0	41.2	59.0	83.7
Never married . . . . .	46.9	47.7	45.0	46.7	61.3	90.7	45.9	40.1	48.2	64.0	90.9
Employment status											
Currently employed . . . . .	50.5	49.9	45.2	44.9	58.1	84.4	51.3	41.9	49.2	61.4	78.8
Unemployed . . . . .	46.3	46.5	43.8	49.4	44.3	*71.1	46.1	42.6	46.4	46.0	94.9
Not in labor force . . . . .	69.4	72.1	45.0	45.9	65.3	86.7	68.1	44.7	52.2	67.4	85.5

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 2. Percent of persons 18 years of age and over who rarely or never ate snacks, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	25.5	25.6	19.3	24.4	29.0	33.8	25.4	19.7	22.6	26.5	36.5
Education level											
Less than 12 years . . . . .	27.8	26.9	19.2	25.9	28.2	32.5	28.6	19.6	24.3	28.3	35.8
12 years . . . . .	24.3	24.0	19.0	22.7	26.5	34.4	24.5	19.4	22.5	24.7	36.1
More than 12 years . . . . .	25.5	26.4	19.7	25.2	31.4	35.0	24.6	20.1	22.2	27.8	38.1
13-15 years . . . . .	25.0	24.7	18.2	25.2	30.3	32.8	25.2	20.5	23.3	29.4	37.1
16 years or more . . . . .	26.1	28.0	22.4	25.2	32.2	36.7	23.8	19.3	21.2	26.1	39.4
Income											
Less than \$10,000 . . . . .	27.6	26.6	18.0	26.4	34.1	37.0	28.1	19.4	24.3	29.6	37.7
\$10,000-\$19,999 . . . . .	25.9	25.0	18.2	27.2	24.3	31.2	26.7	19.6	23.7	26.4	36.5
\$20,000-\$34,999 . . . . .	25.1	25.7	21.2	23.7	28.8	34.6	24.5	20.5	22.0	27.3	33.0
\$35,000-\$49,999 . . . . .	23.8	24.3	21.0	23.1	28.1	29.6	23.3	20.5	21.4	25.1	38.9
\$50,000 or more . . . . .	25.8	26.8	19.0	25.7	30.2	37.1	24.7	19.4	22.9	27.5	38.8
Race											
White . . . . .	25.8	25.9	19.6	24.5	28.9	34.0	25.7	20.4	22.4	26.3	36.8
Black . . . . .	22.7	22.4	17.0	20.6	27.1	32.8	22.9	15.4	22.4	27.3	33.5
Hispanic origin											
Hispanic . . . . .	29.3	29.7	25.6	33.4	30.2	32.4	29.0	23.4	26.5	40.6	36.3
Non-Hispanic . . . . .	25.2	25.3	18.6	23.6	28.9	33.8	25.1	19.2	22.2	25.6	36.4
Geographic region											
Northeast . . . . .	23.5	22.6	16.5	21.7	26.9	27.6	24.3	21.2	21.4	24.0	32.4
Midwest . . . . .	24.1	24.4	20.6	21.5	26.1	34.9	23.9	20.1	20.0	24.7	34.5
South . . . . .	26.3	26.4	18.1	25.6	30.2	36.2	26.3	18.9	23.8	28.0	38.4
West . . . . .	27.8	28.7	22.3	28.7	32.4	34.2	26.9	19.4	24.7	28.9	40.6
Marital status											
Currently married . . . . .	25.3	26.2	22.1	23.3	28.4	32.4	24.4	20.0	21.9	25.7	36.2
Formerly married . . . . .	31.2	32.7	33.0	29.7	31.4	38.8	30.7	24.9	25.7	27.8	35.8
Never married . . . . .	20.9	20.3	16.7	26.4	32.1	39.0	21.7	18.5	22.7	31.8	47.4
Employment status											
Currently employed . . . . .	24.4	24.9	20.1	24.2	29.6	35.4	23.7	21.0	22.7	26.9	35.2
Unemployed . . . . .	20.9	21.8	15.6	26.1	25.1	*38.6	20.0	17.8	20.7	21.6	*33.3
Not in labor force . . . . .	28.3	28.7	16.0	26.8	26.9	33.4	28.1	17.0	22.6	26.0	36.6

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 3. Percent of persons 18 years of age and over who were 20 percent or more above desirable body weight, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	27.5	29.6	20.1	32.0	37.8	26.3	25.6	15.9	24.7	34.2	28.2
Education level											
Less than 12 years . . . . .	32.7	30.0	18.8	30.9	42.9	25.4	35.2	21.7	36.4	47.4	33.0
12 years . . . . .	28.6	31.2	21.3	35.9	37.6	29.5	26.5	17.9	26.4	33.7	27.5
More than 12 years . . . . .	23.8	28.2	19.3	29.7	35.3	24.1	19.3	11.6	20.6	25.7	20.4
13-15 years . . . . .	25.5	30.1	19.2	35.2	39.1	25.1	21.5	13.4	25.5	27.5	21.0
16 years or more . . . . .	22.0	26.5	19.6	25.5	32.9	23.3	16.6	8.4	16.0	23.9	19.7
Income											
Less than \$10,000 . . . . .	29.3	24.0	15.7	31.6	36.5	22.3	32.2	20.7	40.2	49.5	30.1
\$10,000-\$19,999 . . . . .	28.5	27.5	18.8	32.6	37.3	25.6	29.2	19.1	30.5	40.2	29.1
\$20,000-\$34,999 . . . . .	28.2	30.2	20.1	32.5	40.1	27.5	26.4	16.0	27.3	36.0	27.7
\$35,000-\$49,999 . . . . .	27.8	31.3	22.9	32.8	39.1	22.8	23.9	13.0	25.1	31.9	22.4
\$50,000 or more . . . . .	24.9	31.0	21.7	31.3	36.6	25.1	18.4	9.1	15.5	26.7	24.7
Race											
White . . . . .	26.7	29.7	19.8	32.2	37.8	26.3	24.0	14.7	22.7	32.1	26.6
Black . . . . .	38.0	35.1	26.5	36.6	46.8	29.5	40.4	25.0	41.9	54.2	47.8
Hispanic origin											
Hispanic . . . . .	27.6	26.7	13.8	33.4	40.0	25.5	28.4	20.3	30.1	39.0	32.3
Non-Hispanic . . . . .	27.5	29.9	20.9	31.9	37.7	26.3	25.3	15.3	24.1	33.8	28.1
Geographic region											
Northeast . . . . .	27.2	30.0	21.7	31.5	37.9	26.3	24.8	14.3	22.3	33.7	28.3
Midwest . . . . .	29.1	31.4	19.4	33.9	40.3	30.8	27.0	15.8	25.4	36.8	31.0
South . . . . .	28.2	30.3	22.7	33.9	36.1	25.4	26.4	16.7	27.2	34.2	27.7
West . . . . .	24.7	26.1	15.2	27.2	37.7	21.5	23.3	16.3	22.2	31.3	25.1
Marital status											
Currently married . . . . .	29.2	33.3	26.7	33.8	39.3	26.4	25.2	15.5	23.5	32.9	28.0
Formerly married . . . . .	29.1	26.3	17.1	24.8	30.9	25.3	30.2	21.6	26.3	37.3	29.1
Never married . . . . .	19.8	19.3	15.6	27.3	30.0	26.9	20.4	15.6	32.0	37.9	18.6
Employment status											
Currently employed . . . . .	27.3	30.5	21.2	32.1	38.2	26.7	23.4	14.3	23.9	32.0	28.8
Unemployed . . . . .	26.4	29.5	20.9	34.3	37.5	*43.4	23.0	14.5	27.2	35.8	*10.8
Not in labor force . . . . .	28.1	26.4	12.6	29.0	36.3	26.0	28.9	20.2	26.8	37.2	28.2

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.



**Table 4. Percent of overweight persons 18 years of age and over who rarely or never ate snacks, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	22.3	23.0	22.0	20.8	23.4	29.6	21.5	20.1	17.0	21.1	30.0
Education level											
Less than 12 years . . . . .	25.4	24.8	21.6	23.7	25.0	27.2	25.8	22.3	21.6	24.5	30.8
12 years . . . . .	21.2	22.7	22.0	20.1	22.3	33.4	19.8	17.0	17.4	18.3	30.1
More than 12 years . . . . .	21.3	22.5	22.1	20.7	23.5	28.4	19.6	22.4	14.7	22.0	27.7
13-15 years . . . . .	21.6	23.2	22.0	22.1	22.7	35.1	19.7	22.3	14.4	22.4	28.6
16 years or more . . . . .	20.9	21.8	21.9	19.3	24.1	23.4	19.4	*22.8	15.0	21.5	26.3
Income											
Less than \$10,000 . . . . .	25.8	26.4	*16.7	23.6	33.7	33.1	25.6	22.4	21.2	25.0	31.4
\$10,000-\$19,999 . . . . .	23.1	22.5	23.0	21.2	19.5	26.8	23.6	21.5	19.8	21.0	31.2
\$20,000-\$34,999 . . . . .	21.0	21.9	22.0	18.5	24.0	26.8	20.0	19.8	14.1	21.2	31.2
\$35,000-\$49,999 . . . . .	21.2	23.0	28.5	22.4	21.6	*19.8	18.6	23.5	17.3	17.1	*26.6
\$50,000 or more . . . . .	21.8	22.8	17.3	22.7	23.4	31.7	20.0	*15.9	15.8	23.3	*25.0
Race											
White . . . . .	22.1	23.0	20.9	21.4	23.1	29.5	21.2	21.8	16.3	19.9	29.5
Black . . . . .	23.1	23.7	26.6	18.1	25.8	29.6	22.7	15.7	18.6	26.4	32.8
Hispanic origin											
Hispanic . . . . .	26.8	26.3	28.4	26.5	25.6	*20.8	27.2	29.5	24.5	28.6	*27.8
Non-Hispanic . . . . .	21.9	22.8	21.4	20.3	23.4	30.0	20.9	18.4	16.1	20.5	30.1
Geographic region											
Northeast . . . . .	20.9	21.1	22.0	17.8	22.8	24.7	20.8	25.2	17.3	16.9	28.4
Midwest . . . . .	20.3	21.2	18.1	18.6	20.2	32.9	19.5	20.6	12.5	18.8	30.0
South . . . . .	23.5	24.2	22.9	23.5	24.4	28.1	22.8	19.0	19.0	24.4	29.6
West . . . . .	24.1	25.6	25.6	22.1	26.6	32.9	22.6	17.6	19.0	23.2	33.5
Marital status											
Currently married . . . . .	21.6	22.8	25.3	20.5	22.5	28.1	19.9	19.5	15.6	20.4	29.9
Formerly married . . . . .	26.5	28.7	*17.8	24.5	29.4	35.4	25.8	29.6	22.5	22.1	29.8
Never married . . . . .	20.2	20.3	18.3	20.0	26.6	*34.9	20.1	19.0	17.7	24.7	*36.3
Employment status											
Currently employed . . . . .	21.4	22.4	23.1	20.5	24.2	26.8	19.8	21.4	16.5	21.7	29.0
Unemployed . . . . .	17.2	20.0	*12.3	26.9	*22.3	*-	13.3	*21.7	*9.4	*10.8	*25.0
Not in labor force . . . . .	24.5	25.9	*17.3	23.0	20.2	30.6	23.9	17.7	19.5	20.8	30.2

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 5. Percent of overweight persons 18 years of age and over who were currently trying to lose weight, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	53.1	44.7	45.6	45.8	44.7	40.1	61.9	65.0	66.9	63.6	48.8
Education level											
Less than 12 years . . . . .	46.4	35.7	37.9	33.7	36.4	34.8	54.6	62.9	58.6	57.4	46.4
12 years . . . . .	53.5	43.0	44.7	41.7	43.9	41.9	63.2	62.6	67.1	66.8	49.0
More than 12 years . . . . .	57.6	50.9	50.3	52.0	51.0	45.6	67.5	70.7	70.1	66.1	56.2
13-15 years . . . . .	56.3	46.1	48.0	45.8	45.2	46.4	69.0	71.0	70.0	70.1	58.8
16 years or more . . . . .	59.0	55.8	54.2	58.7	55.5	45.2	65.2	70.0	70.3	61.5	52.3
Income											
Less than \$10,000 . . . . .	52.2	44.7	43.3	45.4	53.4	34.1	55.2	57.9	65.6	58.7	43.0
\$10,000-\$19,999 . . . . .	51.1	41.2	43.9	41.5	36.0	44.3	58.8	67.4	61.0	59.6	50.1
\$20,000-\$34,999 . . . . .	52.9	42.5	41.9	45.5	42.3	34.5	64.4	67.9	67.1	63.7	55.8
\$35,000-\$49,999 . . . . .	55.3	49.4	49.0	47.7	51.8	50.8	63.7	62.3	69.6	60.6	40.2
\$50,000 or more . . . . .	58.8	51.2	54.7	49.9	52.4	42.9	72.4	73.8	72.2	74.2	59.7
Race											
White . . . . .	53.4	44.9	45.9	45.8	45.1	41.0	62.8	67.3	67.4	64.6	50.3
Black . . . . .	51.6	42.1	41.5	45.9	41.1	33.7	58.2	57.8	63.8	60.4	40.6
Hispanic origin											
Hispanic . . . . .	53.0	40.5	48.4	40.9	36.3	*32.7	63.1	62.0	65.6	65.1	50.0
Non-Hispanic . . . . .	53.1	45.0	45.4	46.4	45.3	40.4	61.8	65.5	66.9	63.6	48.8
Geographic region											
Northeast . . . . .	56.0	48.2	50.3	49.7	46.9	44.9	64.2	68.1	68.2	69.1	49.5
Midwest . . . . .	55.3	45.0	44.3	46.6	44.7	42.5	66.2	72.0	67.8	68.6	56.0
South . . . . .	48.4	40.4	40.5	42.0	41.9	32.0	56.5	58.4	64.9	55.6	42.6
West . . . . .	55.8	48.3	53.9	47.9	46.7	47.1	63.6	66.4	68.0	65.1	48.6
Marital status											
Currently married . . . . .	52.8	44.4	44.5	45.3	44.9	40.7	63.8	61.5	67.7	64.7	52.8
Formerly married . . . . .	52.8	45.0	*47.5	50.4	43.4	39.2	55.5	70.2	65.3	59.6	46.1
Never married . . . . .	55.4	46.0	47.1	47.0	41.4	*34.2	66.2	68.1	64.0	71.1	*45.2
Employment status											
Currently employed . . . . .	52.9	45.1	46.6	45.4	44.1	41.1	64.9	66.4	66.9	63.9	46.0
Unemployed . . . . .	52.6	46.2	42.1	48.4	49.3	*33.3	61.6	75.2	52.5	65.3	*25.0
Not in labor force . . . . .	53.6	42.8	38.3	50.8	46.6	40.0	58.5	61.4	68.7	63.2	49.2

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 6. Percent of women 18 years of age and over who had had a Pap smear and who had had a breast examination by a health professional in the past year, by age and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Pap smear					Breast examination				
	Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All women <sup>1</sup>	50.1	63.9	55.2	43.6	30.4	53.1	62.2	55.6	49.1	42.0
Education level										
Less than 12 years	37.9	60.8	44.6	33.3	24.7	43.0	56.3	44.0	40.0	37.1
12 years	49.6	63.8	52.7	43.7	31.0	52.2	61.3	53.3	48.5	42.2
More than 12 years	57.2	65.1	60.0	50.2	40.0	59.7	65.5	60.3	55.8	51.0
13-15 years	54.6	64.0	56.2	47.3	35.3	56.9	63.7	56.3	52.2	48.1
16 years or more	60.3	67.1	63.6	53.2	46.8	63.2	68.7	64.1	59.6	55.0
Income										
Less than \$10,000	41.0	60.8	43.5	31.4	25.1	45.5	59.5	43.1	38.6	36.7
\$10,000-\$19,999	44.0	62.3	46.6	36.2	29.2	47.0	60.0	45.8	40.8	40.2
\$20,000-\$34,999	50.1	64.1	53.6	40.0	32.2	53.0	62.7	53.8	45.5	44.8
\$35,000-\$49,999	55.2	67.2	56.0	46.6	40.9	58.3	66.5	57.2	54.1	52.5
\$50,000 or more	58.9	64.3	62.5	54.7	37.5	61.4	64.5	63.2	59.0	50.3
Race										
White	49.7	63.5	55.5	43.8	30.4	53.1	61.8	56.1	49.3	42.4
Black	54.3	71.8	55.8	42.6	29.2	55.3	68.4	55.1	48.0	38.0
Hispanic origin										
Hispanic	49.1	55.0	53.8	40.3	24.5	50.4	54.1	52.2	44.6	40.3
Non-Hispanic	50.1	65.1	55.3	43.7	30.6	53.4	63.4	55.9	49.3	42.1
Geographic region										
Northeast	47.9	62.8	56.3	41.5	26.0	53.4	62.9	58.5	48.3	41.7
Midwest	49.7	64.8	54.5	43.3	29.3	53.2	63.9	55.5	49.5	40.0
South	51.4	65.7	55.9	44.9	31.6	53.5	62.8	55.2	49.4	42.8
West	50.4	60.8	54.2	43.6	35.3	52.2	58.7	53.5	48.8	43.5
Marital status										
Currently married	53.5	70.7	56.6	46.2	33.2	55.8	67.7	56.6	51.4	44.7
Formerly married	39.1	68.4	52.5	37.4	28.4	45.5	63.9	53.0	43.1	40.3
Never married	51.5	55.4	49.2	34.1	28.6	53.1	55.7	51.0	44.0	36.6
Employment status										
Currently employed	54.7	64.2	55.0	46.0	35.3	55.9	62.4	55.3	51.2	42.8
Unemployed	51.1	63.1	50.2	30.3	*18.9	52.9	62.8	52.6	32.7	*43.4
Not in labor force	43.4	63.3	56.8	40.6	29.9	49.2	61.6	56.8	46.7	41.9

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 7. Percent of women 18 years of age and over who knew how to do breast self-examination and percent of those who knew how to do breast self-examination who did the procedure at least 12 times a year, by age and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Knew breast self-examination					Did breast self-examination				
	Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All women <sup>1</sup> . . . . .	88.1	84.9	92.7	90.6	80.5	43.1	36.6	43.6	47.1	45.4
Education level										
Less than 12 years . . . . .	76.9	75.6	81.3	81.6	71.9	43.9	35.3	41.8	48.8	45.8
12 years . . . . .	89.7	84.4	93.0	92.9	85.8	43.6	36.7	45.2	46.6	45.2
More than 12 years . . . . .	92.8	89.5	95.4	94.1	88.6	42.2	36.8	42.7	46.5	45.2
13-15 years . . . . .	91.7	88.3	95.0	92.4	89.9	43.1	38.5	45.1	44.4	46.6
16 years or more . . . . .	94.0	91.7	95.7	95.8	86.8	41.3	33.7	40.4	48.6	43.1
Income										
Less than \$10,000 . . . . .	80.0	81.0	84.8	79.6	76.4	42.2	36.2	40.5	49.0	45.9
\$10,000-\$19,999 . . . . .	85.3	82.2	90.9	87.2	82.1	43.0	39.4	41.5	47.0	44.6
\$20,000-\$34,999 . . . . .	90.6	86.8	93.2	93.8	86.2	42.3	33.9	44.0	47.2	45.3
\$35,000-\$49,999 . . . . .	93.3	89.2	95.7	94.1	89.2	43.1	39.9	43.0	47.4	38.7
\$50,000 or more . . . . .	92.5	87.1	94.9	94.0	83.2	41.5	31.3	42.6	44.4	48.2
Race										
White . . . . .	88.8	85.6	93.5	91.2	81.9	42.3	35.6	42.7	46.1	44.3
Black . . . . .	86.0	84.8	92.4	88.4	68.3	50.9	43.1	51.3	55.6	61.8
Hispanic origin										
Hispanic . . . . .	74.7	70.4	77.9	78.0	71.7	44.1	37.7	46.2	47.1	53.6
Non-Hispanic . . . . .	89.2	87.0	94.2	91.5	80.8	43.1	36.5	43.4	47.1	45.1
Geographic region										
Northeast . . . . .	86.5	83.2	92.6	89.1	77.4	42.0	35.3	43.7	44.9	42.4
Midwest . . . . .	90.5	88.0	94.9	92.5	83.3	41.3	33.0	43.1	44.1	44.9
South . . . . .	89.2	88.3	94.3	90.9	79.3	46.0	39.8	47.0	49.0	49.3
West . . . . .	84.8	77.2	88.0	89.3	83.1	41.6	36.2	38.6	50.2	42.6
Marital status										
Currently married . . . . .	90.6	87.8	93.1	92.0	83.8	44.5	39.2	43.6	47.7	48.6
Formerly married . . . . .	84.8	87.0	92.5	88.5	78.3	43.8	37.3	44.1	45.7	43.4
Never married . . . . .	82.8	81.3	90.2	80.6	77.4	36.4	33.4	43.1	44.4	37.6
Employment status										
Currently employed . . . . .	91.3	87.0	94.3	92.1	86.0	42.9	36.3	44.1	47.3	48.1
Unemployed . . . . .	90.2	87.0	94.0	90.1	91.0	40.7	37.3	43.2	43.0	*41.2
Not in labor force . . . . .	83.4	79.5	87.7	88.6	79.8	43.8	37.3	42.1	47.1	45.0

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 8. Percent of persons 18 years of age and over who had had their blood pressure checked in the past year, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	87.0	82.7	77.6	80.6	85.8	90.9	90.8	92.1	89.9	90.0	91.7
Education level											
Less than 12 years . . . . .	85.4	81.2	73.2	74.0	83.3	89.8	88.9	89.7	84.2	87.5	91.8
12 years . . . . .	86.5	82.2	77.8	80.0	85.3	92.1	89.9	91.3	88.5	89.1	91.9
More than 12 years . . . . .	88.2	83.9	79.3	82.5	87.4	91.4	92.7	93.7	92.4	92.7	91.1
13-15 years . . . . .	87.6	82.6	79.5	81.4	85.7	92.0	92.0	93.6	90.8	91.9	91.5
16 years or more . . . . .	88.8	85.0	79.1	83.3	88.5	91.0	93.4	93.9	93.9	93.4	90.6
Income											
Less than \$10,000 . . . . .	86.2	79.8	78.0	73.9	82.4	86.2	89.5	91.1	83.4	89.6	91.5
\$10,000-\$19,999 . . . . .	85.5	80.8	73.9	76.5	82.6	91.2	89.2	90.9	85.6	87.0	92.7
\$20,000-\$34,999 . . . . .	86.1	81.6	77.0	79.1	84.5	91.9	90.4	92.4	89.7	90.1	88.8
\$35,000-\$49,999 . . . . .	87.3	83.9	78.2	82.6	88.3	94.5	91.0	92.5	91.0	89.9	90.0
\$50,000 or more . . . . .	88.7	85.1	81.2	84.0	87.0	91.8	92.6	94.0	92.6	91.6	93.2
Race											
White . . . . .	86.9	82.9	78.0	80.3	85.8	91.2	90.6	92.0	89.8	89.6	91.4
Black . . . . .	89.2	84.7	81.6	84.3	87.5	89.0	92.6	93.1	90.9	93.3	94.4
Hispanic origin											
Hispanic . . . . .	81.8	73.3	68.9	72.1	78.7	85.7	88.3	88.2	88.6	86.3	92.7
Non-Hispanic . . . . .	87.4	83.4	78.5	81.3	86.1	91.1	90.9	92.6	90.0	90.1	91.6
Geographic region											
Northeast . . . . .	88.7	85.5	81.2	84.7	87.5	90.7	91.4	92.5	91.3	90.8	91.3
Midwest . . . . .	87.2	83.2	78.8	80.8	85.3	92.3	90.8	92.2	90.1	89.7	91.7
South . . . . .	87.1	82.3	76.7	80.5	86.1	89.5	91.2	92.7	90.0	90.5	92.2
West . . . . .	84.9	80.2	74.5	76.6	84.3	92.0	89.2	90.4	88.2	88.3	90.9
Marital status											
Currently married . . . . .	87.6	84.4	77.7	81.9	86.7	91.8	90.7	92.1	90.1	90.3	91.1
Formerly married . . . . .	88.3	81.6	81.8	76.8	82.3	88.0	90.9	92.9	89.4	89.4	92.4
Never married . . . . .	83.6	77.4	77.4	76.1	78.1	87.3	90.9	92.0	89.0	87.0	88.3
Employment status											
Currently employed . . . . .	85.8	81.3	77.7	80.2	85.5	89.6	90.9	91.8	90.2	91.0	90.6
Unemployed . . . . .	84.9	79.3	76.5	83.4	79.8	*68.9	90.7	92.6	88.2	90.6	94.7
Not in labor force . . . . .	89.7	88.1	77.9	85.1	87.7	91.4	90.5	92.5	89.0	88.4	91.8

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 9. Percent of persons 18 years of age and over who had been told 2 or more different times that they had high blood pressure, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	16.3	15.3	4.1	9.8	24.6	32.0	17.2	4.0	8.1	25.2	39.7
Education level											
Less than 12 years . . . . .	24.5	20.8	5.0	11.0	29.8	31.6	27.8	4.6	14.5	33.8	42.4
12 years . . . . .	15.7	14.2	3.3	9.9	24.7	31.7	16.9	4.3	7.7	25.5	39.6
More than 12 years . . . . .	12.6	13.7	4.5	9.6	21.7	32.7	11.5	3.3	6.8	18.5	35.1
13-15 years . . . . .	12.8	14.0	4.5	11.5	23.7	37.1	11.7	3.4	8.2	18.9	33.3
16 years or more . . . . .	12.4	13.3	4.4	8.1	20.5	29.5	11.2	3.1	5.5	18.2	37.5
Income											
Less than \$10,000 . . . . .	22.3	15.8	3.1	12.3	29.3	32.1	25.8	4.2	15.1	40.3	44.7
\$10,000-\$19,999 . . . . .	19.4	18.0	5.3	10.9	31.8	30.1	20.6	5.3	7.1	30.6	39.0
\$20,000-\$34,999 . . . . .	15.5	15.1	3.8	9.8	25.2	33.8	15.8	4.0	9.8	24.4	38.1
\$35,000-\$49,999 . . . . .	12.8	13.7	4.7	9.9	21.7	38.3	11.8	3.3	7.3	22.0	32.9
\$50,000 or more . . . . .	13.1	14.6	3.9	9.3	22.5	34.5	11.4	4.0	5.7	18.3	39.5
Race											
White . . . . .	15.9	15.1	4.0	9.4	23.3	31.5	16.7	3.9	7.1	23.3	39.2
Black . . . . .	21.3	20.0	5.5	14.2	38.6	38.6	22.3	4.5	15.0	41.2	47.2
Hispanic origin											
Hispanic . . . . .	10.1	7.5	*1.7	5.6	17.8	21.2	12.3	2.9	8.7	23.9	41.1
Non-Hispanic . . . . .	16.8	16.0	4.4	10.2	25.0	32.4	17.6	4.1	8.0	25.2	39.5
Geographic region											
Northeast . . . . .	16.3	16.1	4.0	11.2	26.9	29.1	16.4	3.3	6.5	22.9	37.3
Midwest . . . . .	16.9	15.8	4.3	11.4	22.9	33.5	17.9	4.1	7.7	25.6	43.0
South . . . . .	17.6	15.9	4.2	9.1	26.7	33.1	19.1	4.9	10.5	28.2	40.6
West . . . . .	13.5	13.3	3.7	7.9	21.1	30.8	13.7	2.9	6.1	21.6	36.1
Marital status											
Currently married . . . . .	16.4	17.4	5.1	9.8	24.6	32.3	15.3	4.2	7.5	23.9	37.0
Formerly married . . . . .	26.7	20.4	*7.9	11.0	25.0	31.8	29.3	6.2	10.4	28.9	42.5
Never married . . . . .	6.6	6.2	3.2	9.1	21.9	27.0	7.1	3.3	8.5	23.8	29.7
Employment status											
Currently employed . . . . .	11.2	11.8	4.0	9.5	21.1	30.0	10.6	3.6	7.6	20.0	33.7
Unemployed . . . . .	10.3	11.2	6.7	9.9	21.9	*13.3	9.3	*1.8	8.2	25.3	*29.5
Not in labor force . . . . .	27.3	28.2	3.3	16.0	40.1	32.6	26.9	5.1	9.5	32.6	40.4

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 10. Percent of persons 18 years of age and over with 2 or more high blood pressure readings who were currently taking medicine for hypertension, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years ' and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	67.0	61.6	12.8	37.5	69.2	79.9	71.3	14.6	46.5	75.0	84.5
Education level											
Less than 12 years . . . . .	72.8	67.6	*10.8	45.0	69.6	78.8	76.2	*18.9	51.2	75.3	84.3
12 years . . . . .	67.1	62.4	*10.5	34.3	73.8	81.7	70.3	*14.4	40.2	76.3	84.5
More than 12 years . . . . .	60.8	56.5	*15.5	37.7	64.6	80.1	66.0	*12.4	49.5	71.7	84.9
13-15 years . . . . .	59.9	54.3	*18.4	36.3	67.4	75.0	65.9	*10.6	49.7	75.8	84.6
16 years or more . . . . .	61.6	58.5	*10.3	39.2	62.5	84.7	66.2	*15.1	49.5	67.3	85.0
Income											
Less than \$10,000 . . . . .	71.5	64.8	*18.5	46.9	64.7	79.7	73.8	*16.5	47.6	73.9	83.8
\$10,000-\$19,999 . . . . .	70.7	65.7	*5.5	35.1	77.2	80.9	74.2	*14.8	43.9	76.6	85.5
\$20,000-\$34,999 . . . . .	64.8	63.7	*25.8	41.1	71.5	78.8	65.7	*20.0	37.0	74.5	82.8
\$35,000-\$49,999 . . . . .	58.0	53.9	*~	39.3	65.7	74.9	63.1	*3.6	55.1	68.6	82.1
\$50,000 or more . . . . .	62.5	58.2	*12.9	31.4	66.5	86.4	68.5	*9.3	48.7	74.6	92.6
Race											
White . . . . .	66.9	61.5	13.8	35.0	68.6	80.0	71.3	15.5	43.2	73.9	84.3
Black . . . . .	70.1	64.9	*9.6	51.7	74.6	80.9	73.8	*12.7	57.8	82.1	86.6
Hispanic origin											
Hispanic . . . . .	58.8	48.3	*18.6	*28.1	56.5	*70.6	64.2	*7.1	53.9	77.0	73.5
Non-Hispanic . . . . .	67.4	62.1	12.6	37.9	69.7	80.1	71.7	15.4	45.7	74.8	84.9
Geographic region											
Northeast . . . . .	69.5	62.9	*2.9	38.3	75.2	78.8	75.3	*15.9	55.4	79.8	82.6
Midwest . . . . .	68.5	63.5	*9.1	41.5	71.7	83.0	72.6	*23.5	43.9	75.0	85.8
South . . . . .	68.3	64.6	*18.5	43.3	70.9	79.5	70.9	*11.6	47.3	75.7	86.3
West . . . . .	58.8	51.6	*17.1	18.8	55.4	77.1	65.4	*7.0	39.8	67.3	80.8
Marital status											
Currently married . . . . .	66.9	64.7	16.3	39.6	70.4	80.8	69.4	14.9	46.4	74.6	86.3
Formerly married . . . . .	73.4	59.9	*16.0	27.8	63.2	76.1	77.3	*7.8	44.9	75.3	83.6
Never married . . . . .	44.0	36.7	*8.5	33.5	65.0	79.5	51.9	*14.9	51.2	78.6	80.0
Employment status											
Currently employed . . . . .	55.5	52.1	11.1	35.1	66.4	82.8	60.1	15.5	45.7	72.6	83.2
Unemployed . . . . .	48.4	43.1	*3.7	*45.8	64.5	*54.5	55.3	*5.0	*45.0	63.4	*91.3
Not in labor force . . . . .	77.4	76.4	*34.4	58.2	75.8	79.4	77.9	*13.6	48.9	77.5	84.6

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 11. Percent of persons 18 years of age and over who were aware that high blood pressure increases one's chances of getting heart disease, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male				Female					
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	95.9	95.7	94.9	96.4	95.7	95.6	96.0	95.3	96.0	96.3	96.3
Education level											
Less than 12 years . . . . .	93.8	93.4	91.9	92.2	94.1	94.8	94.1	91.6	93.2	94.1	96.0
12 years . . . . .	95.8	95.7	95.0	96.3	95.4	96.4	95.9	95.2	95.4	97.0	96.0
More than 12 years . . . . .	96.9	96.7	95.9	97.3	96.7	95.9	97.1	96.9	97.3	96.9	97.3
13-15 years . . . . .	96.5	96.4	96.2	96.8	96.9	93.7	96.6	96.5	96.9	95.8	97.1
16 years or more . . . . .	97.3	97.0	95.3	97.7	96.6	97.5	97.7	97.6	97.6	97.9	97.6
Income											
Less than \$10,000 . . . . .	92.9	91.6	89.8	92.3	91.6	94.6	93.7	93.5	91.6	93.3	95.3
\$10,000-\$19,999 . . . . .	94.8	94.2	94.2	93.6	94.3	94.5	95.3	94.7	94.5	95.7	96.2
\$20,000-\$34,999 . . . . .	96.1	96.1	95.6	96.9	95.6	95.8	96.0	96.2	96.0	95.7	96.4
\$35,000-\$49,999 . . . . .	96.5	96.2	94.8	96.8	96.0	98.1	96.8	96.8	96.3	97.6	96.4
\$50,000 or more . . . . .	97.1	97.2	97.4	98.2	96.1	97.1	97.1	96.4	97.7	96.4	97.7
Race											
White . . . . .	96.3	96.2	95.4	96.9	96.2	95.8	96.4	96.3	96.6	96.6	96.2
Black . . . . .	93.6	93.7	93.0	93.2	94.3	95.6	93.5	90.8	93.5	95.0	97.1
Hispanic origin											
Hispanic . . . . .	91.8	91.3	89.7	92.9	90.1	95.8	92.2	89.9	93.4	93.9	92.2
Non-Hispanic . . . . .	96.2	96.0	95.4	96.7	96.1	95.6	96.3	96.1	96.3	96.5	96.4
Geographic region											
Northeast . . . . .	96.7	96.5	95.7	96.6	97.2	96.3	97.0	97.4	97.3	96.9	95.9
Midwest . . . . .	96.5	96.5	95.8	96.9	97.1	96.0	96.6	96.7	96.5	96.9	96.1
South . . . . .	96.3	96.4	96.1	96.8	96.2	96.5	96.3	95.4	95.9	96.6	97.5
West . . . . .	93.3	92.8	91.0	95.0	91.9	92.6	93.8	91.9	94.5	94.4	94.6
Marital status											
Currently married . . . . .	96.1	95.8	94.0	96.5	95.7	95.9	96.3	95.9	96.2	96.8	96.4
Formerly married . . . . .	95.5	95.3	95.6	95.7	95.4	94.3	95.5	94.5	95.1	95.2	96.1
Never married . . . . .	95.4	95.6	95.4	96.3	96.4	95.0	95.2	94.9	96.2	95.4	96.3
Employment status											
Currently employed . . . . .	96.2	96.1	94.9	96.7	96.3	95.0	96.4	96.4	96.3	96.7	95.8
Unemployed . . . . .	94.1	93.4	95.0	90.1	94.4	100.0	94.8	95.2	95.7	91.8	95.9
Not in labor force . . . . .	95.2	94.8	94.2	94.0	93.3	95.7	95.4	92.8	95.4	95.9	96.3

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.



**Table 12. Percent of persons 18 years of age and over who ever had their blood cholesterol checked, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	52.7	49.9	24.5	48.2	65.9	71.4	55.3	32.2	53.2	69.4	70.5
Education level											
Less than 12 years . . . . .	44.6	40.7	13.3	28.2	50.2	62.8	48.1	21.0	36.2	57.0	62.4
12 years . . . . .	48.7	43.1	20.2	39.1	62.2	72.3	53.2	28.0	48.0	69.5	73.9
More than 12 years . . . . .	60.8	60.0	34.2	59.1	77.1	82.8	61.5	40.8	61.7	77.8	80.6
13-15 years . . . . .	54.0	51.5	29.7	52.1	72.6	77.9	56.2	35.9	57.1	74.1	79.0
16 years or more . . . . .	67.7	67.6	42.0	64.5	80.1	86.4	67.9	49.6	66.1	81.5	82.7
Income											
Less than \$10,000 . . . . .	40.8	32.3	21.0	26.4	44.9	49.0	45.4	24.0	35.9	58.5	64.5
\$10,000-\$19,999 . . . . .	46.0	40.8	18.3	32.0	51.4	68.9	50.3	27.4	39.9	61.9	72.3
\$20,000-\$34,999 . . . . .	50.6	46.8	26.3	43.0	59.0	77.2	54.4	34.6	51.5	70.0	72.4
\$35,000-\$49,999 . . . . .	55.7	52.7	22.9	53.3	70.2	84.9	58.9	38.3	58.5	73.3	79.1
\$50,000 or more . . . . .	65.3	65.0	34.1	64.7	77.7	87.4	65.5	41.4	65.1	77.7	78.9
Race											
White . . . . .	54.7	52.4	25.8	50.6	67.9	73.2	56.8	33.2	54.6	70.1	71.5
Black . . . . .	42.1	35.4	19.7	34.7	51.3	49.8	47.4	28.1	46.2	66.0	61.1
Hispanic origin											
Hispanic . . . . .	37.5	30.0	14.7	31.6	47.9	57.2	43.9	27.7	45.0	63.9	62.2
Non-Hispanic . . . . .	54.0	51.5	25.6	49.7	66.9	71.9	56.3	32.9	54.0	69.8	70.8
Geographic region											
Northeast . . . . .	52.5	50.3	23.5	49.7	66.3	69.0	54.4	34.6	50.5	66.3	67.0
Midwest . . . . .	54.7	52.2	26.8	50.5	67.1	75.0	57.0	32.7	54.4	72.0	72.8
South . . . . .	51.8	48.1	24.7	46.2	63.5	67.3	55.1	32.1	54.3	68.5	69.6
West . . . . .	52.2	49.9	22.4	47.3	67.6	76.8	54.4	29.6	52.7	71.0	73.3
Marital status											
Currently married . . . . .	56.8	56.5	27.1	50.5	68.2	74.9	57.2	32.9	53.7	70.8	74.6
Formerly married . . . . .	58.3	50.5	30.5	43.8	55.3	60.0	61.5	31.6	52.3	66.6	67.5
Never married . . . . .	33.2	28.5	22.3	39.2	52.1	53.8	39.0	31.4	51.1	60.5	68.2
Employment status											
Currently employed . . . . .	51.0	48.0	25.6	49.2	66.3	73.8	54.5	35.4	55.1	72.2	74.8
Unemployed . . . . .	39.1	33.6	16.7	38.8	56.3	*53.8	45.1	30.8	48.5	65.5	*83.3
Not in labor force . . . . .	57.7	59.0	20.8	37.0	65.3	71.0	57.1	24.6	47.9	65.4	69.9

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 13. Percent of persons 18 years of age and over who had experienced at least a moderate amount of stress in the past 2 weeks, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	57.1	54.1	56.7	64.5	52.3	27.9	59.8	63.7	68.6	60.8	37.4
Education level											
Less than 12 years . . . . .	43.2	38.3	44.6	48.7	38.2	25.9	47.5	55.8	57.8	52.9	33.9
12 years . . . . .	55.7	51.4	53.1	59.2	50.0	28.3	59.1	61.5	66.2	60.1	39.2
More than 12 years . . . . .	65.6	63.8	66.0	71.7	61.3	30.5	67.4	68.9	73.1	67.5	41.1
13-15 years . . . . .	64.0	61.9	62.5	70.0	58.3	33.0	65.8	67.5	72.0	65.1	41.5
16 years or more . . . . .	67.2	65.4	72.0	73.1	63.2	28.7	69.4	71.5	74.2	70.0	40.7
Income											
Less than \$10,000 . . . . .	52.4	49.3	58.3	54.8	48.6	26.8	54.1	63.4	64.7	61.2	35.8
\$10,000-\$19,999 . . . . .	52.6	47.5	56.0	56.7	46.4	28.7	56.8	62.7	66.6	58.9	40.8
\$20,000-\$34,999 . . . . .	56.2	52.0	56.2	61.0	47.6	28.4	60.2	64.1	68.5	60.1	33.5
\$35,000-\$49,999 . . . . .	62.4	59.3	60.1	67.1	53.8	28.0	65.9	67.6	71.7	61.7	37.5
\$50,000 or more . . . . .	65.4	63.8	59.6	74.7	59.9	32.3	67.2	67.0	71.9	65.4	42.5
Race											
White . . . . .	58.8	55.8	59.2	66.6	54.4	28.1	61.5	66.9	70.8	62.5	37.9
Black . . . . .	48.0	44.5	46.0	51.8	40.4	25.6	50.7	47.8	59.2	51.7	34.0
Hispanic origin											
Hispanic . . . . .	45.2	38.4	37.7	44.1	31.7	32.1	51.0	49.8	56.3	49.7	36.1
Non-Hispanic . . . . .	58.1	55.4	59.0	66.3	53.5	27.8	60.5	65.6	69.7	61.5	37.3
Geographic region											
Northeast . . . . .	56.8	53.5	52.6	66.4	51.9	27.4	59.7	63.9	68.8	61.2	39.1
Midwest . . . . .	59.9	57.4	63.2	66.2	56.6	27.6	62.2	67.0	71.7	63.4	37.3
South . . . . .	54.9	52.0	55.3	61.1	50.1	28.7	57.4	59.8	67.7	57.7	36.3
West . . . . .	57.7	54.2	55.1	66.2	50.9	27.5	60.9	66.5	66.3	62.6	37.2
Marital status											
Currently married . . . . .	57.6	54.4	60.0	65.8	51.8	27.6	60.9	62.8	67.3	59.7	40.4
Formerly married . . . . .	54.5	52.8	65.9	63.1	55.7	29.4	55.2	70.6	76.1	65.0	35.9
Never married . . . . .	57.6	53.9	54.0	58.2	49.7	27.7	62.1	63.9	66.7	56.1	26.2
Employment status											
Currently employed . . . . .	63.2	59.4	58.3	65.0	55.1	36.1	67.7	67.1	71.4	65.5	44.6
Unemployed . . . . .	55.4	49.8	45.6	57.1	51.3	*14.1	61.5	59.2	67.3	57.8	*44.6
Not in labor force . . . . .	44.5	36.2	51.7	61.3	40.1	26.3	48.4	56.0	59.9	54.0	36.5

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 14. Percent of persons 18 years of age and over who feel that stress has had at least some effect on their health in the past year, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	40.6	34.1	31.9	40.7	34.5	21.7	46.5	47.7	51.8	47.7	33.4
Education level											
Less than 12 years . . . . .	37.0	30.0	28.9	35.1	34.2	23.0	43.1	44.4	50.8	49.4	34.0
12 years . . . . .	39.7	31.8	30.3	37.0	32.0	21.0	46.0	47.7	50.2	46.5	34.0
More than 12 years . . . . .	43.3	37.9	35.0	44.5	36.6	20.4	48.9	49.2	53.4	48.2	31.7
13-15 years . . . . .	42.6	36.7	33.7	42.4	36.6	22.8	48.0	49.0	53.5	46.6	29.2
16 years or more . . . . .	44.0	39.0	37.4	46.0	36.6	18.5	50.0	49.6	53.4	49.9	35.1
Income											
Less than \$10,000 . . . . .	43.6	37.7	36.4	46.5	48.4	23.0	46.8	46.7	59.2	57.6	34.7
\$10,000-\$19,999 . . . . .	41.3	34.0	33.7	41.5	38.3	23.5	47.3	48.2	54.3	51.2	36.9
\$20,000-\$34,999 . . . . .	40.0	32.9	32.1	39.5	32.9	17.5	46.9	48.3	52.8	47.1	29.7
\$35,000-\$49,999 . . . . .	41.4	35.9	32.1	39.9	35.2	27.3	47.4	45.7	50.2	48.8	29.7
\$50,000 or more . . . . .	42.9	36.5	31.7	44.1	33.7	21.0	49.7	54.5	52.3	45.8	35.7
Race											
White . . . . .	40.9	34.4	32.9	41.0	35.1	20.6	46.8	49.1	52.4	47.5	33.5
Black . . . . .	38.6	32.0	26.1	37.5	33.0	30.1	43.8	40.4	47.2	49.9	32.1
Hispanic origin											
Hispanic . . . . .	36.9	26.5	23.1	30.0	27.9	21.4	45.6	44.1	49.3	45.2	36.9
Non-Hispanic . . . . .	40.9	34.7	33.0	41.6	35.0	21.7	46.5	48.2	52.0	47.8	33.2
Geographic region											
Northeast . . . . .	39.1	32.4	28.5	39.8	32.5	21.4	44.9	47.7	49.5	47.2	31.8
Midwest . . . . .	43.6	37.5	35.5	44.7	38.8	21.9	49.1	50.7	54.8	50.4	35.0
South . . . . .	38.0	31.5	29.5	37.1	31.8	21.4	43.9	43.6	49.8	44.9	32.5
West . . . . .	42.9	36.1	34.7	42.8	35.8	22.1	49.2	51.6	53.5	49.7	35.0
Marital status											
Currently married . . . . .	40.1	34.1	34.3	40.5	33.4	20.4	46.1	46.2	49.5	45.8	35.2
Formerly married . . . . .	44.3	38.6	39.6	42.3	42.1	27.8	46.6	55.2	60.9	53.9	33.4
Never married . . . . .	39.2	32.2	29.9	40.5	34.2	20.7	47.7	48.3	55.1	43.3	17.1
Employment status											
Currently employed . . . . .	41.9	35.4	32.2	39.9	33.4	22.7	49.7	49.4	52.2	48.1	33.8
Unemployed . . . . .	44.7	36.8	32.4	41.3	39.5	*28.2	53.3	52.0	56.2	51.6	*43.2
Not in labor force . . . . .	37.4	29.3	30.3	54.3	38.7	21.4	41.4	42.9	49.9	46.8	33.3

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 15. Percent of persons 18 years of age and over who had sought help for a personal or emotional problem in the past year, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	12.5	8.6	9.6	10.7	7.8	3.1	16.0	18.5	21.5	13.3	6.8
Education level											
Less than 12 years . . . . .	8.5	5.5	8.8	6.7	5.0	2.3	11.3	14.7	18.1	11.1	6.3
12 years . . . . .	11.3	7.5	8.2	9.4	6.6	2.7	14.2	17.0	18.7	11.2	6.6
More than 12 years . . . . .	15.6	10.9	11.4	12.5	10.3	4.5	20.6	21.5	24.6	17.8	8.3
13-15 years . . . . .	14.9	10.4	10.1	12.0	10.1	4.6	19.0	20.8	22.8	15.9	6.8
16 years or more . . . . .	16.4	11.4	13.5	12.8	10.4	4.5	22.5	22.9	26.4	19.8	10.3
Income											
Less than \$10,000 . . . . .	14.6	11.8	12.6	16.6	15.9	*2.8	16.1	18.3	25.7	21.3	6.1
\$10,000-\$19,999 . . . . .	12.5	8.3	10.8	11.7	6.7	2.8	16.0	18.8	23.8	14.6	7.5
\$20,000-\$34,999 . . . . .	12.0	8.0	9.1	10.2	6.5	2.6	16.0	18.7	21.6	11.7	4.8
\$35,000-\$49,999 . . . . .	13.2	9.3	8.3	10.9	8.5	*5.2	17.5	17.7	21.4	13.3	7.9
\$50,000 or more . . . . .	14.0	9.1	9.6	10.4	8.5	*3.7	19.3	22.6	22.2	15.0	10.6
Race											
White . . . . .	12.8	8.7	10.1	10.9	8.1	3.0	16.6	20.0	22.4	13.5	6.9
Black . . . . .	10.2	7.0	6.6	9.0	6.2	*3.9	12.7	11.5	17.2	11.8	6.0
Hispanic origin											
Hispanic . . . . .	10.3	6.2	7.4	6.0	6.3	*-	13.9	12.8	16.8	12.6	*9.1
Non-Hispanic . . . . .	12.6	8.7	9.8	11.1	7.9	3.2	16.2	19.3	21.9	13.4	6.7
Geographic region											
Northeast . . . . .	11.5	8.4	8.5	11.8	6.9	2.8	14.2	18.5	20.3	10.7	5.1
Midwest . . . . .	13.3	9.0	10.6	10.4	8.4	3.8	17.3	19.9	23.2	14.5	7.1
South . . . . .	11.2	7.2	8.1	9.1	6.2	3.1	14.7	15.7	19.8	12.6	7.6
West . . . . .	14.6	10.4	11.5	12.5	10.5	*2.5	18.5	21.7	23.2	16.0	7.0
Marital status											
Currently married . . . . .	10.7	7.0	8.4	8.7	6.6	2.5	14.5	16.5	18.1	11.4	7.1
Formerly married . . . . .	17.3	14.8	20.6	20.1	14.3	5.8	18.4	29.1	37.0	19.3	6.9
Never married . . . . .	14.2	10.7	9.8	14.3	11.8	*3.2	18.5	19.1	22.6	11.4	*3.3
Employment status											
Currently employed . . . . .	13.1	8.8	9.4	9.9	7.2	*2.8	18.2	19.2	21.7	13.3	6.4
Unemployed . . . . .	15.9	11.7	12.6	12.2	*10.3	*2.6	20.4	20.0	26.6	*11.9	*2.6
Not in labor force . . . . .	10.8	7.3	9.5	22.0	10.2	3.1	12.6	16.6	20.1	13.4	6.9

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 16. Percent of persons 18 years of age and over who exercised or played sports regularly, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	40.7	44.0	56.1	44.3	35.6	36.9	37.7	44.2	40.1	34.6	29.1
Education level											
Less than 12 years . . . . .	25.9	29.3	45.0	23.2	20.6	29.5	22.8	28.1	21.6	22.0	21.1
12 years . . . . .	37.0	40.3	51.5	37.3	32.0	37.1	34.4	38.5	34.1	33.4	30.5
More than 12 years . . . . .	52.1	54.3	66.1	53.9	46.6	47.5	49.8	56.7	49.7	45.1	42.3
13-15 years . . . . .	48.5	50.3	65.2	46.5	37.5	42.2	47.0	53.9	44.8	42.5	42.2
16 years or more . . . . .	55.8	57.9	67.6	59.5	52.4	51.4	53.2	61.7	54.4	47.8	42.3
Income											
Less than \$10,000 . . . . .	32.9	40.4	61.8	28.8	22.0	26.1	28.9	38.3	27.2	21.4	24.8
\$10,000-\$19,999 . . . . .	32.3	35.3	47.9	33.3	24.3	30.6	29.9	36.5	30.0	24.8	27.5
\$20,000-\$34,999 . . . . .	40.5	42.6	56.0	40.3	30.9	41.4	38.5	43.7	39.0	34.9	33.4
\$35,000-\$49,999 . . . . .	46.1	47.2	57.6	49.6	33.3	47.4	44.8	53.2	44.4	38.8	41.3
\$50,000 or more . . . . .	51.7	54.1	62.7	54.8	49.5	49.6	49.1	57.1	50.7	44.5	37.5
Race											
White . . . . .	41.5	44.1	55.0	45.0	36.3	37.8	39.1	46.4	42.1	35.7	29.9
Black . . . . .	34.3	42.2	61.7	39.6	28.3	25.1	27.9	32.2	29.4	25.5	19.1
Hispanic origin											
Hispanic . . . . .	34.9	38.4	46.7	38.5	24.4	32.1	31.9	35.1	33.4	27.8	21.2
Non-Hispanic . . . . .	41.2	44.5	57.3	44.7	36.3	37.1	38.3	45.6	40.7	35.2	29.4
Geographic region											
Northeast . . . . .	37.4	41.8	53.6	43.5	34.1	31.8	33.5	42.8	36.5	31.1	21.9
Midwest . . . . .	41.5	43.8	55.5	45.4	36.0	33.3	39.3	46.7	40.2	37.3	30.9
South . . . . .	39.0	42.8	56.7	42.3	32.1	37.6	35.7	42.6	38.4	31.3	27.7
West . . . . .	45.9	48.3	58.0	46.8	41.8	45.7	43.5	45.4	46.1	41.1	38.5
Marital status											
Currently married . . . . .	39.4	40.7	49.0	42.7	35.7	38.0	38.0	40.8	40.0	36.2	31.6
Formerly married . . . . .	34.3	40.4	48.2	48.1	35.9	32.8	31.8	35.6	39.5	31.7	27.5
Never married . . . . .	51.3	56.3	61.3	49.7	32.3	33.5	45.0	49.2	42.4	25.0	25.0
Employment status											
Currently employed . . . . .	43.2	45.6	55.7	45.2	37.0	36.0	40.3	46.0	40.5	34.7	32.4
Unemployed . . . . .	42.7	43.4	53.5	40.8	28.9	*34.6	42.0	46.8	40.6	34.7	*34.6
Not in labor force . . . . .	35.4	38.6	59.7	30.6	30.4	37.1	33.8	39.4	39.0	34.5	28.7

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 17. Percent of persons 18 years of age and over who had walked for exercise in the past 2 weeks, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	45.1	40.9	34.2	38.9	44.5	51.6	48.9	50.7	49.7	49.4	44.3
Education level											
Less than 12 years . . . . .	38.2	37.3	35.2	29.3	36.3	46.2	39.0	40.8	38.6	40.6	37.0
12 years . . . . .	43.4	37.8	32.0	34.7	41.8	53.1	47.8	48.8	46.6	48.4	47.5
More than 12 years . . . . .	50.2	45.0	36.1	43.9	50.7	57.9	55.5	56.5	54.9	57.0	52.1
13-15 years . . . . .	47.8	41.2	34.0	40.8	46.8	57.1	53.8	54.4	52.1	56.8	51.7
16 years or more . . . . .	52.6	48.4	39.7	46.2	53.2	58.5	57.6	60.4	57.5	57.3	52.6
Income											
Less than \$10,000 . . . . .	45.9	44.3	39.4	49.1	51.0	44.5	46.8	50.6	48.4	44.4	42.9
\$10,000-\$19,999 . . . . .	42.7	40.3	33.5	36.8	42.1	51.4	44.6	45.3	46.3	42.4	44.2
\$20,000-\$34,999 . . . . .	44.8	41.4	35.7	38.8	44.2	54.6	48.2	50.5	47.3	49.3	43.8
\$35,000-\$49,999 . . . . .	46.6	40.6	34.3	40.1	41.7	61.7	53.1	54.6	53.4	50.3	56.6
\$50,000 or more . . . . .	48.6	43.1	34.1	39.7	49.0	57.6	54.6	54.6	54.0	56.5	48.2
Race											
White . . . . .	45.3	40.8	32.9	38.5	44.8	52.4	49.5	51.3	50.0	50.3	44.9
Black . . . . .	45.0	42.8	42.5	42.4	43.9	42.6	46.8	48.7	49.5	45.1	38.4
Hispanic origin											
Hispanic . . . . .	36.9	32.5	29.1	32.2	31.6	60.6	40.5	39.9	42.4	38.5	40.6
Non-Hispanic . . . . .	45.8	41.5	34.8	39.5	45.2	51.4	49.7	52.2	50.3	50.1	44.4
Geographic region											
Northeast . . . . .	47.7	44.8	39.2	41.9	48.6	54.9	50.3	51.8	52.5	51.3	43.6
Midwest . . . . .	46.6	41.5	36.2	40.1	43.6	50.9	51.3	54.1	51.0	51.7	47.2
South . . . . .	43.5	38.9	32.2	37.1	42.1	50.2	47.5	51.7	48.4	46.1	41.6
West . . . . .	43.4	39.5	30.9	37.4	45.2	51.7	47.1	44.2	47.7	50.1	46.3
Marital status											
Currently married . . . . .	45.0	41.3	33.6	37.4	44.2	52.1	48.7	48.7	48.7	50.5	44.0
Formerly married . . . . .	45.5	43.7	30.4	42.6	43.8	49.6	46.2	45.3	50.4	46.4	44.0
Never married . . . . .	45.0	38.0	34.7	44.3	50.4	50.9	53.5	53.5	56.2	48.6	50.1
Employment status											
Currently employed . . . . .	43.3	38.0	33.3	37.7	42.6	45.0	49.6	51.2	49.8	48.2	45.4
Unemployed . . . . .	48.3	44.7	41.1	48.5	45.4	*51.3	52.2	52.8	54.2	45.8	*59.0
Not in labor force . . . . .	48.6	50.7	37.5	53.8	53.4	53.2	47.6	49.0	48.6	51.4	44.0

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 18. Percent of persons 18 years of age and over who had been very physically active in leisure time sports (expending an average of 3 or more kilocalories per kilogram per day) in the past 2 weeks, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	29.2	36.6	49.3	36.4	29.3	26.1	22.6	29.7	25.0	19.5	12.5
Education level											
Less than 12 years . . . . .	19.7	26.0	45.1	21.4	18.0	20.7	14.1	20.5	16.6	14.9	8.2
12 years . . . . .	27.2	34.9	46.9	31.4	28.2	27.5	21.1	26.4	23.7	17.9	13.0
More than 12 years . . . . .	36.0	42.9	53.9	43.1	36.1	32.5	28.9	36.7	28.1	24.9	19.4
13-15 years . . . . .	35.3	42.6	54.1	40.4	33.9	30.5	28.8	37.2	27.0	23.5	19.8
16 years or more . . . . .	36.7	43.2	53.5	45.2	37.5	33.9	28.9	35.9	29.1	26.4	18.7
Income											
Less than \$10,000 . . . . .	25.7	35.5	54.3	28.4	19.7	16.5	20.5	32.0	22.7	16.4	9.3
\$10,000-\$19,999 . . . . .	23.3	29.2	41.4	26.8	20.5	22.8	18.5	24.8	22.0	14.5	12.4
\$20,000-\$34,999 . . . . .	29.4	35.7	49.5	32.9	27.5	28.8	23.2	27.0	25.4	20.9	14.4
\$35,000-\$49,999 . . . . .	33.7	40.9	54.0	40.4	29.4	40.2	25.7	32.7	25.8	21.6	16.1
\$50,000 or more . . . . .	36.5	43.4	54.2	45.2	37.2	34.1	29.0	38.8	28.8	23.9	26.4
Race											
White . . . . .	29.6	36.8	48.8	37.4	30.2	26.4	23.1	30.2	25.9	20.1	13.0
Black . . . . .	26.2	35.7	54.8	31.0	23.2	20.0	18.6	25.7	20.1	14.0	5.8
Hispanic origin											
Hispanic . . . . .	26.7	34.6	45.2	31.5	23.4	22.0	20.0	21.6	20.5	17.6	16.2
Non-Hispanic . . . . .	29.5	36.7	49.9	36.7	29.7	26.3	22.8	30.8	25.4	19.7	12.4
Geographic region											
Northeast . . . . .	27.8	35.2	48.8	35.4	28.4	23.1	21.3	32.5	22.3	17.4	12.1
Midwest . . . . .	29.0	35.9	49.4	36.1	27.0	26.3	22.7	29.4	24.5	21.6	11.2
South . . . . .	27.6	35.3	49.7	34.5	26.6	26.0	20.7	27.7	23.7	17.3	9.7
West . . . . .	33.7	40.7	49.2	40.6	37.0	29.6	27.1	31.0	29.8	23.3	20.3
Marital status											
Currently married . . . . .	27.3	33.3	41.0	35.3	30.0	27.4	21.4	23.7	23.9	19.7	13.5
Formerly married . . . . .	23.0	32.8	47.0	42.1	27.7	20.7	18.9	28.9	28.9	19.4	11.6
Never married . . . . .	41.3	48.7	55.3	37.2	21.5	24.2	32.3	36.4	27.6	16.5	14.5
Employment status											
Currently employed . . . . .	31.4	37.5	48.0	36.7	29.2	25.0	24.2	30.5	24.4	18.2	14.0
Unemployed . . . . .	37.0	43.2	56.2	37.3	30.2	*11.5	30.4	34.5	31.8	20.9	*11.5
Not in labor force . . . . .	23.7	32.1	54.6	29.6	30.0	26.5	19.7	27.0	25.7	21.5	12.3

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 19. Percent of persons 18 years of age and over whose job or main daily activity required at least a moderate amount of physical work, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	39.3	43.6	54.2	47.6	39.1	23.3	35.3	36.5	37.4	37.0	27.5
Education level											
Less than 12 years . . . . .	44.2	49.1	63.6	65.2	52.3	22.9	39.9	46.1	52.1	46.2	25.7
12 years . . . . .	46.7	56.5	64.8	65.1	49.8	26.1	38.9	39.9	42.7	38.8	30.3
More than 12 years . . . . .	29.7	30.4	39.1	31.6	23.8	21.3	28.9	29.2	29.5	28.3	26.6
13-15 years . . . . .	37.8	44.2	50.0	48.8	36.1	22.0	32.0	30.6	34.7	30.6	29.6
16 years or more . . . . .	21.4	18.3	20.3	18.5	16.0	20.7	25.2	26.8	24.6	26.0	22.4
Income											
Less than \$10,000 . . . . .	35.3	37.1	42.1	50.2	30.9	21.1	34.4	35.8	46.6	39.5	23.8
\$10,000-\$19,999 . . . . .	46.7	50.2	60.2	64.9	45.8	26.4	43.8	46.6	50.0	45.1	34.5
\$20,000-\$34,999 . . . . .	45.9	53.2	59.3	59.6	53.1	25.1	38.9	36.3	40.7	43.4	31.8
\$35,000-\$49,999 . . . . .	41.2	46.1	55.8	45.0	43.9	30.5	35.7	33.0	36.0	39.3	29.2
\$50,000 or more . . . . .	29.5	30.5	49.2	28.4	24.9	18.1	28.4	31.0	28.6	28.1	20.5
Race											
White . . . . .	38.7	43.2	55.3	46.8	38.2	23.6	34.6	36.1	36.2	36.1	27.8
Black . . . . .	44.1	48.2	52.7	54.8	44.9	22.8	40.8	40.5	43.8	46.4	24.1
Hispanic origin											
Hispanic . . . . .	45.0	54.3	53.0	60.6	54.6	23.6	37.1	35.5	40.5	38.7	25.2
Non-Hispanic . . . . .	38.8	42.7	54.4	46.4	38.2	23.3	35.2	36.7	37.2	37.0	27.6
Geographic region											
Northeast . . . . .	37.9	41.5	51.0	45.3	35.7	27.0	34.6	36.3	37.8	35.7	26.4
Midwest . . . . .	41.6	45.3	56.8	48.5	41.2	24.9	38.2	40.2	40.4	39.0	30.8
South . . . . .	39.4	44.1	56.2	49.0	39.2	20.4	35.2	36.0	37.8	38.3	25.1
West . . . . .	37.6	42.7	50.9	46.3	39.7	22.8	32.7	33.5	33.1	33.7	29.1
Marital status											
Currently married . . . . .	40.3	42.8	57.1	47.8	39.6	24.7	37.6	39.7	37.6	37.4	35.1
Formerly married . . . . .	33.2	39.0	65.5	48.6	37.8	18.1	30.8	35.2	39.7	37.0	21.8
Never married . . . . .	41.3	48.4	51.6	45.6	34.7	19.5	32.6	33.1	32.5	31.8	27.2
Employment status											
Currently employed . . . . .	43.7	50.2	59.2	49.3	43.8	37.6	35.9	36.7	34.9	36.6	34.3
Unemployed . . . . .	41.3	42.6	48.1	42.5	32.1	*43.9	39.9	34.5	45.1	43.4	*29.0
Not in labor force . . . . .	29.8	20.6	23.8	20.3	19.3	20.3	34.2	36.3	44.4	37.4	26.8

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.



**Table 20. Percent of persons 18 years of age and over who judged themselves to be more physically active than other persons their own age, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	32.5	37.5	36.4	36.6	37.7	41.1	27.9	21.1	25.8	31.2	36.1
Education level											
Less than 12 years . . . . .	26.3	29.6	31.9	25.0	26.7	33.9	23.3	18.2	20.8	21.7	28.5
12 years . . . . .	30.9	36.4	35.0	34.7	37.4	42.3	26.5	18.1	23.5	30.9	37.9
More than 12 years . . . . .	37.2	42.3	40.0	40.6	44.0	50.5	31.9	25.3	29.0	38.2	47.3
13-15 years . . . . .	35.5	41.7	39.1	40.4	44.2	50.7	30.1	24.1	26.2	36.4	48.3
16 years or more . . . . .	38.9	42.8	41.5	40.8	43.8	50.4	34.2	27.6	31.7	39.9	46.0
Income											
Less than \$10,000 . . . . .	25.9	28.5	35.2	21.5	16.9	32.1	24.5	19.0	21.9	21.4	32.7
\$10,000-\$19,999 . . . . .	28.6	32.2	31.5	33.2	26.1	36.6	25.6	17.4	24.3	26.3	34.3
\$20,000-\$34,999 . . . . .	32.9	37.9	38.0	35.8	37.0	44.3	28.1	21.2	25.4	32.4	40.6
\$35,000-\$49,999 . . . . .	33.3	38.7	37.8	36.6	40.2	49.2	27.5	21.2	25.6	33.7	38.1
\$50,000 or more . . . . .	38.4	43.5	38.5	43.2	45.1	52.2	32.9	28.4	30.8	35.9	46.3
Race											
White . . . . .	33.3	38.2	35.8	37.6	39.0	42.2	28.9	22.3	26.2	32.3	36.9
Black . . . . .	27.0	34.0	42.5	30.8	28.5	30.4	21.3	16.3	23.3	22.6	25.6
Hispanic origin											
Hispanic . . . . .	29.2	33.8	33.0	35.0	30.1	43.8	25.4	20.0	25.2	31.7	35.3
Non-Hispanic . . . . .	32.8	37.9	37.0	36.8	38.3	41.0	28.1	21.3	25.9	31.3	36.2
Geographic region											
Northeast . . . . .	32.2	37.5	34.9	36.0	40.0	41.2	27.5	22.7	23.2	31.0	34.4
Midwest . . . . .	32.0	37.1	35.8	37.0	38.1	38.2	27.2	19.9	26.3	29.3	35.4
South . . . . .	30.9	35.2	35.6	34.3	33.5	39.5	27.0	21.8	24.4	29.9	34.5
West . . . . .	36.0	41.6	39.8	40.5	41.8	48.1	30.8	20.0	29.8	36.4	42.6
Marital status											
Currently married . . . . .	32.2	37.3	32.7	36.1	38.4	42.1	27.0	19.2	24.7	31.8	35.3
Formerly married . . . . .	34.6	38.7	37.3	41.6	35.1	39.2	32.9	17.8	31.8	31.7	36.6
Never married . . . . .	31.6	37.6	38.9	35.4	33.3	30.7	24.2	23.7	24.9	18.2	38.3
Employment status											
Currently employed . . . . .	34.6	39.2	37.3	37.9	40.8	56.8	29.1	22.3	27.9	35.9	49.1
Unemployed . . . . .	28.1	33.6	34.0	32.4	34.1	*38.5	22.2	20.5	18.9	27.8	*53.8
Not in labor force . . . . .	28.5	32.4	32.2	17.4	25.0	37.7	26.7	18.3	20.2	24.5	34.5

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 21. Percent of persons 18 years of age and over who specified that exercise needs to be performed 3 times per week and maintained 20 minutes per session in order to strengthen the heart and lungs, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	5.2	4.9	4.0	6.0	5.3	3.0	5.5	5.2	7.5	5.4	2.8
Education level											
Less than 12 years . . . . .	2.8	2.4	2.5	3.1	2.0	2.0	3.3	4.6	4.2	3.2	2.1
12 years . . . . .	4.4	3.3	2.7	4.0	3.8	2.2	5.3	4.8	6.5	5.3	3.6
More than 12 years . . . . .	7.2	7.3	6.0	8.0	8.4	5.2	7.2	5.8	9.2	7.2	3.0
13-15 years . . . . .	5.9	6.1	5.0	6.4	7.9	4.9	5.7	4.8	7.2	6.3	*2.3
16 years or more . . . . .	8.6	8.4	7.8	9.2	8.7	5.4	8.9	7.7	11.0	8.1	*3.8
Income											
Less than \$10,000 . . . . .	3.2	2.5	3.0	*3.0	*2.1	*1.4	3.7	4.2	4.8	4.3	2.2
\$10,000-\$19,999 . . . . .	3.7	3.2	3.1	3.8	3.1	2.7	4.1	4.2	4.9	4.2	3.3
\$20,000-\$34,999 . . . . .	5.5	4.5	5.1	5.2	3.3	3.6	6.5	6.7	8.3	5.5	3.7
\$35,000-\$49,999 . . . . .	6.9	6.4	4.6	7.7	6.2	*4.4	7.5	7.0	8.1	7.5	*5.2
\$50,000 or more . . . . .	6.9	6.8	3.4	8.0	7.8	*4.6	7.1	4.5	9.4	6.2	*2.8
Race											
White . . . . .	5.5	5.2	4.3	6.4	5.6	3.3	5.7	5.4	7.8	5.6	2.9
Black . . . . .	3.9	3.1	2.9	3.5	4.1	*0.5	4.6	4.5	6.2	4.0	*2.0
Hispanic origin											
Hispanic . . . . .	3.4	2.9	*2.2	3.5	*3.0	*3.5	3.9	3.4	4.6	4.7	*1.1
Non-Hispanic . . . . .	5.4	5.0	4.2	6.2	5.5	3.0	5.7	5.4	7.7	5.5	2.9
Geographic region											
Northeast . . . . .	5.2	4.7	4.5	5.3	5.8	*2.0	5.5	4.6	7.7	5.0	4.0
Midwest . . . . .	6.0	5.8	4.8	7.9	5.5	3.5	6.2	6.5	8.0	5.4	3.6
South . . . . .	4.5	3.8	2.6	4.8	4.7	2.3	5.1	5.2	6.9	5.4	1.4
West . . . . .	5.5	5.5	4.9	6.2	5.6	4.7	5.6	4.1	7.8	5.8	2.9
Marital status											
Currently married . . . . .	5.8	5.2	5.5	5.9	5.6	3.0	6.3	5.7	8.2	5.5	3.2
Formerly married . . . . .	4.0	3.9	*3.5	5.0	3.9	*2.3	4.1	5.2	5.6	5.1	2.5
Never married . . . . .	4.5	4.1	3.0	7.2	*5.1	*5.2	4.9	4.7	5.8	*5.8	*4.0
Employment status											
Currently employed . . . . .	5.9	5.4	4.3	6.1	5.8	4.0	6.4	5.4	7.8	6.1	*2.2
Unemployed . . . . .	4.3	3.6	*2.1	*4.6	*5.2	*-	5.0	*3.4	7.7	*3.5	*6.4
Not in labor force . . . . .	3.9	3.1	3.1	4.4	3.3	2.8	4.3	5.1	6.7	4.5	2.9

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell includes unknowns.

**Table 22. Percent of persons 18 years of age and over who currently smoked cigarettes, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	25.5	28.4	28.6	33.6	29.3	14.6	22.8	25.3	25.8	24.8	11.5
Education level											
Less than 12 years . . . . .	31.8	37.3	44.6	54.0	39.4	17.4	27.1	40.9	40.3	29.9	10.9
12 years . . . . .	29.6	33.5	33.4	40.9	32.3	16.2	26.5	29.8	32.1	25.5	11.9
More than 12 years . . . . .	18.3	20.0	16.1	23.9	21.5	8.7	16.6	14.5	17.2	20.5	11.8
13-15 years . . . . .	23.0	26.2	20.4	34.3	27.6	8.9	20.2	17.3	23.5	22.8	13.0
16 years or more . . . . .	13.5	14.5	8.8	16.0	17.6	8.6	12.3	9.3	11.1	18.2	10.2
Income											
Less than \$10,000 . . . . .	31.6	37.3	30.6	59.7	47.0	21.1	28.6	31.9	46.6	33.2	13.2
\$10,000-\$19,999 . . . . .	29.8	34.1	35.8	44.7	40.7	16.4	26.3	31.9	36.5	26.1	12.2
\$20,000-\$34,999 . . . . .	26.9	30.3	30.6	37.0	30.5	13.0	23.5	22.3	27.1	26.5	12.1
\$35,000-\$49,999 . . . . .	23.4	25.5	22.8	28.4	27.4	10.9	21.0	19.7	22.4	22.5	10.2
\$50,000 or more . . . . .	19.3	21.3	20.6	24.1	20.7	10.1	17.2	17.7	16.2	19.0	12.3
Race											
White . . . . .	25.6	28.0	29.1	33.0	28.7	13.7	23.4	27.1	26.1	25.4	11.5
Black . . . . .	26.2	32.5	26.7	38.8	36.7	21.5	21.2	17.9	27.2	22.6	11.1
Hispanic origin											
Hispanic . . . . .	23.0	30.9	28.5	35.9	30.2	19.4	16.3	15.7	18.6	18.1	*5.1
Non-Hispanic . . . . .	25.7	28.2	28.6	33.4	29.3	14.4	23.4	26.7	26.6	25.3	11.7
Geographic region											
Northeast . . . . .	23.9	26.8	28.0	31.1	26.7	15.0	21.3	25.9	24.6	22.2	10.3
Midwest . . . . .	27.4	29.4	31.9	33.6	30.2	14.0	25.6	29.4	29.8	27.6	10.1
South . . . . .	26.5	30.4	29.4	35.9	32.5	16.4	22.9	24.9	25.4	25.7	12.2
West . . . . .	23.2	25.6	24.1	32.1	25.9	11.6	20.9	20.9	23.2	22.6	13.5
Marital status											
Currently married . . . . .	24.6	27.1	32.2	31.5	27.0	12.6	22.1	27.6	23.1	21.9	10.5
Formerly married . . . . .	30.3	41.1	43.9	49.3	44.4	23.8	25.9	44.3	37.9	33.5	12.4
Never married . . . . .	24.3	26.7	25.4	32.6	28.8	12.7	21.3	20.2	28.0	23.2	*8.8
Employment status											
Currently employed . . . . .	26.9	29.2	28.1	31.8	27.9	16.3	24.2	24.5	24.6	24.5	15.5
Unemployed . . . . .	38.8	45.8	43.1	53.1	43.5	*16.7	31.2	29.8	38.1	25.1	*6.4
Not in labor force . . . . .	21.3	23.3	25.5	51.7	33.3	14.2	20.3	26.5	28.1	25.2	11.0

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 23. Percent of current smokers 18 years of age and over who currently were smoking 25 cigarettes or more per day, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	22.9	28.5	14.5	31.0	39.0	26.6	16.6	8.8	19.6	21.8	12.0
Education level											
Less than 12 years . . . . .	22.2	25.1	15.2	31.6	30.8	19.3	18.7	10.6	25.1	24.8	11.5
12 years . . . . .	23.4	29.6	15.4	33.6	39.2	35.1	17.2	8.7	21.4	21.1	13.7
More than 12 years . . . . .	22.7	30.1	11.9	27.8	46.5	31.3	13.5	7.1	13.7	20.0	*9.0
13-15 years . . . . .	23.1	30.6	12.3	29.2	53.2	*36.3	14.5	8.1	16.0	20.0	*12.0
16 years or more . . . . .	22.0	29.3	*10.5	25.5	39.9	*27.7	11.6	*3.5	8.9	20.0	*3.8
Income											
Less than \$10,000 . . . . .	17.3	20.9	10.2	30.2	27.4	*13.5	14.8	*5.0	24.4	17.4	14.8
\$10,000-\$19,999 . . . . .	22.3	27.2	18.7	26.4	38.2	30.9	17.2	12.0	23.2	21.3	*7.8
\$20,000-\$34,999 . . . . .	22.3	27.2	12.9	29.9	38.7	30.7	16.2	9.5	17.3	22.1	*12.6
\$35,000-\$49,999 . . . . .	25.3	31.2	18.2	31.1	42.0	*27.2	17.4	10.6	18.8	21.0	*13.5
\$50,000 or more . . . . .	28.1	35.4	*9.1	38.6	45.5	*34.7	18.3	*5.1	19.2	25.3	*11.4
Race											
White . . . . .	25.4	32.1	16.2	35.1	43.6	30.3	18.0	9.4	21.6	23.6	12.8
Black . . . . .	6.0	7.4	*7.7	7.4	*6.9	*7.2	4.2	*3.8	*4.7	*4.9	*-
Hispanic origin											
Hispanic . . . . .	6.8	8.9	*2.9	11.3	*13.2	*16.9	*3.5	*2.3	*4.1	*4.6	*-
Non-Hispanic . . . . .	24.1	30.3	15.9	32.8	40.8	27.1	17.4	9.3	20.6	22.7	12.2
Geographic region											
Northeast . . . . .	21.3	26.3	14.2	27.7	36.3	26.0	15.9	10.2	16.4	22.3	*11.4
Midwest . . . . .	24.2	30.9	18.4	35.0	39.2	27.0	17.2	8.2	20.9	22.6	*12.1
South . . . . .	23.8	29.2	12.4	33.6	39.1	26.3	17.4	10.0	22.1	20.8	12.1
West . . . . .	20.8	26.1	13.0	24.1	41.2	27.5	14.7	*6.0	16.4	21.7	*12.1
Marital status											
Currently married . . . . .	25.2	31.8	15.8	32.0	40.7	31.4	17.2	10.4	19.3	21.6	*8.9
Formerly married . . . . .	23.7	30.6	28.2	32.9	34.1	16.6	19.2	*10.1	22.2	22.7	13.8
Never married . . . . .	13.5	16.3	12.3	23.1	31.3	*19.7	9.4	5.8	15.5	*18.2	*14.1
Employment status											
Currently employed . . . . .	24.0	29.0	15.2	30.8	40.4	30.3	16.7	9.8	19.0	21.7	*8.3
Unemployed . . . . .	23.9	28.2	*12.6	33.1	47.4	*61.5	17.0	*8.5	20.1	*30.8	*-
Not in labor force . . . . .	19.8	26.3	11.1	31.9	32.4	25.4	16.2	6.7	21.1	21.5	12.6

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 24. Percent of persons 18 years of age and over who were aware that smoking increases one's chances of getting heart disease, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	91.4	91.2	92.3	93.2	90.2	86.5	91.6	93.4	93.9	91.6	85.1
Education level											
Less than 12 years . . . . .	82.9	81.9	83.9	82.5	82.1	79.5	83.8	86.6	85.0	85.2	80.5
12 Years . . . . .	92.2	91.7	92.9	92.4	89.6	90.7	92.6	93.8	94.1	92.0	88.5
More than 12 years . . . . .	95.3	95.5	95.6	96.2	95.2	92.5	95.1	96.0	95.9	95.5	88.8
13-15 years . . . . .	94.2	94.2	94.6	95.1	94.1	88.8	94.1	95.2	95.0	94.2	88.1
16 years or more . . . . .	96.4	96.6	97.5	97.1	96.0	95.1	96.2	97.4	96.8	96.8	89.8
Income											
Less than \$10,000 . . . . .	85.2	83.1	88.8	82.9	79.6	75.5	86.3	92.0	89.4	83.6	80.7
\$10,000-\$19,999 . . . . .	88.7	87.9	90.6	87.8	86.9	85.5	89.4	91.6	90.4	89.2	86.6
\$20,000-\$34,999 . . . . .	93.1	92.4	93.0	93.3	91.0	91.4	93.7	94.4	94.9	93.8	89.4
\$35,000-\$49,999 . . . . .	94.7	94.6	93.6	96.7	92.6	92.7	94.8	95.5	95.3	94.1	91.1
\$50,000 or more . . . . .	95.5	95.5	96.1	96.4	94.5	94.6	95.6	97.1	96.3	94.3	92.5
Race											
White . . . . .	92.4	92.2	92.9	94.2	91.5	87.9	92.5	94.4	95.0	92.7	86.1
Black . . . . .	86.0	85.5	88.5	88.2	83.5	72.8	86.4	88.7	89.9	84.2	76.7
Hispanic origin											
Hispanic . . . . .	84.9	82.5	79.6	85.0	85.7	75.6	87.0	87.3	87.6	87.6	81.7
Non-Hispanic . . . . .	92.0	92.0	93.9	93.9	90.5	86.9	92.0	94.4	94.5	91.8	85.2
Geographic region											
Northeast . . . . .	93.0	93.7	95.8	95.7	92.6	87.8	92.4	93.6	94.5	92.6	87.8
Midwest . . . . .	92.9	92.9	94.6	95.2	91.5	87.0	92.9	96.0	94.9	93.3	85.1
South . . . . .	90.0	89.4	90.4	91.7	88.1	84.7	90.4	92.5	93.8	90.3	82.2
West . . . . .	90.4	89.8	89.7	90.8	89.8	87.6	91.0	91.8	92.4	90.7	87.5
Marital status											
Currently married . . . . .	92.4	91.8	93.2	93.6	90.6	88.8	93.1	93.6	94.7	92.5	88.6
Formerly married . . . . .	87.3	87.6	92.2	93.6	87.8	77.2	87.2	92.0	91.3	89.8	82.9
Never married . . . . .	91.5	91.1	91.7	90.6	90.6	81.9	91.9	93.3	91.5	87.3	80.3
Employment status											
Currently employed . . . . .	93.2	92.5	92.5	93.8	91.2	88.6	93.9	95.1	94.6	92.4	86.8
Unemployed . . . . .	91.7	90.5	92.5	91.6	85.2	89.2	92.9	95.0	94.6	84.0	97.4
Not in labor force . . . . .	87.8	86.8	91.2	83.9	87.0	86.0	88.3	89.0	91.7	90.7	84.8

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell includes unknowns.

**Table 25. Percent of current smokers 18 years of age and over who were aware that smoking increases one's chances of getting heart disease, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	88.9	87.5	89.8	90.9	84.1	73.5	90.6	93.0	94.0	87.9	77.9
Education level											
Less than 12 years . . . . .	81.3	79.4	82.6	84.5	76.7	67.4	83.6	88.5	88.1	78.9	74.7
12 years . . . . .	90.5	88.5	91.5	90.5	84.3	77.3	92.4	94.5	94.8	90.3	79.0
More than 12 years . . . . .	93.7	93.4	95.2	94.7	91.3	83.9	94.0	95.2	96.0	93.1	82.2
13-15 years . . . . .	92.9	92.9	95.5	94.1	89.8	71.8	93.0	94.9	94.8	92.3	77.0
16 years or more . . . . .	95.0	94.3	94.1	95.6	92.8	93.1	96.0	96.5	98.3	94.0	91.3
Income											
Less than \$10,000 . . . . .	83.7	80.8	88.8	80.9	75.7	68.3	85.7	93.2	89.0	77.5	73.0
\$10,000-\$19,999 . . . . .	87.6	85.9	88.9	88.9	81.9	77.0	89.4	91.1	93.0	88.9	76.6
\$20,000-\$34,999 . . . . .	91.9	90.1	92.3	91.5	86.8	82.6	94.0	95.5	94.6	92.1	92.8
\$35,000-\$49,999 . . . . .	91.3	89.7	87.4	93.8	85.8	76.0	93.5	94.8	96.5	89.6	72.9
\$50,000 or more . . . . .	94.0	93.6	95.1	96.5	89.5	88.7	94.4	97.2	98.0	89.2	90.2
Race											
White . . . . .	90.0	89.0	90.6	92.1	86.3	76.8	91.0	93.4	94.4	88.5	78.9
Black . . . . .	84.3	81.8	86.3	86.0	77.6	59.2	87.3	89.7	91.4	82.1	72.1
Hispanic origin											
Hispanic . . . . .	83.8	82.3	77.6	84.9	86.3	*79.2	86.0	89.4	89.2	76.9	*74.2
Non-Hispanic . . . . .	89.3	88.0	91.2	91.5	84.1	73.2	90.8	93.3	94.3	88.4	78.0
Geographic region											
Northeast . . . . .	91.4	91.0	96.4	93.4	85.9	78.3	91.9	92.7	96.7	88.3	82.4
Midwest . . . . .	91.1	90.4	93.3	93.4	86.8	75.5	91.8	95.8	93.4	89.0	78.8
South . . . . .	85.9	84.3	84.0	89.1	81.6	70.9	87.8	90.0	91.9	86.3	72.0
West . . . . .	89.1	86.3	88.6	88.8	83.6	70.1	92.5	95.0	95.8	88.9	82.7
Marital status											
Currently married . . . . .	89.6	87.6	90.6	90.8	84.2	76.6	92.0	93.1	95.2	89.0	80.0
Formerly married . . . . .	86.1	85.3	89.7	92.7	82.8	66.5	86.6	94.0	91.2	86.2	76.7
Never married . . . . .	89.9	88.7	89.0	89.3	87.0	*74.6	91.8	92.6	92.8	85.6	*76.6
Employment status											
Currently employed . . . . .	90.6	88.9	89.6	91.4	85.1	74.3	92.9	94.6	94.4	89.7	78.1
Unemployed . . . . .	90.5	88.7	88.0	94.5	80.1	*61.5	93.4	96.6	93.8	82.5	*100.0
Not in labor force . . . . .	84.5	80.9	91.8	84.0	81.1	73.5	86.4	88.6	92.7	85.7	77.8

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell includes unknowns.

**Table 26. Percent of person 18 years of age and over who had consumed an average of 1 ounce or more of ethanol a day (two or more drinks a day of beer, wine, or liquor) in the past 2 weeks by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	5.5	9.7	10.3	9.7	9.8	8.5	1.7	1.7	1.6	2.0	1.7
Education level											
Less than 12 years . . . . .	5.1	9.2	11.1	12.8	9.1	5.4	1.5	*1.7	2.9	*1.1	1.0
12 years . . . . .	5.9	11.2	12.2	11.9	10.2	9.1	1.7	1.8	1.5	1.9	1.7
More than 12 years . . . . .	5.4	8.7	8.2	7.5	9.9	12.0	1.9	1.5	1.5	2.6	3.3
13-15 years . . . . .	5.5	9.3	8.6	9.6	10.0	8.6	2.1	1.5	1.7	2.8	3.9
16 years or more . . . . .	5.3	8.2	7.4	5.9	9.8	14.5	1.7	*1.5	1.3	2.5	*2.4
Income											
Less than \$10,000 . . . . .	4.8	10.0	11.3	12.6	9.0	5.8	2.0	2.6	3.5	*1.8	*0.6
\$10,000-\$19,999 . . . . .	4.9	8.8	11.4	9.2	8.3	5.7	1.7	*1.4	2.4	*1.7	1.6
\$20,000-\$34,999 . . . . .	5.8	10.3	10.8	10.5	10.5	8.3	1.5	1.6	1.2	1.6	*1.8
\$35,000-\$49,999 . . . . .	5.6	9.3	7.6	10.3	8.0	12.8	1.5	*0.8	1.3	*1.8	*3.6
\$50,000 or more . . . . .	6.7	10.7	10.3	8.2	12.5	16.7	2.3	*1.1	1.7	3.0	*6.6
Race											
White . . . . .	5.8	10.1	11.0	9.7	10.4	9.0	1.8	1.9	1.6	2.1	1.9
Black . . . . .	4.3	8.2	8.1	11.8	5.6	*3.4	1.2	*0.6	2.1	*1.2	*0.4
Hispanic origin											
Hispanic . . . . .	4.6	8.8	6.6	9.6	11.9	*7.4	1.1	*1.7	*0.6	*0.6	*1.3
Non-Hispanic . . . . .	5.6	9.8	10.8	9.7	9.7	8.5	1.8	1.6	1.8	2.1	1.7
Geographic region											
Northeast . . . . .	5.4	9.9	10.9	9.9	9.4	8.9	1.6	2.4	1.2	*1.3	*1.4
Midwest . . . . .	5.6	10.2	12.4	10.7	8.6	7.8	1.4	*0.8	1.9	1.8	*1.0
South . . . . .	5.2	9.0	9.3	9.4	9.1	7.0	1.8	1.8	1.6	2.0	1.8
West . . . . .	6.1	10.3	9.1	8.9	12.6	11.6	2.2	1.7	1.8	2.7	3.0
Marital status											
Currently married . . . . .	5.3	8.9	9.6	8.8	9.0	8.7	1.6	1.3	1.4	1.9	2.4
Formerly married . . . . .	5.3	13.8	15.7	14.8	16.5	8.0	1.8	*2.8	2.2	2.2	1.2
Never married . . . . .	6.6	10.3	10.6	10.6	*6.4	*6.5	2.1	1.9	2.8	*1.9	*1.9
Employment status											
Currently employed . . . . .	6.1	9.6	9.7	9.6	9.6	8.6	1.9	2.0	1.5	2.1	*2.5
Unemployed . . . . .	9.0	15.8	20.6	12.4	*11.1	*20.5	*1.6	*0.2	*2.4	*1.7	*9.0
Not in labor force . . . . .	4.0	9.2	10.2	9.6	10.3	8.4	1.6	*1.0	1.9	1.7	1.6

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 27. Percent of persons 18 years of age and over who had at least one drink of beer, wine, or liquor in the past year, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	60.7	71.8	75.6	78.3	68.4	55.6	50.7	58.5	58.2	47.6	31.3
Education level											
Less than 12 years . . . . .	42.6	57.8	67.2	71.2	54.0	44.2	29.2	44.4	39.2	28.5	16.6
12 years . . . . .	59.8	71.9	74.6	77.7	67.3	58.7	50.3	55.8	56.5	46.4	36.4
More than 12 years . . . . .	71.0	78.5	80.6	80.5	77.1	68.5	63.3	67.0	64.1	63.1	51.2
13-15 years . . . . .	68.0	76.2	79.1	78.2	74.0	61.5	60.8	64.4	61.7	59.7	49.2
16 years or more . . . . .	74.2	80.6	83.3	82.3	79.1	73.5	66.4	71.8	66.4	66.5	53.9
Income											
Less than \$10,000 . . . . .	44.9	60.8	72.9	70.8	51.5	36.6	36.3	54.4	46.0	29.5	17.5
\$10,000-\$19,999 . . . . .	51.6	63.3	71.9	72.4	55.7	49.4	42.1	53.2	49.7	36.7	29.1
\$20,000-\$34,999 . . . . .	61.7	72.2	75.0	76.7	67.0	63.7	51.7	58.6	56.2	44.1	40.5
\$35,000-\$49,999 . . . . .	68.2	75.0	77.5	78.4	70.1	64.2	60.6	66.3	62.4	53.7	55.7
\$50,000 or more . . . . .	76.0	83.6	83.2	87.1	81.2	77.3	67.9	71.2	69.9	65.0	58.4
Race											
White . . . . .	63.1	73.6	78.5	80.1	70.2	56.9	53.6	63.3	61.7	50.4	33.0
Black . . . . .	46.4	62.7	64.8	71.3	57.9	39.8	33.3	36.0	40.5	30.0	15.0
Hispanic origin											
Hispanic . . . . .	52.3	69.2	66.1	76.8	66.1	54.3	37.9	41.7	42.2	29.5	23.5
Non-Hispanic . . . . .	61.4	72.0	76.8	78.5	68.5	55.7	51.8	60.8	59.7	49.0	31.6
Geographic region											
Northeast . . . . .	65.6	75.9	77.3	82.3	73.9	62.2	56.5	64.8	63.2	56.9	36.6
Midwest . . . . .	66.4	77.1	84.1	81.9	73.4	60.2	56.5	67.0	65.4	52.7	32.6
South . . . . .	52.2	65.0	69.9	74.1	59.8	45.0	40.9	49.8	49.1	35.3	22.6
West . . . . .	63.2	72.6	73.3	77.2	71.0	62.0	54.5	58.0	59.5	53.0	39.9
Marital status											
Currently married . . . . .	61.9	71.7	79.5	77.9	68.1	57.3	52.1	57.5	57.4	48.2	36.1
Formerly married . . . . .	51.2	72.2	85.0	83.9	72.8	50.2	42.7	62.1	63.2	46.0	27.5
Never married . . . . .	64.9	72.0	72.5	76.4	61.5	47.2	56.2	58.9	56.0	47.2	32.6
Employment status											
Currently employed . . . . .	68.3	76.0	77.5	79.2	71.4	62.1	59.0	64.1	60.9	52.1	44.7
Unemployed . . . . .	65.5	73.7	76.8	74.6	68.3	*57.7	56.5	56.6	58.3	51.9	*62.8
Not in labor force . . . . .	44.6	56.8	63.0	66.4	55.3	54.2	38.7	45.2	49.6	40.9	29.5

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.



**Table 28. Percent of current drinkers 18 years of age and over who had driven a car at least once in the past year when they thought they might have had too much to drink, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	12.3	15.9	24.5	17.0	9.7	3.7	7.7	13.4	8.0	2.7	2.0
Education level											
Less than 12 years . . . . .	11.1	12.6	19.1	17.6	8.3	*3.6	8.2	13.3	9.7	*3.3	*4.4
12 years . . . . .	12.8	17.5	23.5	20.1	10.9	*3.1	7.5	12.7	8.3	3.0	*1.3
More than 12 years . . . . .	12.3	15.7	27.3	14.9	9.4	4.4	7.8	13.9	7.6	2.3	*1.5
13-15 years . . . . .	13.7	18.1	27.9	16.0	11.1	*2.4	8.8	14.2	8.5	*2.8	*1.8
16 years or more . . . . .	10.9	13.8	26.5	14.1	8.3	5.6	6.7	13.2	6.8	*1.7	*1.1
Income											
Less than \$10,000 . . . . .	14.3	19.4	25.0	20.0	*11.2	*3.8	9.3	12.6	9.3	*2.8	*3.1
\$10,000-\$19,999 . . . . .	12.8	16.3	23.8	19.1	11.3	*2.2	8.4	12.7	9.4	*4.6	*2.0
\$20,000-\$34,999 . . . . .	13.9	17.3	27.5	19.0	8.1	4.4	9.3	15.4	8.9	3.9	*2.1
\$35,000-\$49,999 . . . . .	13.3	17.5	26.0	17.3	12.3	*5.9	7.6	12.8	8.0	*2.0	*2.5
\$50,000 or more . . . . .	11.0	14.6	25.5	15.2	9.4	*4.7	6.1	11.6	7.1	*1.6	*2.2
Race											
White . . . . .	12.6	16.3	25.9	17.4	9.9	3.5	7.9	14.3	8.2	2.6	1.8
Black . . . . .	9.2	12.0	14.6	14.1	*5.1	*8.9	4.7	*2.5	6.2	*4.5	*5.9
Hispanic origin											
Hispanic . . . . .	12.9	16.1	16.7	17.5	14.8	*4.7	7.5	12.5	*5.3	*-	*7.5
Non-Hispanic . . . . .	12.3	15.8	25.3	16.9	9.4	3.7	7.7	13.5	8.1	2.8	1.8
Geographic region											
Northeast . . . . .	10.4	13.8	22.9	14.7	7.8	*3.9	6.2	11.7	6.9	*1.2	*2.9
Midwest . . . . .	15.2	20.3	31.3	21.7	12.8	4.6	8.6	14.5	9.6	*2.3	*1.1
South . . . . .	11.3	14.1	20.8	15.4	7.8	4.2	7.4	12.7	6.9	3.6	*1.3
West . . . . .	12.0	14.7	22.7	16.0	10.2	*1.8	8.4	14.4	8.5	3.8	*2.6
Marital status											
Currently married . . . . .	10.0	13.0	21.0	15.5	9.1	3.2	5.8	10.3	6.5	2.2	*2.0
Formerly married . . . . .	12.1	17.6	27.2	23.6	13.6	*3.7	8.3	19.8	12.7	4.5	*2.0
Never married . . . . .	20.5	24.5	27.1	19.7	*9.6	*16.2	14.1	15.9	12.3	*0.5	*1.1
Employment status											
Currently employed . . . . .	14.2	17.3	25.4	17.1	9.8	*4.2	9.3	14.7	8.8	3.2	*2.9
Unemployed . . . . .	13.6	18.9	21.6	18.2	*15.7	*-	5.9	*6.4	*6.1	*5.3	*-
Not in labor force . . . . .	5.8	8.0	18.5	13.3	7.7	3.6	4.1	9.7	5.1	*1.5	*1.8

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 29. Percent of persons 18 years of age and over who were aware that heavy drinking increases one's chances of getting throat cancer, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	43.2	40.8	40.7	39.1	39.9	46.6	45.4	45.1	43.1	45.6	49.4
Education level											
Less than 12 years . . . . .	45.4	43.0	37.0	40.7	43.9	48.7	47.5	43.9	46.6	46.6	50.5
12 years . . . . .	42.0	39.1	40.0	35.7	39.0	46.4	44.3	44.5	41.0	45.3	48.8
More than 12 years . . . . .	43.2	41.1	43.2	40.9	38.7	43.8	45.4	46.1	44.0	45.5	48.7
13-15 years . . . . .	42.9	41.2	42.9	41.2	37.7	43.8	44.4	45.0	41.3	45.3	51.3
16 years or more . . . . .	43.5	41.1	43.7	40.6	39.3	43.8	46.5	48.2	46.5	45.7	45.0
Income											
Less than \$10,000 . . . . .	47.6	44.0	39.0	42.4	50.3	49.6	49.6	48.3	45.9	53.0	51.3
\$10,000-\$19,999 . . . . .	45.7	43.4	39.7	40.2	42.7	51.5	47.7	46.2	42.7	50.9	50.7
\$20,000-\$34,999 . . . . .	43.0	41.0	43.7	37.3	40.1	46.5	44.8	45.8	42.7	44.3	49.0
\$35,000-\$49,999 . . . . .	42.3	40.6	39.8	41.7	39.1	41.9	44.2	42.0	44.0	44.0	54.2
\$50,000 or more . . . . .	40.9	38.8	40.8	38.7	37.0	42.8	43.1	44.4	42.0	42.7	49.6
Race											
White . . . . .	41.9	39.5	40.0	37.5	38.0	45.9	44.1	43.8	41.4	44.0	48.9
Black . . . . .	52.8	51.1	46.4	51.3	54.9	55.5	54.1	51.3	52.9	58.3	56.2
Hispanic origin											
Hispanic . . . . .	42.0	40.4	39.2	37.9	44.9	48.4	43.4	43.3	40.6	44.8	52.3
Non-Hispanic . . . . .	43.3	40.9	40.9	39.2	39.7	46.6	45.5	45.3	43.3	45.6	49.2
Geographic region											
Northeast . . . . .	47.2	45.3	45.5	42.6	44.5	52.4	49.0	49.6	47.0	48.5	51.8
Midwest . . . . .	43.2	40.4	40.9	38.5	40.4	44.3	45.7	46.4	44.4	44.8	48.4
South . . . . .	43.3	40.7	40.3	38.5	40.4	47.1	45.6	44.3	42.3	46.8	51.5
West . . . . .	39.1	37.2	37.2	37.4	34.6	42.7	40.8	40.9	39.2	41.3	43.3
Marital status											
Currently married . . . . .	42.8	40.6	39.2	39.7	39.2	46.7	44.9	43.6	42.7	45.2	53.1
Formerly married . . . . .	43.8	40.3	34.5	36.2	42.7	45.0	45.2	42.8	41.7	45.9	46.9
Never married . . . . .	44.2	41.6	42.0	38.1	45.1	50.6	47.4	47.1	47.7	51.0	45.0
Employment status											
Currently employed . . . . .	41.4	39.5	40.9	38.9	38.5	44.4	43.7	44.4	42.8	43.6	49.8
Unemployed . . . . .	42.9	39.4	40.1	38.4	39.5	*41.0	46.7	49.1	46.9	37.4	*69.2
Not in labor force . . . . .	46.9	45.4	40.2	41.8	46.3	47.1	47.6	46.1	43.4	49.0	49.2

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell includes unknowns.

**Table 30. Percent of persons 18–44 years of age who had heard of fetal alcohol syndrome, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18–24 years	25–29 years	30–34 years	35–44 years	Total	18–24 years	25–29 years	30–34 years	35–44 years
All persons <sup>1</sup> . . . . .	64.3	55.3	45.1	54.6	57.2	61.3	72.8	66.7	71.0	75.6	76.2
Education level											
Less than 12 years . . . . .	42.4	32.2	32.5	25.8	33.6	35.3	52.6	55.2	49.0	52.4	52.5
12 years . . . . .	59.1	48.4	41.4	47.8	52.7	51.7	68.7	63.9	67.4	72.3	70.7
More than 12 years . . . . .	75.4	68.0	57.8	68.7	67.2	72.3	82.6	75.3	81.8	84.3	86.1
13–15 years . . . . .	71.4	63.0	55.4	65.0	64.4	66.7	79.1	73.8	77.7	81.0	83.4
16 years or more . . . . .	79.8	73.1	66.1	72.5	69.3	76.6	87.0	80.5	86.0	87.7	88.7
Income											
Less than \$10,000 . . . . .	55.8	46.6	49.1	44.5	43.6	43.9	61.7	65.2	58.3	59.4	59.1
\$10,000–\$19,999 . . . . .	56.6	47.6	46.7	46.8	45.4	51.0	64.7	61.8	67.5	62.9	66.8
\$20,000–\$34,999 . . . . .	62.6	52.5	41.0	54.1	57.3	54.9	72.6	65.8	73.0	74.8	75.2
\$35,000–\$49,999 . . . . .	69.8	62.1	43.3	63.5	61.5	69.5	78.3	67.2	75.5	82.5	81.8
\$50,000 or more . . . . .	72.7	63.0	45.5	61.4	67.4	68.8	82.3	79.6	77.8	84.9	83.4
Race											
White . . . . .	67.0	58.1	48.4	57.2	60.6	63.0	75.6	69.9	74.6	78.7	78.3
Black . . . . .	50.8	40.8	30.4	40.0	39.5	51.4	58.9	53.9	54.5	61.0	64.8
Hispanic origin											
Hispanic . . . . .	44.2	35.4	24.7	37.7	38.5	42.6	51.6	47.2	46.0	60.1	54.5
Non-Hispanic . . . . .	66.3	57.2	47.8	56.3	58.9	62.7	75.1	69.7	73.9	77.2	77.9
Geographic region											
Northeast . . . . .	60.7	51.2	36.7	50.2	54.6	59.2	69.9	65.1	67.9	74.1	71.7
Midwest . . . . .	69.6	60.2	53.2	59.9	60.7	64.4	78.7	75.4	76.9	80.3	80.8
South . . . . .	62.1	51.9	41.6	51.4	54.4	57.8	71.5	64.4	69.2	75.8	75.6
West . . . . .	64.9	58.8	49.7	57.3	60.2	64.9	70.6	62.3	70.5	71.2	75.8
Marital status											
Currently married . . . . .	68.1	59.7	50.4	57.9	59.1	62.5	75.7	68.7	73.2	78.0	77.7
Formerly married . . . . .	64.2	55.2	*40.5	40.5	54.9	59.4	69.8	66.0	64.1	71.5	71.4
Never married . . . . .	55.8	47.2	43.8	50.5	51.0	54.4	66.6	65.7	66.9	64.4	72.6
Employment status											
Currently employed . . . . .	64.8	56.9	47.2	55.7	57.7	62.2	74.1	67.0	72.8	76.7	77.5
Unemployed . . . . .	57.3	45.6	32.1	41.3	58.1	59.4	69.4	72.0	61.3	69.1	73.3
Not in labor force . . . . .	63.5	44.1	41.4	47.6	44.0	47.7	69.6	65.2	67.8	73.7	71.9

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 31. Percent of persons 18 years of age and over who had gone to the dentist at least once in the past 12 months, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	62.5	59.0	57.9	62.9	60.5	48.7	65.7	67.4	74.0	64.9	50.2
<b>Education level</b>											
Less than 12 years . . . . .	40.4	38.3	45.2	39.5	39.3	30.6	42.2	51.8	52.7	40.7	33.0
12 years . . . . .	61.3	55.9	55.1	59.0	53.9	53.6	65.5	65.4	70.7	65.5	55.7
More than 12 years . . . . .	75.3	71.4	66.7	70.9	77.3	69.4	79.3	75.8	81.8	81.2	74.7
13-15 years . . . . .	71.5	66.3	66.4	65.8	70.0	58.9	76.1	75.5	78.4	75.9	71.1
16 years or more . . . . .	79.2	75.9	67.2	74.8	81.9	77.1	83.1	76.3	85.2	86.5	79.8
<b>Income</b>											
Less than \$10,000 . . . . .	44.5	40.3	58.5	35.2	30.2	19.3	46.8	60.7	50.7	41.7	34.2
\$10,000-\$19,999 . . . . .	49.1	43.5	48.5	47.7	37.5	37.8	53.6	60.6	57.8	50.7	45.6
\$20,000-\$34,999 . . . . .	63.2	58.1	58.1	58.7	58.5	55.9	68.0	69.3	71.9	63.6	64.1
\$35,000-\$49,999 . . . . .	72.5	67.3	62.3	71.3	63.0	74.0	78.1	74.4	82.1	75.0	76.8
\$50,000 or more . . . . .	78.2	74.6	67.5	74.2	77.9	79.2	82.1	78.8	84.5	81.9	76.5
<b>Race</b>											
White . . . . .	64.1	60.8	59.6	64.8	62.6	50.5	67.2	68.9	75.4	66.6	52.2
Black . . . . .	51.8	46.0	51.4	48.9	42.5	29.2	56.4	59.1	66.4	53.2	31.1
<b>Hispanic origin</b>											
Hispanic . . . . .	54.0	47.7	44.3	50.5	53.6	32.1	59.3	55.5	65.8	62.0	42.1
Non-Hispanic . . . . .	63.3	59.9	59.6	64.0	61.0	49.2	66.3	69.2	74.8	65.1	50.5
<b>Geographic region</b>											
Northeast . . . . .	66.6	63.9	63.2	70.3	62.5	52.3	69.0	73.1	77.7	68.0	52.6
Midwest . . . . .	65.0	61.0	59.6	66.0	62.9	48.8	68.7	73.4	75.6	68.4	50.8
South . . . . .	57.3	53.0	54.4	56.4	52.7	43.4	61.2	62.9	69.7	60.1	45.9
West . . . . .	64.2	61.5	56.9	62.6	68.2	54.6	66.7	63.3	75.4	65.8	54.9
<b>Marital status</b>											
Currently married . . . . .	64.4	59.8	53.4	64.4	62.0	51.2	69.0	65.1	75.6	67.8	57.1
Formerly married . . . . .	53.8	52.5	55.1	59.7	53.2	39.9	54.4	61.0	68.6	57.3	44.4
Never married . . . . .	63.8	59.1	61.0	56.9	54.9	38.6	69.5	71.2	69.8	60.6	58.5
<b>Employment status</b>											
Currently employed . . . . .	66.8	62.3	58.0	64.6	63.7	57.3	72.3	70.7	76.7	68.6	60.4
Unemployed . . . . .	56.9	48.2	49.8	48.0	46.5	*38.5	66.4	67.1	64.5	69.9	*57.7
Not in labor force . . . . .	54.2	49.3	60.7	43.5	49.0	46.9	56.6	59.5	66.9	59.2	49.0

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 32. Percent of persons 18 years of age and over who had lost all their permanent teeth, by sex, age and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	10.6	9.6	1.4	3.0	14.4	30.9	11.5	1.7	3.4	15.0	33.7
Education level											
Less than 12 years . . . . .	23.6	21.0	*1.4	5.3	26.9	42.4	25.9	*1.3	7.9	27.5	46.9
12 years . . . . .	9.8	8.9	1.3	3.2	16.1	28.8	10.5	2.0	3.4	14.6	30.0
More than 12 years . . . . .	4.5	4.6	1.5	2.4	6.3	17.0	4.4	1.6	2.3	6.8	14.9
13-15 years . . . . .	5.4	5.6	1.3	2.7	9.0	25.6	5.3	1.4	2.5	8.9	18.4
16 years or more . . . . .	3.6	3.7	*1.8	2.1	4.6	10.8	3.4	*2.0	2.0	4.7	9.9
Income											
Less than \$10,000 . . . . .	20.3	16.6	*1.0	*4.1	30.1	46.5	22.3	*1.7	4.8	28.6	48.0
\$10,000-\$19,999 . . . . .	15.9	15.4	*0.6	3.4	20.6	41.6	16.3	2.1	4.9	20.6	36.8
\$20,000-\$34,999 . . . . .	9.1	9.0	2.3	3.3	15.1	26.5	9.2	2.3	3.5	16.8	23.4
\$35,000-\$49,999 . . . . .	6.3	7.0	*1.1	3.5	15.9	16.8	5.6	*1.5	3.9	9.9	15.2
\$50,000 or more . . . . .	4.6	4.6	*1.6	2.0	7.4	13.6	4.6	*1.5	2.3	7.3	16.7
Race											
White . . . . .	10.8	9.9	1.4	2.8	14.7	31.4	11.7	1.6	3.5	15.2	32.7
Black . . . . .	9.3	7.6	*1.3	3.6	11.9	29.3	10.6	2.9	2.8	13.5	41.5
Hispanic origin											
Hispanic . . . . .	4.9	4.4	*1.1	*1.7	10.2	21.8	5.3	*1.6	*2.0	6.7	33.1
Non-Hispanic . . . . .	11.0	10.0	1.4	3.1	14.7	31.2	12.0	1.8	3.5	15.5	33.8
Geographic region											
Northeast . . . . .	10.8	9.7	2.2	2.0	15.8	29.4	11.7	2.1	2.5	14.0	33.3
Midwest . . . . .	11.5	10.7	1.4	3.6	16.1	34.5	12.3	1.7	3.7	16.8	35.3
South . . . . .	11.0	10.0	*0.7	3.2	15.8	31.8	11.9	1.5	3.8	15.0	35.4
West . . . . .	8.4	7.3	1.9	3.2	9.0	26.1	9.4	1.7	3.2	13.7	28.9
Marital status											
Currently married . . . . .	9.9	10.7	1.5	3.2	14.4	29.4	9.1	2.0	3.4	13.2	28.6
Formerly married . . . . .	21.1	15.1	*2.6	2.5	15.7	36.7	23.5	*1.5	3.5	20.2	38.7
Never married . . . . .	3.3	3.1	1.3	2.7	10.6	35.5	3.4	1.5	2.7	13.9	19.1
Employment status											
Currently employed . . . . .	5.8	5.7	1.5	2.9	12.2	21.7	6.0	1.7	3.4	12.3	25.5
Unemployed . . . . .	5.0	5.8	*1.1	*2.6	18.0	*24.4	4.0	*1.5	*2.6	*9.4	*24.4
Not in labor force . . . . .	20.9	23.5	*0.9	5.7	23.2	33.0	19.6	1.9	3.4	19.2	34.8

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 33. Percent of persons 18 years of age and over who were aware that dental sealants help prevent tooth decay, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	23.3	20.2	15.8	26.7	21.0	11.2	26.2	20.2	40.1	25.5	11.2
Education level											
Less than 12 years . . . . .	7.3	6.0	7.2	8.3	5.4	3.9	8.5	8.9	13.3	10.0	4.7
12 years . . . . .	21.0	16.6	13.9	22.4	15.6	9.7	24.6	17.9	37.3	23.1	12.4
More than 12 years . . . . .	34.1	30.0	21.8	33.9	33.7	23.8	38.3	27.2	49.1	39.8	22.0
13-15 years . . . . .	30.5	25.3	20.6	29.5	27.7	18.6	35.1	27.6	45.8	35.4	21.4
16 years or more . . . . .	37.8	34.2	23.8	37.3	37.6	27.7	42.2	26.4	52.3	44.4	22.9
Income											
Less than \$10,000 . . . . .	10.3	8.4	12.2	10.5	*4.8	*2.1	11.4	15.7	17.6	8.1	5.5
\$10,000-\$19,999 . . . . .	14.3	11.8	12.8	14.1	11.3	8.7	16.3	15.5	25.9	14.4	10.5
\$20,000-\$34,999 . . . . .	23.8	18.9	16.6	24.2	16.7	14.0	28.6	22.5	38.4	28.0	18.5
\$35,000-\$49,999 . . . . .	32.3	26.0	18.7	32.7	23.7	17.5	39.2	28.7	49.8	34.4	23.5
\$50,000 or more . . . . .	35.1	30.3	21.0	36.1	30.7	21.2	40.2	24.9	52.5	36.3	18.8
Race											
White . . . . .	25.2	21.8	16.5	29.3	22.9	12.0	28.4	22.0	44.0	27.3	12.1
Black . . . . .	11.5	9.8	11.4	11.8	8.1	*2.8	12.8	10.8	18.7	12.7	*2.9
Hispanic origin											
Hispanic . . . . .	11.7	9.2	7.0	13.1	8.1	*4.0	13.9	10.6	18.7	15.0	*6.1
Non-Hispanic . . . . .	24.3	21.1	16.9	27.9	21.8	11.4	27.3	21.5	42.2	26.3	11.5
Geographic region											
Northeast . . . . .	21.8	18.5	14.9	23.4	19.6	11.2	24.6	20.0	38.3	24.4	9.5
Midwest . . . . .	26.8	24.0	18.9	33.3	24.9	10.3	29.3	21.5	44.8	28.1	14.1
South . . . . .	22.0	18.5	14.8	24.8	19.2	9.8	25.1	20.2	39.7	23.6	9.3
West . . . . .	23.0	19.7	14.6	24.9	20.6	15.2	26.1	18.8	37.1	26.6	13.4
Marital status											
Currently married . . . . .	26.9	22.2	16.3	29.2	22.0	12.0	31.6	22.4	44.3	27.7	14.7
Formerly married . . . . .	17.2	16.1	19.1	20.4	16.0	8.8	17.6	18.9	31.9	20.3	8.6
Never married . . . . .	16.6	15.5	15.2	17.5	16.5	*5.2	17.9	17.7	20.6	17.2	11.4
Employment status											
Currently employed . . . . .	26.5	22.7	16.4	27.6	22.9	14.9	30.9	20.7	40.4	29.3	18.1
Unemployed . . . . .	19.4	14.7	8.8	23.9	12.9	*5.1	24.6	16.5	33.3	29.9	*2.6
Not in labor force . . . . .	17.3	12.1	14.5	12.5	14.1	10.4	19.8	19.6	40.3	19.6	10.5

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell includes unknowns.

**Table 34. Percent of women 35 years of age and over who had ever had a mammogram, by age and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

<i>Characteristic</i>	<i>Total 35 years and over</i>	<i>35-39 years</i>	<i>40-49 years</i>	<i>50-59 years</i>	<i>60-69 years</i>	<i>70 years and over</i>
All women <sup>1</sup> . . . . .	57.7	39.5	64.3	67.9	61.7	50.1
<b>Education level</b>						
Less than 12 years . . . . .	44.9	29.9	45.4	51.3	49.9	41.3
12 years . . . . .	59.0	37.6	63.3	69.1	62.7	54.7
More than 12 years . . . . .	65.5	43.0	71.3	78.8	74.3	63.4
13-15 years . . . . .	63.2	40.2	69.0	76.3	72.3	60.6
16 years or more . . . . .	67.9	45.7	73.4	81.5	76.6	67.4
<b>Income</b>						
Less than \$10,000 . . . . .	40.9	28.1	43.2	44.5	43.2	41.3
\$10,000-\$19,999 . . . . .	50.3	26.7	49.1	55.1	57.0	51.6
\$20,000-\$34,999 . . . . .	58.9	37.8	63.1	68.1	64.6	56.8
\$35,000-\$49,999 . . . . .	62.9	43.0	66.9	76.2	72.0	58.7
\$50,000 or more . . . . .	71.4	47.4	76.8	82.2	77.2	64.9
<b>Race</b>						
White . . . . .	58.9	40.9	65.6	69.2	63.5	50.2
Black . . . . .	51.3	35.7	56.3	61.9	49.1	49.2
<b>Hispanic origin</b>						
Hispanic . . . . .	49.4	35.5	50.2	58.3	55.8	48.6
Non-Hispanic . . . . .	58.2	39.8	65.4	68.5	62.0	50.1
<b>Geographic region</b>						
Northeast . . . . .	58.4	41.4	60.4	70.7	63.5	51.0
Midwest . . . . .	57.7	40.8	67.0	66.5	61.2	47.9
South . . . . .	55.4	40.5	63.0	65.0	56.9	46.4
West . . . . .	61.1	34.6	67.2	71.4	69.9	59.3
<b>Marital status</b>						
Currently married . . . . .	61.5	40.8	66.6	71.0	64.0	59.9
Formerly married . . . . .	51.7	35.3	60.3	60.5	57.7	44.8
Never married . . . . .	47.4	36.4	48.4	55.1	59.5	47.7
<b>Employment status</b>						
Currently employed . . . . .	60.5	40.5	65.8	70.3	65.2	57.4
Unemployed . . . . .	52.9	34.6	54.8	63.0	72.0	*60.0
Not in labor force . . . . .	55.1	36.6	60.6	64.2	60.2	49.6

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 35. Percent of women 35 years of age and over who had a mammogram in the past 3 years, by age and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

<i>Characteristic</i>	<i>Total 35 years and over</i>	<i>35-39 years</i>	<i>40-49 years</i>	<i>50-59 years</i>	<i>60-69 years</i>	<i>70 years and over</i>
All women <sup>1</sup> . . . . .	50.5	33.9	57.6	59.6	54.9	41.7
<b>Education level</b>						
Less than 12 years . . . . .	37.4	26.1	39.5	42.5	42.5	33.0
12 years . . . . .	51.8	31.9	56.0	61.3	55.8	46.6
More than 12 years . . . . .	58.5	37.2	65.0	70.0	68.1	54.6
13-15 years . . . . .	55.4	34.5	61.6	66.4	65.5	51.0
16 years or more . . . . .	61.7	39.8	68.0	73.9	71.1	59.7
<b>Income</b>						
Less than \$10,000 . . . . .	32.7	21.9	33.0	34.1	36.4	33.1
\$10,000-\$19,999 . . . . .	42.5	22.5	41.0	44.9	49.0	44.4
\$20,000-\$34,999 . . . . .	52.0	31.2	56.0	61.0	58.6	49.1
\$35,000-\$49,999 . . . . .	56.6	38.9	60.7	67.2	66.7	50.8
\$50,000 or more . . . . .	64.5	41.3	70.6	74.3	70.0	55.3
<b>Race</b>						
White . . . . .	51.5	35.1	58.8	60.7	56.5	41.8
Black . . . . .	44.9	30.7	50.5	54.7	43.2	40.5
<b>Hispanic origin</b>						
Hispanic . . . . .	42.3	30.7	44.4	49.1	46.0	41.7
Non-Hispanic . . . . .	51.0	34.1	58.6	60.2	55.3	41.7
<b>Geographic region</b>						
Northeast . . . . .	52.0	35.4	55.5	63.4	56.7	43.6
Midwest . . . . .	50.4	34.9	60.6	57.8	52.9	40.8
South . . . . .	48.0	35.1	55.8	55.8	51.1	37.4
West . . . . .	53.4	29.5	59.0	64.1	63.3	48.9
<b>Marital status</b>						
Currently married . . . . .	55.0	35.9	60.3	63.5	57.8	51.8
Formerly married . . . . .	43.4	28.7	52.7	50.0	50.2	36.4
Never married . . . . .	38.9	27.5	41.0	46.4	50.3	39.2
<b>Employment status</b>						
Currently employed . . . . .	53.5	34.6	59.0	61.6	60.4	48.4
Unemployed . . . . .	46.2	30.5	45.8	59.1	*61.3	*48.5
Not in labor force . . . . .	47.5	31.9	54.6	56.2	52.6	41.2

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.



**Table 36. Percent of women 35 years of age and over who ever had a mammogram and had it done strictly as part of a routine checkup, by age and characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

<i>Characteristic</i>	<i>Total 35 years and over</i>	<i>35-39 years</i>	<i>40-49 years</i>	<i>50-59 years</i>	<i>60-69 years</i>	<i>70 years and over</i>
All women <sup>1</sup> . . . . .	78.0	65.2	76.0	79.5	83.0	82.3
<b>Education level</b>						
Less than 12 years . . . . .	75.8	59.9	69.3	72.4	79.6	80.3
12 years . . . . .	77.4	61.2	73.2	80.7	84.0	82.0
More than 12 years . . . . .	79.7	68.7	79.8	81.4	83.9	85.5
13-15 years . . . . .	80.6	69.6	79.0	83.1	84.5	87.9
16 years or more . . . . .	78.8	68.0	80.4	79.6	83.4	82.1
<b>Income</b>						
Less than \$10,000 . . . . .	74.4	60.4	63.6	70.2	74.8	81.4
\$10,000-\$19,999 . . . . .	77.0	60.5	70.3	78.0	81.8	79.0
\$20,000-\$34,999 . . . . .	78.1	62.0	75.3	76.8	86.0	87.3
\$35,000-\$49,999 . . . . .	76.7	61.9	77.7	81.5	79.3	87.1
\$50,000 or more . . . . .	79.1	69.5	78.1	81.8	85.1	87.6
<b>Race</b>						
White . . . . .	77.4	64.6	75.0	78.7	82.7	81.7
Black . . . . .	83.4	70.3	84.6	83.8	86.0	88.7
<b>Hispanic origin</b>						
Hispanic . . . . .	76.3	57.9	72.9	83.6	87.6	78.3
Non-Hispanic . . . . .	78.1	65.9	76.3	79.2	82.7	82.4
<b>Geographic region</b>						
Northeast . . . . .	79.0	61.3	77.6	81.1	83.1	83.2
Midwest . . . . .	76.5	65.6	73.6	77.5	82.0	82.0
South . . . . .	77.9	68.2	76.5	78.2	83.5	80.6
West . . . . .	79.0	63.2	76.8	82.0	83.3	84.2
<b>Marital status</b>						
Currently married . . . . .	78.0	65.9	76.3	80.5	84.0	82.1
Formerly married . . . . .	78.7	63.6	76.5	76.5	80.6	82.7
Never married . . . . .	73.5	61.1	70.0	77.0	87.1	77.7
<b>Employment status</b>						
Currently employed . . . . .	77.3	65.9	77.4	80.0	84.1	90.6
Unemployed . . . . .	77.6	*58.3	78.5	90.1	*78.7	*66.7
Not in labor force . . . . .	78.9	63.7	71.2	78.1	82.6	81.7

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 37. Percent of women 18–44 years of age who had given birth to a child within the past 5 years who reported smoking cigarettes at any time in the 12 months preceding the birth of their last child, by age and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

<i>Characteristic</i>	<i>Total</i>	<i>18–24 years</i>	<i>25–29 years</i>	<i>30–34 years</i>	<i>35–44 years</i>
All women <sup>1</sup> . . . . .	23.7	29.3	25.7	21.1	17.7
<b>Education level</b>					
Less than 12 years . . . . .	35.5	39.4	37.3	33.9	19.7
12 years . . . . .	28.1	25.9	30.4	28.0	27.1
More than 12 years . . . . .	14.2	19.5	14.8	13.8	12.4
13–15 years . . . . .	19.7	22.0	18.4	21.3	17.4
16 years or more . . . . .	7.8	*–	8.1	6.7	9.5
<b>Income</b>					
Less than \$10,000 . . . . .	36.7	33.2	37.4	45.5	36.6
\$10,000–\$19,999 . . . . .	29.8	31.5	28.6	29.0	29.1
\$20,000–\$34,999 . . . . .	25.0	28.0	27.3	22.7	19.8
\$35,000–\$49,999 . . . . .	18.2	21.3	20.2	16.5	16.9
\$50,000 or more . . . . .	14.2	24.8	16.8	13.3	11.7
<b>Race</b>					
White . . . . .	25.3	34.7	27.4	21.2	18.1
Black . . . . .	19.0	13.1	20.2	25.1	20.6
<b>Hispanic origin</b>					
Hispanic . . . . .	12.1	11.3	13.4	12.3	*11.2
Non-Hispanic . . . . .	25.5	33.0	27.5	22.2	18.8
<b>Geographic region</b>					
Northeast . . . . .	24.5	30.8	29.2	20.6	18.6
Midwest . . . . .	29.1	38.1	31.7	25.6	20.8
South . . . . .	23.4	27.1	23.5	22.0	18.9
West . . . . .	17.8	23.5	19.7	14.7	12.5
<b>Marital status</b>					
Currently married . . . . .	21.2	29.4	23.0	18.6	15.2
Formerly married . . . . .	36.9	37.9	39.5	35.8	32.6
Never married . . . . .	31.4	26.9	34.7	41.6	*41.1
<b>Employment status</b>					
Currently employed . . . . .	21.9	26.6	23.9	20.0	17.3
Unemployed . . . . .	29.8	30.5	36.7	29.5	*15.0
Not in labor force . . . . .	25.5	31.7	27.3	22.0	18.6

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 38. Percent of women 18–44 years of age and over who had given birth to a child within the past 5 years and were smoking before they learned they were pregnant who quit smoking and percent who reduced the number of cigarettes they smoked after learning they were pregnant, by age and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Quit smoking					Reduced number of cigarettes				
	Total	18–24 years	25–29 years	30–34 years	35–44 years	Total	18–24 years	25–29 years	30–34 years	35–44 years
All women <sup>1</sup>	22.6	23.4	26.3	19.4	17.4	37.9	42.2	33.6	38.6	39.0
Education level										
Less than 12 years	13.5	16.3	*13.6	*9.2	*3.4	36.4	45.3	26.1	33.6	*34.5
12 years	24.2	28.1	27.4	18.3	19.6	39.8	41.2	36.7	41.2	42.7
More than 12 years	29.3	*33.7	39.3	25.6	*19.4	36.1	*34.8	34.6	37.7	36.1
13–15 years	28.3	*33.7	38.3	19.1	*21.1	35.6	*34.8	32.6	37.7	*37.8
16 years or more	32.2	*–	*45.0	*43.5	*17.8	37.7	*–	*45.0	*37.7	*34.4
Income										
Less than \$10,000	18.1	22.5	21.8	*10.3	*3.7	39.5	43.2	36.9	40.2	*31.5
\$10,000–\$19,999	19.6	18.3	27.2	*17.9	*4.6	37.5	45.5	25.5	36.6	44.8
\$20,000–\$34,999	22.2	26.7	23.0	18.9	*18.8	35.2	33.5	31.8	38.7	41.7
\$35,000–\$49,999	26.9	*38.5	28.2	*23.5	*24.7	46.2	*44.2	51.0	47.0	*37.6
\$50,000 or more	30.6	*22.5	*45.7	*26.2	*26.6	37.1	*42.5	*33.3	35.2	*40.4
Race										
White	22.3	23.3	25.7	18.7	18.1	39.2	43.1	34.9	40.1	40.6
Black	25.8	*26.2	32.5	*23.5	*13.7	30.1	*41.7	*25.4	*27.8	*25.5
Hispanic origin										
Hispanic	34.1	*43.9	*37.3	*31.4	*15.6	25.5	*24.6	*26.9	*21.6	*31.3
Non-Hispanic	21.9	22.1	25.7	18.7	17.6	38.7	43.4	33.8	39.7	39.6
Geographic region										
Northeast	23.2	*23.2	32.9	*13.5	*17.6	39.6	33.1	34.7	54.0	*35.3
Midwest	19.5	21.4	19.9	17.6	*17.9	41.7	45.1	39.5	39.8	44.8
South	23.4	21.0	27.6	24.3	*16.2	35.3	45.9	28.5	31.3	36.9
West	25.9	30.9	28.5	*19.5	*18.3	34.7	38.2	30.7	33.9	*36.6
Marital status										
Currently married	24.0	25.5	25.7	21.9	20.9	38.3	40.7	35.1	38.8	40.8
Formerly married	18.8	*18.0	28.1	*14.3	*6.5	39.6	51.0	32.3	38.7	*41.6
Never married	19.7	20.6	27.9	*7.9	*8.8	35.0	42.1	*26.4	*36.8	*14.7
Employment status										
Currently employed	23.7	26.2	27.7	20.9	16.3	39.3	44.1	36.7	40.5	36.1
Unemployed	28.0	*28.9	*37.3	*15.4	*16.7	35.5	*31.6	*28.8	*51.3	*41.7
Not in labor force	20.5	20.2	23.2	17.6	*19.8	36.7	42.4	30.4	34.6	42.4

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 39. Percent of persons 18 years of age and over who had at least 1 working smoke detector in their home, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	78.6	78.6	76.4	81.7	77.4	77.5	78.6	77.9	82.4	78.3	73.5
Education level											
Less than 12 years . . . . .	67.0	67.2	62.6	68.1	65.4	72.0	66.8	63.0	64.7	68.6	68.4
12 years . . . . .	78.4	77.7	76.1	79.1	76.9	79.7	78.9	77.0	81.4	79.4	76.0
More than 12 years . . . . .	85.1	85.0	83.3	86.7	84.3	83.9	85.1	85.0	87.4	83.9	79.2
13-15 years . . . . .	82.7	82.0	81.9	82.1	82.1	81.3	83.4	82.6	85.7	83.6	77.6
16 years or more . . . . .	87.5	87.7	85.7	90.3	85.6	85.8	87.3	89.4	89.1	84.3	81.6
Income											
Less than \$10,000 . . . . .	65.1	63.3	71.4	61.3	53.3	58.9	66.0	68.0	63.3	63.7	66.9
\$10,000-\$19,999 . . . . .	70.8	69.4	67.0	68.7	66.1	75.3	71.9	69.7	73.3	72.7	72.2
\$20,000-\$34,999 . . . . .	79.3	78.4	77.2	79.6	75.3	82.7	80.2	80.6	81.6	78.2	79.9
\$35,000-\$49,999 . . . . .	84.6	84.2	80.7	87.5	80.9	86.1	85.1	85.9	86.4	83.5	79.9
\$50,000 or more . . . . .	88.2	88.0	87.2	90.8	85.7	85.6	88.5	89.0	90.6	87.0	79.8
Race											
White . . . . .	79.6	79.6	76.7	82.4	78.6	79.3	79.7	78.9	83.4	79.3	75.1
Black . . . . .	71.2	71.5	75.4	75.7	66.0	59.1	71.1	72.5	76.4	70.1	56.0
Hispanic origin											
Hispanic . . . . .	66.2	64.3	62.2	71.1	58.2	58.7	67.8	65.7	72.2	67.0	60.3
Non-Hispanic . . . . .	79.7	79.8	78.3	82.6	78.6	78.2	79.6	79.6	83.4	79.0	73.9
Geographic region											
Northeast . . . . .	84.0	84.1	80.9	87.0	82.8	84.6	84.0	83.3	87.2	83.1	81.0
Midwest . . . . .	83.0	83.3	80.8	85.9	82.2	83.7	82.7	80.6	85.2	84.2	79.0
South . . . . .	73.0	73.1	72.1	77.5	70.4	69.7	73.0	73.8	78.4	71.0	65.5
West . . . . .	77.4	76.8	74.3	78.3	77.7	76.1	77.9	77.0	81.1	78.6	71.8
Marital status											
Currently married . . . . .	81.0	81.2	78.9	84.0	79.4	80.1	80.8	79.1	84.4	79.4	75.6
Formerly married . . . . .	73.2	70.3	75.6	73.1	66.6	69.4	74.4	75.1	76.6	76.5	71.9
Never married . . . . .	75.1	74.2	74.8	75.2	69.4	62.9	76.1	77.0	76.3	69.9	71.7
Employment status											
Currently employed . . . . .	80.6	80.2	77.4	82.7	79.4	80.4	81.0	80.1	83.3	79.7	70.3
Unemployed . . . . .	73.2	71.4	69.3	76.0	68.1	*73.3	75.0	72.9	74.1	79.4	88.5
Not in labor force . . . . .	75.1	74.1	73.1	67.9	70.2	77.0	75.6	73.5	80.8	76.2	73.8

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 40. Percent of persons 18 years of age and over who wore seatbelts all or most of the time when riding in a car, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	67.0	62.3	55.7	64.2	63.5	67.3	71.3	66.8	73.8	72.0	72.2
Education level											
Less than 12 years . . . . .	55.7	51.7	41.9	45.0	54.4	61.7	59.3	51.1	51.4	61.2	66.1
12 years . . . . .	62.4	55.0	48.6	53.9	58.0	67.5	68.3	61.3	68.2	71.4	74.4
More than 12 years . . . . .	77.2	73.3	69.5	75.5	72.6	75.3	81.3	78.7	83.7	80.3	80.5
13-15 years . . . . .	72.7	67.0	63.7	69.1	67.8	68.6	77.8	75.8	79.6	77.0	79.2
16 years or more . . . . .	81.8	78.8	79.4	80.4	75.7	80.1	85.5	84.0	87.7	83.8	82.3
Income											
Less than \$10,000 . . . . .	57.8	53.0	55.4	46.8	48.4	58.0	60.4	58.6	51.3	61.4	66.6
\$10,000-\$19,999 . . . . .	59.6	55.2	50.0	53.8	52.2	65.1	63.1	59.3	58.8	63.5	70.2
\$20,000-\$34,999 . . . . .	64.2	58.1	53.7	58.0	58.0	67.4	70.1	66.5	72.1	68.3	75.2
\$35,000-\$49,999 . . . . .	71.5	66.2	58.5	68.7	66.0	76.7	77.3	75.3	78.6	76.2	79.7
\$50,000 or more . . . . .	77.0	71.9	60.6	75.5	73.7	73.9	82.5	77.4	85.3	82.0	81.1
Race											
White . . . . .	67.8	62.6	54.8	65.1	63.8	68.0	72.5	68.1	75.3	72.7	73.3
Black . . . . .	58.3	56.4	56.7	54.4	56.2	62.3	59.7	56.2	60.7	62.9	59.6
Hispanic origin											
Hispanic . . . . .	64.0	58.7	53.6	58.7	64.5	71.1	68.5	62.7	70.2	74.0	74.0
Non-Hispanic . . . . .	67.3	62.5	55.9	64.7	63.5	67.2	71.5	67.4	74.1	71.8	72.2
Geographic region											
Northeast . . . . .	59.6	54.8	44.6	58.1	59.8	55.5	63.9	58.2	67.9	64.2	63.7
Midwest . . . . .	65.2	59.2	50.2	60.8	61.4	67.1	70.7	64.2	72.4	72.6	73.4
South . . . . .	69.2	64.9	60.3	66.4	64.3	70.4	73.0	69.8	75.2	73.2	73.5
West . . . . .	72.8	68.7	64.5	70.3	68.2	74.3	76.6	72.2	78.4	77.6	78.7
Marital status											
Currently married . . . . .	68.7	64.0	55.7	64.5	64.7	69.3	73.5	67.7	75.8	74.1	73.7
Formerly married . . . . .	65.7	59.6	53.9	62.5	56.8	60.4	68.1	60.0	66.3	66.9	71.1
Never married . . . . .	62.1	57.8	55.8	63.9	59.4	57.9	67.4	66.7	69.6	65.7	71.7
Employment status											
Currently employed . . . . .	67.3	62.4	56.7	64.8	64.5	64.8	73.1	69.5	75.1	73.7	75.1
Unemployed . . . . .	57.8	52.4	42.6	60.2	55.0	88.0	63.8	61.8	65.7	61.3	*85.9
Not in labor force . . . . .	67.3	63.2	55.6	55.1	60.6	67.7	69.3	60.9	70.8	70.0	71.8

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

**Table 41. Percent of persons 18 years of age and over who had ever heard of radon, by sex, age, and selected characteristics: United States, 1990**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
All persons <sup>1</sup> . . . . .	70.6	74.9	69.3	79.9	76.9	69.8	66.6	60.6	72.1	71.4	58.5
Education level											
Less than 12 years . . . . .	45.9	49.5	44.4	49.7	51.7	51.5	42.7	37.8	40.8	49.2	41.4
12 years . . . . .	70.6	74.6	66.7	77.3	79.8	76.5	67.4	58.0	69.0	74.1	67.4
More than 12 years . . . . .	83.2	87.2	83.3	88.6	87.9	89.1	79.1	72.3	82.1	83.3	76.3
13-15 years . . . . .	78.6	83.2	79.5	86.1	83.8	83.1	74.5	68.3	77.1	79.1	75.5
16 years or more . . . . .	87.9	90.7	89.8	90.5	90.5	93.4	84.6	79.6	86.7	87.7	77.4
Income											
Less than \$10,000 . . . . .	48.6	52.4	60.0	53.6	45.8	42.2	46.6	49.8	41.3	49.3	45.0
\$10,000-\$19,999 . . . . .	59.6	63.0	61.6	64.7	61.0	64.4	56.8	51.5	56.3	60.8	59.3
\$20,000-\$34,999 . . . . .	73.8	77.0	73.3	79.7	75.0	81.1	70.7	67.1	72.5	71.8	71.5
\$35,000-\$49,999 . . . . .	80.8	83.1	76.4	87.3	82.5	81.1	78.3	70.4	79.7	82.9	78.9
\$50,000 or more . . . . .	84.8	87.4	79.6	90.8	87.9	87.7	82.1	74.0	84.8	84.3	75.1
Race											
White . . . . .	74.3	78.8	73.0	83.6	81.3	72.9	70.3	64.8	75.9	75.1	61.3
Black . . . . .	49.4	52.7	52.1	59.7	49.4	40.2	46.7	43.2	53.9	47.9	34.3
Hispanic origin											
Hispanic . . . . .	33.9	37.4	31.4	45.2	31.8	49.2	30.9	28.1	34.1	33.6	23.5
Non-Hispanic . . . . .	73.6	77.9	73.9	82.9	79.6	70.5	69.7	65.0	75.7	74.0	59.8
Geographic region											
Northeast . . . . .	76.8	80.9	76.1	84.7	83.1	76.3	73.1	67.9	80.5	74.9	65.3
Midwest . . . . .	81.8	85.4	83.7	89.8	87.2	75.3	78.5	73.7	84.4	82.3	69.2
South . . . . .	64.7	68.8	63.4	74.5	69.7	64.1	61.1	57.2	67.2	65.9	49.3
West . . . . .	60.6	66.5	55.9	72.2	70.1	66.1	55.0	44.7	57.7	63.5	53.0
Marital status											
Currently married . . . . .	74.5	77.6	71.0	81.5	78.5	73.1	71.4	62.2	74.6	75.0	67.5
Formerly married . . . . .	59.9	67.1	65.0	74.8	67.1	56.2	57.0	53.0	62.9	62.1	51.5
Never married . . . . .	66.3	70.1	68.3	75.5	73.7	64.8	61.7	59.9	66.7	65.4	62.6
Employment status											
Currently employed . . . . .	74.4	77.4	70.8	81.4	78.7	74.6	70.8	64.2	73.9	74.3	62.4
Unemployed . . . . .	66.1	68.3	60.9	76.8	68.6	*76.3	63.6	60.6	66.7	62.9	*72.4
Not in labor force . . . . .	63.0	67.2	63.2	56.9	70.2	68.7	61.0	51.6	67.1	67.7	58.0

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

NOTE: Denominator for each cell excludes unknowns.

# Appendixes

## Contents

I.	Technical notes on methods .....	67
	Background.....	67
	Statistical design of NHIS .....	67
	Collection and processing of data.....	68
	Health promotion and disease prevention.....	69
	Estimation procedures .....	69
	Reliability of the estimates .....	70
II.	Definitions of certain terms used in this report.....	84
	Demographic terms.....	84
	Terms relating to health behaviors and knowledge.....	85
III.	Questionnaire—selected items .....	87

## Appendix tables

I.	The 40 poststratification age-sex-race cells in the National Health Interview Survey of Health Promotion and Disease Prevention .....	69
II.	Estimated standard error parameters for the 1990 National Health Interview Survey of Health Promotion and Disease Prevention .....	70
III.	Number of persons 18 years of age and over, by sex, age, and selected characteristics: United States, 1990....	72
IV.	Number of overweight persons 18 years of age and over, by sex, age, and selected characteristics: United States, 1990.....	73
V.	Number of women 18 years of age and over who knew how to examine their own breasts for lumps, by age and selected characteristics: United States, 1990.....	74
VI.	Number of persons 18 years of age and over with 2 or more high blood pressure readings, by sex, age, and selected characteristics: United States, 1990.....	75
VII.	Number of current smokers 18 years of age and over, by sex, age, and selected characteristics: United States, 1990.....	76
VIII.	Number of current drinkers 18 years of age and over, by sex, age, and selected characteristics: United States, 1990.....	77
IX.	Number of persons 18–44 years of age, by sex, age, and selected characteristics: United States, 1990.....	78
X.	Number of women 18–44 years of age who had given birth to a child within the past 5 years, by age and selected characteristics: United States, 1990.....	79
XI.	Number of women 18–44 years of age who had given birth to a child within the past 5 years and were smoking before they learned they were pregnant, by age and selected characteristics: United States, 1990.....	80
XII.	Number of children under 1 year–17 years of age, by age and selected characteristics: United States, 1990....	81
XIII.	Number of women 35 years of age and over, by age and selected characteristics: United States, 1990.....	82
XIV.	Number of women 35 years of age and over who had ever had a mammogram, by age and characteristics: United States, 1990.....	83

# Appendix I

## Technical notes on methods

### Background

This report is one of a series of statistical reports published by the staff of the National Center for Health Statistics (NCHS). It is based on information collected in a continuing nationwide sample of households included in the National Health Interview Survey (NHIS). Data are obtained on the personal, sociodemographic, and health characteristics of the family members and unrelated individuals living in these households.

Field operations for the survey are conducted by the U.S. Bureau of the Census under specifications established by NCHS. The U.S. Bureau of the Census participates in the survey planning, selects the sample, and conducts the interviews. The data are then transmitted to NCHS for preparation, processing, and analysis.

Summary reports and reports on special topics for each year's data are prepared by the staff of the Division of Health Interview Statistics for publication in Series 10 publications of NCHS. Data are also tabulated for other reports published by NCHS staff and for use by other organizations and by researchers within and outside the Government. Since 1969, public use tapes have been prepared for each year of data collection.

It should be noted that the health characteristics described by NHIS estimates pertain only to the resident, civilian noninstitutionalized population of the United States living at the time of the interview. The sample does not include persons residing in nursing homes, members of the armed forces, institutionalized persons, or U.S. nationals living abroad.

### Statistical design of NHIS

#### General design

Data from NHIS have been collected continuously since 1957. The sample design of the survey has undergone changes following each decennial census. This periodic redesign of the NHIS sample allows the incorporation of the latest population information and statistical methodology into the survey design. The data presented in this report are from an NHIS sample design first used in 1985. It is anticipated that this design will be used until 1995.

The sample design plan of the NHIS follows a multi-stage probability design that permits a continuous sam-

pling of the civilian noninstitutionalized population residing in the United States. The survey is designed in such a way that the sample scheduled for each week is representative of the target population, and the weekly samples are additive over time. This design permits estimates for high-frequency measures or for large population groups to be produced from a short period of data collection. Estimates for low-frequency measures or for smaller population subgroups can be obtained from a longer period of data collection. The annual sample is designed so that tabulations can be provided for each of the four major geographic regions. Because interviewing is done throughout the year, there is no seasonal bias for annual estimates.

The continuous data collection also has administrative and operational advantages because fieldwork can be handled on a continuing basis with an experienced, stable staff.

#### Sample selection

The target population for NHIS is the civilian noninstitutionalized population residing in the United States. For the first stage of the sample design, the United States is considered to be a universe composed of approximately 1,900 geographically defined primary sampling units (PSU's). A PSU consists of a county, a small group of contiguous counties, or a metropolitan statistical area. The PSU's collectively cover the 50 States and the District of Columbia. The 52 largest PSU's are selected into the sample with certainty and are referred to as self-representing PSU's. The other PSU's in the universe are referred to as non-self-representing PSU's. These PSU's are clustered into 73 strata, and 2 sample PSU's are chosen from each stratum with probability proportional to population size. This gives a total of 198 PSU's selected in the first stage.

Within a PSU, two types of second stage units are used: area segments and permit area segments. Area segments are defined geographically and contain an expected eight households. Permit area segments cover geographical areas containing housing units built after the 1980 census. The permit area segments are defined using updated lists of building permits issued in the PSU since 1980 and contain an expected four households.

Within each segment all occupied households are targeted for interview. On occasion, a sample segment



may contain a large number of households. In this situation the households are subsampled to provide a manageable interviewer workload.

The sample was designed so that a typical NHIS sample for the data collection years 1985 to 1995 will consist of approximately 7,500 segments containing about 59,000 assigned households. Of these households, an expected 10,000 will be vacant, demolished, or occupied by persons not in the target population of the survey. The expected sample of 49,000 occupied households will yield a probability sample of about 127,000 persons.

### Features of the NHIS sample redesign

Starting in 1985, the NHIS design incorporated several new design features (54). The major changes include the following:

1. *The use of an all-area frame.* The NHIS sample is now designed so that it can serve as a sample frame for other NCHS population-based surveys. In previous NHIS designs about two-thirds of the sample was obtained from lists of addresses compiled at the time of the decennial census; that is, a list frame. Due to U.S. Bureau of the Census confidentiality restrictions, these sample addresses could be used for only those surveys being conducted by the U.S. Bureau of the Census. The methodology used to obtain addresses in the 1985 NHIS area frame does not use the census address lists. The sample addresses thus obtained can be used as a sampling frame for other NCHS surveys.
2. *The NHIS as four panels.* Four national subdesigns, or panels, constitute the full NHIS. Each panel contains a representative sample of the U.S. civilian noninstitutionalized population. Each of the four panels has the same sampling properties, and any combination of panels defines a national design. Panels were constructed to facilitate the linkage of NHIS to other surveys and also to efficiently make large reductions in the size of the sample by eliminating panels from the survey.  

In 1990 the sample consisted of 8,112 segments containing 60,481 assigned households. Of the 48,680 households eligible for interview, 46,476 households were actually interviewed, resulting in a sample of 119,631 persons.
3. *The oversampling of black persons.* One of the goals in designing the current NHIS was to improve the precision of estimates for black persons. This was accomplished by the use of differential sampling rates in PSU's with between about 5 and 50 percent black population. Sampling rates for selection of segments were increased in areas known to have the highest concentrations of black persons. Segment sampling rates were decreased in other areas within the PSU to ensure that the total sample in each PSU was the same size as it would have been without oversampling black persons.

4. *The reduction of the number of sampled PSU's.* Interviewer travel to sample PSU's constitutes a large component of the total field costs for the NHIS. The previous NHIS design included 376 PSU's. Research showed that reducing the number of sample PSU's while increasing the sample size within PSU's would reduce travel costs and also maintain the reliability of health estimates. The design now contains 198 PSU's.
5. *The selection of two PSU's per non-self-representing stratum.* In the previous design, one PSU was selected from each non-self-representing stratum. This feature necessitated the use of less efficient variance estimation procedures; the selection of two PSU's allows more efficient variance estimation methodology.

### Collection and processing of data

The NHIS questionnaire contains two major parts: The first consists of topics that remain relatively the same from year to year. Among these topics are the incidence of acute conditions, the prevalence of chronic conditions, persons limited in activity due to chronic conditions, restriction in activity due to impairment or health problems, and utilization of health care services involving physician care and short-stay hospitalization. Occasionally new questions are incorporated into the main questionnaire. Since 1985, questions that ask the household members' city and State of birth, social security number, and father's last name, have been included. In 1989, questions were added that ask the location (city, county, and State) of any physician contact whether by telephone or in person; and for household members born in the United States, how many years they have lived in the State of residence, and for household members born in a foreign country, how many years they have lived in the United States. The second part consists of special topics added as supplements to each year's questionnaire. In 1985, and again in 1990, the supplement addressed a wide range of Health Promotion and Disease Prevention (HPDP) topics. Beginning in August 1987, a special set of supplemental questions on the adult population's knowledge and attitudes about acquired immunodeficiency syndrome (AIDS) was added to the NHIS using computer-assisted personal interviewing (CAPI).

Careful procedures are followed to assure the quality of data collected in the interview. Most households in the sample are contacted by mail before the interviewers arrive. Potential respondents are informed of the importance of the survey and assured that all information obtained in the interview will be held in strict confidence. Interviewers make repeated trips to a household when a respondent is not immediately found. The success of these procedures is indicated by the response rate for the survey, which has been between 95 and 98 percent over the years. When contact is made, the interviewer attempts to have all family members of the household 19 years of age and over present during the interview. When this is not possible, proxy responses for absent adult family

members are accepted. In most situations, proxy respondents are used for persons under 19 years of age. Persons 17 and 18 years of age may respond for themselves, however.

Interviewers undergo extensive training and retraining. The quality of their work is checked by means of periodic observation and by reinterview. Their work is also evaluated by statistical studies of the data they obtain in their interviews. A field edit is performed on all completed interviews so that if there are any problems with the information on the questionnaire, respondents may be recontacted to solve the problem.

Completed questionnaires are sent from the U.S. Bureau of the Census field offices to NCHS for coding and editing. To ensure the accuracy of coding, a 5-percent sample of all questionnaires is recoded and keyed by other coders. A 100-percent verification procedure is used if certain error tolerances are exceeded. Staff of the Division of Health Interview Statistics then edit the files to remove impossible and inconsistent codes.

The interview, fieldwork, and data processing procedures summarized above are described in detail in Series 1, No. 18 (55).

## Health promotion and disease prevention

One adult per family, 18 years of age or older, was randomly selected from the total NHIS sample to participate in the 1990 special section on HPDP. Self-response was required for this portion of the survey and callbacks were made as necessary. A total of 41,104 interviews were completed for the HPDP, representing an estimated total response rate of 83.4 percent, which is the product of the response for the household (95.5 percent) times the response rate for sample persons identified as eligible for the HPDP (87.3 percent). The HPDP questionnaire covered a wide range of health promotion topics including general health habits, mammography, injury control, radon, cardiovascular disease, stress, exercise, smoking, alcohol use, and dental care. One topic covered in 1985, Occupational health and safety, was omitted in 1990. Two new topics for 1990 were mammography and radon. The questionnaire items for the two new topics can be found in appendix III. The questions in other sections of the HPDP questionnaire are in most cases identical to those asked in the 1985 survey. The complete 1990 HPDP questionnaire can be found in appendix III of *Current Estimates, 1990* (56). The 1985 HPDP questionnaire is reprinted in Series 10, No. 163 (6).

In addition to data collected from sample persons, data related to smoking in pregnancy were collected for all women, aged 18–44 years, residing in NHIS sample households, who were currently pregnant or had given birth to a child in the past 5 years. Data on breast feeding and child safety were collected for all children of appropriate ages residing in the household.

**Table 1. The 40 poststratification age-sex-race cells in the National Health Interview Survey of Health Promotion and Disease Prevention**

Age	Black		All other	
	Male	Female	Male	Female
18–19 years . . . . .	X	X	X	X
20–24 years . . . . .	X	X	X	X
25–29 years . . . . .	X	X	X	X
30–34 years . . . . .	X	X	X	X
35–44 years . . . . .	X	X	X	X
45–49 years . . . . .	X	X	X	X
50–54 years . . . . .	X	X	X	X
55–64 years . . . . .	X	X	X	X
65–74 years . . . . .	X	X	X	X
75 years and over . . . . .	X	X	X	X

## Estimation procedures

Because the design of NHIS is a complex multistage probability sample, it is necessary to reflect these complex procedures in the derivation of estimates (54). The estimates presented in this report are based upon 1990 sample person counts weighted to produce national estimates. The weight for each sample person is the product of four component weights:

1. *Probability of selection.* The basic weight for each person is obtained by multiplying the reciprocals of the probabilities of selection at each step in the design: PSU, segment, and household.
2. *Household nonresponse adjustment within segment.* In NHIS, interviews are completed in about 95 percent of all eligible households. Because of household nonresponse, a weighting adjustment is required. The nonresponse adjustment weight is a ratio with the number of households in a sample segment as the numerator and the number of households actually interviewed in that segment as the denominator. This adjustment reduces bias in an estimate to the extent that persons in the noninterviewed households have the same characteristics as the persons in the interviewed households in the same segment.
3. *First-stage ratio adjustment.* The weight for persons in the non-self-representing PSU's is ratio adjusted to the 1980 population within four race-residence classes of the non-self-representing strata within each geographic region.
4. *Poststratification by age-sex-race.* Within each of 40 age-sex-race cells (table I), a weight is constructed each quarter to ratio adjust the first-stage population estimate based on the NHIS to an independent estimate of the population of each cell. These independent estimates are prepared by the U.S. Bureau of the Census and are updated quarterly.

The main effect of the ratio-estimating process is to make the sample more closely representative of the target population by age, sex, race, and residence. The poststratification adjustment helps to reduce the com-

ponent of bias resulting from sampling frame under-coverage; furthermore, this adjustment frequently reduces sampling variance.

## Reliability of the estimates

Because NHIS estimates are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same survey and processing procedures. There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling errors. To the extent possible, these types of errors are kept to a minimum by methods built into the survey procedures described earlier (57). Although it is very difficult to measure the extent of bias in NHIS, several studies have been conducted to examine this problem. The results have been published in several reports (58-61).

## Nonsampling errors

*Interviewing process.* Information, such as the number of days of restricted activity caused by the condition, can be obtained more accurately from household members than from any other source because only the persons concerned are in a position to report this information. However, there are limitations to the accuracy of diagnostic and other information collected in household interviews. For example, for diagnostic information, the household respondent can usually pass on to the interviewer only the information the physician has given to the family. For conditions not medically attended, diagnostic information is often no more than a description of symptoms. Further, a respondent may not answer a question in the intended manner because he or she has not properly understood the question, has forgotten the event, does not know, or does not wish to divulge the answer. Regardless of the type of measure, all NHIS data are estimates of known reported morbidity, disability, and so forth.

*Population estimates.* Some of the published tables include population figures for specified categories. Except for overall totals for the 40 age, sex, and race groups, which are adjusted to independent estimates, these figures are based on the sample of households in NHIS. They are given primarily to provide denominators for rate computation, and for this purpose they are more appropriate for use with the accompanying measures of health characteristics than other population data that may be available. With the exception of the overall totals by age, sex, and race mentioned above, the population figures may differ from figures (which are derived from different sources) published in reports of the U.S. Bureau of the Census. Official population estimates are presented in U.S. Bureau of the Census reports in Series P-20, P-25, and P-60.

*Rounding of numbers.* In published tables, the figures are rounded to the nearest thousand, although they are not necessarily accurate to that detail. Derived statistics, such as rates and percent distributions, are computed

Table II. Estimated standard error parameters for the 1990 National Health Interview Survey of Health Promotion and Disease Prevention

Parameter set	Characteristic	Estimated parameters	
		a	b
I	Population estimates for demographic, socioeconomic, and health characteristics . . . . .	0.000021	6100
II	Age-sex-race population based upon combining the poststratification cells of table I . . . . .	0.0	0.0

after the estimates on which these are based have been rounded to the nearest thousand.

## Sampling errors

The standard error is primarily a measure of sampling error, that is, the variations that might occur by chance because only a sample of the population is surveyed. The chances are about 68 in 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 in 100 that the difference would be less than twice the standard error and about 99 in 100 that it would be less than 2 1/2 times as large.

Individual standard errors were not computed for each estimate in this report. Instead, standard errors were computed for a broad spectrum of estimates. Regression techniques were then applied to produce equations from which a standard error for any estimate can be approximated. The regression equations, represented by parameters *a* and *b*, are presented in table II. Rules explaining their use are presented in the section below.

The reader is cautioned that this procedure will give an approximate standard error of an estimate rather than the precise standard error. The reader is further cautioned that particular care should be exercised when the denominator is small.

## General rules for determining standard errors

To produce approximate standard errors for NHIS estimates, the reader must first determine the type of characteristic to be estimated, that is, the parameter set in table II to be used. The reader must then determine the type of estimate for which the standard error is needed. The type of estimate corresponds to one of five general rules for determining standard errors.

Rule 1. *Estimated number of people or events*—For the estimated number of people or events published in this report, there are two cases to consider. For the first case, if the estimated number is any combination of the post-stratification age-sex-race cells in table I, then its value has been adjusted to official U.S. Bureau of the Census figures and its standard error is assumed to be 0.0. This corresponds to parameter set II in table II. As an example, this

would be the case for the number of persons in the U.S. target population or the number of black persons in the 18–44 year age group. Although the race class “white” is not specifically adjusted to U.S. Bureau of the Census figures, it dominates the poststratification “all other” race class; consequently, age-sex-“all other” race combinations of table I can be treated as age-sex-white combinations for the purpose of approximating standard errors.

For the second case, the standard errors for all other estimates of numbers of people or events, are approximated by using the parameters provided in table II and formula 1 below.

If the aggregate  $x$  for a characteristic has associated parameters  $a$  and  $b$ , then the approximate standard error for  $x$ ,  $SE(x)$ , can be computed by the formula

$$SE(x) = \sqrt{ax^2 + bx} \quad (1)$$

**Rule 2. For rates, proportions, and percents when the denominator is generated by the poststratification age-sex-race classes (table I)**—In this case, the denominator has no sampling error. For example, rule 2 would apply to the estimated number of bed days per person for black persons age 65 years and over because the denominator is a combination of the poststratification cells. Approximate standard errors for such estimates can be computed using table II  $a$  and  $b$  parameters associated with the numerator characteristics along with formula 2 below.

If the estimate of rate, proportion, or percent  $p$  is the ratio of two estimated numbers,  $p = x/Y$  (where  $p$  may be inflated by 100 for percents or 1,000 for rates per 1,000 persons), with  $Y$  having no sampling error, then the approximate standard error for  $p$  is given by the formula

$$SE(p) = p \sqrt{a + \frac{b}{x}} \quad (2)$$

In this report, the value of the denominator  $Y$  is always provided, but in a few cases the numerator value  $x$  is not published. For these cases the value of  $x$  may be computed by the formula

$$x = pY \quad \text{if } p \text{ is a percent or rate per 100 units } 100$$

**Rule 3. Proportions and percents when the denominator is not generated by the poststratification age-sex-race classes**—If  $p$  represents an estimated percent,  $b$  is the parameter from table II associated with the numerator characteristics, and  $y$  is the number of persons in the denominator upon which  $p$  is based, then the standard error of  $p$  may be approximated by

$$SE(p) = \sqrt{\frac{bp(100-p)}{y}} \quad (3)$$

(If  $p$  is a proportion, then the above formula can be used but with 100 replaced by 1.0.)

**Rule 4. Rates when the denominator is not generated by the poststratification age-sex-race classes**—If the estimated rate  $p$  is expressed as the ratio of two estimates,  $p = x/y$  (inflated by 100 or 1,000 when appropriate), then the estimated standard error for  $p$  is given by the formula

$$SE(p) = p \sqrt{\frac{SE(x)^2}{x^2} + \frac{SE(y)^2}{y^2} - 2r \frac{SE(x)}{x} \frac{SE(y)}{y}} \quad (4)$$

where  $SE(x)$  and  $SE(y)$  are computed using rule 1 and  $x$  and  $y$  are obtained from the tables. No estimates of  $r$ , the correlation between the numerator and denominator, are presented in this report; therefore, only the first two terms are available. The reader must assume that  $r = 0.0$ . Assuming  $r = 0.0$  will yield an overestimate of the standard error if  $r$  is actually positive and an underestimate if  $r$  is negative.

**Rule 5. Difference between two statistics (mean, rate, total, and proportion)**—If  $x_1$  and  $x_2$  are two estimates, then the standard error of the difference ( $x_1 - x_2$ ) can be computed as follows:

$$SE(x_1 - x_2) = \sqrt{SE(x_1)^2 + SE(x_2)^2 - 2rSE(x_1)SE(x_2)} \quad (5)$$

where  $SE(x_1)$  and  $SE(x_2)$  are computed using rules 1–4 as appropriate and  $r$  is the correlation coefficient between  $x_1$  and  $x_2$ .

Assuming  $r = 0.0$  will result in an accurate standard error if the two estimates are actually uncorrelated and will result in an overestimate of the standard error if the correlation is positive or an underestimate if the correlation is negative.

## Relative standard errors

Prior to 1985, relative standard error (RSE) curves were present in *Current Estimates* for approximating relative standard errors. For readers who wish to continue using them, the following provides guidance. The RSE of an estimate is obtained by dividing the standard error (SE) of the estimate by the estimate  $x$  itself. This quantity is expressed as a percent of the estimate:

$$RSE = 100 \frac{SE(x)}{x}$$

Table III. Number of persons 18 years of age and over, by sex, age, and selected characteristics: United States, 1990

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
Number in thousands											
All persons <sup>1,2</sup> . . . . .	181,447	86,278	22,438	29,102	22,324	12,414	95,169	23,379	30,162	24,261	17,367
Education level											
Less than 12 years . . . . .	38,367	18,041	4,230	3,562	5,150	5,098	20,326	4,011	3,511	5,522	7,282
12 years . . . . .	69,405	30,771	9,254	10,235	7,538	3,745	38,634	9,592	12,085	10,787	6,170
More than 12 years . . . . .	73,244	37,280	8,941	15,249	9,583	3,508	35,964	9,729	14,517	7,875	3,843
13-15 years . . . . .	37,155	17,517	5,668	6,637	3,734	1,479	19,638	6,318	7,115	3,983	2,223
16 years or more . . . . .	36,089	19,763	3,273	8,612	5,849	2,029	16,326	3,412	7,402	3,893	1,620
Income											
Less than \$10,000 . . . . .	18,469	6,539	2,654	1,316	1,172	1,397	11,930	3,743	2,193	2,002	3,992
\$10,000-\$19,999 . . . . .	30,452	13,712	4,107	3,563	2,559	3,484	16,740	4,479	3,943	3,769	4,549
\$20,000-\$34,999 . . . . .	40,216	19,771	5,496	6,911	4,600	2,763	20,445	5,660	6,845	5,000	2,941
\$35,000-\$49,999 . . . . .	29,795	15,646	3,687	6,875	3,926	1,157	14,149	3,338	6,228	3,634	949
\$50,000 or more . . . . .	36,199	18,794	3,609	7,286	6,665	1,233	17,405	3,243	7,588	5,544	1,030
Race											
White . . . . .	155,301	74,046	18,456	24,958	19,440	11,192	81,255	19,230	25,333	21,028	15,663
Black . . . . .	20,248	9,037	2,853	3,033	2,139	1,012	11,212	3,351	3,720	2,647	1,493
Hispanic origin											
Hispanic . . . . .	14,314	6,605	2,535	2,339	1,331	401	7,709	2,855	2,653	1,567	633
Non-Hispanic . . . . .	166,599	79,448	19,833	26,695	20,915	12,004	87,151	20,462	27,411	22,577	16,700
Geographic region											
Northeast . . . . .	36,609	17,103	4,261	5,863	4,472	2,507	19,506	4,430	5,916	5,206	3,955
Midwest . . . . .	44,944	21,552	5,574	7,247	5,545	3,186	23,393	5,620	7,499	5,976	4,297
South . . . . .	62,397	29,427	7,725	9,857	7,471	4,375	32,969	8,330	10,164	8,409	6,067
West . . . . .	37,498	18,196	4,878	6,135	4,837	2,346	19,302	5,000	6,584	4,670	3,048
Marital status											
Currently married . . . . .	117,413	59,015	8,875	21,962	18,472	9,706	58,398	11,519	22,529	17,278	7,072
Formerly married . . . . .	30,439	8,789	629	3,178	2,836	2,145	21,650	1,462	4,708	5,941	9,537
Never married . . . . .	33,413	18,382	12,890	3,927	1,005	559	15,031	10,328	2,908	1,040	755
Employment status											
Currently employed . . . . .	118,423	64,591	18,272	26,535	17,612	2,171	53,833	15,773	22,107	14,113	1,839
Unemployed . . . . .	5,572	2,913	1,232	968	630	83	2,659	1,123	970	487	78
Not in labor force . . . . .	57,451	18,774	2,934	1,599	4,081	10,160	38,677	6,482	7,084	9,661	15,449

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.  
<sup>2</sup>Numbers may not add to totals due to rounding.

Table IV. Number of overweight persons 18 years of age and over, by sex, age, and select characteristics: United States, 1990

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
Number in thousands											
All persons <sup>1,2</sup> . . . . .	48,418	24,659	4,310	8,945	8,214	3,191	23,759	3,640	7,275	8,073	4,772
Education level											
Less than 12 years . . . . .	12,144	5,251	773	1,054	2,163	1,262	6,892	846	1,226	2,513	2,307
12 years . . . . .	19,321	9,285	1,895	3,541	2,760	1,089	10,035	1,679	3,129	3,554	1,673
More than 12 years . . . . .	16,874	10,092	1,641	4,347	3,279	825	6,783	1,106	2,919	1,983	775
13-15 years . . . . .	9,193	5,074	1,035	2,238	1,439	362	4,119	828	1,758	1,072	461
16 years or more . . . . .	7,681	5,018	607	2,109	1,840	462	2,663	277	1,161	911	314
Income											
Less than \$10,000 . . . . .	5,243	1,511	402	394	410	305	3,733	755	845	961	1,171
\$10,000-\$19,999 . . . . .	8,457	3,667	748	1,111	927	880	4,790	844	1,173	1,470	1,303
\$20,000-\$34,999 . . . . .	11,067	5,791	1,062	2,184	1,809	736	5,275	890	1,827	1,756	802
\$35,000-\$49,999 . . . . .	8,033	4,715	806	2,165	1,487	258	3,317	422	1,547	1,139	209
\$50,000 or more . . . . .	8,783	5,620	744	2,203	2,371	303	3,163	290	1,156	1,464	252
Race											
White . . . . .	40,317	21,258	3,494	7,724	7,152	2,888	19,059	2,768	5,622	6,585	4,084
Black . . . . .	7,390	3,029	723	1,039	975	291	4,361	818	1,515	1,374	655
Hispanic origin											
Hispanic . . . . .	3,841	1,713	341	767	504	101	2,127	569	768	590	201
Non-hispanic . . . . .	44,431	22,889	3,969	8,153	7,679	3,088	21,542	3,066	6,473	7,435	4,569
Geographic region											
Northeast . . . . .	9,700	4,978	887	1,785	1,658	648	4,723	620	1,282	1,718	1,102
Midwest . . . . .	12,745	6,542	1,036	2,375	2,162	969	6,204	867	1,871	2,156	1,309
South . . . . .	17,003	8,561	1,676	3,177	2,625	1,084	8,441	1,361	2,691	2,778	1,612
West . . . . .	8,970	4,578	711	1,608	1,769	490	4,392	791	1,430	1,421	749
Marital status											
Currently married . . . . .	33,430	19,013	2,271	7,156	7,067	2,519	14,417	1,751	5,167	5,552	1,947
Formerly married . . . . .	8,593	2,223	101	754	843	525	6,370	312	1,212	2,156	2,690
Never married . . . . .	6,353	3,388	1,925	1,020	297	146	2,964	1,572	894	363	135
Employment status											
Currently employed . . . . .	31,297	18,990	3,699	8,186	6,541	564	12,307	2,201	5,180	4,406	520
Unemployed . . . . .	1,421	833	252	316	229	*36	588	157	255	167	*8
Not in labor force . . . . .	15,701	4,836	358	443	1,444	2,591	10,864	1,282	1,839	3,500	4,243

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

<sup>2</sup>Numbers may not add to totals due to rounding.

**Table V. Number of women 18 years of age and over who knew how to examine their own breasts for lumps, by age and selected characteristics: United States, 1990**

<i>Characteristic</i>	<i>Total</i>	<i>18-29 years</i>	<i>30-44 years</i>	<i>45-64 years</i>	<i>65 years and over</i>
			Number in thousands		
All women <sup>1,2</sup> . . . . .	82,740	19,599	27,646	21,707	13,789
Education level					
Less than 12 years . . . . .	15,413	2,982	2,828	4,447	5,155
12 years . . . . .	34,295	8,002	11,121	9,927	5,246
More than 12 years . . . . .	32,897	8,600	13,668	7,279	3,349
13-15 years . . . . .	17,805	5,511	6,680	3,627	1,987
16 years or more . . . . .	15,091	3,089	6,988	3,652	1,362
Income					
Less than \$10,000 . . . . .	9,419	3,007	1,842	1,565	3,004
\$10,000-\$19,999 . . . . .	14,104	3,656	3,502	3,248	3,698
\$20,000-\$34,999 . . . . .	18,331	4,846	6,311	4,658	2,516
\$35,000-\$49,999 . . . . .	13,066	2,952	5,894	3,379	840
\$50,000 or more . . . . .	15,907	2,779	7,147	5,146	834
Race					
White . . . . .	71,275	16,274	23,408	18,942	12,650
Black . . . . .	9,508	2,799	3,399	2,300	1,010
Hispanic origin					
Hispanic . . . . .	5,657	1,967	2,037	1,209	443
Non-Hispanic . . . . .	76,817	17,592	25,518	20,389	13,318
Geographic region					
Northeast . . . . .	16,633	3,642	5,409	4,571	3,011
Midwest . . . . .	20,936	4,888	7,038	5,473	3,537
South . . . . .	29,098	7,293	9,482	7,566	4,758
West . . . . .	16,073	3,775	5,717	4,098	2,483
Marital status					
Currently married . . . . .	52,405	10,007	20,811	15,711	5,875
Formerly married . . . . .	18,046	1,255	4,257	5,188	7,345
Never married . . . . .	12,210	8,271	2,563	808	568
Employment status					
Currently employed . . . . .	48,525	13,566	20,606	12,805	1,547
Unemployed . . . . .	2,375	968	907	429	71
Not in labor force . . . . .	31,840	5,065	6,132	8,472	12,171

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

<sup>2</sup>Numbers may not add to totals due to rounding.

**Table VI. Number of persons 18 years of age and over with 2 or more high blood pressure readings, by sex, age, and selected characteristics: United States, 1990**

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
Number in thousands											
All persons <sup>1,2</sup> . . . . .	29,583	13,235	917	2,864	5,485	3,970	16,347	924	2,432	6,103	6,888
Education											
Less than 12 years . . . . .	9,400	3,750	213	393	1,533	1,611	5,650	185	508	1,869	3,088
12 years . . . . .	10,901	4,361	304	1,010	1,862	1,186	6,540	416	927	2,756	2,441
More than 12 years . . . . .	9,210	5,091	400	1,461	2,082	1,148	4,119	323	989	1,459	1,349
13-15 years . . . . .	4,742	2,453	255	765	884	549	2,289	217	580	752	741
16 years or more . . . . .	4,468	2,638	145	696	1,199	599	1,830	106	408	707	608
Income											
Less than \$10,000 . . . . .	4,113	1,034	81	162	343	448	3,080	158	332	806	1,783
\$10,000-\$19,999 . . . . .	5,915	2,469	219	390	813	1,047	3,446	236	280	1,153	1,776
\$20,000-\$34,999 . . . . .	6,215	2,981	209	677	1,161	934	3,234	225	670	1,218	1,120
\$35,000-\$49,999 . . . . .	3,823	2,149	173	680	853	443	1,675	110	454	798	312
\$50,000 or more . . . . .	4,729	2,741	139	676	1,500	426	1,988	129	435	1,017	407
Race											
White . . . . .	24,758	11,149	740	2,342	4,538	3,529	13,609	750	1,802	4,910	6,147
Black . . . . .	4,306	1,804	156	431	826	391	2,502	150	557	1,090	705
Hispanic origin											
Hispanic . . . . .	1,443	495	*43	130	237	85	948	84	230	374	260
Non-Hispanic . . . . .	28,056	12,727	873	2,734	5,236	3,885	15,329	840	2,192	5,694	6,603
Geographic region											
Northeast . . . . .	5,955	2,758	171	655	1,202	730	3,198	145	386	1,190	1,476
Midwest . . . . .	7,588	3,399	241	825	1,268	1,067	4,188	230	579	1,531	1,848
South . . . . .	10,975	4,666	324	900	1,993	1,449	6,309	406	1,065	2,374	2,464
West . . . . .	5,065	2,412	181	485	1,022	723	2,653	143	402	1,007	1,101
Marital status											
Currently married . . . . .	19,211	10,279	454	2,142	4,550	3,132	8,933	483	1,697	4,137	2,616
Formerly married . . . . .	8,138	1,793	*50	351	709	683	6,345	90	488	1,718	4,049
Never married . . . . .	2,201	1,142	413	358	220	151	1,060	342	246	248	224
Employment status											
Currently employed . . . . .	13,312	7,611	739	2,512	3,709	651	5,701	574	1,680	2,828	619
Unemployed . . . . .	572	327	82	96	138	*11	246	*20	80	123	*23
Not in labor force . . . . .	15,699	5,298	96	256	1,638	3,308	10,401	331	671	3,152	6,246

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

<sup>2</sup>Numbers may not add to totals due to rounding.



Table VII. Number of current smokers 18 years of age and over, by sex, age, and selected characteristics: United States, 1990

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
Number in thousands											
All persons <sup>1,2</sup> . . . . .	45,750	24,203	6,316	9,636	6,464	1,787	21,546	5,877	7,734	5,972	1,964
Education level											
Less than 12 years . . . . .	12,034	6,597	1,848	1,870	2,008	871	5,437	1,624	1,398	1,633	782
12 years . . . . .	20,327	10,175	3,041	4,142	2,394	599	10,152	2,838	3,850	2,735	730
More than 12 years . . . . .	13,300	7,371	1,423	3,606	2,039	304	5,929	1,407	2,478	1,600	443
13-15 years . . . . .	8,471	4,537	1,137	2,246	1,023	131	3,934	1,091	1,661	900	283
16 years or more . . . . .	4,829	2,834	286	1,360	1,016	173	1,994	316	818	701	160
Income											
Less than \$10,000 . . . . .	5,779	2,393	793	768	539	293	3,386	1,187	1,014	661	523
\$10,000-\$19,999 . . . . .	8,976	4,610	1,449	1,561	1,036	564	4,366	1,419	1,421	975	551
\$20,000-\$34,999 . . . . .	10,708	5,941	1,671	2,537	1,378	356	4,767	1,258	1,845	1,315	349
\$35,000-\$49,999 . . . . .	6,914	3,968	839	1,937	1,067	125	2,946	658	1,386	806	96
\$50,000 or more . . . . .	6,935	3,967	733	1,734	1,377	124	2,968	572	1,223	1,050	123
Race											
White . . . . .	39,291	20,454	5,300	8,129	5,509	1,516	18,837	5,184	6,560	5,315	1,778
Black . . . . .	5,218	2,875	744	1,150	771	211	2,343	593	997	588	165
Hispanic origin											
Hispanic . . . . .	3,239	1,994	700	821	395	77	1,246	442	491	281	*31
Non-Hispanic . . . . .	42,409	22,149	5,595	8,796	6,050	1,708	20,260	5,432	7,231	5,665	1,932
Geographic region											
Northeast . . . . .	8,650	4,537	1,183	1,800	1,181	373	4,113	1,134	1,436	1,141	403
Midwest . . . . .	12,144	6,232	1,752	2,410	1,632	437	5,912	1,637	2,217	1,634	425
South . . . . .	16,348	8,827	2,227	3,481	2,410	709	7,521	2,071	2,566	2,151	733
West . . . . .	8,609	4,608	1,154	1,945	1,240	268	4,001	1,035	1,515	1,047	404
Marital status											
Currently married . . . . .	28,602	15,772	2,809	6,825	4,932	1,206	12,831	3,168	5,170	3,762	731
Formerly married . . . . .	9,127	3,577	273	1,551	1,246	507	5,550	645	1,763	1,973	1,168
Never married . . . . .	8,000	4,838	3,225	1,257	284	71	3,162	2,064	797	236	*64
Employment status											
Currently employed . . . . .	31,531	18,581	5,063	8,319	4,850	350	12,950	3,844	5,395	3,433	278
Unemployed . . . . .	2,135	1,314	523	513	266	*13	821	328	369	120	*5
Not in labor force . . . . .	12,084	4,308	731	804	1,348	1,424	7,776	1,705	1,970	2,419	1,681

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

<sup>2</sup>Numbers may not add to totals due to rounding.

**Table VIII. Number of current drinkers 18 years of age and over, by sex, age, and selected characteristics: United States, 1990**

Characteristic	Both sexes 18 years and over	Male					Female				
		Total	18-29 years	30-44 years	45-64 years	65 years and over	Total	18-29 years	30-44 years	45-64 years	65 years and over
Number in thousands											
All persons <sup>1,2</sup> . . . . .	108,681	61,025	16,728	22,466	15,052	6,780	47,656	13,510	17,355	11,454	5,336
Education											
Less than 12 years . . . . .	16,033	10,193	2,787	2,469	2,747	2,190	5,840	1,749	1,352	1,552	1,186
12 years . . . . .	41,024	21,800	6,805	7,836	4,983	2,176	19,224	5,277	6,755	4,965	2,227
More than 12 years . . . . .	51,479	28,942	7,136	12,118	7,304	2,385	22,537	6,471	9,228	4,924	1,913
13-15 years . . . . .	25,018	13,191	4,423	5,124	2,742	902	11,827	4,044	4,347	2,360	1,076
16 years or more . . . . .	26,461	15,752	2,713	6,993	4,563	1,483	10,709	2,427	4,882	2,564	837
Income											
Less than \$10,000 . . . . .	8,161	3,884	1,893	898	591	502	4,277	2,007	995	586	689
\$10,000-\$19,999 . . . . .	15,541	8,571	2,926	2,543	1,417	1,684	6,971	2,360	1,935	1,369	1,308
\$20,000-\$34,999 . . . . .	24,557	14,112	4,082	5,253	3,028	1,748	10,446	3,279	3,811	2,187	1,169
\$35,000-\$49,999 . . . . .	20,188	11,656	2,848	5,353	2,719	736	8,532	2,212	3,873	1,925	523
\$50,000 or more . . . . .	27,303	15,572	2,977	6,278	5,371	946	11,732	2,292	5,255	3,598	586
Race											
White . . . . .	96,853	53,745	14,303	19,714	13,448	6,281	43,108	12,029	15,481	10,523	5,076
Black . . . . .	9,211	5,542	1,811	2,127	1,224	380	3,669	1,188	1,478	783	220
Hispanic origin											
Hispanic . . . . .	7,355	4,476	1,632	1,763	865	215	2,879	1,164	1,112	459	144
Non-Hispanic . . . . .	101,046	56,394	15,038	20,664	14,128	6,565	44,652	12,306	16,189	10,969	5,188
Geographic region											
Northeast . . . . .	23,707	12,841	3,280	4,746	3,268	1,546	10,866	2,827	3,681	2,936	1,422
Midwest . . . . .	29,344	16,309	4,614	5,870	3,967	1,858	13,036	3,704	4,849	3,115	1,367
South . . . . .	32,184	18,834	5,301	7,172	4,419	1,941	13,350	4,111	4,942	2,946	1,351
West . . . . .	23,446	13,042	3,533	4,678	3,397	1,434	10,405	2,868	3,884	2,457	1,196
Marital status											
Currently married . . . . .	71,837	41,688	6,947	16,886	12,396	5,459	30,149	6,547	12,820	8,263	2,518
Formerly married . . . . .	15,361	6,252	529	2,624	2,040	1,059	9,108	895	2,927	2,709	2,578
Never married . . . . .	21,341	13,025	9,228	2,930	605	262	8,316	6,001	1,595	482	238
Employment status											
Currently employed . . . . .	79,850	48,405	13,975	20,702	12,393	1,334	31,445	10,015	13,329	7,297	803
Unemployed . . . . .	3,591	2,111	927	721	418	*45	1,480	621	562	248	*49
Not in labor force . . . . .	25,240	10,508	1,826	1,043	2,240	5,400	14,731	2,874	3,465	3,909	4,484

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

<sup>2</sup>Numbers may not add to totals due to rounding.

Table IX. Number of persons 18–44 years of age, by sex, age, and selected characteristics: United States, 1990

Characteristic	Both sexes 18–44 years	Male					Female				
		Total	18–24 years	25–29 years	30–34 years	35–44 years	Total	18–24 years	25–29 years	30–34 years	35–44 years
Number in thousands											
All persons <sup>1,2</sup> . . . . .	105,082	51,540	12,242	10,197	10,829	18,274	53,541	12,781	10,598	11,108	19,055
Education level											
Less than 12 years . . . . .	15,314	7,792	2,783	1,447	1,433	2,129	7,522	2,456	1,555	1,344	2,168
12 years . . . . .	41,165	19,489	5,245	4,009	4,140	6,095	21,677	5,251	4,340	4,508	7,577
More than 12 years . . . . .	48,436	24,190	4,208	4,733	5,219	10,030	24,246	5,048	4,681	5,245	9,272
13–15 years . . . . .	25,737	12,304	3,244	2,424	2,261	4,375	13,432	3,939	2,378	2,665	4,450
16 years or more . . . . .	22,699	11,885	964	2,309	2,957	5,655	10,814	1,109	2,303	2,580	4,822
Income											
Less than \$10,000 . . . . .	9,906	3,971	1,968	686	554	762	5,936	2,633	1,110	875	1,318
\$10,000–\$19,999 . . . . .	16,091	7,669	2,298	1,809	1,493	2,070	8,422	2,554	1,925	1,718	2,225
\$20,000–\$34,999 . . . . .	24,912	12,407	2,477	3,019	2,894	4,017	12,504	2,654	3,005	2,711	4,134
\$35,000–\$49,999 . . . . .	20,128	10,562	1,801	1,886	2,510	4,365	9,566	1,495	1,843	2,207	4,021
\$50,000 or more . . . . .	21,726	10,896	2,123	1,486	2,173	5,114	10,831	1,723	1,519	2,367	5,221
Race											
White . . . . .	87,977	43,414	9,879	8,576	9,133	15,825	44,563	10,435	8,795	9,223	16,111
Black . . . . .	12,957	5,886	1,643	1,209	1,213	1,820	7,071	1,892	1,460	1,463	2,257
Hispanic origin											
Hispanic . . . . .	10,382	4,874	1,509	1,026	987	1,351	5,509	1,752	1,103	1,118	1,535
Non-Hispanic . . . . .	94,402	46,528	10,693	9,140	9,814	16,881	47,873	10,980	9,483	9,945	17,466
Geographic region											
Northeast . . . . .	20,469	10,124	2,325	1,936	2,238	3,625	10,346	2,259	2,171	2,137	3,779
Midwest . . . . .	25,941	12,822	2,952	2,623	2,582	4,665	13,119	3,083	2,537	2,745	4,753
South . . . . .	36,075	17,582	4,283	3,441	3,683	6,174	18,493	4,663	3,666	3,845	6,318
West . . . . .	22,597	11,014	2,682	2,196	2,326	3,810	11,583	2,776	2,224	2,380	4,204
Marital status											
Currently married . . . . .	64,886	30,838	2,567	6,309	7,840	14,122	34,048	4,360	7,159	8,416	14,113
Formerly married . . . . .	9,978	3,808	127	502	913	2,266	6,171	496	966	1,320	3,388
Never married . . . . .	30,053	16,817	9,522	3,368	2,071	1,856	13,236	7,894	2,434	1,363	1,545
Employment status											
Currently employed . . . . .	82,687	44,807	9,124	9,148	9,947	16,588	37,881	8,263	7,510	7,757	14,350
Unemployed . . . . .	4,294	2,200	825	407	387	581	2,094	648	476	380	591
Not in labor force . . . . .	18,100	4,533	2,292	642	495	1,105	13,567	3,871	2,612	2,970	4,114

<sup>1</sup>Includes persons with unknown sociodemographic characteristics.

<sup>2</sup>Numbers may not add to totals due to rounding.

**Table X. Number of women 18–44 years of age who had given birth to a child within the past 5 years, by age and selected characteristics: United States, 1990**

<i>Characteristic</i>	<i>Total</i>	<i>18–24 years</i>	<i>25–29 years</i>	<i>30–34 years</i>	<i>35–44 years</i>
		Number in thousands			
All women <sup>1,2</sup> . . . . .	14,214	3,159	4,398	4,084	2,573
Education level					
Less than 12 years . . . . .	2,532	1,040	780	407	305
12 years . . . . .	5,907	1,613	1,969	1,533	792
More than 12 years . . . . .	5,713	482	1,632	2,127	1,472
13–15 years . . . . .	3,061	427	1,076	1,030	528
16 years or more . . . . .	2,652	56	556	1,097	944
Income					
Less than \$10,000 . . . . .	1,658	739	489	277	153
\$10,000–\$19,999 . . . . .	2,512	897	828	480	306
\$20,000–\$34,999 . . . . .	3,420	651	1,290	983	497
\$35,000–\$49,999 . . . . .	2,442	244	747	914	538
\$50,000 or more . . . . .	2,486	161	506	996	822
Race					
White . . . . .	11,556	2,366	3,596	3,421	2,173
Black . . . . .	2,101	697	649	483	272
Hispanic origin					
Hispanic . . . . .	1,855	534	543	439	339
Non-Hispanic . . . . .	12,296	2,606	3,831	3,633	2,226
Geographic region					
Northeast . . . . .	2,627	480	764	824	559
Midwest . . . . .	3,469	701	1,092	1,022	654
South . . . . .	4,929	1,256	1,592	1,352	729
West . . . . .	3,190	721	951	887	632
Marital status					
Currently married . . . . .	11,299	1,963	3,547	3,547	2,241
Formerly married . . . . .	1,283	269	435	338	242
Never married . . . . .	1,618	921	410	197	90
Employment status					
Currently employed . . . . .	7,808	1,401	2,475	2,408	1,525
Unemployed . . . . .	654	262	166	146	80
Not in labor force . . . . .	5,752	1,496	1,757	1,531	968

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

<sup>2</sup>Numbers may not add to totals due to rounding.

Table XI. Number of women 18–44 years of age who had given birth to a child within the past 5 years and were smoking before they learned they were pregnant, by age and selected characteristics: United States, 1990

<i>Characteristic</i>	<i>Total</i>	<i>18–24 years</i>	<i>25–29 years</i>	<i>30–34 years</i>	<i>35–44 years</i>
		Number in thousands			
All women <sup>1,2</sup> . . . . .	3,257	893	1,102	826	436
Education level					
Less than 12 years . . . . .	862	393	280	131	58
12 years . . . . .	1,612	405	588	420	199
More than 12 years . . . . .	779	92	234	273	180
13–15 years . . . . .	579	92	193	204	90
16 years or more . . . . .	199	*–	40	69	90
Income					
Less than \$10,000 . . . . .	585	236	179	117	54
\$10,000–\$19,999 . . . . .	734	279	235	134	87
\$20,000–\$34,999 . . . . .	832	176	343	217	96
\$35,000–\$49,999 . . . . .	435	52	149	149	85
\$50,000 or more . . . . .	337	40	81	122	94
Race					
White . . . . .	2,831	794	960	695	382
Black . . . . .	376	84	126	115	51
Hispanic origin					
Hispanic . . . . .	208	57	67	51	*32
Non-Hispanic . . . . .	3,041	832	1,030	775	404
Geographic region					
Northeast . . . . .	626	142	219	163	102
Midwest . . . . .	989	257	342	256	134
South . . . . .	1,109	329	362	288	130
West . . . . .	533	165	179	118	71
Marital status					
Currently married . . . . .	2,312	560	795	631	326
Formerly married . . . . .	462	100	167	119	77
Never married . . . . .	483	233	140	76	*34
Employment status					
Currently employed . . . . .	1,669	367	581	469	252
Unemployed . . . . .	186	76	59	39	*12
Not in labor force . . . . .	1,402	450	461	318	172

<sup>1</sup>Includes women with unknown sociodemographic characteristics.

<sup>2</sup>Numbers may not add to totals due to rounding.

Table XII. Number of children under 1 year–17 years of age, by age and selected characteristics: United States, 1990

Characteristic	Ages 0–4 years	Ages 6 months– 4 years	Ages 5–17 years	Ages 0–9 years
	Number in thousands			
Both sexes <sup>1,2</sup> . . . . .	15,538	13,869	35,671	30,558
Male . . . . .	8,021	7,121	18,262	15,665
Female . . . . .	7,517	6,748	17,409	14,893
Age				
Less than 1 year . . . . .	3,333	1,663	*–	3,333
1 year . . . . .	3,090	3,090	*–	3,090
2 years . . . . .	3,027	3,027	*–	3,027
3 years . . . . .	3,041	3,041	*–	3,041
4 years . . . . .	3,047	3,047	*–	3,047
5 years . . . . .	*–	*–	3,185	3,185
6 years . . . . .	*–	*–	2,869	2,869
7 years . . . . .	*–	*–	3,073	3,073
8 years . . . . .	*–	*–	2,948	2,948
9 years . . . . .	*–	*–	2,946	2,946
10–14 years . . . . .	*–	*–	13,521	*–
15–17 years . . . . .	*–	*–	7,129	*–
Income				
Less than \$10,000 . . . . .	1,969	1,760	3,442	3,559
\$10,000–\$19,999 . . . . .	2,757	2,428	5,617	5,238
\$20,000–\$34,999 . . . . .	3,759	3,361	8,186	7,312
\$35,000–\$49,999 . . . . .	2,730	2,476	6,933	5,612
\$50,000 or more . . . . .	2,754	2,479	7,634	5,713
Race				
White . . . . .	12,916	11,506	29,579	25,405
Black . . . . .	2,109	1,905	4,921	4,165
Hispanic origin				
Hispanic . . . . .	2,197	1,940	4,548	4,152
Non-Hispanic . . . . .	12,799	11,463	30,906	25,759
Geographic region				
Northeast . . . . .	2,808	2,460	6,259	5,428
Midwest . . . . .	3,860	3,448	9,462	7,689
South . . . . .	5,290	4,739	12,228	10,409
West . . . . .	3,580	3,221	7,722	7,033

<sup>1</sup>Includes children with unknown sociodemographic characteristics.

<sup>2</sup>Numbers may not add to totals due to rounding.

Table XIII. Number of women 35 years of age and over, by age and selected characteristics: United States, 1990

<i>Characteristic</i>	<i>Total over 35</i>	<i>35-39 years</i>	<i>40-49 years</i>	<i>50-59 years</i>	<i>60-69 years</i>	<i>70 years and over</i>
	Number in thousands					
All women . . . . .	59,934	9,887	16,069	11,389	11,014	11,576
Education level						
Less than 12 years . . . . .	14,714	1,081	2,229	2,684	3,323	5,397
12 years . . . . .	24,234	3,898	6,680	5,072	4,890	3,693
More than 12 years . . . . .	20,798	4,895	7,120	3,598	2,758	2,428
13-15 years . . . . .	10,567	2,402	3,402	1,857	1,471	1,435
16 years or more . . . . .	10,231	2,493	3,718	1,741	1,286	993
Income						
Less than \$10,000 . . . . .	7,203	782	965	851	1,552	3,052
\$10,000-\$19,999 . . . . .	10,408	1,208	1,831	1,675	2,613	3,080
\$20,000-\$34,999 . . . . .	11,948	2,174	3,357	2,315	2,411	1,691
\$35,000-\$49,999 . . . . .	8,545	2,228	2,920	1,839	1,079	478
\$50,000 or more . . . . .	11,710	2,443	4,858	2,643	1,178	589
Race						
White . . . . .	52,188	8,316	13,754	9,842	9,781	10,495
Black . . . . .	6,282	1,181	1,834	1,255	1,074	939
Hispanic origin						
Hispanic . . . . .	3,704	798	1,198	742	554	412
Non-Hispanic . . . . .	56,029	9,055	14,826	10,592	10,404	11,151
Geographic region						
Northeast . . . . .	12,808	1,827	3,393	2,500	2,441	2,647
Midwest . . . . .	14,912	2,527	3,991	2,695	2,781	2,918
South . . . . .	20,486	3,332	5,343	3,918	3,912	3,981
West . . . . .	11,728	2,201	3,341	2,276	1,879	2,030
Marital status						
Currently married . . . . .	38,074	7,308	11,861	8,220	6,767	3,918
Formerly married . . . . .	18,536	1,645	3,222	2,742	3,784	7,143
Never married . . . . .	3,312	925	985	425	461	515
Employment status						
Currently employed . . . . .	30,067	7,349	11,891	6,998	3,085	744
Unemployed . . . . .	1,140	318	419	264	*106	*33
Not in labor force . . . . .	28,727	2,220	3,759	4,126	7,823	10,799

NOTE: Numbers are actual denominators for table 36 and should be used for calculating standard errors for tables 34 and 35.

Table XIV. Number of women 35 years of age and over who ever had a mammogram, by age and characteristics: United States, 1990

<i>Characteristic</i>	<i>Total over 35</i>	<i>35-39 years</i>	<i>40-49 years</i>	<i>50-59 years</i>	<i>60-69 years</i>	<i>70 years and over</i>
	Number in thousands					
All women . . . . .	34,049	3,799	10,188	7,708	6,745	5,608
Education level						
Less than 12 years . . . . .	6,431	319	977	1,384	1,634	2,117
12 years . . . . .	14,144	1,428	4,196	3,483	3,052	1,985
More than 12 years . . . . .	13,415	2,046	5,008	2,822	2,035	1,504
13-15 years . . . . .	6,594	941	2,309	1,418	1,062	863
16 years or more . . . . .	6,821	1,105	2,698	1,404	973	641
Income						
Less than \$10,000 . . . . .	2,832	217	385	373	655	1,202
\$10,000-\$19,999 . . . . .	5,169	311	896	921	1,482	1,560
\$20,000-\$34,999 . . . . .	7,008	813	2,089	1,584	1,570	952
\$35,000-\$49,999 . . . . .	5,310	940	1,921	1,396	774	280
\$50,000 or more . . . . .	8,248	1,129	3,695	2,163	899	362
Race						
White . . . . .	30,321	3,321	8,927	6,809	6,158	5,107
Black . . . . .	3,127	408	1,007	759	522	432
Hispanic origin						
Hispanic . . . . .	1,756	271	573	434	298	180
Non-Hispanic . . . . .	32,171	3,514	9,587	7,227	6,419	5,424
Geographic region						
Northeast . . . . .	7,326	728	2,010	1,755	1,532	1,301
Midwest . . . . .	8,465	1,003	2,643	1,778	1,689	1,352
South . . . . .	11,166	1,327	3,320	2,541	2,208	1,769
West . . . . .	7,092	742	2,215	1,634	1,315	1,186
Marital status						
Currently married . . . . .	23,239	2,928	7,849	5,840	4,318	2,305
Formerly married . . . . .	9,315	555	1,885	1,642	2,162	3,071
Never married . . . . .	1,492	316	454	226	263	233
Employment status						
Currently employed . . . . .	17,901	2,901	7,730	4,874	1,980	417
Unemployed . . . . .	595	*108	228	162	*75	*21
Not in labor force . . . . .	15,553	790	2,229	2,672	4,690	5,171

NOTE: Excludes women who did not give reason for mammogram. To be used in calculating standard errors for table 36 only.



# Appendix II

## Definitions of certain terms used in this report

### Demographic terms

*Age*—The age recorded for each person is the age at last birthday. Age is recorded in single years and grouped in a variety of distributions depending on the purpose of the table.

*Education level*—Each person 18 years of age and over is classified by education in terms of the highest grade of school completed. Only grades completed in regular schools, where persons are given a formal education, are included. A “regular” school is one that advances a person toward an elementary or high school diploma, or a college, university, or professional school degree. Thus, education in vocational, trade, or business schools outside the regular school system is not counted in determining the highest grade of school completed.

*Employment status*—Persons were classified according to three categories of employment status:

- *Currently employed* includes persons who reported that at any time during the 2-week period covered by the interview they either worked at or had a job or business. Current employment includes paid work as an employee of someone else; self-employment in business, farming, or professional practice; and unpaid work in a family business or farm. Persons who were temporarily absent from a job or business because of a temporary illness, vacation, strike, or bad weather are considered currently employed if they expect to work as soon as the particular event causing the absence no longer exists. Freelance workers are considered currently employed if they had a definite arrangement with one employer or more to work for pay according to a weekly or monthly schedule, either full time or part time. Excluded from the currently employed population are persons who have no definite employment schedule but work only when their services are needed. Also excluded from the currently employed population are (1) persons receiving revenue from an enterprise but not participating in its operation, (2) persons doing housework or charity work for which they receive no pay, (3) seasonal workers during the portion of the year they are not working, and (4) persons who were not working, even though having a job or business, but were on layoff or looking for work.
- *Unemployed* includes persons who during the 2-week period covered by the interview did not work or had no job or business but were looking for work, and those

who had a job but were on layoff or were looking for work.

- *Not in labor force* includes persons who did not at any time during the 2-week period covered by the interview have a job or business, were not looking for work, and were not on layoff from a job. In general, persons not in the labor force are retired persons, physically handicapped persons unable to work, and housewives or charity workers who receive no pay.

*Family income*—Each member of a family is classified according to the total income of the family of which he or she is a member. Within the household all persons related to each other by blood, marriage, or adoption constitute a family. Unrelated individuals are classified according to their own incomes.

The income recorded is the total of all income received by members of the family (or by an unrelated individual) in the 12-month period preceding the week of interview. Income from all sources—for example, wages, salaries, rents from property, pensions, and help from relatives—is included.

*Geographic region*—For the purpose of classifying the population by geographic area, the States are grouped into four regions. These regions, which correspond to those used by the U.S. Bureau of the Census, are as follows:

<i>Region</i>	<i>States included</i>
Northeast	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania.
Midwest	Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, and Nebraska.
South	Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Oklahoma, Arkansas, and Texas.
West	Washington, Oregon, California, Nevada, New Mexico, Arizona, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, and Hawaii.

*Hispanic origin*—In this report, the population has been subdivided into two groups: Hispanic and non-Hispanic. Persons identifying themselves as belonging to any one of seven Hispanic origin groups (Puerto Rican, Cuban, Mexican/Mexicano, Mexican American, Chicano, other Latin American, other Spanish) are classified as Hispanic. All others are classified as non-Hispanic.

*Marital Status*—Marital status categories in this report are as follows;

- *Currently married* includes all married persons not separated from their spouses. Persons with common-law marriages are considered to be married.
- *Formerly married* includes separated, divorced, and widowed persons. Separated persons are those with legal separations, those living apart with the intention of obtaining a divorce, and other persons permanently or temporarily estranged from their spouses because of marital discord. This does not include persons separated from their spouses because of circumstances of employment or because of service in the armed forces; these persons are considered married. Widowed and divorced include, respectively, all persons who reported that they were either widowed or legally divorced.
- *Never married* includes persons who were never married and persons whose only marriage was annulled.

*Race*—Data in this report are presented only for white persons and black persons. Race characterization is based on the respondent's description of his or her racial background. Data for persons of other races are not shown separately.

## Terms relating to health behaviors and knowledge

In general, the terms relating to health behavior and knowledge are interpreted and defined by the respondent to the Health Promotion and Disease Prevention (HPDP) questionnaire. Only those terms requiring special definition are shown below.

*Breakfast*—This term is respondent defined with one exception. If the interviewer was directly asked, coffee or tea alone is not considered breakfast.

*Breast examination* includes examinations by physicians, nurses, physicians' assistants, midwives, nurse practitioners, or other health professionals.

*Breast feeding* includes feeding by the biological mother, by a wet nurse, or by giving the mother's milk in a bottle.

*Breast self-examination* is a procedure followed by women themselves to examine their own breasts for lumps. Medical experts generally recommend that women examine their own breasts for lumps monthly.

*Current drinker* is a person who has had at least one drink in the past 12 months.

Information was not obtained on the number of ounces or type of alcoholic beverage consumed. Therefore, an average ethanol value of 0.5 per drink was assigned when

calculating total average daily ounces of ethanol consumed (total number of drinks in the past 2 weeks x 0.5 divided by 14). One ounce of ethanol is equivalent to two average alcoholic drinks (two shots of liquor, two 5-ounce glasses of wine, or two 12-ounce cans of beer). An average daily intake of 1.0 ounce of ethanol or more was termed "heavier drinking" by the National Institute on Alcohol Abuse and Alcoholism in the mid-1980's (47,48).

*Current smoker* is a person who has smoked 100 cigarettes in his or her entire life and is currently smoking.

*High blood pressure* is used interchangeably with hypertension. Persons who reported having two or more elevated blood pressure readings (by whatever definition their health professional used) were considered ever-hypertensive. The two readings had to be on two separate occasions, not simply a repeat reading during a single visit.

*Mammography*—film screen or xerographic—is the main imaging technique used in screening for female breast cancer. This procedure is far more sensitive than manual breast examination, capable of detecting lumps 2–3 years earlier than when they would be palpable (42).

*Overweight*—In this report, overweight is defined as 20 percent or more above desirable body weight for height, using 1983 Metropolitan Life Insurance Company standards (MLIC) (62). Data on body weight are based on self-reported height and weight, without shoes. The midpoint of the medium-frame weight category for a particular height was used as the desirable weight for that height. The MLIC standards were developed based on weight in indoor clothing and height with 1-inch heels. The National Health Interview Survey (NHIS) asked respondents to report their height without shoes. The MLIC standards were adjusted by subtracting 2 pounds from the midpoint of the medium-frame category for both sexes and subtracting 1 inch from the height.

The MLIC desirable weight standards are based on the mortality experience of a group of life insurance policy holders. Because persons who obtain life insurance are not representative of the general population, the appropriateness of these standards for some population subgroups is unknown (46). The 1983 MLIC standards are slightly higher than the earlier published 1960 MLIC standards (63). Both MLIC and NHIS data were based on self-reported height and weight. Self-reported height and weight data produce conservative estimates of the extent of overweight in the population because heavier people tend to report lighter body weights than are obtained by actual physical measurements.

A variety of measures of overweight status is in use both within NCHS and by outside researchers (46). A major source of data on the prevalence of overweight in the U.S. population is the Second National Health and Nutrition Examination Survey (NHANES II). Data released from the NHANES II on overweight status are computed using measured height and weight and expressed in terms of body mass index (BMI), calculated as weight divided by height, squared. Although not identical, the proportions of the population defined as "20 percent

or more overweight” using the BMI NHANES II cut-points and the 1983 MLIC standards are not substantially different (46).

*Parent* includes the biological, adoptive, step, or foster parent of the child.

*Physically active*—The term “physically active” is used in two ways in this report:

- *Very physically active*, shown in table 18, refers to persons who expended an average of 3 or more kilocalories per kilogram of body weight per day in leisure time sports activities over the past 2 weeks. Respondents were asked whether they had participated in any of 22 specific physical activities, the number of times they had engaged in them in the past 2 weeks, and the perceived increase in their heart rate while participating in the activity—none, small, moderate, or large. To synthesize these data into a single measure of physical activity, the data were converted into kilocalories per kilogram per hour, using the following procedure: (1) a value representing energy requirements in kilocalories per kilogram per hour (kcal/kg/hr) was assigned to each level of increase in heart rate for each activity or combination of activities listed in the HPDP questionnaire. The values assigned were based on guidelines developed by a panel of experts (64) and modified slightly for the NHIS. The number of kilocalories required for the activity was multiplied by the total time in hours (frequency × duration) in the past 2 weeks and the result then divided by 14 (the number of days in the recall period) to achieve a daily value. The result was summed across all activities to produce an estimate of the average number of kilocalories per

kilogram per day expended. Using these estimates, respondents were classified as to whether they were sedentary (0.0–1.4 kcal/kg/day), moderately active (1.5–2.9 kcal/kg/day), or very active (3.0 or more kcal/kg/day). The “very active” category was selected for presentation in this report. Examples of persons who would be classified as very physically active are those who reported walking with a moderate increase in heart rate for 45 minutes every day, or running or jogging with a large increase in heart rate for 15 minutes every day, or walking an hour on 7 of the 14 days with a moderate increase in heart rate and playing tennis with a small increase in heart rate for 2 hours on one other day.

- *More physically active* than others the same age, shown in table 20, is based solely on self-assessment and incorporates both the individual’s assessment of his or her own level of physical activity and that of his or her contemporaries.

*Poison control center telephone number* includes knowing how to obtain the number if necessary (such as looking in the telephone book).

*Radon* is a tasteless, odorless, invisible, radioactive gas formed by the natural decay of uranium in the earth’s soil. It typically moves up through the ground to the air above and into homes and buildings through cracks and other holes in the foundations of the structures (44).

*Seeking help for a personal or emotional problem* includes seeking help from a family member, friend, mental health professional (psychologist, psychiatrist, social worker, medical doctor, analyst, therapist, counselor), religious counselor, or self-help group.

# Appendix III

## Questionnaire – selected items

Section R – MAMMOGRAPHY		
<b>ITEM R1</b>	Refer to age.	<input type="checkbox"/> Female 35 or over (1) <input type="checkbox"/> Other (Section S)
<b>1a.</b>	A mammogram is an X-ray taken only of the breasts by a machine that presses against the breast while the picture is taken. Have you ever had a mammogram?	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No (4) 9 <input type="checkbox"/> DK (5)
<b>b.</b>	How many times have you had a mammogram?	_____ Times
<b>2.</b>	(Please think about your FIRST mammogram) Did a doctor or other health professional suggest that you have this (first) mammogram or did you decide this on your own?	1 <input type="checkbox"/> Doctor or other health professional suggested 2 <input type="checkbox"/> Decided on own 8 <input type="checkbox"/> Other – Specify _____ 9 <input type="checkbox"/> DK
<b>3a.</b>	When did you have your (most recent) mammogram?	_____ Number { <ul style="list-style-type: none"> <li><input type="checkbox"/> Days ago</li> <li><input type="checkbox"/> Weeks ago</li> <li><input type="checkbox"/> Months ago</li> <li><input type="checkbox"/> Years ago</li> </ul>
<b>b.</b>	Was your (most recent) mammogram done because of some breast symptom or condition, or as a routine checkup?	1 <input type="checkbox"/> Breast symptom or condition 2 <input type="checkbox"/> Routine checkup, no symptoms 3 <input type="checkbox"/> Family history of breast cancer 8 <input type="checkbox"/> Other reason – Specify _____ 9 <input type="checkbox"/> DK/Don't remember
<b>ITEM R2</b>	Refer to question 3a.	<input type="checkbox"/> More than 3 years in 3a (4) <input type="checkbox"/> Other (5)
<b>4.</b>	What is the most important reason why you have [never had a mammogram/not had a mammogram in the past few years]? Mark only one.	01 <input type="checkbox"/> Not recommended by doctor or doctor never said it was needed 02 <input type="checkbox"/> Didn't think necessary or needed 03 <input type="checkbox"/> No problems 04 <input type="checkbox"/> Put it off; procrastinated 05 <input type="checkbox"/> Didn't know I should 06 <input type="checkbox"/> Cost too much or insurance doesn't cover it 07 <input type="checkbox"/> Fear (of radiation, pain; or of results) 08 <input type="checkbox"/> Not due yet; too young 09 <input type="checkbox"/> Don't go to doctors/don't have doctor 10 <input type="checkbox"/> Never heard of mammogram } (Section S) 11 <input type="checkbox"/> Breasts missing 98 <input type="checkbox"/> Other – Specify _____ 99 <input type="checkbox"/> DK
<b>5a.</b>	Do you plan to have a mammogram in the future?	1 <input type="checkbox"/> Yes (5b) 2 <input type="checkbox"/> No (Section S) 3 <input type="checkbox"/> If doctor recommends (5b) 9 <input type="checkbox"/> DK (Section S)
<b>b.</b>	When do you plan to have your (first/next) mammogram? Mark the first appropriate response.	1 <input type="checkbox"/> Less than 1 year 2 <input type="checkbox"/> 1 year, less than 3 years 3 <input type="checkbox"/> 3 years, less than 5 years 4 <input type="checkbox"/> When doctor recommends 8 <input type="checkbox"/> Other – Specify _____ 9 <input type="checkbox"/> DK
Notes		

FORM HIS-3 (1990) (8-15-89)

**Section T – RADON**

<b>1. Have you ever heard of radon, a gas that is found in the air in some homes?</b>	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 9 <input type="checkbox"/> DK/Not sure } (10)	<b>8305</b>
<b>2. Do you believe that exposure to radon is unhealthy, or do you believe that it has little or no effect on health?</b>	1 <input type="checkbox"/> Exposure to radon is unhealthy 2 <input type="checkbox"/> Exposure to radon has little or no effect on health (4) 9 <input type="checkbox"/> Not sure/DK/ No opinion (4)	<b>8306</b>
<i>Hand card T. Read categories if telephone interview.</i>		
<b>3. Which, if any, of these conditions do you believe can be caused by radon exposure?</b>  <i>Mark all that apply.</i>	1 <input type="checkbox"/> Headache 2 <input type="checkbox"/> Arthritis 3 <input type="checkbox"/> Lung cancer 4 <input type="checkbox"/> Other cancer 5 <input type="checkbox"/> Asthma 6 <input type="checkbox"/> None of these 9 <input type="checkbox"/> DK	<b>8307</b>
<b>4. Has your household air been tested for the presence of radon?</b>	1 <input type="checkbox"/> Yes (6) 2 <input type="checkbox"/> No 9 <input type="checkbox"/> DK	<b>8314</b>
<b>5. Do you or anyone plan to have this home tested for radon within the next year?</b>	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 9 <input type="checkbox"/> DK } (10)	<b>8315</b>
<b>6. Were followup tests conducted to verify the results of the first test?</b>	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 9 <input type="checkbox"/> DK	<b>8316</b>
<b>7a. Has anything been done in this home to reduce the radon level or to reduce the radon exposure?</b>	1 <input type="checkbox"/> Yes (7c) 2 <input type="checkbox"/> No 9 <input type="checkbox"/> DK	<b>8317</b>
<b>b. Do you or anyone plan to do anything to reduce the radon level or radon exposure in this home?</b>	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 9 <input type="checkbox"/> DK } (8)	<b>8318</b>
<b>c. What has been done?</b>  <b>Anything else?</b>  <i>Mark all that apply.</i>	<input type="checkbox"/> Increase ventilation by opening windows, doors, etc. <input type="checkbox"/> Stopped or decreased smoking <input type="checkbox"/> Moved out of or spend less time in basement <input type="checkbox"/> Modified home — sealed cracks, installed ventilation system, etc. <input type="checkbox"/> Other — Specify <u>      </u>  <input type="checkbox"/> DK	<b>8319</b>
<b>8a. What was the radon level from that (last) test (BEFORE any corrective action was taken)?</b>	_____ Picocuries per liter (9) 9996 <input type="checkbox"/> DK results yet (10) 9999 <input type="checkbox"/> DK level (8b)	<b>8325</b>
<b>b. Was it above or below 4 picocuries (pi'-ko-kurees) per liter?</b>	1 <input type="checkbox"/> Above 4 2 <input type="checkbox"/> At or below 4 9 <input type="checkbox"/> DK (10)	<b>8329</b>
<b>9. How harmful to health is this radon level — would you say not harmful, somewhat harmful, very harmful, or do you not know?</b>	1 <input type="checkbox"/> Not harmful 2 <input type="checkbox"/> Somewhat harmful 3 <input type="checkbox"/> Very harmful 9 <input type="checkbox"/> DK	<b>8330</b>
<i>Mark box or ask:</i>		
<b>10. Which of the following best describes your residence?</b>  <i>Read answer categories.</i>	1 <input type="checkbox"/> Single home, duplex, townhouse 2 <input type="checkbox"/> Basement, first or second floor apartment or condominium 3 <input type="checkbox"/> Apartment or condominium above second floor 4 <input type="checkbox"/> Trailer/mobile home 8 <input type="checkbox"/> Other — Specify <u>      </u>  _____ _____	<b>8331</b>
Notes		

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