

## Prevalence of selected chronic conditions, United States, 1983-85

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### Introduction

National estimates of the prevalence of selected chronic conditions in the civilian noninstitutionalized population of the United States for the years 1983-85 are presented in this report. These estimates are based on data collected by the National Center for Health Statistics (NCHS) by means of the National Health Interview Survey (NHIS). Data on the prevalence of chronic conditions reported in household interviews are shown in terms of number and rate per 1,000 persons for the total population and by rate per 1,000 persons according to age, sex and race. Data are also presented by rank order of prevalence, by rank order of conditions causing the highest percent of limitation in activity, and by the percent of high prevalence conditions for which persons were ever hospitalized.

Data are shown by the following condition categories:

- Circulatory conditions.
- Respiratory conditions.
- Digestive conditions.
- Impairments and conditions of the nervous system and sense organs.
- Conditions of the skin and subcutaneous tissue and conditions of the musculoskeletal system and connective tissue.
- Endocrine, nutritional, and metabolic diseases and immunity disorders; diseases of the blood and blood-forming organs; and conditions of the genitourinary system.

NHIS chronic condition prevalence data are presented annually in the NCHS publication *Current Estimates From the National Health Interview Survey*, and periodically for 3 years of data (NCHS, 1986a, 1986b, 1986c, and 1986d). The 3 year data reports have the advantage of smaller variances and hence are more suitable for analysis.

### Highlights

- Chronic sinusitis was the chronic condition reported most frequently in the interviews with an average annual prevalence of 31.2 million conditions or 134.6 per 1,000 persons in the civilian noninstitutionalized population.
- Arthritis and high blood pressure (hypertension) were the second and third most prevalent chronic conditions reported with annual averages of 30.3 million and 28.6 million conditions, respectively.
- Arthritis was reported to be more prevalent among females than males. Among females, arthritis ranks as the most frequently reported condition with an annual average rate of 164.3 per 1,000 persons; however, among males arthritis ranks fifth in prevalence with an annual average rate of 95.2 per 1,000 persons.
- Among black persons, high blood pressure (hypertension) was the most prevalent chronic condition reported, with a rate of 146.3 per 1,000 persons.
- Among the younger persons, those under 18 years of age, hay fever, with a rate of 55.7 per 1,000 persons, was the most frequently reported chronic condition.
- Chronic sinusitis was the most prevalent chronic condition reported among persons 18-44 years of age, and deformities or orthopedic impairments was second. The rates were 160.0 and 131.2 per 1,000 persons, respectively.
- For the age groups 45-64 years, 65-74 years, and 75 years and over, arthritis was the chronic condition reported most frequently and high blood pressure ranked second in all three age groups.
- Mental retardation was the chronic condition causing the highest percent of activity limitation with 85.6 percent of reported conditions resulting in limitation. Multiple sclerosis, and malignant neoplasms of lung and bronchus ranked second and third, causing limita-

tion of activity in 76.8 percent and 68.2 percent, respectively, of the conditions reported.

- Among the 15 most prevalent reported chronic conditions, heart disease ranked first in the percent ever hospitalized with 42.6 percent. In the subcategory Ischemic heart disease, there was a hospitalization reported for 68.5 percent of the conditions.

## Background

Information from the National Health Interview Survey (NHIS) of the National Center for Health Statistics is based on data collected in a continuing nationwide survey by household interview. Each week a probability sample of households in the civilian noninstitutionalized population of the United States is interviewed by personnel of the U.S. Bureau of the Census. Information is obtained about the health and other characteristics of the people in each household.

One of the strengths of NHIS is the ability to combine data over multiple years. This increases stability of the estimates because augmenting the sample size leads to smaller sampling errors. This is especially helpful in NHIS where each individual condition group constitutes only a one-sixth sample in a given year. That is, each household is surveyed for only one of the six chronic condition checklists. Combining data over time is possible because of the sampling design of NHIS and its use of standard questions over several years. Combining data is particularly desirable when making estimates for relatively rare events or population subgroups—in this case, chronic conditions. Therefore, data for this report are based on information obtained during 1983, 1984, and 1985 and annual averages for these 3 years are presented.

Methodological studies have shown that chronic conditions are generally underreported in interview surveys (NCHS, 1987). Respondents in health interviews tend to report conditions of which they are aware and about which they are willing to report to the interviewer. Reporting is better for conditions that have made a significant impact on the affected individual and his family. Conditions that are severe or costly, or that receive treatment tend to be better reported than conditions having less impact. For instance, a condition that has caused limitation of activity, visits to the doctor, or days in bed is more likely to be reported in the interview than a condition that has had little or no impact on the person.

Methodological studies have also indicated that inclusion of a checklist of descriptive condition titles as part of the interview questionnaire increases the probability that respondents will recognize the terms and report those of which they are aware. Of course, the diagnostic accuracy of condition reports depends on how well the respondent remembers information that the attending physician has passed on to the family or, in the absence of medical attendance, on the previous experience or education of the family.

The questionnaires for 1983, 1984, and 1985 are illustrated in their entirety in the Current Estimates reports for these years (NCHS, 1986a, 1986b, and 1986c).

Information about the prevalence of chronic conditions was obtained from responses to the six categorical checklists of conditions in section H of the questionnaires. The question was phrased as follows: "During the past 12 months, did anyone in the family have \_\_\_\_\_?"

A brief description of methods and procedures used in NHIS is given in the Technical notes section of this report.

## Chronic condition prevalence

Prevalence often refers to the number of some item existing at a given point in time; this definition of prevalence is usually referred to as point prevalence. Prevalence can also refer to the average number of some item existing during a specified interval of time and is usually called period prevalence. The latter definition is used in NHIS because the data are collected over intervals of time.

Chronic conditions are defined as conditions that either (1) were first noticed 3 months or more before the date of interview, or (2) belong to a group of conditions considered chronic regardless of when they began.

For the purpose of estimating the prevalence of reported chronic conditions, the total NHIS sample was divided into six representative subsamples. Each subsample was administered one of six checklists that contained broad categories of types of chronic conditions. Respondents were asked to indicate the presence or absence of each condition specified on the particular list administered to them. Because the presence or absence of many types of chronic conditions is often ambiguous, several "impact" questions were asked about each condition reported.

The tables in this report are organized primarily by checklist. However, some modifications in the presentation were made for instances in which more than one of the six lists included data from the same disease classification system as listed in the *Ninth Revision International Classification of Diseases* (World Health Organization, 1977).

## Conditions with high prevalence

The chronic conditions with highest prevalence during 1983-85 are presented in table 1. Top 10 rankings are presented for all persons, for males and females, for white and black persons, and for five age categories.

Chronic sinusitis ranked first for all persons, for males, for white persons, and for persons age 18-44 years. Arthritis ranked first among females and among persons in the age groups 45-64 years, 65-74 years, and 75 years and over. High blood pressure (hypertension) ranked first among black persons and hay fever or allergic rhinitis ranked first among persons under 18 years of age.

There was no marked difference between males and females regarding those conditions ranking in the top 10, with nine of the ten appearing on both lists. Deformities or

orthopedic impairment and deafness and other hearing impairments ranked higher among males, and arthritis clearly ranked higher among females.

The groups with the most diversity in the top 10 rankings were the young persons, under 18 years of age, and the older persons, 65-74 years and 75 years and over. Among the younger persons, respiratory conditions ranked high, constituting five of the top 10 conditions—hay fever or allergic rhinitis, chronic bronchitis, chronic sinusitis, asthma, and chronic disease of tonsils and adenoids.

Among the older persons, conditions such as cataracts, tinnitus, diabetes, and hardening of the arteries ranked in the top 10. However, these conditions were not in the top 10 rankings for all persons.

The figure shows the 15 most prevalent chronic conditions for all persons by the percent of the conditions that ever necessitated hospitalization.

The conditions that caused the most hospitalization were heart disease 42.6 percent (68.5 percent for ischemic heart disease by itself) and diabetes 32.7 percent. Seven of the ten most prevalent chronic conditions had relatively low percents of ever being hospitalized for the condition (less than 10 percent). On the other hand, there are many conditions that are not as high in prevalence that resulted in very high percent of hospitalization.

Chronic conditions that result in the largest percent of activity limitation are also quite different from those on the lists of high prevalence. Table 2 presents the 12 chronic conditions that cause the highest percent of activity limitation by rank order. Mental retardation ranks highest (85.6 percent) followed by multiple sclerosis (76.8 percent) and malignant neoplasms of lung and bronchus (68.2 percent). Chronic sinusitis, which is the most prevalent chronic condition, causes activity limitation in less than one-half of one-percent of the reported conditions.

### Selected circulatory conditions

Prevalence estimates and rates for chronic circulatory conditions for all persons, and the rates per 1,000 persons by sex, race, and age groups are shown in table 3. The data indicates that high blood pressure (hypertension), estimated at 28.6 million conditions annually, was the most prevalent circulatory condition. High blood pressure was the most prevalent circulatory condition for each group except those under 18 years of age, for whom heart disease had the highest rates. Heart disease was also high in overall prevalence, 19.3 million conditions annually; and hemorrhoids accounted for 10.5 million conditions a year.

### Selected respiratory conditions

Table 4 shows the prevalence estimates and rates per 1,000 persons for chronic respiratory conditions for all persons and rates per 1,000 persons by sex, race, and age groups. Chronic sinusitis was the most prevalent respiratory condition with an annual average of 31.2 million conditions reported. Hay fever or allergic rhinitis, chronic bronchitis,

and asthma were also high in prevalence with an annually reported 20.0, 11.1, and 8.6 million conditions, respectively. Chronic sinusitis was the most prevalent respiratory condition for both sexes, for white and black persons, and for all age groups except the group under 18 years of age. In that group, hay fever or allergic rhinitis, chronic bronchitis, and chronic sinusitis were similar in reported annual prevalence. The respective rates per 1,000 persons were 55.7, 54.7, and 51.9.

### Selected digestive conditions

Prevalence estimates and rates for digestive conditions for all persons and rates per 1,000 persons by sex, race, and age groups are shown in table 5. Digestive conditions, with the highest annual number of reported conditions, were indigestion and other functional disorders (5.9 million), hernia of abdominal cavity (4.9 million), ulcers (4.5 million), and constipation (4.3 million). Among the young persons under 18 years, constipation was reported most often with a rate of 6.0 per 1,000 persons. The age group 18-44 years reported indigestion and other functional disorders most frequently, 27.8 per 1,000 persons, and the age groups 45-64 years and 65-74 years reported hernia of the abdominal cavity as their most frequent digestive condition, 40.9 and 73.3 per 1,000 persons, respectively. Among those 75 years and over, constipation was reported most frequently, 103.4 per 1,000 persons. Females reported much higher rates of constipation than males, 27.6 to 9.3 per 1,000 persons. Constipation was also the most frequently reported digestive condition among black persons—22.9 per 1,000 persons. For both males and white persons, indigestion and other functional disorders was reported more frequently than any other digestive condition.

### Selected impairments and nervous system and sense organ conditions

Table 6 contains the prevalence estimates and rates per 1,000 persons for selected impairments and nervous system and sense organ conditions for all persons; and rates per 1,000 persons by sex, race, and age groups. Among the impairments, the highest prevalence was reported for deformities or orthopedic impairments—28.0 million conditions, of which 14.1 million were of the back and 10.5 million were of the lower extremities. Deafness and other hearing impairments were also reported frequently—21.0 million conditions. In addition 8.2 million visual impairments, including blindness, were reported. Among persons under 18 years of age, speech impairments were quite prevalent, along with the three categories mentioned above. Deformities or orthopedic impairments, hearing impairments, and visual impairments were also the most frequently reported for both sexes, white and black persons and persons in the 18-44 years and 45-64 years age groups. Among the older persons, 65-74 years and 75 years and over, deafness and other hearing impairments were

reported most frequently. The rates of hearing impairments were higher among men than women and higher among white persons than black persons.

The nervous system and sense organ conditions reported most frequently were migraine headache, 7.7 million; tinnitus, 5.8 million; other headache, 5.3 million; and cataracts, 5.2 million. Among persons under 18 years and 18-44 years of age, migraine headache and other headaches were reported most frequently. Tinnitus and migraine headache were the conditions reported most frequently for persons 45-64 years of age; however, cataracts and tinnitus had the highest rates among persons 65-74 years and 75 years of age and over. Tinnitus and color blindness were the conditions of highest prevalence among males and migraine headache was by far the most prevalent condition among females. The rates for both migraine headache and other headache among females were more than double the rates reported among males. However, males were 10 times more likely to report color blindness conditions than were females. Among both white persons and black persons, migraine headache was the highest nervous system and sense organ condition in prevalence.

### **Selected skin and subcutaneous tissue and musculoskeletal system and connective tissue conditions**

Prevalence estimates and rates for chronic conditions of the skin and subcutaneous tissue, and musculoskeletal system and connective tissue for all persons and rates per 1,000 persons by sex, race, and age group are shown in table 7. Dermatitis was the most frequently reported condition of skin and subcutaneous tissue, with an annual prevalence of 9.0 million conditions. Ingrown nails, corns and calluses, and acne were also frequently reported with an annual 5.0, 4.8, and 4.6 million conditions, respectively. Among persons under 18 years and 18-44 years, the highest rates of prevalence were reported for dermatitis and acne. In the age group 45-64 years, corns and calluses were the most frequently reported condition followed by dermatitis. The older persons 65-74 years and 75 years and over reported corns and calluses and ingrown nails most fre-

quently. Dermatitis was the most prevalent skin condition for both males and females, although the rate among females was higher than that reported among males. Dermatitis also had the highest reported rate among white persons. However, corns and calluses were reported highest among the black persons.

Arthritis was by far the most frequently reported condition of the musculoskeletal system and connective tissue, with an annual prevalence of 30.3 million conditions. It was the most prevalent condition for both males and females, white persons and black persons, and all age groups except persons under 18 years of age, for whom very few musculoskeletal system conditions were reported.

### **Selected endocrine, nutritional and metabolic disease and immunity disorders, diseases of the blood and blood forming organs, and genitourinary conditions**

Table 8 contains prevalence estimates and rates per 1,000 persons for selected endocrine, nutritional and metabolic disease and immunity disorders, diseases of the blood and blood forming organs, and genitourinary conditions for all persons, and rates per 1,000 persons by sex, race, and age groups. These individual systems will be discussed together because they do not include many conditions. Diabetes was the most frequently reported condition among these groups with an annual prevalence of 5.9 million conditions. Anemias, other diseases of the thyroid, and gout were also relatively high in prevalence with 3.5, 2.5, and 2.3 million conditions, respectively, reported yearly. Among persons under 18 years and 18-44 years of age, anemias were reported most frequently. Diabetes was the most prevalent condition reported among persons 45-64 years, 65-74 years, and 75 years of age and over, among both males and females, and among both white and black persons. The diabetes rate per 1,000 persons was much higher for black persons than for white persons, 37.1 to 24.3.

The population figures used in computing rates in this report are found in table 9.

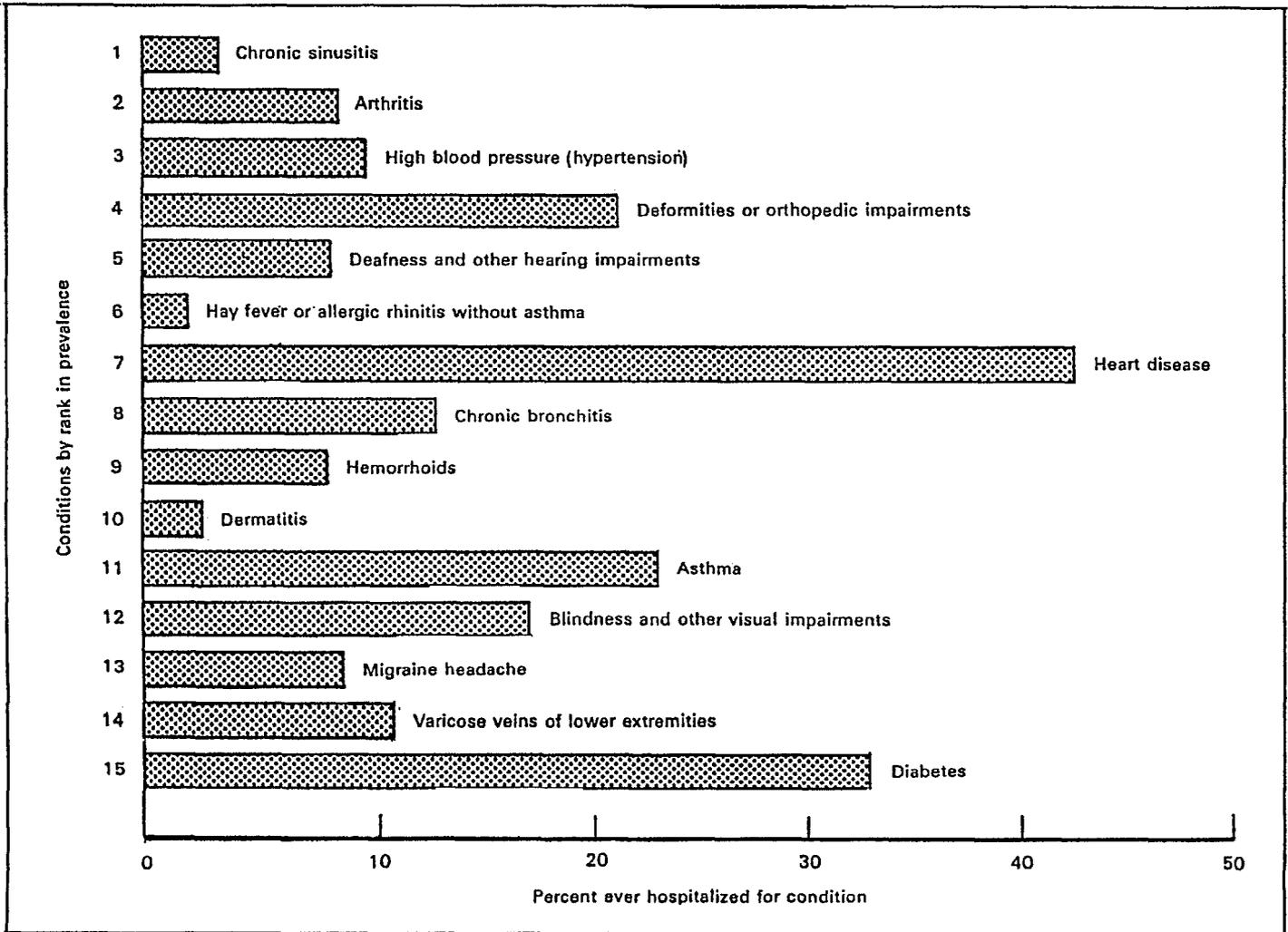


Figure. Selected chronic conditions with highest prevalence, in rank order, by percent ever hospitalized for the condition: United States, 1983-85

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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
  - # Figure suppressed to comply with confidentiality requirements
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Table 1. Selected chronic conditions with highest prevalence, in rank order, by sex, race, and age: United States, 1983-85

Chronic condition	All persons <sup>1</sup>	Sex		Race		Age					
		Male	Female	White	Black	Under 18 years	18-44 years	45-64 years	65-74 years	75 years and over	
											Rank order
Chronic sinusitis . . . . .	1	1	2	1	3	3	1	3	6	7	
Arthritis . . . . .	2	5	1	2	2	-	6	1	1	1	
High blood pressure (hypertension) . . . . .	3	3	3	4	1	-	4	2	2	2	
Deformities or orthopedic impairments . . . . .	4	2	4	3	4	6	2	4	5	6	
Deafness and other hearing impairments . . . . .	5	4	7	5	7	10	7	5	4	3	
Hay fever or allergic rhinitis without asthma . . . . .	6	6	5	6	5	1	3	7	-	-	
Heart disease . . . . .	7	7	6	7	6	9	-	6	3	4	
Chronic bronchitis . . . . .	8	10	8	8	10	2	10	-	-	-	
Hemorrhoids . . . . .	9	9	9	9	-	-	5	8	10	-	
Dermatitis . . . . .	10	-	-	10	-	5	9	-	-	-	
Blindness and other visual impairments . . . . .	-	8	-	-	-	-	-	-	-	8	
Migraine headache . . . . .	-	-	10	-	-	-	8	-	-	-	
Asthma . . . . .	-	-	-	-	8	4	-	-	-	-	
Diabetes . . . . .	-	-	-	-	9	-	-	10	7	-	
Chronic disease of tonsils and adenoids . . . . .	-	-	-	-	-	7	-	-	-	-	
Acne . . . . .	-	-	-	-	-	8	-	-	-	-	
Varicose veins of lower extremities . . . . .	-	-	-	-	-	-	-	9	-	-	
Cataracts . . . . .	-	-	-	-	-	-	-	-	8	5	
Tinnitus . . . . .	-	-	-	-	-	-	-	-	9	-	
Hardening of the arteries . . . . .	-	-	-	-	-	-	-	-	-	9	
Constipation . . . . .	-	-	-	-	-	-	-	-	-	10	

<sup>1</sup>Includes races other than white and black.

Table 2. Selected chronic conditions causing highest percent of limitation in activity, in rank order, and percent of persons with conditions who are limited in activity: United States, 1983-85

Chronic condition	Rank	Percent of persons with limitation of activity
Mental retardation . . . . .	1	85.6
Multiple sclerosis . . . . .	2	76.8
Malignant neoplasms of lung and bronchus . . . . .	3	68.2
Paralysis of extremities, complete or partial . . . . .	4	59.8
Paralysis, complete or partial, other sites . . . . .	5	50.4
Intervertebral disc disorders . . . . .	6	48.8
Malignant neoplasms of stomach, intestines, colon, and rectum . . . . .	7	48.6
Epilepsy . . . . .	8	46.7
Emphysema . . . . .	9	42.5
Pneumoconiosis and asbestosis . . . . .	10	38.2
Cerebrovascular disease . . . . .	11	37.6
Diabetes . . . . .	12	35.5

**Table 3. Average annual number of selected chronic circulatory system conditions and rates per 1,000 persons, by age, sex, and race: United States, 1983-85**

Chronic circulatory condition	Number of conditions in thousands <sup>1</sup>	Age						Sex		Race	
		All ages	Under 18 years	18-44 years	45-64 years	65-74 years	75 years and over	Male	Female	White	Black
		Rate per 1,000 persons									
Heart disease . . . . .	19,259	83.2	21.4	37.6	136.5	290.6	339.2	79.5	86.6	88.0	58.1
Ischemic heart disease . . . . .	6,964	30.1	* -	3.1	64.1	147.1	140.3	35.2	25.3	33.1	12.6
Heart rhythm disorders . . . . .	7,498	32.4	17.0	25.8	40.7	70.7	92.9	25.1	39.1	34.3	22.4
Tachycardia or rapid heart . . . . .	1,939	8.4	*0.9	5.0	15.1	26.2	29.6	5.8	10.7	9.1	4.4
Heart murmurs . . . . .	4,108	17.7	15.6	17.4	16.9	23.0	29.8	14.0	21.2	18.3	15.5
Other and unspecified heart rhythm disorders . . . . .	1,451	6.3	*0.5	3.5	8.8	21.5	33.6	5.3	7.2	6.9	*2.5
Congenital heart disease . . . . .	711	3.1	3.1	2.7	3.0	*3.6	*5.3	2.9	3.2	3.2	*1.7
Other selected diseases of the heart (excludes hypertension). . . . .	4,086	17.6	*1.3	6.0	28.7	69.2	100.6	16.2	19.0	17.4	21.4
Rheumatic fever with or without heart disease. . . . .	1,494	6.5	*1.1	5.5	12.9	12.7	10.6	5.1	7.7	6.9	4.8
High blood pressure (hypertension). . . . .	28,594	123.5	2.3	61.8	264.5	407.9	395.3	108.7	137.3	121.8	146.3
Cerebrovascular disease. . . . .	2,531	10.9	*0.4	1.9	16.9	44.1	83.8	11.7	10.2	10.8	13.4
Hardening of the arteries. . . . .	3,127	13.5	* -	*0.4	19.8	66.6	110.5	14.0	13.0	14.8	6.4
Aneurysm . . . . .	261	1.1	*0.1	*0.1	*1.2	6.4	8.2	1.3	0.9	1.2	*0.9
Phlebitis, thrombophlebitis. . . . .	928	4.0	*0.1	2.5	7.7	12.9	12.9	2.3	5.6	4.3	3.1
Varicose veins of lower extremities. . . . .	7,055	30.5	*0.4	24.0	58.4	74.2	87.0	12.7	47.0	32.8	17.8
Hemorrhoids . . . . .	10,467	45.2	*0.9	53.3	74.3	78.8	58.8	42.1	48.1	48.3	28.5
Poor circulation . . . . .	1,000	4.3	* -	1.5	7.4	16.7	25.2	3.3	5.3	4.0	7.2

<sup>1</sup>Includes races other than white and black.

**Table 4. Average annual number of selected chronic respiratory system conditions and rates per 1,000 persons, by age, sex, and race: United States, 1983-85**

Chronic respiratory condition	Number of conditions in thousands <sup>1</sup>	Age						Sex		Race	
		All ages	Under 18 years	18-44 years	45-64 years	65-74 years	75 years and over	Male	Female	White	Black
		Rate per 1,000 persons									
Chronic bronchitis . . . . .	11,135	48.1	54.7	39.3	50.2	67.1	52.2	39.2	56.4	50.9	34.7
Emphysema . . . . .	2,099	9.1	* -	1.3	19.1	45.6	37.2	13.1	5.3	9.9	4.4
Asthma . . . . .	8,595	37.1	45.1	33.8	32.1	46.9	25.5	34.6	39.5	37.3	39.8
Hayfever or allergic rhinitis without asthma . . . . .	20,007	86.4	55.7	112.2	88.8	64.2	51.6	82.2	90.4	89.7	65.6
Nasal polyps . . . . .	833	3.6	2.2	3.7	5.2	*4.6	*3.1	4.0	3.2	3.8	3.0
Chronic sinusitis . . . . .	31,162	134.6	51.9	160.0	181.1	166.6	143.6	116.8	151.2	140.5	107.9
Deviated nasal septum . . . . .	1,213	5.2	*0.8	6.9	6.8	6.7	*7.2	5.8	4.7	6.0	*0.7
Chronic disease of tonsils and adenoids . . . . .	3,168	13.7	29.8	12.0	1.9	*2.0	*0.8	10.8	16.4	14.4	10.7
Chronic laryngitis . . . . .	1,265	5.5	3.3	6.7	6.4	5.3	*3.7	2.4	8.3	5.9	3.4
Pleurisy . . . . .	832	3.6	*0.3	4.0	6.4	6.3	*3.0	2.4	4.7	4.0	*1.0
Pneumoconiosis and asbestosis . . . . .	359	1.6	* -	0.9	2.4	6.9	*4.9	2.9	*0.3	1.6	*1.0
Malignant neoplasms of lung and bronchus. . . . .	211	0.9	* -	*0.2	1.8	*3.1	*5.9	1.1	0.8	1.0	*0.3
Other diseases of the lung. . . . .	1,130	4.9	4.4	3.5	5.9	10.3	*7.3	5.3	4.5	5.1	3.9

<sup>1</sup>Includes races other than white and black.

Table 5. Average annual number of selected chronic digestive system conditions and rates per 1,000 persons, by age, sex, and race: United States, 1983-85

Chronic digestive condition	Number of conditions in thousands <sup>1</sup>	Age						Sex		Race	
		All ages	Under 18 years	18-44 years	45-64 years	65-74 years	75 years and over	Male	Female	White	Black
		Rate per 1,000 persons									
Gallbladder stones . . . . .	974	4.2	*0.1	2.9	7.8	11.3	15.1	2.4	5.9	4.3	3.8
Liver diseases including cirrhosis. . . . .	620	2.7	*0.3	2.2	5.3	7.1	*2.8	3.3	2.1	2.7	*2.7
Ulcer, gastric, duodenal and/or peptic . . . . .	4,461	19.3	1.3	19.6	35.2	35.8	31.1	18.8	19.7	19.6	16.7
Hernia of abdominal cavity . . . . .	4,912	21.2	4.2	9.3	40.9	73.3	72.3	22.1	20.4	23.1	11.8
Disease of the esophagus . . . . .	496	2.1	*0.2	1.0	4.4	6.3	8.5	1.5	2.8	2.5	*0.1
Gastritis and duodenitis. . . . .	2,737	11.8	2.9	10.5	20.7	22.3	23.6	9.3	14.1	11.8	12.1
Indigestion and other functional disorders of the stomach and digestive system . . . . .	5,910	25.5	2.3	27.8	37.9	52.0	50.9	26.5	24.7	26.5	21.0
Enteritis and colitis . . . . .	2,391	10.3	4.3	9.8	14.4	21.2	16.8	6.9	13.5	11.1	5.3
Spastic colon . . . . .	1,321	5.7	*0.2	5.8	10.9	9.9	9.3	2.1	9.1	6.5	*0.9
Diverticula of intestines . . . . .	1,881	8.1	* -	1.5	15.4	36.1	45.4	4.1	11.9	9.3	*1.0
Constipation . . . . .	4,349	18.8	6.0	12.6	21.6	44.6	103.4	9.3	27.6	18.3	22.9
Other stomach and intestinal disorders . . . . .	2,134	9.2	3.5	8.9	11.6	14.6	28.9	7.8	10.5	9.2	8.9
Malignant neoplasms of stomach, intestines, colon, and rectum . . . . .	249	1.1	* -	*0.1	2.3	*4.2	*7.0	0.9	1.2	1.1	*0.5

<sup>1</sup>Includes races other than white and black

**Table 6. Average annual number of selected impairments and chronic conditions of the nervous system and sense organs and rates per 1,000 persons, by age, sex, and race: United States, 1983-85**

Impairment and chronic condition	Number of conditions in thousands <sup>1</sup>	Age						Sex		Race	
		All ages	Under 18 years	18-44 years	45-64 years	65-74 years	75 years and over	Male	Female	White	Black
Rate per 1,000 persons											
<b>Impairment</b>											
Blindness and other visual impairments . . . . .	8,172	35.3	10.1	29.9	46.4	71.8	136.3	44.4	26.8	36.3	30.2
Deafness and other hearing impairments . . . . .	21,028	90.8	20.6	51.1	149.1	260.8	380.9	105.9	76.7	97.0	53.1
Speech impairments . . . . .	2,360	10.2	17.2	6.3	9.1	11.0	8.2	13.7	6.9	9.1	18.2
Impairment of sensation . . . . .	747	3.2	*0.2	2.5	5.2	8.1	13.0	3.3	3.1	3.6	*1.1
Mental retardation . . . . .	1,086	4.7	9.9	3.4	2.3	0.8	*1.3	6.3	3.2	4.0	10.0
Absence of extremities (excludes absence of fingers or toes only) . . . . .	1,794	7.7	*1.0	5.1	14.8	22.3	20.8	12.7	3.1	8.0	6.9
Absence of upper extremities . . . . .	1,194	5.2	*0.8	3.4	10.2	13.8	13.4	9.0	1.6	5.5	3.1
Absence of lower extremities . . . . .	600	2.6	*0.3	1.7	4.6	8.4	*7.3	3.8	1.5	2.5	3.8
Absence of lung . . . . .	199	0.9	* -	*0.3	1.8	*3.5	*2.9	1.3	*0.4	1.0	*0.3
Absence of kidney . . . . .	596	2.6	*0.5	2.0	5.1	5.9	*4.8	2.4	2.7	2.7	*1.6
Absence of breast . . . . .	1,024	4.4	* -	*0.6	10.6	16.6	21.8	*0.3	8.3	4.9	*1.7
Absence of bone, joint, muscle, or extremity . . . . .	461	2.0	*0.3	1.1	2.7	7.1	10.1	1.6	2.4	2.1	*1.6
Absence of tips of fingers, toes . . . . .	402	1.7	*0.5	2.0	2.0	*2.8	*4.1	3.0	*0.6	2.0	*0.3
Paralysis of extremities, complete or partial . . . . .	1,452	6.3	2.4	3.2	9.7	17.7	26.3	7.3	5.3	6.2	7.6
Paralysis of extremities, complete . . . . .	650	2.8	*0.2	1.3	5.4	9.4	12.1	3.3	2.3	2.8	3.4
Paralysis of extremities, partial . . . . .	802	3.5	2.2	2.0	4.3	8.3	14.2	4.0	3.0	3.4	4.2
Paralysis of, other site, complete or partial . . . . .	224	1.0	*0.2	*0.7	*1.6	*2.6	*2.5	0.9	1.0	0.8	*1.9
Deformities or orthopedic impairments, total . . . . .	27,954	120.7	34.9	131.2	175.4	190.8	197.8	116.7	124.5	124.3	101.9
Deformities or orthopedic impairments of back . . . . .	14,065	60.7	11.3	71.4	91.1	90.0	83.3	51.7	69.2	63.5	45.3
Deformities or orthopedic impairments of upper extremities . . . . .	3,108	13.4	2.0	13.3	20.6	25.9	33.0	15.8	11.2	14.3	7.9
Deformities or orthopedic impairments of lower extremities . . . . .	10,459	45.2	21.0	45.2	61.6	72.8	77.8	47.8	42.7	45.2	46.4
Other deformities or orthopedic impairments . . . . .	322	1.4	*0.5	1.3	2.1	*2.0	*3.7	1.4	1.4	1.3	*2.3
Cleft palate . . . . .	164	0.7	*0.9	*0.6	*0.7	*0.5	*0.8	*0.7	0.7	0.8	*0.3
<b>Condition of nervous system and sense organs</b>											
Glaucoma . . . . .	1,709	7.4	*0.5	1.8	10.2	33.1	49.9	6.5	8.2	7.2	8.9
Cataracts . . . . .	5,220	22.5	*1.0	2.3	20.2	97.5	241.4	14.9	29.7	23.9	14.6
Color blindness . . . . .	2,499	10.8	3.5	13.1	14.2	14.6	12.5	20.4	1.8	11.9	4.0
Diseases of retina . . . . .	763	3.3	*0.3	1.5	4.4	11.7	21.2	2.6	4.0	3.6	*1.2
Tinnitus . . . . .	5,760	24.9	*0.9	14.7	45.4	90.7	75.9	24.1	25.6	26.4	17.0
Epilepsy . . . . .	1,043	4.5	5.0	4.8	3.7	5.1	*1.8	4.9	4.1	4.1	7.2
Migraine headache . . . . .	7,739	33.4	10.0	49.4	41.3	22.0	*7.7	18.0	47.9	34.6	26.9
Other headache (excludes tension headache) . . . . .	5,328	23.0	7.7	30.2	29.3	22.6	21.6	14.5	30.9	23.1	21.6
Multiple sclerosis . . . . .	151	0.7	* -	*0.7	*1.5	*0.2	*0.9	*0.4	0.9	0.7	*0.3

<sup>1</sup>Includes races other than white and black

Table 7. Average annual number of selected chronic conditions of the skin and subcutaneous tissue and of the musculoskeletal system and connective tissue and rates per 1,000 persons, by age, sex, and race: United States, 1983-85

Chronic condition	Number of conditions in thousands <sup>1</sup>	Age						Sex		Race	
		All ages	Under 18 years	18-44 years	45-64 years	65-74 years	75 years and over	Male	Female	White	Black
Rate per 1,000 persons											
<b>Condition of skin and subcutaneous tissue</b>											
Sebaceous skin cyst . . . . .	1,563	6.8	1.9	8.8	9.2	6.9	*5.8	7.3	6.2	7.6	*1.9
Acne . . . . .	4,608	19.9	26.7	28.3	3.1	*1.0	* -	18.2	21.5	20.6	15.7
Psoriasis . . . . .	2,168	9.4	2.4	8.8	14.8	23.4	11.8	9.6	9.2	10.5	*2.6
Dermatitis . . . . .	8,977	38.8	40.2	41.8	34.6	29.9	32.9	30.4	46.6	40.3	28.5
Dry (itching) skin, not elsewhere classified . . . . .	4,020	17.4	8.6	17.5	21.3	31.9	29.9	15.2	19.4	18.1	13.2
Chronic ulcer of skin . . . . .	211	0.9	*0.1	*0.5	*1.2	*1.5	8.1	0.8	1.1	1.0	*0.6
Ingrown nails . . . . .	5,023	21.7	7.3	21.2	28.9	40.3	53.6	19.5	23.7	22.7	17.0
Corns and calluses . . . . .	4,828	20.9	*1.2	17.8	37.3	43.6	63.2	14.1	27.1	19.6	32.2
Benign neoplasms of the skin . . . . .	704	3.0	*1.2	3.0	4.2	5.6	*5.0	2.6	3.4	3.4	*0.9
Malignant neoplasms of the skin . . . . .	1,287	5.6	*0.1	1.7	12.0	21.9	22.5	7.1	4.1	6.5	* -
<b>Condition of musculoskeletal system and connective tissue</b>											
Arthritis . . . . .	30,318	130.9	2.3	52.4	279.4	459.7	507.7	95.2	164.3	135.8	15.3
Rheumatism, unspecified . . . . .	520	2.2	*0.1	1.2	4.5	5.9	10.0	1.8	2.6	2.2	*1.7
Sciatica (including lumbago) . . . . .	1,181	5.1	* -	4.0	9.3	16.3	11.2	3.5	6.6	5.7	*1.7
Intervertebral disc disorders . . . . .	3,927	17.0	*0.2	15.2	37.7	36.1	16.2	18.9	15.2	18.0	12.2
Bone spur or tendinitis, not otherwise specified . . . . .	1,723	7.4	*0.7	6.1	16.1	15.7	11.6	6.0	8.8	8.5	*1.4
Disorders of bone or cartilage . . . . .	1,250	5.4	1.9	3.0	7.8	15.1	24.3	3.6	7.1	5.9	*2.6
Bunions . . . . .	2,318	10.0	*0.8	6.6	19.4	24.7	35.5	3.8	15.8	10.1	11.1
Bursitis, not elsewhere classified . . . . .	4,684	20.2	*0.5	15.3	47.5	42.8	34.4	16.7	23.5	21.6	12.3

<sup>1</sup>Includes races other than white and black

**Table 8. Average annual number of selected chronic endocrine, nutritional, and metabolic diseases and immunity disorders; diseases of the blood and blood forming organs; and genitourinary conditions, and rates per 1,000 persons, by age, sex, and race: United States, 1983-85**

Chronic condition	Number of conditions in thousands <sup>1</sup>	Age						Sex		Race	
		All ages	Under 18 years	18-44 years	45-64 years	65-74 years	75 years and over	Male	Female	White	Black
		Rate per 1,000 persons									
<i>Endocrine, nutritional, and metabolic disease and immunity disorder</i>											
Gout . . . . .	2,289	9.9	* -	3.4	21.5	39.1	35.5	13.6	6.4	9.7	12.5
Goiter. . . . .	440	1.9	*0.1	1.5	4.1	*3.1	*5.4	*0.4	3.3	2.0	*1.5
Other diseases of the thyroid . . . . .	2,532	10.9	*1.0	8.9	22.0	23.7	23.4	2.7	18.6	11.6	7.3
Diabetes. . . . .	5,933	25.6	1.7	9.0	54.4	97.9	91.8	22.3	28.7	24.3	37.1
<i>Diseases of the blood and blood forming organs</i>											
Anemias . . . . .	3,482	15.0	9.6	17.1	14.9	17.0	26.7	4.8	24.6	14.1	24.1
<i>Genitourinary conditions</i>											
Kidney stones . . . . .	1,037	4.5	*0.4	3.8	10.1	8.6	*5.4	5.4	3.6	4.7	3.1
Kidney infections. . . . .	1,364	5.9	2.0	7.3	7.2	5.4	11.4	1.5	10.0	6.0	5.8
Other kidney trouble, not elsewhere classified . . . . .	1,022	4.4	1.7	3.0	6.2	10.6	17.2	3.4	5.4	4.1	7.2
Bladder infections . . . . .	1,888	8.2	2.2	9.9	10.5	9.5	16.1	1.5	14.4	8.9	4.1
Other disorders of bladder. . . . .	1,979	8.5	1.9	6.6	11.0	22.1	35.7	3.8	13.0	8.4	9.8
Diseases of prostate . . . . .	1,218	5.3	* -	2.4	9.5	19.5	24.4	10.9	...	5.7	3.2
Inflammatory disease of female genital organs . . . . .	425	1.8	*0.2	3.6	*0.8	*1.3	*1.1	...	3.5	1.9	*1.6
Noninflammatory disease of female genital organs. . . . .	1,020	4.4	*0.2	8.5	3.0	*2.1	*0.4	...	8.5	4.6	3.7
Menstrual disorders. . . . .	1,513	6.5	2.0	12.3	4.0	*0.2	* -	...	12.6	6.6	6.9
Other diseases of female genital organs . . . . .	2,096	9.1	3.3	14.2	7.9	*4.3	*7.0	...	17.5	9.3	8.5
Female trouble, not otherwise specified . . . . .	199	0.9	* -	1.5	*0.6	*1.3	* -	...	1.7	0.8	*1.0
Malignant neoplasm of breast . . . . .	451	1.9	* -	*0.5	4.4	7.4	8.2	...	3.8	2.0	*1.3
Malignant neoplasm of female genital organs. . . . .	185	0.8	*0.1	1.1	*1.2	*1.0	*0.4	...	1.5	0.8	*0.6
Malignant neoplasm of prostate . . . . .	95	0.4	* -	* -	*0.5	*2.4	*3.3	0.8	...	*0.3	*0.9
Benign neoplasm of breast . . . . .	98	0.4	* -	*0.5	*0.4	*0.7	*1.7	...	0.8	0.5	*0.1
Benign neoplasm of female genital organs . . . . .	511	2.2	* -	3.3	3.8	*0.7	*0.3	...	4.3	2.2	2.9

<sup>1</sup>Includes races other than white and black

**Table 9. Population used in computing rates shown in this report by age, sex, and race: United States, 1983-85**

<i>Age, sex, and race</i>	<i>Population in thousands</i>
All persons <sup>1</sup> . . . . .	231,550
<b>Age</b>	
Under 18 years . . . . .	62,651
18-44 years. . . . .	98,120
45-64 years. . . . .	44,323
65-74 years. . . . .	16,341
75 years and over . . . . .	10,115
<b>Sex</b>	
Male . . . . .	111,799
Female . . . . .	119,751
<b>Race</b>	
White . . . . .	197,875
Black . . . . .	27,734

<sup>1</sup>Includes races other than white and black

## Technical notes

The National Health Interview Survey (NHIS) is a continuous, cross-sectional, nationwide survey conducted by household interview. Each week a probability sample of households in the civilian noninstitutionalized population of the United States is interviewed by personnel of the U.S. Bureau of the Census to obtain information on the health and other characteristics of each member of the household. A description of the survey design, methods used in estimation, and general qualifications of the NHIS data is provided in *Current Estimates From the National Health Interview Survey, 1983, 1984 and 1985* (NCHS, 1986a, 1986b, and 1986c).

The NHIS sample for the 3 years 1983-85 was composed of about 117,000 eligible households, containing approximately 303,000 persons living at the time of interview. The total noninterview rate for the NHIS was about 3.7 percent.

A description of the survey design, methods used in estimation, and general qualifications of NHIS data were published previously (NCHS, 1985). Because the estimates shown in this report are based on a sample of the population rather than on the entire population, they are subject to sampling error. Sampling errors for most of the estimates are relatively low. However, where an estimated number, or the numerator or denominator of a rate or percent is small, the sampling error may be large.

The relatively small size of the sample for the chronic condition lists, one-sixth of the total sample per year, limits the number of variables with which the data can be effectively analyzed.

An asterisk is placed beside certain figures to indicate more than 30-percent relative standard error. Figures

NOTE: A list of references follows the text.

marked with an asterisk are given primarily to allow the reader to combine them with related estimates, thereby possibly producing a more reliable overall estimate for a broader category.

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

Approximate standard errors for estimates in this report are shown in table I.

**Table I. Standard errors for numbers of chronic conditions: United States, 1983-85**

<i>Number of conditions in thousands</i>	<i>Standard errors in thousands</i>
50 . . . . .	18.9
100 . . . . .	26.8
500 . . . . .	59.9
1,000 . . . . .	84.7
5,000 . . . . .	190.3
10,000 . . . . .	270.6
20,000 . . . . .	386.8
30,000 . . . . .	478.7

Note: Table I shows standard errors associated with various numbers of chronic conditions. To estimate standard errors for rates of chronic conditions per 1,000 population, the rates must be converted to numbers of conditions by multiplying the rate by the base population to which it applies and dividing the result by 1,000. For instance, the rate of chronic bronchitis in the white population is 50.9 per 1,000 persons. This yields an estimated 10,072,000 cases of chronic bronchitis among white individuals ( $50.9 \times 197,875,000/1,000$ ). Thus, the standard error lies between 270,600 and 386,800 cases. Expressed as a percentage of the base number or rate, the standard error lies between 2.7 percent ( $270,600/10,072,000$ ) and 3.8 percent ( $386,800/10,072,000$ ). Likewise, to estimate standard errors for the percent of chronic conditions resulting in hospitalization or restricted activity, the number of conditions with those results must be calculated by multiplying the percent times the base number of conditions to which it refers. The standard error then can be estimated using table I, as in the preceding example.

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