Incidence and Prevalence: 2006 Chart Book on Cardiovascular and Lung Diseases

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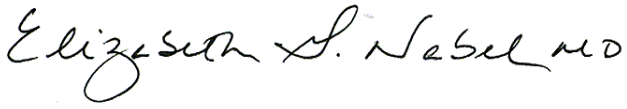
Foreword

I am pleased to present the first National Heart, Lung, and Blood Institute (NHLBI) *Incidence & Prevalence: Chart Book on Cardiovascular and Lung Diseases,* which is intended to serve as a complement to the biennial NHLBI *Morbidity & Mortality: Chart Book on Cardiovascular, Lung, and Blood Diseases* that summarizes national morbidity and mortality statistics for cardiovascular, lung, and blood diseases.

This book focuses on incidence and prevalence data for cardiovascular and lung diseases from NHLBI-supported epidemiologic studies that are conducted in selected communities: the Atherosclerosis Risk in Communities (ARIC) Cohort and Surveillance studies, the Cardiovascular Health Study (CHS), the Coronary Artery Risk Development in Young Adults (CARDIA), the Framingham Heart Study (FHS), the Multi-Ethnic Study of Atherosclerosis (MESA), and the Strong Heart Study (SHS). The data provided on selected cardiovascular and lung diseases by age, race, and sex should be useful in future efforts to assess progress in combating heart and lung diseases and in eliminating health disparities.

I would like to express my appreciation to the study investigators and to Thomas Thom of the NHLBI for developing the material presented in the *Incidence & Prevalence: 2006 Chart Book on Cardiovascular and Lung Diseases*.



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1. Introduction

Statistics on prevalence, hospitalizations, and mortality for selected cardiovascular, lung, and blood diseases in the U.S. population are derived from health interview, examination, and record surveys and from vital statistics of the National Center for Health Statistics (NCHS), and are described in the biennial NHLBI *Morbidity & Mortality: Chart Book on Cardiovascular, Lung, and Blood Diseases*[1] and the annual *NHLBI Fact Book*.

Data on incidence, however, are not directly available for the entire United States, but can be obtained from population-based cohort and surveillance studies of adults conducted in selected communities.

The purpose of this chart book, *Incidence & Prevalence: 2006 Chart Book on Cardiovascular and Lung Diseases*, is to present largely unpublished estimates of incidence and prevalence from six community cohort studies and one surveillance study sponsored by the NHLBI: Atherosclerosis Risk in Communities (ARIC) Cohort Study, Cardiovascular Health Study (CHS), Coronary Artery Risk Development in Young Adults (CARDIA), Framingham Heart Study (FHS), Multi-Ethnic Study of Atherosclerosis (MESA), Strong Heart Study (SHS), and ARIC Surveillance. These studies comprise 23 defined communities.

Strength of the Data

Although the 23 communities do not represent the Nation, the studies contain some of the best incidence and prevalence estimates available. Each cohort study identifies a sample of people in a given community, obtains physical measures and characteristics in a baseline year, and then follows the cohort prospectively for several years, usually with periodic medical examinations and health interviews. Searches of hospital and vital statistics records that use the International Classification of Diseases (ICD) to code for diseases are also used. Diagnosis may be physician-adjudicated from standard physical examinations or otherwise validated. Searches of medical records are used to collect data in ARIC Surveillance.

Permission for Citation

Study investigators have published peer-reviewed findings but not detailed descriptive statistics of incidence and prevalence. Permission was granted by the study investigators to include unpublished incidence and prevalence estimates in this chart book. These statistics are available for use and citation if credit is given to the study and this chart book.

Data Interpretation

Interpretation of the charts and tables requires an understanding of information on each study, their individual disease definitions, and definitions of epidemiologic terms, which can be found in Appendixes A, B, and C, respectively.

Data Description

Table 1–1 contains the name of each study and the data years, age range, and race/ethnicity of participants. All studies have data for men and women. Table 1–2 indicates the diseases for which incidence and prevalence data are available.

Table 1–1. Data Years, Age Range, and Race/Ethnicity for Each Study

	Incidence			Prevalence		
Study	Data Years	Age Range	Race/Ethnicity	Data Years	Age Range	Race/Ethnicity
ARIC Cohort	1987–2001	45–84	white, black	1987–1989	45–64	white, black
ARIC Surveillance	1987–2001	35–74	white, black	NA	NA	NA
CHS	1989–2000	≥65	white, black	1999	≥70	white, black
CARDIA*	NA	NA	NA	1985, 2000	18–45	white, black
FHS†	1980–2003	≥35	white	1998–2002	≥35	white
MESA	NA	NA	NA	2000–2002	45–84	white, black, Asian, Hispanic
SHS	1989–2000	45–74	American Indians	1989–1992	45–74	American Indians

* Ages 18–30 in 1985 and 33–45 in 2000.
† Data collected before 1980 not included.
NA=Not available.

Table 1–2. Incidence and Prevalence of Selected Diseases Reported in Each Study

Study	CVD	CHD	MI	AP	HF	STK	PAD	HTN	ASTH	COPD
ARIC Cohort	P	I P	I P	I P	I P	I P	I P	P	I P	P
ARIC Surveillance		I	I							
CHS*	I P	I P	I P	I P	I P	I P	I P	P		
CARDIA†	P	P	P	P		P	P	P	P	P
FHS	I P	I P	I P	I P	I P	I P		I P		
MESA‡							P	P	P	P
SHS	I P	I P	I P		I P	I P	P	P		

I=Incidence; P=Prevalence; CVD=cardiovascular disease; CHD=coronary heart disease; MI=myocardial infarction; AP=angina pectoris; HF=heart failure; STK=stroke; PAD=peripheral arterial disease; HTN=hypertension; ASTH=asthma; COPD=chronic obstructive pulmonary disease.
* Also reported prevalence of transient ischemic attack (TIA).
† Also reported prevalence of mitral valve prolapse and rheumatic heart disease.
‡ Also reported prevalence of sleep apnea.

Tables 1–3 and 1–4 contain the number of incidence and prevalence cases, respectively, reported in the studies for selected diseases. The numbers are based on the sample sizes, data years, case definitions, participants' age and race/ethnicity, and by the geographic composition of the study.

A zero means the study reported no cases for the *Chart Book* because the number was actually zero or was too small to be meaningful. Some cases are also counted in a broader category, e.g. myocardial infarction (MI) is included in coronary heart disease (CHD). Cardiovascular disease (CVD) is not defined as all-inclusive of diseases of the cardiovascular system.

Table 1–3. Number of Incidence Cases Reported in Each Study

Study	CVD	CHD	MI	AP	HF	STK	PAD	HTN	ASTH
ARIC-Cohort	0	976	845	1,592	1,247	601	506	0	249
ARIC-Surveillance	0	16,202	15,084	0	0	0	0	0	0
CHS	2,219	1,077	583	920	1,026	663	208	0	0
CARDIA	0	0	0	0	0	0	0	0	0
FHS*	1,908	1,204	823	573	819	809	0	2,274	0
MESA	0	0	0	0	0	0	0	0	0
SHS	571	483	159	0	236	151	0	0	0

* Includes original and offspring cohorts.

Table 1–4. Number of Prevalence Cases Reported in Each Study

Study	CVD	CHD	MI	AP	HF	STK	PAD	HTN	ASTH	COPD
ARIC-Cohort	963	752	640	798	81	278	409	5,402	703	652
ARIC-Surveillance	0	0	0	0	0	0	0	0	0	0
CHS*	1,623	1,192	563	1,122	547	368	143	2,200	0	0
CARDIA†	746	291	20	27	0	33	80	443	604	256
FHS‡	1,264	803	469	552	352	421	0	2,231	0	0
MESA§	0	0	0	0	0	0	352	3,019	668	220
SHS	128	97	44	0	184	37	226	1,789	0	0

* Additionally, 177 cases were reported for TIA.
† Numbers are for 2000. Additionally, 233 cases were reported for mitral valve prolapse, and 31 cases were reported for rheumatic heart disease.
‡ Includes original and offspring cohorts
§ Additionally, 719 cases were reported for sleep apnea.

Charts and Tables

Chapter 2 contains incidence charts for selected CVDs. Data for the charts are located in the tables found in Chapter 4. Chapter 3 contains prevalence charts for selected cardiovascular and lung diseases. Data for the charts are located in the tables found in Chapter 5. Time periods indicated in the charts and tables vary among the studies. Time trends are not presented.

Charts, grouped by disease, present estimates by age, race/ethnicity, and sex as available; age-adjusted estimates are presented by sex and race/ethnicity. Because the range in rates across demographic groups and studies is large, the Y-scale is not the same for all charts.

Attained Age

For incidence, the attained age is the age of the study subject at the follow-up examination in which the subject is first diagnosed with the specific disease; it is not the subject's age at the study baseline. For prevalence, it is the age of the study subject in the year in which disease prevalence was measured. In three studies, ARIC Cohort, MESA, and SHS, prevalence was measured during the baseline years. Thus for those studies, the attained age is the age of the subject upon entry into the study. For FHS, prevalence is measured from 1998 to 2002, and the age of the study subject is the age attained at each follow-up examination during that period.

Imprecision and Standard Errors

Standard errors (SE) of the estimates and 95 percent confidence intervals were calculated, but are not shown except in Tables 2–1, 3–1, 3–2, and 3–3.

For age-adjusted incidence rates, the standard error is:

$$SE = \sqrt{\sum_{i}^{n} w_i^2 \frac{r_i}{PY_i}}$$

where
i = age group
n = number of age groups
w = standard 2000 age-adjustment factor
r = rate of incidence
PY = person years of observations.

The formula for the standard error of the age-adjusted prevalence is the same except that *Pop,* the study population, is used instead of PY, and r = the rate of prevalence.

$$SE = \sqrt{\sum_{i}^{n} w_i^2 \frac{r_i}{Pop_i}}$$

For age-specific incidence rates, the binomial distribution is assumed and the standard error is:

$$SE = \sqrt{P(1-P)/PY}$$

where
P = age-specific incidence rate.

For age-specific prevalence rates, the standard error is:

$$SE = \sqrt{P(1-P)/Pop}$$

where
P = age-specific prevalence rate.

To determine the reliability of the rates, it was necessary to calculate the relative standard error (RSE) of each rate. This is done by dividing the SE for each incidence or prevalence rate by its estimate. The RSE is expressed as a percent, and is calculated as follows:

$$RSE = 100 \times (SE/r)$$

where
r = incidence rate or prevalence rate.

Rather than following the suggestion of the ARIC investigator to omit rates based on fewer than 25 cases, we have chosen to institute the standard practice used by the NCHS concerning unreliable rates. An asterisk before a rate indicates the RSE of a rate is from 20 to 30 percent; an asterisk in place of the rate indicates the RSE is greater than 30 percent.

Age Adjustment

Age-adjustment of rates is direct adjustment to the age distribution of the population of the United States in 2000.[2] The specific population estimates used to derive adjustment factors appropriate for each study are from population projections by age in Table 2 of a publication of the U.S. Bureau of the Census.[3] Adjustment factors for the age groups in each study are located in Appendix A. Adjusted incidence and prevalence rates are not comparable among studies unless the age groups are the same.

Chart Statements

The brief statement associated with each chart highlights differences in rates by age, race, and sex and is based on 95 percent confidence intervals around rates. A difference is noted when confidence intervals of rates being compared do not overlap. Where they do overlap, a qualified statement may be made.

2. Charts on Incidence

This chapter contains incidence charts for CVD from the following studies: ARIC (Cohort and Surveillance), CHS, FHS, and SHS. Basic incidence data including the rates used to create the charts may be found in Chapter 4. Data for two 5–year age groups were combined to create the CHS values in Table 2–1 and Chart 2–9, but the sums are not shown in the source table.

The incidence rate is given in 1,000 person years and is expressed as follows:

Rate = $1{,}000(N/PY)$

where
N = number of new cases
P = person years of observations.

The rates shown in the charts represent average annual rates for the period indicated. They are by age, race, and sex, where age is the attained age of the individual at the time of the examination when a new case is recorded. Age-adjusted rates are by race and sex.

Each chart contains a footnote that gives abbreviated information on how the study defines the disease in the title. Comparisons of rates among studies are difficult because of study differences (Appendix A), especially with respect to disease definitions (Appendix B).

Age, Race, and Sex Differences

Table 2–1 and charts in this chapter show that for most diseases and in most studies, incidence generally increases with age for men and women.

Race comparisons observed in ARIC Cohort and CHS show that age-adjusted rates for most diseases tend to be similar for black men and white men. Exceptions include higher stroke/TIA incidence for black men in ARIC Cohort and higher PAD incidence for black men in CHS.

The age-adjusted rates for most diseases tend to be higher in black women than in white women, but with confidence intervals often overlapping. Exceptions to higher rates in black women include no black–white difference for MI incidence in CHS women and no black–white difference for PAD in ARIC Cohort women.

Sex comparisons demonstrate that men appear to have a higher incidence for most diseases than women. Exceptions include the higher incidence of angina pectoris in women, ages 45–54, in ARIC Cohort and the higher incidence of stroke in women, ages 85–94, in FHS.

Differences Among Studies

Table 2–1 displays the incidence rates of four diseases by age and sex from four studies. Comparisons among the studies show several differences. They include higher MI incidence rates for men, ages 65–74, in CHS than in ARIC and SHS; higher angina pectoris rates in both men and women less than age 65 in ARIC Cohort than in FHS and after age 65, higher rates in CHS than in FHS (wherever data are available); higher heart failure rates for men and women after age 65 in CHS than in FHS; and higher stroke rates for men and women, ages 65–74, in CHS and FHS than in ARIC Cohort. Study differences in disease definitions affect the comparisons.

Table 2–1. Incidence/1,000 Person Years and 95% CI by Age and Sex: Selected Diseases by Study

Age	ARIC Cohort	CHS	FHS	SHS
Myocardial Infarction: Men				
45–54	4.0 (3.0; 5.0)	---	4.6 (3.4; 5.8)	4.5 (2.8; 6.3)
55–64	6.2 (5.4; 7.0)	---	11.4 (9.4; 13.3)	6.3 (4.4; 8.3)
65–74	9.3 (8.0; 10.5)	15.3 (12.2; 18.4)	11.9 (9.7; 14.0)	7.1 (4.4; 9.8)
75–84	---	20.6 (17.6; 23.6)	22.8 (18.9; 26.6)	---
85–94	---	28.4 (20.7; 36.1)	24.5 (16.7; 32.3)	---
Myocardial Infarction: Women				
45–54	1.2 (0.8; 1.7)	---	*0.8 (0.3; 1.2)	1.5 (0.6; 2.4)
55–64	3.0 (2.6; 3.5)	---	3.2 (2.2; 4.2)	2.8 (1.8; 3.7)
65–74	4.7 (3.9; 5.5)	5.7 (4.2; 7.1)	5.7 (4.4; 6.9)	4.3 (2.7; 5.9)
75–84	*8.2 (3.7; 12.6)	10.7 (9.0; 12.4)	11.0 (9.1; 13.0)	---
85–94	---	16.6 (11.8; 21.3)	17.3 (13.6; 21.0)	---
Angina Pectoris: Men				
45–54	9.4 (7.9; 10.9)	---	4.8 (3.6; 6.0)	---
55–64	11.6 (10.4; 12.9)	---	8.9 (7.2; 10.6)	---
65–74	12.8 (10.8; 14.8)	27.4 (23.1; 31.7)	9.9 (7.9; 11.8)	---
75–84	---	36.0 (31.8; 40.3)	13.0 (10.0; 15.9)	---
85–94	---	34.6 (25.4; 43.9)	*7.4 (3.1; 11.8)	---
Angina Pectoris: Women				
45–54	13.9 (12.3; 15.4)	---	1.1 (0.5; 1.6)	---
55–64	13.4 (12.2; 14.6)	---	4.0 (2.9; 5.1)	---
65–74	12.3 (10.4; 14.2)	14.3 (11.9; 16.6)	5.6 (4.3; 6.8)	---
75–84	---	20.4 (17.9; 22.9)	6.2 (4.7; 7.7)	---
85–94	---	24.5 (18.2; 30.8)	3.2 (1.5; 4.9)	---
Heart Failure: Men				
45–54	2.3 (1.6; 3.0)	---	*1.5 (0.8; 2.2)	*4.6 (2.8; 6.4)
55–64	6.2 (5.5; 7.0)	---	3.3 (2.3; 4.3)	5.9 (4.0; 7.8)
65–74	14.1 (12.6; 15.6)	15.4 (12.5; 18.4)	9.2 (7.4; 11.0)	*6.7 (4.0; 9.4)
75–84	21.3 (13.7; 28.8)	31.1(27.6; 34.5)	22.3 (18.8; 25.8)	---
85–94	---	62.3 (51.2; 73.5)	43.0 (33.4; 52.7)	---
Heart Failure: Women				
45–54	*1.7 (1.2; 2.2)	---	*0.8 (0.4; 1.3)	*2.8 (1.6; 4.0)
55–64	4.1 (3.6; 4.6)	---	*1.3 (0.7; 1.9)	5.4 (3.9; 6.8)
65–74	10.6 (9.4; 11.8)	9.1 (7.4; 10.9)	4.6 (3.5; 5.8)	13.0 (10.1; 15.9)
75–84	*15.3 (9.2; 21.3)	20.5 (18.2; 22.9)	14.8 (12.6; 17.0)	---
85–94	---	45.7 (37.6; 53.7)	30.6 (25.8; 35.6)	---
Stroke: Men				
45–54	*1.4 (0.9; 2.0)	---	*1.3 (0.6; 1.9)	*2.9 (1.5; 4.2)
55–64	2.9 (2.4; 3.4)	---	4.3 (3.2; 5.5)	3.8 (2.3; 5.3)
65–74	6.4 (5.4; 7.4)	10.0 (7.6; 12.4)	11.1 (9.1; 13.1)	7.2 (4.5; 9.9)
75–84	*12.2 (6.6; 17.7)	17.0 (14.4; 19.6)	19.6 (16.2; 23.1)	---
85–94	---	20.4 (14.3; 26.5)	16.2 (10.0; 22.4)	---
Stroke: Women				
45–54	*1.0 (0.6; 1.4)	---	*1.4 (0.8; 2.0)	*1.9 (0.9; 2.9)
55–64	2.4 (1.9; 2.8)	---	2.2 (1.4; 3.0)	3.0 (2.0; 4.1)
65–74	4.2 (3.4; 4.9)	6.7 (5.2; 8.2)	7.0 (5.6; 8.4)	5.9 (4.0; 7.8)
75–84	*8.7 (4.1; 13.2)	15.8 (13.8; 17.8)	17.1 (14.919.3)	---
85–94	---	30.1 (23.6; 36.5)	27.1 (22.4; 31.9)	---

--- Rate is not available or is unreliable; RSE is more than 30 percent.
* Rate is unreliable: RSE is from 20 to 30 percent.

Cardiovascular Disease

Chart 2–1
Incidence of Cardiovascular Disease* by Age and Sex
FHS, 1980–2003

Cases/1,000 Person Years

Age	Men	Women
45–54	10.1	4.2
55–64	21.4	8.9
65–74	34.6	20.0
75–84	59.2	40.2
85–94	74.4	65.2

* CHD, HF, cerebrovascular accident, or intermittent claudication.
Data from Table 4–23.

From ages 45–54 to 75–84, the incidence of CVD increases with age in men and women, with higher rates in men.

Chart 2–2
Incidence of Cardiovascular Disease* by Age and Sex
CHS, 1989–2000

Cases/1,000 Person Years

Age	Men	Women
65–69	51.0	30.3
70–74	68.7	36.1
75–79	85.9	50.7
80–84	119.4	76.2
85–89	142.2	99.1
90–94	160.7	171.9

* CHD, HF, stroke, TIA, or claudication.
Data from Table 4–11.

From ages 65–69 to 90–94, the incidence of CVD increases with age in men and women, with higher rates in men. At ages 90–94, the rates are similar for both groups.

Cardiovascular Disease

For ages 45–54 to 55–64, the incidence of CVD in American Indians is higher in men than in women.

Chart 2–3
Incidence of Cardiovascular Disease* in American Indians by Age and Sex
SHS, 1989–2000

Cases/1,000 Person Years

Age	Men	Women
45–54	12.8	7.1
55–64	18.4	11.7
65–74	28.5	20.8

* CHD or stroke.
Data from Table 4–47.

The age-adjusted incidence of CVD (ages ≥ 65) is higher in men than in women. Black–white differences are not apparent.

Chart 2–4
Age-Adjusted Incidence of Cardiovascular Disease* by Race and Sex, Ages 65 and Over
CHS, 1989–2000

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
67.2	87.4	56.1	87.1	88.2	53.9	63.2

* CHD, HF, stroke, TIA, or claudication.
Data from Table 4–11.

Coronary Heart Disease

Chart 2–5
Incidence of Coronary Heart Disease* by Age, Race, and Sex
ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Age	White Men	Black Men	White Women	Black Women
55–64	7.0	7.7	2.7	4.7
65–74	10.5	13.7	5.2	7.9

* MI or death from CHD.
Data from Table 4–1.

For ages 55–64 and 65–74, the incidence of CHD is higher in men than in women, both white and black.

Chart 2–6
Incidence of Coronary Heart Disease* by Age, Race, and Sex
ARIC Surveillance, 1987–2001

Cases/1,000 Person Years

Age	White Men	Black Men	White Women	Black Women
35–44	1.1	1.5	0.3	0.8
45–54	3.4	4.2	1.1	2.2
55–64	7.2	8.1	2.8	5.8
65–74	11.9	14.0	6.4	9.3

* Hospitalized for definite or probable MI or death from CHD.
Data from Table 4–9.

From ages 35–44 to 65–74, the incidence of CHD increases with age in men and women, with higher rates in men, both white and black.

Coronary Heart Disease.

From ages 45–54 to 85–94, the incidence of CHD increases with age in men and women. The rates lag in women by about 20 years.

Chart 2–7
Incidence of Coronary Heart Disease* by Age and Sex
FHS, 1980–2003

Cases/1,000 Person Years

Age	Men	Women
45–54	8.0	1.8
55–64	16.4	6.4
65–74	21.8	11.0
75–84	32.8	17.1
85–94	38.0	22.8

* MI, angina pectoris, coronary insufficiency, or fatal CHD.
Data from Table 4–24.

From ages 45–54 to 65–74, the incidence of CHD in American Indians tends to increase with age, with higher rates in men than in women below age 65. The difference appears to extend to ages 65–74.

Chart 2–8
Incidence of Coronary Heart Disease*
in American Indians by Age and Sex
SHS, 1989–2000

Cases/1,000 Person Years

Age	Men	Women
45–54	10.3	5.7
55–64	16.6	9.4
65–74	24.7	16.6

* Definite fatal CHD based on chart review and death certificate; nonfatal CHD based on chart review.
Data from Table 4–48.

Coronary Heart Disease

Chart 2–9
Incidence of Coronary Heart Disease* by Age, Race, and Sex
CHS, 1989–2000

Cases/1,000 Person Years

Age	White Men	Black Men	White Women	Black Women
65–74	31.4	28.7 †	15.1	17.8
75–84	41.7	40.9	23.9	27.5

* MI, angina pectoris, CABG, angioplasty, or fatal atherosclerotic CHD.
† Unreliable rate.
Data from Table 4–12.

For ages 65–74 and 75–84, the incidence of CHD is approximately twice as high in white men as in white women

Chart 2–10
Age-Adjusted Incidence of Coronary Heart Disease*
by Race and Sex, Ages 35–74
ARIC Surveillance, 1987–2001

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
3.4	4.7	2.2	4.5	5.4	1.9	3.4

* Hospitalized for definite or probable MI or death from CHD.
Data from Table 4–9.

The age-adjusted incidence of CHD (ages 35–74) is higher in men, both overall and white.

Coronary Heart Disease

The age-adjusted incidence of CHD (ages 45–84) is higher in white men than in white women.

Chart 2–11
Age-Adjusted Incidence of Coronary Heart Disease* by Race and Sex, Ages 45–84
ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
5.2	7.3	3.7	7.0	8.5	3.3	5.0

* MI or death from CHD.
Data from Table 4–1.

The age-adjusted incidence of CHD (ages ≥ 65) is higher in men than in women, both overall and white.

Chart 2–12
Age-Adjusted Incidence of Coronary Heart Disease* by Race and Sex, Ages 65 and Over
CHS, 1989–2000

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
28.2	38.4	22.0	38.5	37.8	21.4	29.4

* MI, angina pectoris, CABG, angioplasty, or fatal atherosclerotic CHD.
Data from Table 4–12.

Myocardial Infarction

Chart 2–13
Incidence of Myocardial Infarction* by Age, Race, and Sex
ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Age	White Men	Black Men	White Women	Black Women
55–64	6.2	5.9	2.7	4.0
65–74	9.4	8.6	4.5	5.4

* MI diagnosis by expert committee based on review of hospital records.
Data from Table 4–2.

For ages 55–64 and 65–74, the incidence of MI is twice as high in white men as in white women.

Chart 2–14
Incidence of Myocardial Infarction* by Age, Race, and Sex
ARIC Surveillance, 1987–2001

Cases/1,000 Person Years

Age	White Men	Black Men	White Women	Black Women
35–44	1.0	1.3	0.3	0.7
45-54	3.1	3.6	1.0	2.0
55–64	6.3	6.3	2.5	4.6
65–74	9.5	10.3	5.4	7.1

* MI diagnosis by computer algorithm based on symptoms, ECG, and cardio-biomarkers.
Data from Table 4–10.

From ages 35–44 to 65–74, the incidence of MI increases with age in men and women, with higher rates in men.

Myocardial Infarction

For ages 55–64 to 75–84, the incidence of MI is at least twice as high in men as in women.

Chart 2–15
Incidence of Myocardial Infarction* by Age and Sex
FHS, 1980–2003

Cases/1,000 Person Years

Age	Men	Women
55–64	11.4	3.2
65–74	11.9	5.7
75–84	22.8	11.0
85–94	24.5	17.3

* MI based on ECG evidence, hospital examination, or autopsy report of recent MI.
Data from Table 4–26.

The age-adjusted incidence of CHD (ages ≥ 65) is higher in men than in women, both overall and white.

Chart 2–16
Age-Adjusted Incidence of Myocardial Infarction*
by Race and Sex, Ages 65 and Over
CHS, 1989–2000

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
12.4	18.2	9.0	18.5	15.9	8.9	9.0

* Fatal MI based on death certificates, medical records, or interview with physician, next-of-kin and witnesses; nonfatal MI based on symptoms and ECG evidence.
Data from Table 4–13.

Myocardial Infarction

Chart 2–17
Age-Adjusted Incidence of Myocardial Infarction* by Race and Sex, Ages 45–84 ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
4.4	5.8	3.3	5.7	6.0	2.9	4.5

* MI diagnosis by expert committee based on review of hospital records.
Data from Table 4–2.

The age-adjusted incidence of heart failure (ages 45–84) is higher in men than in women, both overall and white.

Chart 2–18
Age-Adjusted Incidence of Myocardial Infarction* by Race and Sex, Ages 35–74 ARIC Surveillance, 1987–2001

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
2.9	4.0	1.9	3.9	4.3	1.7	2.8

* MI diagnosis by computer algorithm based on symptoms, ECG, and cardio-biomarkers.
Data from Table 4–10.

The age-adjusted incidence of MI (ages 35–74) is higher in men than in women, both overall and white.

Angina Pectoris

The age-adjusted incidence of angina pectoris (ages 45–74) is highest in black women.

Chart 2–19
Age-Adjusted Incidence of Angina Pectoris* by Race and Sex, Ages 45–74
ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
12.3	10.8	13.4	10.7	10.8	11.3	17.9

* Angina pectoris determined by Rose Questionnaire.[4]
Data from Table 4–3.

The age-adjusted incidence of angina pectoris (ages ≥ 65) is higher in men than in women, both overall and white.

Chart 2–20
Age-Adjusted Incidence of Angina Pectoris* by Race and Sex, Ages 65 and Over
CHS, 1989–2000

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
22.5	29.9	18.2	30.5	27.0	17.6	25.7 †

* Angina pectoris diagnosed and treated by physician or chest pain plus CABG, obstruction of coronary artery, or evidence by Rose Questionnaire.
† Unreliable rate.
Data from Table 4–16.

Angina Pectoris/Heart Failure

Chart 2–21
Incidence of Angina Pectoris* by Age and Sex
FHS, 1980–2003

Cases/1,000 Person Years

Age	Men	Women
45–54	4.8	1.1 †
55–64	8.9	4.0
65–74	9.9	5.6
75–84	13.0	6.2

* Angina pectoris based on physician interview of patient.
† Unreliable rate.
Data from Table 4–27.

For ages 45–54 to 75–84, the incidence of angina pectoris is higher in men than in women.

Chart 2–22
Incidence of Heart Failure* by Age and Sex
FHS, 1980–2003

Cases/1,000 Person Years

Age	Men	Women
65–74	9.2	4.7
75–84	22.3	14.8
85–94	43.0	30.7

* HF based on physician review of medical records and strict diagnostic criteria.
Data from Table 4–28.

The incidence of heart failure in men and women approximately doubles with each 10-year increase from ages 65–74 to 85–94; however, it triples for women between ages 65–74 and 75–84.

Heart Failure

The age-adjusted incidence of heart failure (ages 45–84) is higher in men than in women, both overall and white.

Chart 2–23
Age-Adjusted Incidence of Heart Failure* by Race and Sex, Ages 45–84
ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
7.0	8.2	5.9	7.9	9.6	5.0	8.3

* HF based on hospital records.
Data from Table 4–4.

The age-adjusted incidence of heart failure (ages ≥ 65) is higher in men than in women, both overall and white.

Chart 2–24
Age-Adjusted Incidence of Heart Failure* by Race and Sex, Ages 65 and Over
CHS, 1989–2000

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
21.3	26.7	17.6	27.0	23.1	17.2	20.4

* HF based on physician diagnosis and treatment.
Data from Table 4–17.

Heart Failure/Stroke.

Chart 2–25
Incidence of Heart Failure* by Age, Race, and Sex
ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Age	White Men	Black Men	White Women	Black Women
55–64	5.4	9.2	2.9	7.0
65–74	13.9	15.2	8.8	15.9

* HF based on hospital records.
Data from Table 4–4.

For ages 55–64 and 65–74, the incidence of heart failure is higher in black women than in white women.

Chart 2–26
Age-Adjusted Incidence of Stroke/Transient Ischemic Attack* by Race and Sex, Ages 45–84
ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
8.1	8.8	7.6	7.7	12.1	6.3	10.5

* Stroke/TIA based on self-reported physician diagnosis.
Data from Table 4–5.

The age-adjusted incidence of stroke/TIA (ages 45–84) is higher in blacks; it is similar overall in men and women.

Stroke

For ages 45–54 to 65–74, the incidence of stroke/TIA doubles for white men and women with each 10-year increase.

Chart 2–27
Incidence of Stroke/Transient Ischemic Attack* by Age, Race, and Sex
ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Age	White Men	Black Men	White Women	Black Women
45–54	2.4	9.7	2.4	7.2
55–64	6.1	13.1	4.8	10.0
65–74	12.2	16.2	9.9	15.0

* Stroke/TIA based on self-reported physician diagnosis.
Data from Table 4–5.

From ages 55–64 to 75–84, the incidence of stroke increases with age in men and women.

Chart 2–28
Incidence of Stroke* by Age and Sex
FHS, 1980–2003

Cases/1,000 Person Years

Age	Men	Women
55–64	4.3	2.2
65–74	11.1	7.0
75–84	19.6	17.1
85–94	16.2	27.1

* Stroke (i.e., CVA) based on occurrence of a stroke and either in-hospital examination or physician review of hospital records.
Data from Table 4–29.

Peripheral Arterial Disease

Chart 2–29
Age-Adjusted Incidence of Peripheral Arterial Disease* by Race and Sex, Ages 45–74 ARIC Cohort, 1987–2001

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
6.9	6.8	6.9	6.6	7.2	6.9	7.3

* PAD based on ankle-brachial index (ABI) < 0.9 for men and < 0.85 for women.
Data from Table 4–7.

The age-adjusted incidence of PAD (ages 45–74) is similar in men and women and in blacks and whites.

Chart 2–30
Age-Adjusted Incidence of Peripheral Arterial Disease* by Race and Sex, Ages 65 and Over CHS, 1989–2000

Cases/1,000 Person Years

Total	Men	Women	White Men	Black Men	White Women	Black Women
4.2	5.4	3.4	5.1	7.8 †	3.0	5.6 †

* Claudication based on physical examination.
† Unreliable rate.
Data from Table 4–22.

The age-adjusted incidence of PAD (ages ≥ 65) is higher in men, both overall and white.

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3. Charts on Prevalence

This chapter contains charts of prevalence for cardiovascular and lung diseases from the six cohort studies: ARIC, CHS, CARDIA, FHS, MESA, and SHS. Rates are either age-adjusted or expressed by age, race/ethnicity, and sex, where age is the attained age when prevalence is measured. Prevalence is expressed as the percent of persons with a disease at a given time period:

Rate = $100(N/Pop)$

where
N = number of cases
Pop = population of the group.

Each chart contains a footnote that gives abbreviated information on how the study defines the disease in the title. Study differences (Appendix A), especially with respect to disease definition differences (Appendix B), make prevalence comparisons difficult.

Age, Race, and Sex Differences

Prevalence for diseases generally increases with age. Asthma is the exception as seen in MESA.

In ARIC Cohort, CHS, CARDIA, and MESA, race comparisons show that age-adjusted prevalence rates tend to be similar for several diseases in white and black men. Exceptions include higher rates in black men for strokes and PAD in ARIC Cohort and hypertension in MESA and higher rates in white men for CHD in ARIC Cohort and CARDIA.

Age-adjusted rates for most diseases are generally higher in black women than in white women, but with confidence intervals often overlapping. Exceptions include no race differences in women for CHD in CARDIA, MI in CHS, angina in ARIC Cohort, or COPD in CARDIA, and higher rates for COPD in ARIC Cohort white women.

Prevalence estimates for most diseases tend to be higher in men than in women. Exceptions include higher rates in women for angina pectoris in ARIC Cohort, COPD in both CARDIA and ARIC Cohort, and asthma in MESA. Where data are available (tables in Chapter 5), ARIC Cohort, CHS, and SHS show little difference between men and women in the prevalence of stroke, PAD, hypertension, and asthma.

National Comparisons

Table 3–1 displays prevalence estimates of four diseases in three studies and in NHANES. Data years are 1987–89 for ARIC Cohort, 1999 for CHS, and 1998–2002 for FHS. The 1999–2002 NHANES estimates are based on self-reported information from health interviews in which individuals had previously been told of having the disease by a physician or other health professional. The estimates were tabulated by the NHLBI from NCHS public use datasets.

As noted previously, comparisons among studies are somewhat difficult due to differences in study design, disease definition, and years of data collection. Provided below are some differences in prevalence between the NHLBI studies and NHANES.

Comparisons of MI prevalence, ages 45–54 to 75–84, between ARIC Cohort, CHS, and FHS and NHANES show that although considerable variability exists among the rates, most of the confidence intervals overlap. Where they do not overlap, FHS men, ages 65–84, and CHS women, ages 75–84, have higher prevalence of angina pectoris than comparable NHANES groups; ARIC Cohort men and women, ages 55–64, have lower prevalence of heart failure than comparable NHANES groups; and FHS men, ages 75–84, have higher prevalence of stroke than the NHANES group; but CHS women, ages 75–84, have lower stroke prevalence than women in the NHANES group.

Table 3–2 contains hypertension prevalence by age and sex for each of the studies and for NHANES.[5] For men, a comparison between rates in each study to those in NHANES shows the rates to be similar. For women, ages ≥ 55, the rates in NHANES are higher than those in the other studies.

Table 3–3 contains prevalence of PAD by age, sex, and study. The prevalence of PAD tends to be similar in men and women.

Table 3–1. Prevalence (%) and 95% CI of Cardiovascular Diseases by Age and Sex: Studies and NHANES

Age	ARIC Cohort	CHS	FHS	NHANES
Myocardial Infarction: Men				
45–54	4.1 (3.5; 4.8)	---	*3.6 (1.7; 5.5)	2.8 (1.4; 4.3)
55–64	9.7 (8.7; 10.7)	---	8.1 (5.9; 10.2)	11.8 (8.3; 15.3)
65–74	---	---	17.0 (13.8; 20.3)	12.0 (8.2; 15.6)
75–84	---	20.0 (17.6; 22.3)	22.2 (17.8; 26.7)	18.6 (15.6; 21.7)†
Myocardial Infarction: Women				
45–54	1.3 (1.0; 1.6)	---	---	1.0 (0.3; 1.7)
55–64	2.8 (2.2; 3.3)	---	*2.2 (1.1; 3.3)	3.5 (1.9; 5.0)
65–74	---	---	4.6 (2.9; 6.4)	5.9 (3.9; 7.8)
75–84	---	10.2 (8.8; 11.5)	11.6 (8.5; 14.6)	10.7 (7.9; 13.6)†
Angina Pectoris: Men				
45–54	2.8 (2.2; 3.4)	---	*5.5 (3.2; 7.9)	3.7 (1.7; 5.6)
55–64	5.3 (4.6; 6.1)	---	7.6 (5.5; 9.7)	8.3 (5.7; 10.9)
65–74	---	---	18.2 (14.9; 21.6)	10.5 (7.4; 13.5)
75–84	---	33.0 (30.2; 35.7)	23.1 (18.6; 27.6)	13.4 (11.1; 15.7)†
Angina Pectoris: Women				
45–54	5.5 (4.8; 6.1)	---	---	3.8 (2.3; 5.2)
55–64	6.7 (5.9; 7.5)	---	*3.4 (2.0; 4.7)	7.3 (4.8; 9.8)
65–74	---	---	7.7 (5.5; 9.9)	7.6 (4.9; 10.3)
75–84	---	22.9 (21.0; 24.8)	17.2 (13.6; 20.8)	12.1 (8.8; 15.4)†
Heart Failure: Men				
45–54	---	---	---	1.8 (0.7; 2.9)
55–64	1.1 (0.8; 1.4)	---	---	5.8 (3.7; 7.9)
65–74	---	---	6.4 (4.3; 8.5)	6.2 (3.8; 8.7)
75–84	---	13.6 (11.6; 15.7)	18.9 (14.7; 23.1)	9.8 (7.2; 12.5)†
Heart Failure: Women				
45–54	---	---	---	1.5 (0.3; 2.6)
55–64	0.7 (0.5; 1.0)	---	---	2.3 (1.2; 3.5)
65–74	---	---	*2.5 (1.2; 3.8)	4.1 (2.6; 5.6)
75–84	---	10.6 (9.2; 12.0)	14.2 (10.8; 17.5)	11.0 (8.1; 14.0)†
Stroke: Men				
45–54	1.3 (1.0; 1.7)	---	---	1.2 (0.4; 1.9)
55–64	3.2 (2.6; 3.8)	---	*2.5 (1.2; 3.7)	3.1 (1.7; 4.5)
65–74	---	---	8.1 (5.8; 10.5)	6.7 (4.9; 8.5)
75–84	---	10.0 (8.3; 11.8)	18.9 (14.7; 23.1)	12.1 (9.8; 14.4)†
Stroke: Women				
45–54	1.1 (0.8; 1.4)	---	---	2.1 (0.8; 3.4)
55–64	1.8 (1.4; 2.2)	---	*2.5 (1.3; 3.7)	3.0 (1.3; 4.7)
65–74	---	---	6.2 (4.2; 8.2)	6.3 (4.2; 8.4)
75–84	---	7.2 (6.1; 8.4)	14.6 (11.3; 18.0)	11.5 (8.8; 14.1)†

--- Rate is not available or RSE is more than 30 percent.
* Rate is unreliable; RSE is from 20 to 30 percent.
† Age ≥ 75.

Table 3–2. Prevalence (%) and 95% CI of Hypertension by Age, Sex, and Study and NHANES

Age	ARIC Cohort	CHS	CARDIA	FHS	MESA	SHS	NHANES
Men							
35–44	---	---	13.3 (11.6; 14.9)*	†21.7 (11.2; 32.1)	---	---	17.1 (13.8; 20.4)
45–54	27.7 (26.2; 29.3)	---	---	29.4 (24.6; 34.2)	22.6 (19.9; 25.2)	35.7 (32.7; 38.8)	30.9 (25.8; 36.0)
55–64	40.9 (39.2; 42.5)	---	---	47.3 (43.2; 51.4)	38.6 (35.4; 41.7)	42.3 (38.2; 46.3)	44.9 (41.4; 48.4)
65–74	---	---	---	63.7 (59.4; 68.1)	55.1 (52.0; 58.3)	51.6 (46.0; 57.2)	58.9 (53.2; 64.6)
75–84	---	60.8 (57.8; 63.9)	---	72.2 (66.6; 77.8)	58.6 (54.3; 62.9)	---	68.4 (64.7; 72.1)‡
85–94	---	59.0 (52.9; 65.2)	---	76.8 (70.1; 83.6)	---	---	
Women							
35–44	---	---	11.1 (9.8; 12.5)*	---	---	---	15.1 (12.6; 17.6)
45–54	28.9 (27.6; 30.2)	---	---	21.0 (17.3; 24.7)	23.5 (20.9; 26.2)	28.2 (25.7; 30.7)	31.7 (27.6; 35.8)
55–64	43.6 (42.0; 45.2)	---	---	41.3 (37.6; 45.0)	43.8 (40.7; 46.8)	43.2 (40.0; 46.4)	53.9 (49.6; 58.2)
65–74	---	---	---	56.7 (52.5; 61.0)	56.5 (53.5; 59.5)	57.5 (53.1; 61.8)	72.5 (68.2; 76.8)
75–84	---	67.8 (65.4; 70.1)	---	75.4 (70.8; 79.8)	69.3 (65.5; 73.1)	---	82.8 (80.1; 85.5)‡
85–94	---	72.8 (68.4; 77.1)	---	80.5 (76.3; 84.7)	---	---	

--- Rate is not available or RSE is more than 30 percent.
* Ages 33–45.
† Rate is unreliable; RSE is from 20 to 30 percent.
‡ Ages ≥ 75.
Note: Hypertension is defined BP ≥ 140/90 or on medication in ARIC, FHS, MESA, SHS, and NHANES; that plus history of being told of hypertension in CHS, and self-report in CARDIA.

Table 3–3. Prevalence (%) and 95% CI of Peripheral Arterial Disease by Age, Sex, and Study

Age	ARIC Cohort	CHS	CARDIA	MESA	SHS
Men					
35–44	---	---	*1.2† (0.7; 1.7)	---	---
45–54	1.9 (1.4; 2.4)	---	---	---	*2.8 (1.7; 3.9)
55–64	4.3 (3.6; 5.0)	---	---	*2.4 (1.4; 3.4)	5.5 (3.5; 7.4)
65–74	---	---	---	7.1 (5.4; 8.7)	9.4 (6.0; 12.7)
75–84	---	4.4 (3.2; 5.6)	---	10.2 (7.6;12.8)	---
85–94	---	7.2 (4.3; 10.1)	---	---	---
Women					
35–44	---	---	2.9† (2.2; 3.7)	---	---
45–54	1.7 (1.4; 2.1)	---	---	*2.3 (1.3; 3.2)	4.0 (2.9; 5.0)
55–64	3.3 (2.7; 3.9)	---	---	3.9 (2.7; 5.0)	5.3 (3.8; 6.8)
65–74	---	---	---	5.9 (4.4; 7.3)	10.9 (8.0; 13.7)
75–84	---	2.7 (2.0; 3.4)	---	13.6 (10.7; 16.4)	---
85–94	---	*2.7 (1.3; 4.1)	---	---	---

--- Rate is not available or RSE is more than 30 percent.
* Rate is unreliable; RSE is from 20 to 30 percent.
† Ages 33–45.
Note: PAD in CARDIA is self-report; other studies use ABI, but CHS also uses surgery and physician or hospital diagnosis, and MESA also uses Rose/World Health Organization (WHO) criteria.

Cardiovascular Disease

The prevalence of CVD increases with age and reaches about 50 percent in men beginning at ages 75–84 and in women beginning at ages 85–94.

Chart 3–1
Prevalence of Cardiovascular Disease* by Age and Sex
FHS, 1998–2002

Percent of Population

Age	Men	Women
45–54	9.9	3.7 †
55–64	14.8	9.1
65–74	35.7	18.4
75–84	51.7	43.6
85–94	68.3	51.8

* CHD, HF, cerebrovascular accident, or intermittent claudication.
† Unreliable rate.
Data from Table 5–37.

For ages 33–39 and 40–45, the prevalence of CVD is higher in black women than in white women. It is also higher in black men than white men ages 40–45.

Chart 3–2
Prevalence of Cardiovascular Disease* by Age, Race, and Sex
CARDIA, 2000

Percent of Population

Age	White Men	Black Men	White Women	Black Women
33–39	12.1	15.7	11.7	19.9
40–45	17.2	28.8	18.7	34.1

* MI, angina pectoris, rheumatic heart disease, mitral valve prolapse, PAD, stroke, or hypertension.
Data from Table 5–23.

Cardiovascular Disease/Coronary Heart Disease

Chart 3–3
Age-Adjusted Prevalence of Cardiovascular Disease* by Race and Sex, Ages 70 and Over
CHS, 1999

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
38.8	44.4	35.6	41.3	43.7	33.4	40.6

* CHD, HF, stroke, TIA, or claudication.
Data from Table 5–12.

About 40 percent of persons ages ≥ 70 have CVD. The age-adjusted prevalence is not markedly different between men and women or between whites and blacks.

Chart 3–4
Age-Adjusted Prevalence of Coronary Heart Disease* by Race and Sex, Ages 45–64
ARIC Cohort, 1987–1989

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
4.6	7.6	2.1	8.1	5.7	1.7	3.0

* MI or history of MI, CABG surgery, or angioplasty of coronary artery.
Data from Table 5–2.

The age-adjusted prevalence of CHD (ages 45–64) is higher in men than in women overall, and both white and black. It is higher in white men than in black men, but higher in black women than in white women.

Coronary Heart Disease

From ages 70–74 to 85–89, the prevalence of CHD increases moderately in men and women, with higher rates in men.

Chart 3–5
Prevalence of Coronary Heart Disease* by Age and Sex
CHS, 1999

Percent of Population

Age	Men	Women
70–74	29.0	20.6
75–79	33.1	22.7
80–84	39.6	25.4
85–89	43.3	31.2

* History of MI, angina pectoris, CABG surgery, or angioplasty of coronary artery.
Data from Table 5–13.

From ages 55–64 to 75–84, the prevalence of CHD increases in men and women. It doubles with each 10-year increase in women.

Chart 3–6
Prevalence of Coronary Heart Disease* by Age and Sex
FHS, 1998–2002

Percent of Population

Age	Men	Women
55–64	11.7	5.4
65–74	28.3	11.1
75–84	34.2	26.4

* MI, angina pectoris, coronary insufficency, or fatal CHD.
Data from Table 5–38.

Coronary Heart Disease

Chart 3–7
Age-Adjusted Prevalence of Coronary Heart Disease* by Race and Sex, Ages 33–45
CARDIA, 2000

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
8.2	12.7	4.5	14.9	10.1	4.5	4.5

* CHD based on self-report: told of having heart attack or angina pectoris by doctor or nurse.
Data from Table 5–24.

The age-adjusted prevalence (ages 33–45) of CHD is higher in men than in women overall, and both white and black.

Chart 3–8
Prevalence of Coronary Heart Disease* by Age, Race, and Sex
ARIC Cohort, 1987–1989

Percent of Population

Age	White Men	Black Men	White Women	Black Women
45–54	5.4	4.0	1.0	2.2
55–64	12.4	8.4	2.9	4.2

* MI or history of MI, CABG surgery, or angioplasty of coronary artery.
Data from Table 5–2.

The prevalence of CHD is about twice as high at ages 55–64 as at ages 45–54 for all groups.

Myocardial Infarction

From ages 55–64 to 85–94, the prevalence of MI increases with age in men and women. The rates lag in women by about 20 years.

Chart 3–9
Prevalence of Myocardial Infarction* by Age and Sex
FHS, 1998–2002

Percent of Population

Age	Men	Women
55–64	8.1	2.2 †
65–74	17.1	4.6
75–84	22.2	11.6
85–94	27.7	14.4

* MI based on ECG evidence, hospital examination, or autopsy report of recent MI.
† Unreliable rate.
Data from Table 5–40.

The prevalence of MI is higher in white men than in white women. It approximately doubles between ages 45–54 and 55–64 for all groups.

Chart 3–10
Prevalence of Myocardial Infarction* by Age, Race, and Sex
ARIC Cohort, 1987–1989

Percent of Population

Age	White Men	Black Men	White Women	Black Women
45–54	4.2	3.9	0.9	2.1
55–64	10.2	7.5	2.3	3.9

* MI based on ECG or history of physician diagnosed MI, or self-reported hospitalized heart attack.
Data from Table 5–3.

Myocardial Infarction

Chart 3–11
Age-Adjusted Prevalence of Myocardial Infarction* by Race and Sex, Ages 45–64 ARIC Cohort, 1987–1989

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
3.9	6.3	1.9	6.6	5.3	1.5	2.8

* MI based on ECG or history of physician diagnosed MI, or self-reported hospitalized heart attack.
Data from Table 5–3.

The age-adjusted prevalence of MI (ages 45–64) is higher in men than in women overall, both white and black.

Chart 3–12
Age-Adjusted Prevalence of Myocardial Infarction* by Race and Sex, Ages 70 and Over CHS, 1999

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
12.1	17.7	9.0	16.1	14.5	9.2	8.9

* History of MI based on ECG evidence, physician diagnosis, or hospital discharge record.
Data from Table 5–14.

The age-adjusted prevalence of MI (ages ≥ 70) is higher in men than in women overall.

Angina Pectoris

The age-adjusted prevalence of angina pectoris (ages 45–64) is higher in women than in men overall, and both white and black.

Chart 3–13
Age-Adjusted Prevalence of Angina Pectoris* by Race and Sex, Ages 45–64
ARIC Cohort, 1987–1989

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
5.0	3.8	6.0	3.9	3.3	6.3	5.2

* Angina pectoris determined by Rose Questionnaire.
Data from Table 5–4.

The age-adjusted prevalence of angina pectoris (ages ≥ 70) is higher in white men than in white women.

Chart 3–14
Age-Adjusted Prevalence of Angina Pectoris* by Race and Sex, Ages 70 and Over
CHS, 1999

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
25.7	31.0	22.7	31.3	26.8	20.5	25.6

* History of angina pectoris based on medication use, CABG surgery or angioplasty of coronary artery, physician diagnosis, or hospital discharge record.
Data from Table 5–15.

Angina Pectoris

Chart 3–15
Prevalence of Angina Pectoris* by Age and Sex
FHS, 1998–2002

Percent of Population

Age	Men	Women
55–64	7.6	3.4†
65–74	18.2	7.7
75–84	23.1	17.2
85–94	30.2	14.4

* Angina pectoris based on physician interview of patient.
† Unreliable rate.
Data from Table 5–41.

The prevalence of angina pectoris is higher in men than in women at ages 65–74 and 85–94.

Chart 3–16
Prevalence of Angina Pectoris* by Age and Sex
CHS, 1999

Percent of Population

Age	Men	Women
70–74	23.2†	18.5
75–79	30.2	21.7
80–84	36.6	24.6
85–89	40.8	29.7
90–94	46.3	25.9

* History of angina pectoris based on medication use, CABG surgery or angioplasty of coronary artery, physician diagnosis, or hospital discharge record.
† Unreliable rate.
Data from Table 5–15.

For ages 75–79 to 90–94, the increase in prevalence of angina pectoris is greater in men than in women.

Angina Pectoris/Heart Failure

The prevalence of angina pectoris is higher in white women than in white men at ages 45–54.

Chart 3–17
Prevalence of Angina Pectoris* by Age, Race, and Sex
ARIC Cohort, 1987–1989

Percent of Population

Age	White Men	Black Men	White Women	Black Women
45–54	2.8	2.8†	6.1	4.2
55–64	5.7	4.0	6.6	6.9

* Angina pectoris determined by Rose Questionnaire.
† Unreliable rate.
Data from Table 5–4.

The increase in prevalence of heart failure in men and women is greater between ages 65–74 and 75–84 than between ages 75–84 and 85–94.

Chart 3–18
Prevalence of Heart Failure* by Age and Sex
FHS, 1998–2002

Percent of Population

Age	Men	Women
65–74	6.4	2.5†
75–84	18.9	14.2
85–94	23.8	20.0

* HF based on physician review of medical records and strict diagnostic criteria.
† Unreliable rate.
Data from Table 5–42.

Stroke

Chart 3–19
Prevalence of Stroke* by Age and Sex
FHS, 1998–2002

Percent of Population

Age	Men	Women
65–74	8.1	6.3
75–84	18.9	14.6
85–94	29.7	21.8

* CVA based on occurrence of stroke and either in-hospital examination or physician review of hospital records.
Data from Table 5–43.

The prevalence of stroke increases with age. At ages 85–94, the rate in men and women is about 3.5 times higher than those at ages 65–74.

Chart 3–20
Age-Adjusted Prevalence of Stroke/Transient Ischemic Attack* by Race and Sex, Ages 45–64
ARIC Cohort, 1987–1989

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
2.1	2.4	1.9	2.0	3.7	1.8	2.2

* Stroke/TIA based on self-reported prior physician diagnosis.
Data from Table 5–6.

The age-adjusted prevalence of stroke/TIA (ages 45–64) is highest in black men.

Peripheral Arterial Disease/Hypertension

The age-adjusted prevalence of PAD (ages 45–64) is higher in black men than in white men.

Chart 3–21
Age-Adjusted Prevalence of Peripheral Arterial Disease* by Race and Sex, Ages 45–64
ARIC Cohort, 1987–1989

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
2.6	2.9	2.3	2.4	4.4	2.1	3.0

* PAD based on ABI < 0.9 for men and < 0.85 for women.
Data from Table 5–8.

The age-adjusted prevalence of hypertension (ages 45–84) for men and women is higher in blacks than in whites, Asians, and Hispanics.

Chart 3–22
Age-Adjusted Prevalence of Hypertension* by Race/Ethnicity and Sex, Ages 45–84
MESA, 2000–2002

Percent of Population

Race/Ethnicity	Men	Women
Total	38.1	41.5
White	34.2	33.2
Asian†	31.1	34.4
Black	51.1	56.0
Hispanic	33.6	40.4

* Hypertension based on systolic BP ≥ 140 mmHg, diastolic BP ≥ 90 mmHg, or taking antihypertensive medication.
† Predominantly of Chinese descent.
Data from Table 5–64.

Chronic Obstructive Pulmonary Disease

Chart 3–23
Age-Adjusted Prevalence of Chronic Obstructive Pulmonary Disease* by Race and Sex, Ages 45–64
ARIC Cohort, 1987–1989

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
4.4	3.5	5.1	3.7	2.7	5.6	3.8

* COPD based on self-reported prior physician diagnosis of chronic bronchitis or emphysema.
Data from Table 5–10.

The age-adjusted prevalence of COPD (ages 45–64) is highest in white women.

Chart 3–24
Age-Adjusted Prevalence of Chronic Obstructive Pulmonary Disease* by Race and Sex, Ages 33–45
CARDIA, 2000

Percent of Population

Total	Men	Women	White Men	Black Men	White Women	Black Women
6.9	5.3	8.2	4.8	5.8	8.4	8.4

* Chronic bronchitis or emphysema based on self-report of diagnosis by doctor or nurse.
Data from Table 5–36.

The age-adjusted prevalence of COPD (ages 33–45) is higher in women than in men, both overall and white.

Asthma

For ages 45–54 to 65–74, the prevalence of asthma is higher in women than in men.

Chart 3–25
Prevalence of Asthma* by Age and Sex
MESA, 2000–2002

Percent of Population

Age	Men	Women
45–54	7.3	16.9
55–64	8.1	11.8
65–74	6.4	9.5
75–84	8.6	7.9

* Asthma based on self-reported physician diagnosis.
Data from Table 5–66.

The age-adjusted prevalence of asthma (ages 45–84) is higher in women than in men overall, white, black, and Hispanic, but not Asian.

Chart 3–26
Age-Adjusted Prevalence of Asthma*
by Race/Ethnicity and Sex, Ages 45–84
MESA, 2000–2002

Percent of Population

Race/Ethnicity	Men	Women
Total	7.5	12.9
White	8.8	11.7
Asian†	7.6	4.4‡
Black	7.4	16.2
Hispanic	5.5	14.9

* Asthma based on self-reported physician diagnosis.
† Predominantly of Chinese descent.
‡ Unreliable rate.
Data from Table 5–66.

4. Incidence Tables by Study

This chapter contains incidence statistics for selected cardiovascular and lung diseases from five NHLBI-supported epidemiologic studies: ARIC (Cohort and Surveillance), CHS, FHS, and SHS. Two studies, CARDIA and MESA, had insufficient numbers of cases to be included. Several of the tables are the basis for the charts in Chapter 2, but not all of the data are charted.

The tables provided by the study investigators have been modified for brevity and uniformity of presentation. Age-adjusted rates were calculated using the adjustment factors given in Appendix A for each study.

Incidence Tables

The incidence tables contain data by age, race, and sex. Specifically, they contain the number of new cases (N) of a particular disease occurring in the given time period, the sum of the number of person years (PY) of observation for individuals within the specific age group during the time period, and incidence rates expressed in 1000 PY. The rates can be considered average annual rates over the data years indicated.

Incidence rates for CHS and FHS tables are calculated from PY values expressed to two decimal places, not by the rounded whole numbers given in the tables.

For the ARIC surveillance study (Tables 4–9 and 4–10), Pop, the average annual population size (estimated from interpolation of the U.S. Census data), is given instead of PY. To determine the rate, N must be divided by the number of surveillance years (15) to get the average annual number of new cases for the surveillance period before dividing by Pop. The rate is then multiplied by 1,000.

ARIC Cohort Incidence Tables

Table 4–1. Incidence of Coronary Heart Disease by Age, Race, and Sex, 1987–2001

[MI or death from CHD]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	110	39,324	2.80	76	15,834	4.80	34	23,490	1.45
55–64	442	89,975	4.91	269	37,717	7.13	173	52,258	3.31
65–74	399	48,740	8.19	240	21,558	11.13	159	27,182	5.85
75–84	25	2,855	*8.76	12	1,285	*9.34	13	1,570	*8.28
45–84	976	180,893	5.40	597	76,393	7.81	379	104,500	3.63
Age-adjusted			5.22			7.28			3.73

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	54	11,513	4.69	22	4,321	*5.09	20	15,788	*1.27	14	7,702	*1.82
55–64	204	29,316	6.96	65	8,401	7.74	101	36,926	2.74	72	15,331	4.70
65–74	183	17,381	10.53	57	4,176	13.65	105	20,318	5.17	54	6,864	7.87
75–84	9	1,043	*	3	242	*	9	1,212	*	4	359	*
45–84	450	59,253	7.59	147	17,140	8.58	235	74,244	3.17	144	30,256	4.76
Age-adjusted			6.97			8.46			3.26			5.03

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–2. Incidence of Myocardial Infarction by Age, Race, and Sex, 1987–2001

[MI based on expert committee review of hospital records]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	93	39,702	2.34	64	16,027	3.99	29	23,675	1.22
55–64	398	91,184	4.36	237	38,438	6.17	161	52,746	3.05
65–74	334	49,601	6.73	205	22,130	9.26	129	27,471	4.70
75–84	20	2,926	*6.84	7	1,335	*	13	1,590	*8.17
45–84	845	183,412	4.61	513	77,930	6.58	332	105,482	3.15
Age-adjusted			4.35			5.77			3.33

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	46	11,701	3.93	18	4,326	*4.16	18	15,963	*1.13	11	7,711	*1.43
55–64	187	30,001	6.23	50	8,437	5.93	100	37,391	2.67	61	15,355	3.97
65–74	169	17,928	9.43	36	4,201	8.57	92	20,585	4.47	37	6,886	5.37
75–84	5	1,093	*	2	242	*	8	1,227	*	5	363	*
45–84	407	60,723	6.70	106	17,206	6.16	218	75,167	2.90	114	30,315	3.76
Age-adjusted			5.71			6.05			2.92			4.54

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

ARIC Cohort Incidence Tables

Table 4–3. Incidence of Angina Pectoris by Age, Race, and Sex, 1987–2001

[Angina pectoris determined by Rose Questionnaire]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	451	37,619	11.99	148	15,796	9.37	303	21,823	13.88
55–64	824	65,339	12.61	346	29,698	11.65	478	35,641	13.41
65–74	317	25,263	12.55	157	12,279	12.79	160	12,983	12.32
45–74	1,592	128,221	12.42	651	57,774	11.27	941	70,447	13.36
Age-adjusted			12.31			10.84			13.38

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	99	11,652	8.50	49	4,144	11.82	156	14,773	10.56	147	7,050	20.85
55–64	282	23,639	11.93	64	6,059	10.56	289	25,840	11.18	189	9,801	19.28
65–74	136	9,899	13.74	21	2,380	*8.82	128	9,792	13.07	32	3,191	10.03
45–74	517	45,191	11.44	134	12,583	10.65	573	50,405	11.37	368	20,042	18.36
Age-adjusted			10.74			10.75			11.32			17.89

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–4. Incidence of Heart Failure by Age, Race, and Sex, 1987–2001

[HF based on hospital records]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	79	40,959	1.93	39	16,829	2.32	40	24,130	1.66
55–64	479	95,469	5.02	258	41,382	6.23	221	54,087	4.09
65–74	635	51,997	12.21	339	24,009	14.12	296	27,988	10.58
75–84	54	2,984	18.10	30	1,411	21.26	24	1,573	*15.26
45–84	1,247	191,409	6.51	666	83,631	7.96	581	107,778	5.39
Age-adjusted			6.96			8.24			5.90

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	28	12,304	2.28	11	4,525	*2.43	19	16,237	*1.17	21	7,893	*2.66
55–64	176	32,438	5.43	82	8,944	9.17	110	38,317	2.87	111	15,770	7.04
65–74	272	19,603	13.88	67	4,406	15.21	185	20,995	8.81	111	6,992	15.87
75–84	24	1,158	*20.72	6	253	*	18	1,214	*14.83	6	359	*
45–84	500	65,503	7.63	166	18,128	9.16	332	76,763	4.32	249	31,015	8.03
Age-adjusted			7.89			9.60			4.97			8.32

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

ARIC Cohort Incidence Tables

Table 4–5. Incidence of Stroke/Transient Ischemic Attack by Age, Race, and Sex, 1987–2001

[Stroke/TIA based on self-reported physician diagnosis]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	162	39,245	4.13	69	16,055	4.30	93	23,190	4.01
55–64	654	94,823	6.90	311	40,802	7.62	343	54,021	6.35
65–74	654	54,646	11.97	321	24,885	12.90	333	29,762	11.19
75–84	84	5,010	16.77	42	2,288	18.36	42	2,722	15.43
45–84	1,554	193,724	8.02	743	84,029	8.84	811	109,695	7.39
Age-adjusted			8.11			8.77			7.59

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	28	11,823	2.37	41	4,231	9.69	38	15,580	2.44	55	7,610	7.23
55–64	197	32,080	6.14	114	8,722	13.07	183	38,033	4.81	160	15,988	10.01
65–74	248	20,382	12.17	73	4,502	16.21	217	22,029	9.85	116	7,733	15.00
75–84	37	1,857	19.93	5	431	*	32	2,038	15.70	10	684	*
45–84	510	66,143	7.71	233	17,886	13.03	470	77,680	6.05	341	32,014	10.65
Age-adjusted			7.67			12.13			6.32			10.50

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–6. Incidence of Stroke by Age, Race, and Sex, 1987–2001

[Ischemic stroke based on expert committee review of hospital records]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	48	40,774	1.18	24	16,777	*1.43	24	23,997	*1.00
55–64	248	95,288	2.60	121	41,356	2.93	127	53,933	2.35
65–74	273	52,534	5.20	155	24,280	6.38	118	28,254	4.18
75–84	32	3,098	10.33	18	1,481	*12.15	14	1,617	*8.66
45–84	601	191,695	3.14	318	83,894	3.79	283	107,801	2.63
Age-adjusted			3.58			4.25			3.02

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	10	12,337	*	14	4,440	*3.15	10	16,212	*	14	7,786	*1.80
55–64	67	32,591	2.06	54	8,765	6.16	48	38,223	1.26	79	15,710	5.03
65–74	110	20,011	5.50	45	4,269	10.54	67	21,115	3.17	51	7,140	7.14
75–84	15	1,226	*12.23	3	255	*	10	1,236	*	4	380	*
45–84	202	66,165	3.05	116	17,729	6.54	135	76,785	1.76	148	31,016	4.77
Age-adjusted			3.61			6.57			2.30			4.88

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

ARIC Cohort Incidence Tables

Table 4–7. Incidence of Peripheral Arterial Disease by Age, Race, and Sex, 1987–2001

[PAD based on ABI < 0.9 for men and < 0.85 for women]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	90	24,203	3.72	37	9,989	3.70	53	14,214	3.73
55–64	269	35,558	7.56	111	16,037	6.92	158	19,521	8.09
65–74	147	11,891	12.36	76	5,965	12.74	71	5,926	11.98
45–74	506	71,652	7.06	224	31,991	7.00	282	39,662	7.11
Age-adjusted			6.86			6.75			6.94

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	27	7,684	3.51	10	2,305	*	38	9,876	3.85	15	4,338	*3.46
55–64	93	13,384	6.95	18	2,653	*6.78	118	14,632	8.06	40	4,889	8.18
65–74	64	5,088	12.58	12	877	*13.69	53	4,629	11.45	18	1,297	*13.88
45–74	184	26,156	7.03	40	5,835	6.86	209	29,137	7.17	73	10,524	6.94
Age-adjusted			6.63			7.22			6.87			7.28

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Note: Data for ages 75–84 are not available.

Table 4–8. Incidence of Asthma by Age, Race, and Sex, 1987–2001

[Asthma based on hospital records]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	20	38,366	*0.52	9	15,838	*	11	22,528	*0.49
55–64	103	90,718	1.14	26	39,671	0.66	77	51,047	1.51
65–74	114	50,732	2.25	38	23,773	1.60	76	26,959	2.82
75–84	12	3,015	*3.98	5	1,461	*	7	1,554	*
45–84	249	182,831	1.36	78	80,743	0.97	171	102,088	1.68
Age-adjusted			1.49			1.18			1.76

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	8	11,578	*	1	4,260	*	6	15,215	*	5	7,312	*
55–64	17	31,052	*0.55	9	8,619	*	55	36,109	1.52	22	14,939	*1.47
65–74	31	19,384	1.60	7	4,389	*	54	20,083	2.69	22	6,876	*3.20
75–84	2	1,203	*	3	258	*	4	1,198	*	3	356	*
45–84	58	63,217	0.92	20	17,526	*1.14	119	72,606	1.64	52	29,483	1.76
Age-adjusted			*0.96			*			1.54			*2.44

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

ARIC Surveillance Incidence Tables

Table 4–9. Incidence of Coronary Heart Disease by Age, Race, and Sex, 1987–2001

[Hospitalized MI or death from CHD]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**
35–44	1,378	116,647	0.79	1,011	56,457	1.19	367	60,190	0.41
45–54	3,183	88,553	2.40	2,253	42,257	3.55	930	46,296	1.34
55–64	4,979	63,827	5.20	3,251	29,606	7.32	1,727	34,221	3.36
65–74	6,662	48,388	9.18	3,805	20,796	12.20	2,857	27,592	6.90
35–74	16,202	317,415	3.40	10,320	149,116	4.61	5,881	168,299	2.33
Age-adjusted			3.35			4.70			2.21

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**
35–44	688	42,286	1.08	323	14,171	1.52	174	43,564	0.27	193	16,626	0.77
45–54	1,682	33,169	3.38	571	9,088	4.19	569	35,480	1.07	361	10,816	2.23
55–64	2,617	24,398	7.15	635	5,208	8.13	1,142	27,448	2.77	586	6,772	5.77
65–74	3,115	17,501	11.87	690	3,295	13.96	2,151	22,500	6.37	707	5,092	9.26
35–74	8,102	117,354	4.60	2,219	31,762	4.66	4,036	128,992	2.09	1,847	39,307	3.13
Age-adjusted			4.53			5.42			1.89			3.42

Rate is per 1,000 person years.

Table 4–10. Incidence of Myocardial Infarction by Age, Race, and Sex, 1987–2001

[MI diagnosis by computer algorithm based on symptoms, ECG, and cardio-biomarkers]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**
35–44	1,324	126,345	0.70	969	61,554	1.05	355	64,791	0.37
45–54	3,132	95,646	2.18	2,212	45,831	3.22	921	49,815	1.23
55–64	4,676	70,056	4.45	3,057	32,572	6.26	1,618	37,484	2.88
65–74	5,952	53,559	7.41	3,333	23,049	9.64	2,619	30,510	5.72
35–74	15,084	345,606	2.91	9,571	163,006	3.91	5,513	182,600	2.01
Age-adjusted			2.85			3.96			1.90

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**	**N**	**Pop**	**Rate**
35–44	688	46,872	0.98	281	14,682	1.28	178	48,045	0.25	177	16,746	0.70
45–54	1,717	36,578	3.13	495	9,253	3.57	602	38,932	1.03	319	10,883	1.95
55–64	2,559	27,299	6.25	499	5,273	6.31	1,147	30,658	2.49	471	6,826	4.60
65–74	2,821	19,723	9.54	512	3,326	10.26	2,072	25,375	5.44	547	5,135	7.10
35–74	7,785	130,472	3.98	1,787	32,534	3.66	3,999	143,010	1.86	1,514	39,590	2.55
Age-adjusted			3.90			4.25			1.68			2.77

Rate is per 1,000 person years.

CHS Incidence Tables

Table 4–11. Incidence of Cardiovascular Disease by Age, Race, and Sex, 1989–2000

[CHD, HF, stroke, TIA, or claudication]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	121	3,255	37.17	55	1,079	50.98	66	2,176	30.33
70–74	490	10,315	47.50	248	3,613	68.65	242	6,702	36.11
75–79	687	10,878	63.16	331	3,854	85.88	356	7,023	50.69
80–84	534	5,812	91.88	252	2,110	119.42	282	3,702	76.18
85–89	263	2,285	115.12	121	851	142.20	142	1,434	99.05
90–94	99	594	166.76	44	274	160.72	55	320	171.92
≥95	25	71	352.11	14	36	*385.67	11	35	*314.29
≥65	2,219	33,209	66.82	1,065	11,817	90.12	1,154	21,392	53.94
Age-adjusted			67.23			87.35			56.11

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	46	910	50.56	9	169	*	54	1,863	28.99	12	314	*38.24
70–74	214	3,102	68.99	34	511	66.54	193	5,786	33.36	49	917	53.46
75–79	293	3,430	85.42	38	424	89.56	299	6,236	47.95	57	788	72.38
80–84	229	1,905	120.23	23	206	*111.91	253	3,264	77.52	29	438	66.21
85–89	109	763	142.80	12	88	*137.00	125	1,235	101.18	17	198	*85.76
90–94	41	249	164.53	3	25	*	44	269	163.49	11	51	*216.58
≥95	11	31	*351.10	3	5	*	9	35	*259.52	2	0	*
≥65	943	10,390	90.76	122	1,427	85.50	977	18,687	52.28	177	2,705	64.62
Age-adjusted			87.09			88.17			53.87			63.15

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–12. Incidence of Coronary Heart Disease by Age, Race, and Sex, 1989–2000

[MI, angina pectoris, CABG, angioplasty, or fatal atherosclerotic CHD]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	67	3,468	19.32	30	1,160	25.86	37	2,308	16.03
70–74	242	11,281	21.45	131	4,031	32.50	111	7,250	15.31
75–79	330	12,278	26.88	170	4,460	38.12	160	7,818	20.47
80–84	258	6,912	37.33	121	2,541	47.61	137	4,371	31.35
85–89	122	2,855	42.73	55	1,092	50.35	67	1,763	38.01
90–94	45	781	57.62	25	325	76.82	20	456	*43.90
≥95	13	120	*108.66	10	65	*	3	55	*
≥65	1,077	37,694	28.57	542	13,675	39.63	535	24,019	22.27
Age-adjusted			28.19			38.38			22.05

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	25	969	*25.79	5	191	*	31	1,961	15.81	6	347	*
70–74	113	3,420	33.04	18	611	*29.45	92	6,194	14.85	19	1,056	*18.00
75–79	152	3,924	38.73	18	536	*33.61	133	6,888	19.31	27	930	29.03
80–84	106	2,269	46.71	15	272	*55.18	123	3,811	32.28	14	560	*25.00
85–89	50	983	50.89	5	110	*	56	1,511	37.05	11	251	*43.76
90–94	23	295	*77.85	2	30	*	16	382	*41.90	4	74	*
≥95	8	55	*	2	10	*	2	53	*	1	2	*
≥65	477	10,947	43.57	65	1,759	36.95	453	20,417	22.19	82	3,220	25.47
Age-adjusted			38.46			37.77			21.42			*29.37

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Incidence Tables

Table 4–13. Incidence of Fatal and Nonfatal Myocardial Infarction by Age, Race, and Sex, 1989–2000

[Fatal MI based on death certificates, medical records, and interviews with attending physicians, next-of-kin, and witnesses; nonfatal MI based on symptoms and ECG evidence]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	28	3,827	7.32	16	1,322	*12.10	12	2,505	*4.79
70–74	124	12,795	9.69	76	4,706	16.15	48	8,090	5.93
75–79	185	14,375	12.87	99	5,423	18.26	86	8,952	9.61
80–84	144	8,416	17.11	79	3,227	24.48	65	5,189	12.53
85–89	70	3,589	19.50	37	1,375	26.91	33	2,214	14.90
90–94	27	982	27.49	14	422	*33.16	13	560	*23.22
≥95	5	170	*	2	82	*	3	88	*
≥65	583	29,780	19.58	323	16,557	19.51	260	27,597	9.42
Age-adjusted			12.37			18.16			8.95

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	14	1,098	*12.75	2	224	*	10	2,107	*	2	398	*
70–74	66	4,006	16.47	10	699	*	40	6,871	5.82	8	1,218	*
75–79	89	4,835	18.41	10	588	*	74	7,820	9.46	12	1,132	*10.60
80–84	72	2,922	24.64	7	305	*	56	4,503	12.44	9	686	*
85–89	32	1,246	25.69	5	129	*	29	1,890	15.34	4	324	*
90–94	14	386	*36.29	0	36	*	12	464	*25.87	1	96	*
≥95	2	73	*	0	10	*	2	66	*	1	22	*
≥65	289	14,566	19.84	34	1,991	17.08	223	23,720	9.40	37	3,191	11.60
Age-adjusted			18.54			15.90			8.94			8.99

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–14. Incidence of Fatal Myocardial Infarction by Age, Race, and Sex, 1989–2000

[Fatal MI based on death certificates, medical records, and interviews with attending physicians, next-of-kin, and witnesses]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	3	3,827	*	3	1,322	*	0	2,505	*
70–74	27	12,795	2.11	18	4,706	*3.83	9	8,090	*
75–79	41	14,375	2.85	25	5,423	*4.61	16	8,952	*1.79
80–84	43	8,416	5.11	23	3,227	*7.13	20	5,189	*3.85
85–89	29	3,589	8.08	19	1,375	*13.82	10	2,214	*
90–94	14	982	*14.26	8	422	*	6	560	*
≥95	2	170	*	1	82	*	1	88	*
≥65	159	29,780	5.34	97	16,557	5.86	62	27,597	2.25
Age-adjusted			3.31			5.42			2.05

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	2	1,098	*	1	224	*	0	2,107	*	0	398	*
70–74	15	4,006	*3.74	3	699	*	9	6,871	*	0	1,218	*
75–79	23	4,835	*4.76	2	588	*	12	7,820	*1.53	4	1,132	*
80–84	21	2,922	*7.19	2	305	*	17	4,503	*3.78	3	686	*
85–89	17	1,246	*13.65	2	129	*	10	1,890	*	0	324	*
90–94	8	386	*	0	36	*	6	464	*	0	96	*
≥95	1	73	*	0	10	*	1	66	*	0	22	*
≥65	87	14,566	5.97	10	1,862	*	55	23,720	2.32	7	3,191	2.19
Age-adjusted			5.39			*			2.21			*

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Incidence Tables

Table 4–15. Incidence of Nonfatal Myocardial Infarction by Age, Race, and Sex, 1989–2000

[Nonfatal MI based on ECG evidence or symptoms plus abnormal enzymes levels and ECG evidence]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	25	3,827	*6.53	13	1,322	*9.83	12	2,505	*4.79
70–74	97	12,795	7.58	58	4,706	12.33	39	8,090	4.82
75–79	144	14,375	10.02	74	5,423	13.65	70	8,952	7.82
80–84	101	8,416	12.00	56	3,227	17.36	45	5,189	8.67
85–89	41	3,589	11.42	18	1,375	*13.09	23	2,214	*10.39
90–94	13	982	*13.24	6	422	*	7	560	*
≥95	3	170	*	1	82	*	2	88	*
≥65	424	29,780	14.24	226	16,557	13.65	198	27,597	7.17
Age-adjusted			9.05			12.76			6.90

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	12	1,098	*10.93	1	224	*	10	2,107	*	2	398	*
70–74	51	4,006	12.73	7	699	*	31	6,871	4.51	8	1,218	*
75–79	66	4,835	13.65	8	588	*	62	7,820	7.93	8	1,132	*
80–84	51	2,922	17.45	5	305	*	39	4,503	8.66	6	686	*
85–89	15	1,246	*12.04	3	129	*	19	1,890	*10.05	4	324	*
90–94	6	386	*	0	36	*	6	464	*	1	96	*
≥95	1	73	*	0	10	*	1	66	*	1	22	*
≥65	202	14,566	13.87	24	1,862	*	168	23,720	7.08	30	3,191	9.40
Age-adjusted			13.16			*10.75			6.73			*7.62

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–16. Incidence of Angina Pectoris by Age, Race, and Sex, 1989–2000

[Angina pectoris diagnosed and treated by physician or chest pain plus CABG, obstruction of coronary artery, or evidence by Rose Questionnaire]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	63	3,571	17.64	26	1,220	21.31	37	2,351	15.74
70–74	226	11,627	19.44	124	4,252	29.17	102	7,375	13.83
75–79	306	12,656	24.18	163	4,716	34.56	143	7,940	18.01
80–84	214	7,134	30.00	104	2,691	38.65	110	4,443	24.76
85–89	84	2,964	28.34	41	1,157	35.45	43	1,808	23.79
90–94	24	821	*29.23	11	344	*31.96	13	477	*27.26
≥95	3	131	*	1	73	*	2	58	*
≥65	920	38,904	23.65	470	8,579	54.78	450	24,452	18.40
Age-adjusted			22.51			29.92			18.25

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	23	1,019	*22.56	3	201	*	31	2,000	15.50	6	351	*
70–74	108	3,604	29.97	16	648	*24.70	86	6,290	13.67	16	1,086	*14.74
75–79	145	4,143	35.00	18	573	*31.40	121	6,985	17.32	22	955	*23.05
80–84	93	2,406	38.66	11	286	*38.52	96	3,874	24.78	14	569	*24.58
85–89	36	1,045	34.46	5	112	*	35	1,550	22.58	8	258	*
90–94	10	314	*	1	30	*	10	403	*	3	74	*
≥95	1	63	*	0	10	*	1	56	*	1	2	*
≥65	416	10,189	40.83	54	1,658	32.57	380	21,158	17.96	70	3,294	21.25
Age-adjusted			30.50			26.97			17.62			*25.73

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Incidence Tables

Table 4–17. Incidence of Heart Failure by Age, Race, and Sex, 1989–2000

[HF based on physician diagnosis and treatment]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	36	4,005	8.99	17	1,442	*11.79	19	2,563	*7.41
70–74	165	13,433	12.28	85	5,164	16.46	80	8,269	9.67
75–79	307	15,033	20.42	158	5,957	26.52	149	9,076	16.42
80–84	277	8,569	32.32	136	3,510	38.75	141	5,059	27.87
85–89	173	3,518	49.17	88	1,420	61.99	85	2,099	40.50
90–94	59	901	65.49	25	393	63.55	34	508	66.99
≥95	9	131	*	7	63	*	2	67	*
≥65	1,026	44,689	22.96	516	17,950	28.75	510	27,640	18.45
Age-adjusted			21.27			26.73			17.60

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	14	1,220	*11.48	3	223	*	16	2,169	*7.38	3	394	*
70–74	72	4,440	16.22	13	724	*17.95	60	7,041	8.52	20	1,228	*16.29
75–79	145	5,329	27.21	13	628	*20.70	125	7,950	15.72	24	1,126	*21.32
80–84	125	3,197	39.10	11	313	*35.16	120	4,420	27.15	21	640	*32.83
85–89	81	1,299	62.34	7	120	*	73	1,807	40.40	12	292	*41.08
90–94	24	361	*66.41	1	32	*	29	419	69.27	5	89	*
≥95	7	57	*	0	6	*	2	62	*	0	5	*
≥65	468	15,904	29.43	48	1,321	36.33	425	23,867	17.81	85	3,773	22.53
Age-adjusted			27.04			23.09			17.15			20.39

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–18. Incidence of Fatal and Nonfatal Stroke by Age, Race, and Sex, 1989–2000

[Nonfatal stroke based on physical examination and laboratory data;
fatal stroke based on death certificates, medical records, and interviews]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	19	4,037	*4.71	9	1,454	*	10	2,583	*
70–74	120	13,500	8.89	57	5,152	11.06	63	8,349	7.55
75–79	201	15,265	13.17	94	6,002	15.66	107	9,262	11.55
80–84	192	8,897	21.58	70	3,661	19.12	122	5,236	23.30
85–89	86	3,783	22.73	31	1,598	19.39	55	2,185	25.17
90–94	38	1,004	37.86	11	461	*23.85	27	543	49.76
≥95	7	149	*	2	66	*	5	83	*
≥65	663	46,636	14.22	274	18,395	14.90	389	28,240	13.77
Age-adjusted			12.96			13.16			13.04

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	9	1,219	*	0	235	*	7	2,188	*	3	395	*
70–74	49	4,425	11.07	8	727	*	49	7,135	6.87	14	1,214	*11.54
75–79	86	5,399	15.93	8	603	*	85	8,122	10.47	22	1,140	*19.29
80–84	65	3,363	19.33	5	298	*	108	4,552	23.73	14	684	*20.48
85–89	27	1,468	18.39	4	130	*	51	1,865	27.35	4	320	*
90–94	11	422	*26.04	0	39	*	21	463	*45.36	6	80	*
≥95	1	61	*	1	5	*	5	69	*	0	14	*
≥65	248	16,358	15.16	26	1,907	*	326	24,393	13.36	63	3,164	19.91
Age-adjusted			13.40			*12.82			12.70			15.44

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Incidence Tables

Table 4–19. Incidence of Fatal Stroke by Age, Race, and Sex, 1989–2000

[Fatal stroke based on death certificates, medical records, and interviews with attending physicians, next-of-kin, and witnesses]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	1	4,037	*	0	1,454	*	1	2,583	*
70–74	10	13,500	*	5	5,152	*	5	8,349	*
75–79	23	15,265	*1.51	11	6,002	*1.83	12	9,262	*1.30
80–84	24	8,897	*2.70	13	3,661	*3.55	11	5,236	*2.10
85–89	16	3,783	*4.23	8	1,598	*	8	2,185	*
90–94	8	1,004	*	0	461	*	8	543	*
≥95	2	149	*	0	66	*	2	83	*
≥65	82	46,486	1.76	37	18,329	2.02	45	28,157	1.60
Age-adjusted			1.71			1.52			1.90

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	0	1,219	*	0	235	*	1	2,188	*	0	395	*
70–74	5	4,425	*	0	727	*	2	7,135	*	3	1,214	*
75–79	11	5,399	*2.04	0	603	*	10	8,122	*	2	1,140	*
80–84	12	3,363	*3.57	1	298	*	10	4,552	*	1	684	*
85–89	5	1,468	*	3	130	*	8	1,865	*	0	320	*
90–94	0	422	*	0	39	*	7	463	*	1	80	*
≥95	0	61	*	0	5	*	2	69	*	0	14	*
≥65	33	16,358	2.02	4	1,907	*	40	24,393	1.64	7	3,164	*
Age-adjusted			1.49			*			*1.96			*

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–20. Incidence of Nonfatal Stroke by Age, Race, and Sex, 1989–2000

[Stroke based on physical examination or laboratory data]

Part A

	Total			Men			Female		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	18	4,037	*4.46	9	1,454	*	9	2,583	*
70–74	110	13,500	8.15	52	5,152	10.09	58	8,349	6.95
75–79	178	15,265	11.66	83	6,002	13.83	95	9,262	10.26
80–84	168	8,897	18.88	57	3,661	15.57	111	5,236	21.20
85–89	70	3,783	18.5	23	1,598	*14.39	47	2,185	21.51
90–94	30	1,004	29.89	11	461	*23.85	19	543	*35.01
≥95	5	149	*	2	66	*	3	83	*
≥65	579	46,636	12.42	237	18,395	12.88	342	28,240	12.11
Age-adjusted			11.25			11.64			11.14

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	9	1,219	*	0	235	*	6	2,188	*	3	395	*
70–74	44	4,425	9.94	8	727	*	47	7,135	6.59	11	1,214	*9.06
75–79	75	5,399	13.89	8	603	*	75	8,122	9.23	20	1,140	*17.54
80–84	53	3,363	15.76	4	298	*	98	4,552	21.53	13	684	*19.02
85–89	22	1,468	*14.99	1	130	*	43	1,865	23.06	4	320	*
90–94	11	422	*26.04	0	39	*	14	463	*30.24	5	80	*
≥95	1	61	*	1	5	*	3	69	*	0	14	*
≥65	215	16,358	13.14	22	1,907	*	286	24,393	11.72	56	3,164	17.70
Age-adjusted			11.91			*10.57			10.73			13.82

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Incidence Tables

Table 4–21. Incidence of Stroke or Transient Ischemic Attack by Age, Race, and Sex, 1989–2000

[Stroke and TIA based on physical examination or laboratory data]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	24	3,980	*6.03	11	1,429	*7.70	13	2,551	*5.10
70–74	157	13,232	11.87	73	5,035	14.50	84	8,197	10.25
75–79	261	14,844	17.58	120	5,810	20.65	141	9,034	15.61
80–84	221	8,537	25.89	80	3,503	22.84	141	5,034	28.01
85–89	93	3,634	25.59	33	1,519	21.72	60	2,114	28.38
90–94	43	969	44.40	14	444	*31.52	29	524	55.30
≥95	8	146	*	4	64	*	4	83	*
≥65	807	44,373	18.19	335	17,805	18.82	472	27,537	17.14
Age-adjusted			16.23			16.86			15.87

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	11	1,203	*9.14	0	225	*	10	2,156	*	3	395	*
70–74	62	4,331	14.31	11	704	*15.62	65	7,007	9.28	19	1,190	*15.97
75–79	112	5,220	21.45	8	590	*	115	7,916	14.53	26	1,118	23.25
80–84	75	3,211	23.36	5	292	*	125	4,372	28.59	16	662	*24.19
85–89	29	1,394	20.81	4	126	*	55	1,806	30.45	5	308	*
90–94	14	405	*34.54	0	39	*	24	447	*53.63	5	77	*
≥95	3	59	*	1	5	*	4	68	*	0	14	*
≥65	306	15,765	19.41	29	1,265	22.92	398	23,773	16.74	74	3,764	19.66
Age-adjusted			17.34			*14.18			15.58			17.86

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–22. Incidence of Claudication by Age, Race, and Sex, 1989–2000

[Claudication based on physical examination]

Part A

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	12	4,072	*2.95	5	1,470	*	7	2,603	*
70–74	53	13,821	3.83	29	5,306	5.47	24	8,515	*2.82
75–79	70	15,835	4.42	41	6,259	6.55	29	9,576	3.03
80–84	43	9,399	4.58	22	3,825	*5.75	21	5,574	*3.77
85–89	22	4,047	*5.44	12	1,651	*7.27	10	2,395	*
90–94	4	1,099	*	3	485	*	1	615	*
≥95	4	182	*	1	84	*	3	98	*
≥65	208	44,382	4.69	113	19,079	5.92	95	29,375	3.23
Age-adjusted			4.17			5.42			3.37

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
65–69	3	1,228	*	2	242	*	5	2,202	*	2	401	*
70–74	27	4,552	5.93	2	754	*	19	7,240	*2.62	5	1,275	*
75–79	33	5,603	5.89	8	656	*	22	8,354	*2.63	7	1,222	*
80–84	20	3,498	*5.72	2	327	*	19	4,846	*3.92	2	728	*
85–89	11	1,516	*7.26	1	135	*	8	2,057	*	2	339	*
90–94	2	447	*	1	38	*	0	516	*	1	98	*
≥95	1	78	*	0	6	*	2	83	*	1	15	*
≥65	97	16,921	5.73	16	2,158	*7.42	75	25,299	2.96	20	4,077	4.91
Age-adjusted			5.08			*7.82			2.99			*5.58

Rate is per 1,000 person years. Rates are calculated from PY values expressed to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Incidence Tables: Both Cohorts

Table 4–23. Incidence of Cardiovascular Disease by Age and Sex, 1980–2003

[CHD, HF, CVA, or intermittent claudication]

	Total			Men			Women		
Age Group	N	PY	Rate	N	PY	Rate	N	PY	Rate
35–44	39	17,851	2.18	27	8,076	3.34	12	9,774	*1.23
45–54	177	25,482	6.95	119	11,802	10.08	58	13,680	4.24
55–64	326	22,180	14.70	221	10,334	21.39	105	11,846	8.86
65–74	493	19,042	25.89	266	7,691	34.59	227	11,351	20.00
75–84	581	12,580	46.18	234	3,953	59.19	347	8,627	40.22
85–94	271	4,024	67.34	69	928	74.35	202	3,096	65.24
≥95	21	264	*79.55	2	40	*	19	224	*84.97
≥35	1,908	101,423	18.81	938	42,824	21.90	970	58,598	16.55
Age-adjusted			14.52			19.22			11.18

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–24. Incidence of Coronary Heart Disease by Age and Sex, 1980–2003

[MI, angina pectoris, coronary insufficiency, or fatal CHD]

	Total			Men			Women		
Age Group	N	PY	Rate	N	PY	Rate	N	PY	Rate
35–44	26	17,942	*1.45	21	8,113	*2.59	5	9,828	*
45–54	120	25,878	4.64	95	11,954	7.95	25	13,924	*1.80
55–64	254	23,039	11.02	176	10,757	16.36	78	12,282	6.35
65–74	324	20,956	15.46	188	8,633	21.78	136	12,322	11.04
75–84	333	14,948	22.28	161	4,902	32.84	172	10,046	17.12
85–94	138	5,205	26.51	48	1,262	38.02	90	3,943	22.83
≥95	9	354	*	1	55	*	8	298	*
≥35	1,204	108,320	11.12	690	45,677	15.11	514	62,643	8.21
Age-adjusted			8.32			12.48			5.35

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–25. Incidence of Myocardial Infarction or Fatal Coronary Heart Disease by Age and Sex, 1980–2003

[MI based on ECG evidence, hospital examination, or autopsy report of recent MI; fatal CHD based on hospital records and death certificate]

	Total			Men			Women		
Age Group	N	PY	Rate	N	PY	Rate	N	PY	Rate
35–44	14	18,033	*0.78	13	8,180	*1.59	1	9,853	*
45–54	75	26,325	2.85	64	12,262	5.22	11	14,063	*0.78
55–64	190	24,143	7.87	148	11,361	13.03	42	12,782	3.29
65–74	237	23,028	10.29	144	9,615	14.98	93	13,413	6.93
75–84	327	17,209	19.00	176	5,715	30.80	151	11,494	13.14
85–94	152	6,259	24.29	52	1,511	34.43	100	4,748	21.06
≥95	11	430	*25.57	1	68	*	10	362	*
≥35	1,006	115,427	8.72	598	48,711	12.28	408	66,716	6.12
Age-adjusted			6.08			9.73			3.51

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Incidence Tables: Both Cohorts

Table 4–26. Incidence of Myocardial Infarction by Age and Sex, 1980–2003

[MI based on ECG evidence, hospital examination, or autopsy report of recent MI]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	13	18,033	*0.72	12	8,180	*1.47	1	9,853	*
45–54	67	26,325	2.55	56	12,262	4.57	11	14,063	*0.78
55–64	170	24,143	7.04	129	11,361	11.35	41	12,782	3.21
65–74	190	23,028	8.25	114	9,615	11.86	76	13,413	5.67
75–84	257	17,209	14.93	130	5,715	22.75	127	11,494	11.05
85–94	119	6,259	19.01	37	1,511	24.50	82	4,748	17.27
≥95	7	430	*	0	68	*	7	362	*
≥35	823	115,427	7.13	478	48,711	9.81	345	66,716	5.17
Age-adjusted			5.05			7.81			3.02

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–27. Incidence of Angina Pectoris by Age and Sex, 1980–2003

[Angina pectoris based on physician interview of patient]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	18	17,991	*1.00	14	8,150	*1.72	4	9,841	*
45–54	74	26,263	2.82	59	12,257	4.81	15	14,007	*1.07
55–64	151	23,818	6.34	101	11,351	8.90	50	12,467	4.01
65–74	165	22,293	7.40	94	9,525	9.87	71	12,769	5.56
75–84	140	16,358	8.56	74	5,696	12.99	66	10,662	6.19
85–94	25	5,823	*4.29	11	1,479	*7.44	14	4,344	*3.22
≥95	0	380	*	0	61	*	0	319	*
≥35	573	112,926	5.07	353	48,517	7.28	220	64,408	3.42
Age-adjusted			3.97			5.93			2.20

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–28. Incidence of Heart Failure by Age and Sex, 1980–2003

[HF based on physician review of medical records and strict diagnostic criteria]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	3	18,098	*	3	8,237	*	0	9,861	*
45–54	31	26,777	1.16	19	12,674	*1.50	12	14,103	*0.85
55–64	58	25,294	2.29	41	12,375	3.31	17	12,919	*1.32
65–74	165	24,700	6.68	101	10,936	9.24	64	13,764	4.65
75–84	321	18,326	17.52	149	6,680	22.31	172	11,646	14.77
85–94	219	6,460	33.90	73	1,697	43.03	146	4,763	30.65
≥95	22	413	*53.22	1	70	*	21	343	*61.18
≥35	819	120,070	6.82	387	52,670	7.35	432	67,400	6.41
Age-adjusted			4.24			5.44			3.37

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Incidence Tables: Both Cohorts

Table 4–29. Incidence of Cerebrovascular Accident by Age and Sex, 1980–2003

[CVA based on occurrence of a stroke and either in-hospital examination or physician review of hospital records]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	4	18,067	*	2	8,221	*	2	9,846	*
45–54	36	26,719	1.35	16	12,660	*1.26	20	14,059	*1.42
55–64	81	25,073	3.23	53	12,242	4.33	28	12,831	2.18
65–74	211	24,009	8.79	117	10,518	11.12	94	13,492	6.97
75–84	314	17,435	18.01	121	6,161	19.64	193	11,274	17.12
85–94	147	6,066	24.23	26	1,607	16.18	121	4,460	27.13
≥95	16	397	*40.31	2	71	*	14	326	*42.94
≥35	809	117,767	6.87	337	51,479	6.55	472	67,288	7.01
Age-adjusted			4.48			4.84			3.69

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–30. Incidence of Hypertension by Age and Sex, 1980–2003

[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or on antihypertensive medication]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	226	13,382	16.89	125	5,584	22.38	101	7,798	12.95
45–54	524	16,944	30.92	245	7,087	34.57	279	9,857	28.30
55–64	636	11,051	57.55	301	4,725	63.71	335	6,327	52.95
65–74	577	5,873	98.24	261	2,297	113.61	316	3,576	88.37
75–84	242	2,190	110.51	95	766	124.00	147	1,424	103.26
85–94	69	427	161.74	24	155	154.40	45	271	165.94
≥95	0	9	*	0	8	*	0	0	*
≥35	2,274	49,876	45.59	1,051	20,623	50.96	1,223	29,253	41.81
Age-adjusted			50.16			56.89			45.63

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Incidence Tables: Original Cohort

Table 4–31. Incidence of Cardiovascular Disease by Age and Sex, 1980–2003

[MI, CHD, HF, CVA, or intermittent claudication]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
55–64	48	1,701	28.22	31	737	42.07	17	964	*17.63
65–74	279	10,368	26.91	141	3,790	37.20	138	6,579	20.98
75–84	507	11,363	44.62	194	3,432	56.53	313	7,931	39.46
85–94	270	3,971	67.99	69	902	76.49	201	3,069	65.50
≥95	21	264	*79.55	2	40	*	19	224	*84.97
≥55	1,125	27,667	40.66	437	8,901	49.10	688	18,767	36.66
Age-adjusted			34.23			45.91			26.87

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–32. Incidence of Coronary Heart Disease by Age and Sex, 1980–2003

[MI, angina pectoris, coronary insufficiency, or fatal CHD]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
55–64	34	1,824	18.64	22	790	*27.85	12	1,034	*11.61
65–74	191	11,555	16.53	106	4,332	24.47	85	7,224	11.77
75–84	290	13,496	21.49	133	4,242	31.35	157	9,253	16.97
85–94	138	5,134	26.88	48	1,222	39.28	90	3,912	23.01
≥95	9	354	*	1	55	*	8	289	*
≥55	662	32,362	20.46	310	10,641	29.13	352	21,712	16.21
Age-adjusted			19.17			28.22			13.64

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–33. Incidence of Myocardial Infarction or Fatal Coronary Heart Disease by Age and Sex, 1980–2003

[MI based on ECG evidence, hospital examination, and autopsy report of recent MI; fatal CHD based on hospital records and death certificate]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
55–64	24	1,973	*12.17	17	850	*20.01	7	1,123	*
65–74	147	12,824	11.46	90	4,876	18.46	57	7,948	7.17
75–84	294	15,572	18.88	152	4,955	30.67	142	10,617	13.37
85–94	152	6,184	24.58	52	1,467	35.44	100	4,717	21.20
≥95	11	430	*25.57	1	68	*	10	362	*
≥55	628	36,983	16.98	312	12,216	25.54	316	24,767	12.76
Age-adjusted			14.27			22.74			9.16

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Incidence Tables: Original Cohort

Table 4–34. Incidence of Myocardial Infarction by Age and Sex, 1980–2003

[MI based on ECG evidence and hospital examination or autopsy report of recent MI]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
55–64	23	1,973	*11.66	16	850	*18.83	7	1,123	*
65–74	124	12,824	9.67	74	4,876	15.18	50	7,948	6.29
75–84	228	15,572	14.64	109	4,955	22.00	119	10,617	11.21
85–94	119	6,184	19.24	37	1,467	25.22	82	4,717	17.38
≥95	7	430	*	0	68	*	7	362	*
≥55	501	36,983	13.55	236	12,216	19.32	265	24,767	10.70
Age-adjusted			12.20			18.65			8.12

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–35. Incidence of Angina Pectoris by Age and Sex, 1980–2003

[Angina pectoris based on physician interview of patient]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
55–64	25	1,888	*13.24	16	850	*18.83	9	1,039	*
65–74	92	12,351	7.45	46	4,845	9.49	46	7,507	6.13
75–84	120	14,764	8.13	61	4,952	12.32	59	9,812	6.01
85–94	25	5,744	*4.35	11	1,432	*7.68	14	4,312	*3.25
≥95	0	380	*	0	61	*	0	319	*
≥55	262	35,128	7.46	134	12,140	11.04	128	22,989	5.57
Age-adjusted			9.70			13.71			6.91

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–36. Incidence of Heart Failure by Age and Sex, 1980–2003

[HF based on physician review of medical records and strict diagnostic criteria]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
55–64	7	2,038	*	4	913	*	3	1,124	*
65–74	96	13,754	6.98	52	5,613	9.26	44	8,142	5.40
75–84	273	16,549	16.50	119	5,816	20.46	154	10,733	14.35
85–94	217	6,389	33.96	71	1,657	42.85	146	4,732	30.85
≥95	22	413	*53.32	1	70	*	21	343	*61.18
≥55	615	39,144	15.71	247	14,070	17.56	368	25,075	14.68
Age-adjusted			9.63			11.85			8.23

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Incidence Tables: Original Cohort

Table 4–37. Incidence of Cerebrovascular Accident by Age and Sex, 1980–2003

[CVA based on occurrence of a stroke and either in-hospital examination or physician review of hospital records]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
55–64	14	2,011	*6.96	11	903	*12.19	3	1,109	*
65–74	115	13,341	8.62	64	5,325	12.02	51	8,016	6.36
75–84	283	15,793	17.92	105	5,385	19.50	178	10,408	17.10
85–94	146	5,992	24.37	26	1,560	16.67	120	4,431	27.08
≥95	16	397	*40.31	2	71	*	14	326	*42.96
≥55	574	37,534	15.29	208	13,244	15.70	366	24,290	15.07
Age-adjusted			11.15			14.08			8.75

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–38. Incidence of Hypertension by Age and Sex, 1980–2003

[Hypertension is a systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or on antihypertensive medication]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
55–64	52	567	91.68	24	229	104.98	28	339	82.70
65–74	343	2,862	119.86	159	1,062	149.68	184	1,799	102.26
75–84	214	1,904	112.41	78	622	125.35	136	1,282	106.12
85–94	69	422	163.32	24	151	158.63	45	271	165.94
≥95	0	9	*	0	8	*	0	0	*
≥55	678	5,764	117.63	285	2,073	137.49	393	3,691	106.48
Age-adjusted			108.75			125.81			98.49

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Incidence Tables: Offspring Cohort

Table 4–39. Incidence of Cardiovascular Disease by Age and Sex, 1980–2003

[MI, CHD, HF, CVA, or intermittent claudication]

	Total			Men			Women		
Age Group	N	PY	Rate	N	PY	Rate	N	PY	Rate
35–44	39	17,851	2.18	27	8,076	3.34	12	9,774	*1.23
45–54	177	25,482	6.95	119	11,802	10.08	58	13,680	4.24
55–64	278	20,479	13.57	190	9,597	19.80	88	10,882	8.09
65–74	214	8,674	24.67	125	3,901	32.04	89	4,773	18.65
75–84	74	1,217	60.79	40	522	76.70	34	696	48.87
35–84	782	73,702	10.61	501	33,898	14.78	281	39,804	7.06
Age-adjusted			13.78			18.54			9.89

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–40. Incidence of Coronary Heart Disease by Age and Sex, 1980–2003

[MI, angina pectoris, coronary insufficiency, or death from CHD]

	Total			Men			Women		
Age Group	N	PY	Rate	N	PY	Rate	N	PY	Rate
35–44	26	17,942	*1.45	21	8,113	*2.59	5	9,828	*
45–54	120	25,878	4.64	95	11,954	7.95	25	13,924	*1.80
55–64	220	21,215	10.37	154	9,967	15.45	66	11,248	5.87
65–74	133	9,400	14.15	82	4,302	19.06	51	5,098	10.00
75–84	43	1,453	29.60	28	660	42.44	15	793	*18.92
35–84	542	75,887	7.14	380	34,995	10.86	162	40,891	3.96
Age-adjusted			8.13			12.11			4.73

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–41. Incidence of Myocardial Infarction or Fatal Coronary Heart Disease by Age and Sex, 1980–2003

[MI based on ECG evidence, hospital examination, and autopsy report of recent MI; fatal CHD based on hospital records and death certificate]

	Total			Men			Women		
Age Group	N	PY	Rate	N	PY	Rate	N	PY	Rate
35–44	14	18,033	*0.78	13	8,180	*1.59	1	9,853	*
45–54	75	26,325	2.85	64	12,262	5.22	11	14,063	*0.78
55–64	166	22,170	7.49	131	10,511	12.46	35	11,659	3.00
65–74	90	10,204	8.82	54	4,739	11.40	36	5,465	6.59
75–84	33	1,637	20.16	24	760	*31.59	9	877	*
35–84	378	78,369	4.82	286	36,451	7.85	92	41,918	2.19
Age-adjusted			4.66			8.51			2.58

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Incidence Tables: Offspring Cohort

Table 4–42. Incidence of Myocardial Infarction by Age and Sex, 1980–2003

[MI based on ECG evidence and hospital examination or autopsy report of recent MI]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	13	18,033	*0.72	13	8,180	*1.47	1	9,853	*
45–54	67	26,325	2.55	56	12,262	4.57	11	14,063	*0.78
55–64	147	22,170	6.63	113	10,511	10.75	34	11,659	2.92
65–74	66	10,204	6.47	40	4,739	8.44	26	5,465	*4.76
75–84	29	1,637	17.72	21	760	*27.64	8	877	*
35–84	322	78,369	4.11	243	36,451	6.67	80	41,918	1.91
Age-adjusted			4.56			7.24			2.22

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–43. Incidence of Angina Pectoris by Age and Sex, 1980–2003

[Angina pectoris based on physician interview of patient]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	18	17,991	*1.00	14	8,150	*10.72	4	9,841	*
45–54	74	26,263	2.82	59	12,257	4.81	15	14,007	*1.07
55–64	126	21,929	5.75	85	10,501	8.09	41	11,429	3.59
65–74	73	9,942	7.34	48	4,680	10.26	25	5,262	*4.75
75–84	20	1,593	*12.55	13	743	*17.49	7	850	*
35–84	311	77,719	4.00	219	36,330	6.03	92	41,388	2.22
Age-adjusted			4.22			9.29			2.44

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–44. Incidence of Heart Failure by Age and Sex, 1980–2003

[HF based on physician review of medical records and strict diagnostic criteria]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	3	18,098	*	3	8,237	*	0	9,861	*
45–54	31	26,777	1.16	19	12,674	*1.50	12	14,103	*0.85
55–64	51	23,257	2.19	37	11,462	3.23	14	11,795	*1.19
65–74	69	10,946	6.30	49	5,323	9.20	20	5,623	*3.56
75–84	48	1,777	27.01	30	864	34.73	18	913	*19.71
35–84	202	80,855	2.50	138	38,560	3.58	64	42,294	1.51
Age-adjusted			4.04			5.46			2.70

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Incidence Tables: Offspring Cohort

Table 4–45. Incidence of Cerebrovascular Accident by Age and Sex, 1980–2003

[CVA based on occurrence of a stroke and either in-hospital examination or physician review of hospital records]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	4	18,067	*	2	8,221	*	2	9,846	*
45–54	36	26,719	1.35	16	12,660	*1.26	20	14,059	*1.42
55–64	67	23,062	2.91	42	11,339	3.70	25	11,723	*2.13
65–74	96	10,668	9.00	53	5,193	10.21	43	5,475	7.85
75–84	31	1,642	18.88	16	775	*20.64	15	867	*17.31
35–84	234	80,158	2.92	129	38,188	3.38	105	41,969	2.50
Age-adjusted			3.86			4.30			3.44

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–46. Incidence of Hypertension by Age and Sex, 1980–2003

[Hypertension is a systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or on antihypertensive medication]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
35–44	226	13,382	16.89	125	5,584	22.39	101	7,798	12.95
45–54	524	16,944	30.92	245	7,087	34.57	279	9,857	28.30
55–64	584	10,484	55.70	277	4,496	61.61	307	5,988	51.27
65–74	234	3,012	77.70	102	1,235	82.59	132	1,777	74.30
75–84	28	286	97.91	17	144	*118.16	11	142	*77.40
35–84	1,596	44,108	36.18	766	18,546	41.30	830	25,562	32.47
Age-adjusted			42.98			49.30			37.88

Rate is per 1,000 person years. Rates are calculated from PY values to two decimal places, not from the PY values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

SHS Incidence Tables

Table 4–47. Incidence of Cardiovascular Disease in American Indians by Age and Sex, 1989–2000

[Definite CHD or stroke]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	121	12,758	9.48	69	5,413	12.75	52	7,345	7.08
55–64	232	16,334	14.20	112	6,094	18.38	120	10,240	11.72
65–74	218	9,267	23.52	94	3,299	28.49	124	5,968	20.78
45–74	571	38,359	14.89	275	14,806	18.57	296	23,553	12.57
Age-adjusted			14.13			18.06			11.62

Rate is per 1,000 person years.

Table 4–48. Incidence of Fatal and Nonfatal Coronary Heart Disease in American Indians by Age and Sex, 1989–2000

[Definite fatal CHD based on chart review and death certificate; nonfatal CHD based on chart review]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	98	12,844	7.63	56	5,448	10.28	42	7,396	5.68
55–64	200	16,543	12.09	103	6,193	16.63	97	10,350	9.37
65–74	185	9,503	19.47	84	3,405	24.67	101	6,098	16.56
45–74	483	38,890	12.42	243	15,046	16.15	240	23,844	10.07
Age-adjusted			11.69			15.50			9.29

Rate is per 1,000 person years.

Table 4–49. Incidence of Fatal Coronary Heart Disease in American Indians by Age and Sex, 1989–2000

[Definite fatal CHD based on chart review or death certificate]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	33	13,138	2.51	22	5,664	*3.88	11	7,474	*1.47
55–64	84	17,345	4.84	43	6,665	6.45	41	10,680	3.84
65–74	101	10,288	9.82	50	3,886	12.87	51	6,402	7.97
45–74	218	40,771	5.35	115	16,215	7.09	103	24,556	4.19
Age-adjusted			4.89			6.72			3.68

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

SHS Incidence Tables

Table 4–50. Incidence of Nonfatal Coronary Heart Diseases in American Indians by Age and Sex, 1989–2000

[Nonfatal CHD based on chart review]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	73	12,844	5.68	41	5,448	7.53	32	7,396	4.33
55–64	150	16,543	9.07	80	6,193	12.92	70	10,350	6.76
65–74	111	9,503	11.68	49	3,405	14.39	62	6,098	10.17
45–74	334	38,890	8.59	170	15,046	11.30	164	23,844	6.88
Age-adjusted			8.08			10.73			6.40

Rate is per 1,000 person years.

Table 4–51. Incidence of Fatal and Nonfatal Myocardial Infarction in American Indians by Age and Sex, 1989–2000

[Definite fatal MI based on chart review or autopsy report; definite nonfatal MI based on chart review]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	36	12,983	2.77	25	5,539	*4.51	11	7,444	*1.48
55–64	70	17,029	4.11	41	6,466	6.34	29	10,563	2.75
65–74	53	9,978	5.31	26	3,673	*7.08	27	6,305	4.28
45–74	159	39,990	3.98	92	15,678	5.87	67	24,312	2.76
Age-adjusted			3.76			5.65			2.51

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–52. Incidence of Fatal Myocardial Infarction in American Indians by Age and Sex, 1989–2000

[Definite fatal MI based on chart review or autopsy report]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	5	13,138	*	4	5,664	*	1	7,474	*
55–64	4	17,345	*	2	6,665	*	2	10,680	*
65–74	17	10,288	*1.65	8	3,886	*	9	6,402	*
45–74	26	40,771	*0.64	14	16,215	*0.90	12	24,556	*0.49
Age-adjusted			*0.63			*0.90			*0.44

Rate is per 1,000 person years.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

SHS Incidence Tables

Table 4–53. Incidence of Nonfatal Myocardial Infarction in American Indians by Age and Sex, 1989–2000
[Definite nonfatal MI based on chart review]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	31	12,983	2.39	21	5,539	*3.79	10	7,444	*
55–64	68	17,029	3.99	40	6,466	6.19	28	10,563	2.65
65–74	39	9,978	3.91	20	3,673	*5.45	19	6,305	*3.01
45–74	138	39,990	3.45	81	15,678	5.17	57	24,312	2.34
Age-adjusted			3.22			4.90			2.12

Rate is per 1,000 person years.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–54. Incidence of Fatal and Nonfatal Heart Failure in American Indians by Age and Sex, 1989–2000
[Fatal HF based on death certificate; nonfatal HF based on chart review]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	45	12,693	3.55	25	5,441	*4.59	20	7,252	*2.76
55–64	91	16,390	5.55	37	6,297	5.88	54	10,093	5.35
65–74	100	9,394	10.65	24	3,560	*6.74	76	5,834	13.03
45–74	236	38,477	6.13	86	15,298	5.62	150	23,179	6.47
Age-adjusted			5.78			5.47			5.90

Rate is per 1,000 person years.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–55. Incidence of Fatal Heart Failure in American Indians by Age and Sex, 1989–2000
[Fatal HF based on death certificate]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	2	13,138	*	2	5,664	*	0	7,474	*
55–64	6	17,345	*	4	6,665	*	2	10,680	*
65–74	10	10,288	*	5	3,886	*	5	6,402	*
45–74	18	40,771	*0.44	11	16,215	*0.68	7	24,556	*
Age-adjusted			*0.40			*			*

Rate is per 1,000 person years.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

SHS Incidence Tables

Table 4–56. Incidence of Nonfatal Heart Failure in American Indians by Age and Sex, 1989–2000
[Nonfatal HF based on chart review]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	44	12,693	3.47	24	5,441	*4.41	20	7,252	*2.76
55–64	88	16,390	5.37	35	6,297	5.56	53	10,093	5.25
65–74	100	9,394	10.65	24	3,560	*6.74	76	5,834	13.03
45–74	232	38,477	6.03	83	15,298	5.43	149	23,179	6.43
Age-adjusted			5.69			5.29			5.87

Rate is per 1,000 person years.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–57. Incidence of Fatal and Nonfatal Stroke in American Indians by Age and Sex, 1989–2000
[Fatal stroke based on chart review and autopsy/death certificate; nonfatal stroke based on chart review]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	30	13,043	2.30	16	5,623	*2.85	14	7,420	*1.89
55–64	57	17,060	3.34	25	6,516	*3.84	32	10,544	3.03
65–74	64	9,993	6.40	27	3,745	7.21	37	6,248	5.92
45–74	151	40,096	3.77	68	15,884	4.28	83	24,212	3.43
Age-adjusted			3.56			4.15			3.16

Rate is per 1,000 person years.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 4–58. Incidence of Fatal Stroke in American Indians by Age and Sex, 1989–2000
[Fatal stroke based on chart review or autopsy/death certificate]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	5	13,138	*	4	5,664	*	1	7,474	*
55–64	15	17,345	*0.86	4	6,665	*	11	10,680	*
65–74	12	10,288	*1.17	6	3,886	*	6	6,402	*
45–74	32	40,771	0.78	14	16,215	*0.86	18	24,556	*0.73
Age-adjusted			0.71			*0.87			*0.59

Rate is per 1,000 person years.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

SHS Incidence Tables

Table 4–59. Incidence of Nonfatal Stroke in American Indians by Age and Sex, 1989–2000
[Nonfatal stroke based on chart review]

	Total			Men			Women		
Age Group	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**	**N**	**PY**	**Rate**
45–54	26	13,043	*1.99	13	5,623	*2.31	13	7,420	*1.75
55–64	47	17,060	2.75	24	6,516	*3.68	23	10,544	*2.18
65–74	56	9,993	5.60	22	3,745	*5.87	34	6,248	5.44
45–74	129	40,096	3.22	59	15,884	3.71	70	24,212	2.89
Age-adjusted			3.05			3.54			2.73

Rate is per 1,000 person years.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

5. Prevalence Tables by Study

This chapter contains prevalence statistics for selected cardiovascular and lung diseases from six NHLBI-support cohort studies: ARIC, CARDIA, CHS, FHS, MESA, and SHS. Several of the tables are the basis for the charts in Chapter 3, but not all of the data are charted.

Changes to Original Tables

The tables provided by the study investigators have been modified for brevity and uniformity of presentation. Age-adjusted rates were calculated using the adjustment factors given in Appendix A for each study.

Prevalence Tables

The prevalence tables contain data by age, race/ethnicity, and sex. Specifically, they contain the number of persons (N) with a particular disease in a given time period, the population (Pop) for that group, and the prevalence (i.e., the percent) of the population with the disease. Prevalence rates for FHS tables are calculated from Pop values expressed to two decimal places, not by the rounded numbers given in the tables.

It should be noted that the specific year(s) in which the prevalence was measured varied widely among the six studies and should be kept in mind when comparing studies.

ARIC Cohort Prevalence Tables

Table 5–1. Prevalence of Cardiovascular Disease by Age, Race, and Sex, 1987–1989

[CHD or stroke]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	310	8,028	3.86	199	3,365	5.91	111	4,663	2.38
55–64	653	7,141	9.14	479	3,439	13.93	174	3,702	4.70
45–64	963	15,169	6.35	678	6,804	9.96	285	8,365	3.41
Age-adjusted			5.93			9.06			3.29

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	148	2,512	5.89	51	853	5.98	53	3,154	1.68	58	1,509	3.84
55–64	387	2,750	14.07	92	689	13.35	109	2,690	4.05	65	1,012	6.42
45–64	535	5,262	10.17	143	1,542	9.27	162	5,844	2.77	123	2,521	4.88
Age-adjusted			9.10			8.88			2.61			4.85

Table 5–2. Prevalence of Coronary Heart Disease by Age, Race, and Sex, 1987–1989

[MI or history of MI, CABG surgery, or angioplasty of coronary artery]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	232	8,042	2.88	169	3,366	5.02	63	4,676	1.35
55–64	520	7,155	7.27	398	3,446	11.55	122	3,709	3.29
45–64	752	15,197	4.95	567	6,812	8.32	185	8,385	2.21
Age-adjusted			4.60			7.59			2.11

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	135	2,514	5.37	34	852	3.99	30	3,162	0.95	33	1,514	2.18
55–64	340	2,753	12.35	58	693	8.37	79	2,695	2.93	43	1,014	4.24
45–64	475	5,267	9.02	92	1,545	5.95	109	5,857	1.86	76	2,528	3.01
Age-adjusted			8.11			5.71			1.73			2.99

ARIC Cohort Prevalence Tables

Table 5–3. Prevalence of Myocardial Infarction by Age, Race, and Sex, 1987–1989

[MI based on ECG or history of physician diagnosed MI, or self-reported hospitalized heart attack]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	201	8,096	2.48	140	3,384	4.14	61	4,712	1.30
55–64	439	7,206	6.09	336	3,473	9.68	103	3,733	2.76
45–64	640	15,302	4.18	476	6,857	6.94	164	8,445	1.94
Age-adjusted			3.90			6.32			1.87

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	107	2,531	4.23	33	853	3.87	29	3,197	0.91	32	1,515	2.11
55–64	284	2,780	10.22	52	693	7.50	63	2,719	2.32	40	1,014	3.94
45–64	391	5,311	7.36	85	1,546	5.50	92	5,916	1.56	72	2,529	2.85
Age-adjusted			6.58			5.30			1.46			2.83

Table 5–4. Prevalence of Angina Pectoris by Age, Race, and Sex, 1987–1989

[Angina pectoris determined by Rose Questionnaire]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	358	8,203	4.36	96	3,424	2.80	262	4,779	5.48
55–64	440	7,291	6.03	187	3,510	5.33	253	3,781	6.69
45–64	798	15,494	5.15	283	6,934	4.08	515	8,560	6.02
Age-adjusted			5.02			3.79			5.96

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	72	2,563	2.81	24	861	*2.79	198	3,239	6.11	64	1,540	4.16
55–64	159	2,805	5.67	28	705	3.97	182	2,749	6.62	71	1,032	6.88
45–64	231	5,368	4.30	52	1,566	3.32	380	5,988	6.35	135	2,572	5.25
Age-adjusted			3.93			3.25			6.31			5.23

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

ARIC Cohort Prevalence Tables

Table 5–5. Prevalence of Heart Failure by Age, Race, and Sex, 1987–1989

[HF based on self-reported current use of medication for HF]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	15	8,185	*0.18	7	3,414	*	8	4,771	*
55–64	66	7,263	0.91	38	3,493	1.09	28	3,770	0.74
45–64	81	15,448	0.52	45	6,907	0.65	36	8,541	0.42
Age-adjusted			0.47			0.56			0.39

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	2	2,548	*	5	866	*	3	3,235	*	5	1,536	*
55–64	26	2,790	*0.93	12	703	*1.71	9	2,741	*	19	1,029	*1.85
45–64	28	5,338	0.52	17	1,569	*1.08	12	5,976	*0.20	24	2,565	*0.94
Age-adjusted			0.41			*1.02			*0.18			*0.93

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE >30 percent.

Table 5–6. Prevalence of Stroke/Transient Ischemic Attack by Age, Race, and Sex, 1987–1989

[Stroke/TIA based on self-reported prior physician diagnosis]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	114	8,025	1.42	53	3,343	1.59	61	4,682	1.30
55–64	226	7,082	3.19	124	3,406	3.64	102	3,676	2.78
45–64	340	15,107	2.25	177	6,749	2.62	163	8,358	1.95
Age-adjusted			2.12			2.40			1.88

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	32	2,490	1.29	21	853	*2.46	40	3,154	1.27	21	1,528	*1.37
55–64	84	2,707	3.10	40	699	5.72	66	2,649	2.49	36	1,027	3.51
45–64	116	5,197	2.23	61	1,552	3.93	106	5,803	1.83	57	2,555	2.23
Age-adjusted			2.00			3.74			1.75			2.21

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

ARIC Cohort Prevalence Tables

Table 5–7. Prevalence of Stroke by Age, Race, and Sex, 1987–1989

[Stroke based on self-reported prior physician diagnosis]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	98	8,207	1.19	46	3,431	1.34	52	4,776	1.09
55–64	180	7,282	2.47	112	3,505	3.20	68	3,777	1.80
45–64	278	15,489	1.80	158	6,936	2.28	120	8,553	1.40
Age-adjusted			1.69			2.07			1.37

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	23	2,563	*0.90	23	868	*2.65	24	3,236	*0.74	28	1,540	1.82
55–64	68	2,804	2.43	44	701	6.28	39	2,746	1.42	29	1,031	2.81
45–64	91	5,367	1.70	67	1,569	4.27	63	5,982	1.05	57	2,571	2.22
Age-adjusted			1.50			4.08			1.01			2.21

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

Table 5–8. Prevalence of Peripheral Arterial Disease by Age, Race, and Sex, 1987–1989

[PAD based on ABI < 0.9 for men and < 0.85 for women]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	143	7,928	1.80	63	3,311	1.90	80	4,617	1.73
55–64	266	7,026	3.79	146	3,377	4.32	120	3,649	3.29
45–64	409	14,954	2.74	209	6,688	3.13	200	8,266	2.42
Age-adjusted			2.58			2.85			2.34

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	38	2,481	1.53	25	830	*3.01	46	3,139	1.47	34	1,478	2.30
55–64	103	2,707	3.80	43	670	6.42	79	2,657	2.97	41	992	4.13
45–64	141	5,188	2.72	68	1,500	4.53	125	5,796	2.16	75	2,470	3.04
Age-adjusted			2.42			4.35			2.06			3.02

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

ARIC Cohort Prevalence Tables

Table 5–9. Prevalence of Hypertension by Age, Race, and Sex, 1987–1989

[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or on antihypertensive medication]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	2,326	8,180	28.44	946	3,412	27.73	1,380	4,768	28.94
55–64	3,076	7,273	42.29	1,431	3,502	40.86	1,645	3,771	43.62
45–64	5,402	15,453	34.96	2,377	6,914	34.38	3,025	8,539	35.43
Age-adjusted			33.88			32.89			34.71

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	527	2,549	20.67	419	863	48.55	610	3,230	18.89	770	1,538	50.07
55–64	994	2,797	35.54	437	705	61.99	955	2,742	34.83	690	1,029	67.06
45–64	1,521	5,346	28.45	856	1,568	54.59	1,565	5,972	26.21	1,460	2,567	56.88
Age-adjusted			26.51			53.83			25.15			56.75

Table 5–10. Prevalence of Chronic Obstructive Pulmonary Disease by Age, Race, and Sex, 1987–1989

[COPD based on self-reported prior physician diagnosis of chronic brochitis or emphysema]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	260	7,629	3.41	84	3,261	2.58	176	4,368	4.03
55–64	392	6,750	5.81	161	3,304	4.87	231	3,446	6.70
45–64	652	14,379	4.53	245	6,565	3.73	407	7,814	5.21
Age-adjusted			4.35			3.48			5.08

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	64	2,428	2.64	20	833	*2.40	131	2,944	4.45	45	1,424	3.16
55–64	140	2,630	5.32	21	674	*3.12	185	2,479	7.46	46	967	4.76
45–64	204	5,058	4.03	41	1,507	2.72	316	5,423	5.83	91	2,391	3.81
Age-adjusted			3.69			2.68			5.63			3.79

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

ARIC Cohort Prevalence Table

Table 5–11. Prevalence of Asthma by Age, Race, and Sex, 1987–1989

[Asthma based on self-reported prior physician diagnosis]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	374	8,024	4.66	157	3,358	4.68	217	4,666	4.65
55–64	329	7,116	4.62	152	3,427	4.44	177	3,689	4.80
45–64	703	15,140	4.64	309	6,785	4.55	394	8,355	4.72
Age-adjusted			4.64			4.59			4.71

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	124	2,515	4.93	33	843	3.91	137	3,171	4.32	80	1,495	5.35
55–64	123	2,741	4.49	29	686	4.23	129	2,686	4.80	48	1,003	4.79
45–64	247	5,256	4.70	62	1,529	4.05	266	5,857	4.54	128	2,498	5.12
Age-adjusted			4.76			4.04			4.51			5.13

CHS Prevalence Table

Table 5–12. Prevalence of Cardiovascular Disease by Age, Race, and Sex, 1999

[CHD, HF, stroke, TIA, or claudication]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	73	215	33.95	27	69	39.13	46	146	31.51
75–79	624	1,747	35.72	262	632	41.46	362	1,115	32.47
80–84	503	1,222	41.16	235	475	49.47	268	747	35.88
85–89	318	637	49.92	136	240	56.67	182	397	45.84
90–94	89	183	48.63	37	67	55.22	52	116	44.83
≥ 95	16	24	66.67	3	8	*	13	16	81.25
≥ 70	1,623	4,028	40.29	700	1,491	46.95	923	2,537	36.38
Age-adjusted			38.78			44.38			35.60

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	4	14	*	23	55	41.82	14	50	*28.00	32	96	33.33
75–79	225	529	42.53	37	103	35.92	294	943	31.18	68	172	39.53
80–84	214	434	49.31	21	41	51.22	217	633	34.28	51	114	44.74
85–89	125	213	58.69	11	27	*40.74	157	341	46.04	25	56	44.64
90–94	35	65	53.85	2	2	*	39	92	42.39	13	24	54.17
≥ 95	3	7	*	0	1	*	7	10	*70.00	6	6	*
≥ 70	606	1,262	48.02	94	229	41.05	728	2,069	35.19	195	468	41.67
Age-adjusted			41.26			43.74			33.42			40.63

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Prevalence Tables

Table 5–13. Prevalence of Coronary Heart Disease by Age, Race, and Sex, 1999

[History of MI, angina pectoris, CABG surgery, or angioplasty of coronary artery]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	50	215	23.26	20	69	28.99	30	146	20.55
75–79	462	1,747	26.45	209	632	33.07	253	1,115	22.69
80–84	378	1,222	30.93	188	475	39.58	190	747	25.44
85–89	228	637	35.79	104	240	43.33	124	397	31.23
90–94	63	183	34.43	33	67	49.25	30	116	25.86
≥95	11	24	*45.83	3	8	*	8	16	*50.00
≥70	1,192	4028	29.59	557	1,491	37.36	635	2,537	25.03
Age-adjusted			27.90			34.82			23.99

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	4	14	*	16	55	*29.09	9	50	*18.00	21	96	21.88
75–79	184	529	34.78	25	103	24.27	206	943	21.85	47	172	27.33
80–84	176	434	40.55	12	41	*29.27	159	633	25.12	31	114	27.19
85–89	96	213	45.07	8	27	*29.63	108	341	31.67	16	56	*28.57
90–94	31	65	47.69	2	2	*	21	92	22.83	9	24	*37.50
≥95	3	7	*	0	1	*	3	10	*	5	6	83.33
≥70	494	1,262	39.14	63	229	27.51	506	2,069	24.46	129	468	27.56
Age-adjusted			35.57			30.51			22.38			26.96

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–14. Prevalence of Myocardial Infarction by Age, Race, and Sex, 1999

[History of MI based on ECG evidence, physician diagnosis, or hospital discharge record]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	17	215	*7.91	9	69	*	8	146	5.48
75–79	234	1,747	13.39	121	632	19.15	113	1,115	10.13
80–84	176	1,222	14.40	100	475	21.05	76	747	10.17
85–89	105	637	16.48	54	240	22.50	51	397	12.85
90–94	28	183	15.30	16	67	*23.88	12	116	*10.34
≥95	3	24	*	0	8	*	3	16	*
≥70	563	4,028	13.98	300	1,491	20.12	263	2,537	10.37
Age-adjusted			12.09			17.66			8.98

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	1	14	*	8	55	*	3	50	*	5	96	*
75–79	108	529	20.42	13	103	*12.62	95	943	10.07	18	172	*10.47
80–84	91	434	20.97	9	41	*21.95	63	633	9.95	13	114	*11.40
85–89	50	213	23.47	4	27	*	46	341	13.49	5	56	*
90–94	16	65	*24.62	0	2	*	9	92	*	3	24	*
≥95	0	7	*	0	1	*	2	10	*	1	6	*
≥70	266	1,262	21.08	34	229	14.85	218	2,069	10.54	45	468	9.62
Age-adjusted			16.12			14.54			9.16			8.87

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Prevalence Tables

Table 5–15. Prevalence of Angina Pectoris by Age, Race, and Sex, 1999

[History of angina pectoris based on medication use, CABG surgery or angioplasty of coronary artery, physician diagnosis, or hospital discharge record]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	43	215	20.00	16	69	*23.19	27	146	18.49
75–79	433	1,747	24.79	191	632	30.22	242	1,115	21.70
80–84	358	1,222	29.30	174	475	36.63	184	747	24.63
85–89	216	637	33.91	98	240	40.83	118	397	29.72
90–94	61	183	33.33	31	67	46.27	30	116	25.86
≥95	11	24	*45.83	3	8	*	8	16	*50.00
≥70	1,122	4,028	27.86	513	1,491	34.41	609	2,537	24.00
Age-adjusted			25.72			31.01			22.68

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	3	14	*	13	55	*23.64	7	50	*	20	96	*20.83
75–79	169	529	31.95	22	103	21.36	199	943	21.10	43	172	25.00
80–84	164	434	37.79	10	41	*24.39	154	633	24.33	30	114	26.32
85–89	90	213	42.25	8	27	*29.63	103	341	30.21	15	56	*26.79
90–94	29	65	44.62	2	2	*	21	92	22.83	9	24	*37.50
≥95	3	7	*	0	1	*	3	10	*	5	6	*83.33
≥70	458	1,262	36.29	55	229	24.02	487	2,069	23.54	122	468	26.07
Age-adjusted			31.31			26.83			20.47			25.56

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–16. Prevalence of Heart Failure by Age, Race, and Sex, 1999

[History of HF based on medication use, ECG evidence, physician diagnosis, or hospital discharge record]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	21	215	*9.77	9	69	*	12	146	*8.22
75–79	176	1,747	10.07	76	632	12.03	100	1,115	8.97
80–84	173	1,222	14.16	75	475	15.79	98	747	13.12
85–89	126	637	19.78	56	240	23.33	70	397	17.63
90–94	42	183	22.95	19	67	28.36	23	116	19.83
≥95	9	24	*37.50	2	8	*	7	16	*43.75
≥70	547	4,028	13.58	237	1,491	15.90	310	2,537	12.22
Age-adjusted			12.84			15.27			11.52

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	1	14	*	8	55	*	2	50	*	10	96	*10.42
75–79	67	529	12.67	9	103	*	81	943	8.59	19	172	*11.05
80–84	71	434	16.36	4	41	*	80	633	12.64	18	114	*15.79
85–89	49	213	23.00	7	27	*	59	341	17.30	11	56	*19.64
90–94	18	65	*27.69	1	2	*	19	92	*20.65	4	24	*
≥95	2	7	*	0	1	*	3	10	*	4	6	*66.67
≥70	208	1,262	16.48	29	229	12.66	244	2,069	11.79	66	468	14.10
Age-adjusted			13.52			14.49			9.63			13.86

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Prevalence Tables

Table 5–17. Prevalence of Stroke or Transient Ischemic Attack by Age, Race, and Sex, 1999

[Stroke or TIA based on self-report and physician diagnosis]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	21	215	*9.77	8	69	*	13	146	*8.90
75–79	175	1,747	10.02	67	632	10.60	108	1,115	9.69
80–84	158	1,222	12.93	75	475	15.79	83	747	11.11
85–89	101	637	15.86	31	240	12.92	70	397	17.63
90–94	26	183	14.21	8	67	*	18	116	*15.52
≥95	8	24	*33.33	2	8	*	6	16	*
≥70	489	4,028	12.14	191	1,491	12.81	298	2,537	11.75
Age-adjusted			11.70			12.50			11.27

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	1	14	*	7	55	*	4	50	*	9	96	*
75–79	56	529	10.59	11	103	*10.68	81	943	8.59	27	172	15.70
80–84	69	434	15.90	6	41	*	66	633	10.43	17	114	*14.91
85–89	28	213	13.15	3	27	*	61	341	17.89	9	56	*
90–94	8	65	*	0	2	*	14	92	*15.22	4	24	*
≥95	2	7	*	0	1	*	3	10	*	3	6	*
≥70	164	1,262	13.00	27	229	11.79	229	2,069	11.07	69	468	14.74
Age-adjusted			*11.08			*11.53			10.39			14.03

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–18. Prevalence of Stroke by Age, Race, and Sex, 1999

[Stroke based on self-report and physician diagnosis]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	15	215	*6.98	4	69	*	11	146	*7.53
75–79	129	1,747	7.38	52	632	8.23	77	1,115	6.91
80–84	117	1,222	9.57	59	475	12.42	58	747	7.76
85–89	77	637	12.09	22	240	*9.17	55	397	13.85
90–94	22	183	*12.02	6	67	*	16	116	*13.79
≥95	8	24	*33.33	2	8	*	6	16	*
≥70	368	4,028	9.14	145	1,491	9.73	223	2,537	8.79
Age-adjusted			8.82			8.62			8.85

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	0	14	*	4	55	*	2	50	*	9	96	*
75–79	42	529	7.94	10	103	*9.71	56	943	5.94	21	172	*12.21
80–84	54	434	12.44	5	41	*	45	633	7.11	13	114	*11.40
85–89	20	213	*9.39	2	27	*	48	341	14.08	7	56	*
90–94	6	65	*	0	2	*	13	92	*14.13	3	24	*
≥95	2	7	*	0	1	*	3	10	*	3	6	*
≥70	124	1,262	9.83	21	229	*9.17	167	2,069	8.07	56	468	11.97
Age-adjusted			6.63			*8.50			7.14			11.76

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Prevalence Tables

Table 5–19. Prevalence of Transient Ischemic Attack by Age, Race, and Sex, 1999

[TIA based on self-report and physician diagnosis]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	9	215	*	5	69	*	4	146	*
75–79	62	1,747	3.55	21	632	*3.32	41	1,115	3.68
80–84	61	1,222	4.99	26	475	5.47	35	747	4.69
85–89	38	637	5.97	14	240	*5.83	24	397	*6.05
90–94	6	183	*	4	67	*	2	116	*
≥95	1	24	*	0	8	*	1	16	*
≥70	177	4,028	4.39	70	1,491	4.69	107	2,537	4.22
Age-adjusted			4.30			5.42			3.76

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	1	14	*	4	55	*	2	50	*	2	96	*
75–79	19	529	*3.59	2	103	*	32	943	3.39	9	172	*
80–84	23	434	*5.30	3	41	*	29	633	4.58	6	114	*
85–89	12	213	*5.63	2	27	*	21	341	*6.16	3	56	*
90–94	4	65	*	0	2	*	1	92	*	1	24	*
≥95	0	7	*	0	1	*	0	10	*	1	6	*
≥70	59	1,262	4.68	11	229	*4.80	85	2,069	4.11	22	468	*4.70
Age-adjusted			5.42			*			*3.96			*4.31

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–20. Prevalence of Peripheral Arterial Disease by Age, Race, and Sex, 1999

[History of angina pectoris based on ABI < 0.8, hospital records, physician diagnosis, or absence of lower limb]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	7	215	*	2	69	*	5	146	*
75–79	54	1,747	3.09	27	632	4.27	27	1,115	2.42
80–84	45	1,222	3.68	22	475	*4.63	23	747	*3.08
85–89	33	637	5.18	21	240	*8.75	12	397	*3.02
90–94	3	183	*	1	67	*	2	116	*
≥95	1	24	*	0	8	*	1	16	*
≥70	143	4,028	3.55	73	1,491	4.90	70	2,537	2.76
Age-adjusted			3.44			4.14			2.99

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	1	14	*	1	55	*	1	50	*	4	96	*
75–79	23	529	*4.35	4	103	*	22	943	*2.33	5	172	*
80–84	20	434	*4.61	2	41	*	18	633	*2.84	5	114	*
85–89	19	213	*8.92	2	27	*	11	341	*3.23	1	56	*
90–94	1	65	*	0	2	*	1	92	*	1	24	*
≥95	0	7	*	0	1	*	0	10	*	1	6	*
≥70	64	1,262	5.07	9	229	*3.93	53	2,069	2.56	17	468	*3.63
Age-adjusted			5.64			*			*			*3.80

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CHS Prevalence Table

Table 5–21. Prevalence of Hypertension by Age, Race, and Sex, 1999
[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or on antihypertensive medication]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	124	176	70.45	35	54	64.81	89	122	72.95
75–79	945	1,481	63.81	326	551	59.17	619	930	66.56
80–84	682	1,018	66.99	260	412	63.11	422	606	69.64
85–89	350	519	67.44	118	196	60.20	232	323	71.83
90–94	91	134	67.91	29	53	54.72	62	81	76.54
≥95	8	17	*47.06	2	7	*	6	10	*60.00
≥70	2,200	3,345	65.77	770	1,273	60.49	1430	2,072	69.02
Age-adjusted			67.00			61.27			70.26

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
70–74	10	13	76.92	25	41	60.98	21	39	53.85	68	83	81.93
75–79	265	464	57.11	61	87	70.11	512	796	64.32	107	134	79.85
80–84	241	379	63.59	19	33	57.58	355	519	68.40	67	87	77.01
85–89	104	176	59.09	14	20	70.00	194	280	69.29	38	43	88.37
90–94	28	51	54.90	1	2	*	45	61	73.77	17	20	85.00
≥95	2	7	*	0	0	*	5	8	*62.50	1	2	*
≥70	650	1,090	59.63	120	183	65.57	1,132	1,703	66.47	298	369	80.76
Age-adjusted			64.82			62.42			62.43			80.65

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CARDIA Prevalence Table

Table 5–22. Prevalence of Cardiovascular Disease by Age, Race, and Sex, 1985
[MI, angina pectoris, rheumatic heart disease, mitral valve prolapse, or hypertension]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
18–24	25	2,284	*1.09	9	1,051	*	16	1,233	*1.30
25–30	79	2,831	2.79	26	1,277	2.04	53	1,554	3.41
18–30	104	5,115	2.03	35	2,328	1.50	69	2,787	2.48
Age-adjusted			1.86			1.39			2.26

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
18–24	4	436	*	5	615	*	5	483	*	11	750	*1.50
25–30	14	736	*1.90	12	541	*2.20	24	824	*2.90	29	730	3.97
18–30	18	1,172	*1.50	17	1,156	*1.50	29	1,307	2.22	40	1,480	2.70
Age-adjusted			*1.36			*1.45			1.89			2.60

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CARDIA Prevalence Tables

Table 5–23. Prevalence of Cardiovascular Disease by Age, Race, and Sex, 2000

[MI, angina pectoris, rheumatic heart disease, mitral valve prolapse, PAD, stroke, or hypertension]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	232	1,508	15.38	93	663	14.03	139	845	16.45
40–45	514	2,164	23.75	206	957	21.53	308	1,207	25.52
33–45	746	3,672	20.32	299	1,620	18.46	447	2,052	21.78
Age-adjusted			18.96			17.24			20.33

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	38	313	12.14	55	350	15.71	42	358	11.73	97	487	19.92
40–45	103	599	17.20	103	358	28.77	126	673	18.72	182	534	34.08
33–45	141	912	15.46	158	708	22.32	168	1,031	16.29	279	1,021	27.33
Age-adjusted			14.30			21.29			14.72			25.97

Table 5–24. Prevalence of Coronary Heart Disease by Age, Race, and Sex, 2000

[CHD based on self-report: told of having heart attack or angina pectoris by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	59	1,207	4.89	39	555	7.03	20	652	*3.10
40–45	232	1,836	12.64	168	828	20.29	64	1,008	6.35
33–45	291	3,043	9.56	207	1,383	14.97	84	1,660	5.06
Age-adjusted			8.20			12.70			4.47

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	27	274	9.85	12	281	*4.30	9	284	*	11	368	*2.99
40–45	115	533	21.58	53	295	17.97	36	576	6.25	28	432	6.48
33–45	142	807	17.60	65	576	11.28	45	860	5.23	39	800	4.88
Age-adjusted			14.86			10.13			4.49			4.48

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CARDIA Prevalence Tables

Table 5–25. Prevalence of Myocardial Infarction by Age, Race, and Sex, 2000

[MI based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	7	1,505	*	4	661	*	3	844	*
40–45	13	2,161	*0.60	9	957	*	4	1,204	*
33–45	20	3,666	*0.60	13	1,618	*0.80	7	2,048	*
Age-adjusted			*0.53			*0.75			*

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	1	312	*	3	349	*	0	357	*	3	487	*
40–45	6	599	*	3	358	*	2	673	*	2	531	*
33–45	7	911	*	6	707	*	2	1,030	*	5	1,018	*
Age-adjusted			*0.61			*			*			*

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–26. Prevalence of Angina Pectoris by Age, Race, and Sex, 2000

[Angina pectoris based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	8	1,505	*	5	661	*	3	844	*
40–45	19	2,161	*0.90	3	957	*	16	1,204	*1.30
33–45	27	3,666	0.74	8	1,618	*	19	2,048	*0.90
Age-adjusted			*0.68			*			*0.77

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	4	312	*	1	349	*	0	357	*	3	487	*
40–45	1	599	*	2	358	*	5	673	*	11	531	*2.10
33–45	5	911	*	3	707	*	5	1,030	*	14	1,018	*1.40
Age-adjusted			*			*			*			*1.24

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CARDIA Prevalence Tables

Table 5–27. Prevalence of Rheumatic Heart Disease by Age, Race, and Sex, 2000

[Rheumatic heart disease based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	6	1,505	*	3	661	*	3	844	*
40–45	25	2,161	*1.16	10	957	*	15	1,204	*1.30
33–45	31	3,666	0.85	13	1,618	*0.80	18	2,048	*0.90
Age-adjusted			0.72			*0.70			*0.74

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	2	312	*	1	349	*	1	357	*	2	487	*
40–45	6	599	*	4	358	*	3	673	*	12	531	*2.26
33–45	8	911	*	5	707	*	4	1,030	*	14	1,018	*1.38
Age-adjusted			*			*			*			*1.20

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–28. Prevalence of Mitral Valve Prolapse by Age, Race, and Sex, 1985

[Mitral valve prolapse based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
18–24	12	2,284	*0.53	2	1,051	*	10	1,233	*
25–30	27	2,831	0.95	6	1,277	*	21	1,554	*1.40
18–30	39	5,115	0.76	8	2,328	*	31	2,787	1.11
Age-adjusted			0.72			*			1.05

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
18–24	2	436	*	0	615	*	5	483	*	5	750	*
25–30	4	736	*	2	541	*	17	824	*2.10	4	730	*
18–30	6	1,172	*	2	1,156	*	22	1,307	*1.70	9	1,480	*
Age-adjusted			*			*			*1.50			*

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CARDIA Prevalence Tables

Table 5–29. Prevalence of Mitral Valve Prolapse by Age, Race, and Sex, 2000

[Mitral valve prolapse based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	81	1,505	5.38	21	661	*3.20	60	844	7.11
40–45	152	2,161	7.03	41	957	4.28	111	1,204	9.22
33–45	233	3,666	6.36	62	1,618	3.83	171	2,048	8.35
Age-adjusted			6.09			3.65			8.01

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	14	312	*4.50	7	349	*	26	357	7.28	34	487	6.98
40–45	28	599	4.67	13	358	*3.60	70	673	10.40	41	531	7.72
33–45	42	911	4.61	20	707	*2.80	96	1,030	9.32	75	1,018	7.37
Age-adjusted			4.57			*2.70			8.61			7.30

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–30. Prevalence of Peripheral Arterial Disease by Age, Race, and Sex, 2000

[PAD based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	17	1,507	*1.10	6	662	*	11	845	*1.30
40–45	63	2,161	2.92	14	956	*1.50	49	1,205	4.07
33–45	80	3,668	2.18	20	1,618	*1.20	60	2,050	2.93
Age-adjusted			1.90			*1.15			2.48

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	4	312	*	2	350	*	7	358	*	4	487	*
40–45	6	599	*	8	357	*	24	673	*3.60	25	532	*4.70
33–45	10	911	*	10	707	*	31	1,031	3.01	29	1,019	2.85
Age-adjusted			*			*			2.65			2.48

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CARDIA Prevalence Tables

Table 5–31. Prevalence of Stroke by Age, Race, and Sex, 2000

[Stroke based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	11	1,507	*	2	662	*	9	845	*
40–45	22	2,161	*1.00	8	956	*	14	1,205	*1.20
33–45	33	3,668	0.90	10	1,618	*	23	2,050	*1.10
Age-adjusted			0.85			*			*1.11

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	1	312	*	1	350	*	4	358	*	5	487	*
40–45	4	599	*	4	357	*	3	673	*	11	532	*2.10
33–45	5	911	*	5	707	*	7	1,031	*	16	1,019	*1.60
Age-adjusted			*			*			*			*1.47

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–32. Prevalence of Hypertension by Age, Race, and Sex, 1985

[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or on antihypertensive medication]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
18–24	8	2,284	*	5	1,051	*	3	1,233	*
25–30	49	2,831	1.73	21	1,277	*1.60	28	1,554	1.80
18–30	57	5,115	1.11	26	2,328	1.12	31	2,787	1.11
Age-adjusted			0.97			*1.01			0.95

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
18–24	2	436	*	3	615	*	0	483	*	3	750	*
25–30	11	736	*1.50	10	541	*1.85	7	824	*	21	730	*2.90
18–30	13	1,172	*1.10	13	1,156	*1.10	7	1,307	*	24	1,480	*1.60
Age-adjusted			*0.93			*1.11			*0.38			*1.52

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

CARDIA Prevalence Tables

Table 5–33. Prevalence of Hypertension by Age, Race, and Sex, 2000

[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or on antihypertensive medication]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	133	1,508	8.82	64	663	9.65	69	845	8.17
40–45	310	2,164	14.33	151	957	15.78	159	1,207	13.17
33–45	443	3,672	12.06	215	1,620	13.27	228	2,052	11.11
Age-adjusted			11.18			12.27			10.31

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	19	313	*6.10	45	350	12.86	7	358	*	62	487	12.73
40–45	67	599	11.19	84	358	23.46	36	673	5.35	123	534	23.03
33–45	86	912	9.43	129	708	18.22	43	1,031	4.17	185	1,021	18.12
Age-adjusted			8.26			17.39			3.41			17.13

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–34. Prevalence of Asthma by Age, Race, and Sex, 1985

[Asthma based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
18–24	235	2,274	10.33	126	1,045	12.06	109	1,229	8.87
25–30	246	2,805	8.77	112	1,265	8.85	134	1,540	8.70
18–30	481	5,079	9.47	238	2,310	10.30	243	2,769	8.78
Age-adjusted			9.62			10.61			8.79

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
18–24	38	434	8.76	88	611	14.40	33	481	6.86	76	748	10.16
25–30	65	728	8.93	47	537	8.75	63	817	7.71	71	723	9.82
18–30	103	1,162	8.86	135	1,148	11.76	96	1,298	7.40	147	1,471	9.99
Age-adjusted			8.84			11.84			7.24			10.01

CARDIA Prevalence Tables

Table 5–35. Prevalence of Asthma by Age, Race, and Sex, 2000

[Asthma based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	263	1,508	17.44	116	663	17.50	147	845	17.40
40–45	341	2,164	15.76	128	957	13.38	213	1,207	17.65
33–45	604	3,672	16.45	244	1,620	15.06	360	2,052	17.54
Age-adjusted			16.72			15.74			17.51

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	44	313	14.06	72	350	20.57	52	358	14.53	95	487	19.51
40–45	80	599	13.36	48	358	13.41	106	673	15.75	107	534	20.04
33–45	124	912	13.60	120	708	16.95	158	1,031	15.32	202	1,021	19.78
Age-adjusted			13.76			17.51			15.05			19.74

Table 5–36. Prevalence of Chronic Obstructive Pulmonary Disease by Age, Race, and Sex, 2000

[Chronic bronchitis or emphysema based on self-report of diagnosis by doctor or nurse]

Part A

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	103	1,507	6.83	34	662	5.14	69	845	8.17
40–45	153	2,161	7.08	53	956	5.54	100	1,205	8.30
33–45	256	3,668	6.98	87	1,618	5.38	169	2,050	8.24
Age-adjusted			6.94			5.31			8.23

Part B

	White Men			Black Men			White Women			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
33–39	13	312	*4.17	21	350	*5.40	34	358	9.50	35	487	7.19
40–45	34	599	5.68	24	357	*6.40	47	673	6.98	53	532	9.96
33–45	47	911	5.16	45	707	6.36	81	1,031	7.86	88	1,019	8.64
Age-adjusted			4.82			5.83			8.42			8.37

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

FHS Prevalence Tables: Both Cohorts

Table 5–37. Prevalence of Cardiovascular Disease by Age and Sex, 1998–2002
[CHD, HF, CVA, or intermittent claudication]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	2	108	*	2	61	*	0	47	*
45–54	54	843	6.41	36	362	9.94	18	481	*3.74
55–64	152	1,290	11.78	90	608	14.80	62	682	9.09
65–74	287	1,076	26.67	184	516	35.66	103	560	18.39
75–84	357	757	47.16	172	333	51.65	185	424	43.63
85–94	369	648	56.94	138	202	68.32	231	446	51.79
≥95	43	79	54.43	10	17	*58.82	33	62	53.23
≥35	1,264	4,801	26.33	632	2,099	30.11	632	2,702	23.39
Age-adjusted			13.59			17.38			10.32

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–38. Prevalence of Coronary Heart Disease by Age and Sex, 1998–2002
[MI, angina pectoris, coronary insufficiency, or fatal CHD]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	33	843	3.91	28	362	7.73	5	481	*
55–64	108	1,290	8.37	71	608	11.68	37	682	5.43
65–74	208	1,076	19.33	146	516	28.29	62	560	11.07
75–84	226	757	29.85	114	333	34.23	112	424	26.42
85–94	202	648	31.17	86	202	42.57	116	446	26.01
≥95	25	79	31.65	4	17	*	21	62	33.87
≥35	803	4,801	16.73	450	2,099	21.44	353	2,702	13.06
Age-adjusted			8.92			12.45			5.76

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* A rate not shown has an RSE > 30 percent.

FHS Prevalence Tables: Both Cohorts

Table 5–39. Prevalence of Myocardial Infarction or Fatal Coronary Heart Disease by Age and Sex, 1998–2002

[MI based on ECG evidence, hospital examination, or autopsy report of recent MI; fatal CHD based on hospital records and death certificate]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	17	843	*2.02	14	362	*3.87	3	481	*
55–64	65	1,290	5.04	50	608	8.22	15	682	*2.20
65–74	117	1,076	10.87	90	516	17.44	27	560	4.82
75–84	131	757	17.31	79	333	23.72	52	424	12.26
85–94	126	648	19.44	59	202	29.21	67	446	15.02
≥95	12	79	*15.19	2	17	*	10	62	*16.13
≥35	469	4,801	9.77	295	2,099	14.05	174	2,702	6.44
Age-adjusted			5.19			8.11			2.70

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–40. Prevalence of Myocardial Infarction by Age and Sex, 1998–2002

[MI based on ECG evidence, hospital examination, or autopsy report of recent MI]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	16	843	*1.90	13	362	*3.59	3	481	*
55–64	64	1,290	4.96	49	608	8.06	15	682	*2.20
65–74	114	1,076	10.59	88	516	17.05	26	560	4.64
75–84	123	757	16.25	74	333	22.22	49	424	11.56
85–94	120	648	18.52	56	202	27.72	64	446	14.35
≥95	10	79	*12.66	1	17	*	9	62	*
≥35	448	4,801	9.33	282	2,099	13.43	174	2,702	6.44
Age-adjusted			4.98			7.77			2.59

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Prevalence Tables: Both Cohorts

Table 5–41. Prevalence of Angina Pectoris by Age and Sex, 1998–2002

[Angina pectoris based on physician interview of patient]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	0	108	*	0	61	*	0	47	*
45–54	23	843	*2.73	20	362	*5.52	3	481	*
55–64	69	1,290	5.35	46	608	7.57	23	682	*3.37
65–74	137	1,076	12.73	94	516	18.22	43	560	7.68
75–84	150	757	19.82	77	333	23.12	73	424	17.22
85–94	125	648	19.29	61	202	30.20	64	446	14.35
≥95	18	79	*22.78	3	17	*	15	62	*24.19
≥35	522	4,801	10.87	301	2,099	14.34	221	2,702	8.18
Age-adjusted			5.61			8.01			3.71

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–42. Prevalence of Heart Failure by Age and Sex, 1998–2002

[HF based on physician review of medical records and strict diagnostic criteria]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	9	843	*	6	362	*	3	481	*
55–64	18	1,290	*1.40	9	608	*	9	682	*
65–74	47	1,076	4.37	33	516	6.40	14	560	*2.50
75–84	123	757	16.25	63	333	18.92	60	424	14.15
85–94	137	648	21.14	48	202	23.76	89	446	19.96
≥95	17	79	*21.52	2	17	*	15	62	*24.19
≥35	352	4,801	7.33	162	2,099	7.72	190	2,702	7.03
Age-adjusted			3.45			4.38			2.57

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Prevalence Tables: Both Cohorts

Table 5–43. Prevalence of Cerebrovascular Accident by Age and Sex, 1998–2002

[CVA based on occurrence of stroke and either in-hospital examination or physician review of hospital records]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	10	843	*	2	362	*	8	481	*
55–64	32	1,290	2.48	15	608	*2.47	17	682	*2.49
65–74	77	1,076	7.16	42	516	8.14	35	560	6.25
75–84	125	757	16.51	63	333	18.92	62	424	14.62
85–94	157	648	24.23	60	202	29.70	97	446	21.75
≥95	19	79	*24.05	2	17	*	17	62	*27.42
≥35	421	4,801	8.77	185	2,099	8.81	236	2,702	8.73
Age-adjusted			4.14			4.65			3.63

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–44. Prevalence of Hypertension by Age and Sex, 1998–2002

[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or taking antihypertensive medication]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	18	105	*17.14	13	60	*21.67	5	45	*
45–54	201	816	24.63	103	350	29.43	98	466	21.03
55–64	544	1,234	44.08	271	573	47.29	273	661	41.30
65–74	594	989	60.06	299	469	63.75	295	520	56.73
75–84	445	601	74.04	179	248	72.18	266	353	75.35
85–94[†]	392	494	79.35	116	151	76.82	276	343	80.47
≥95	37	54	68.52	5	11	*	32	43	74.42
≥35	2,231	4,293	51.97	986	1,862	52.95	1,245	2,431	51.21
Age-adjusted			36.11			39.54			32.50

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

[†] Includes 15 offspring cases (7 men and 8 women) not shown in Table 5–60.

FHS Prevalence Tables: Original Cohort

Table 5–45. Prevalence of Cardiovascular Disease by Age and Sex, 1998–2002

[MI, CHD, angina pectoris, HF, CVA, coronary insufficiency syndrome, or intermittent claudication]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
75–84	179	317	56.47	76	130	58.46	103	187	55.08
85–94	357	623	57.30	130	188	69.15	227	435	52.18
≥95	43	79	54.43	10	17	*58.82	33	62	53.23
≥75	579	1,019	56.82	216	335	64.48	363	684	53.07
Age-adjusted			56.61			60.94			54.36

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

Table 5–46. Prevalence of Coronary Heart Disease by Age and Sex, 1998–2002

[MI, angina pectoris, coronary insufficiency, or fatal CHD]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
75–84	120	317	37.85	51	130	39.23	66	187	35.29
85–94	196	623	31.46	81	188	43.09	115	435	26.44
≥95	25	79	31.65	4	17	*	21	62	33.87
≥75	341	1,019	33.46	136	335	40.60	202	684	29.53
Age-adjusted			36.22			39.72			33.21

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–47. Prevalence of Myocardial Infarction or Fatal Coronary Heart Disease by Age and Sex, 1998–2002

[MI based on ECG evidence, hospital examination, or autopsy report of recent MI, fatal CHD based on hospital records and death certificate]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
75–84	72	317	22.71	40	130	30.77	32	187	17.11
85–94	122	623	19.58	55	188	29.26	67	435	15.40
≥95	12	79	*15.19	2	17	*	10	62	*16.13
≥75	206	1,019	20.22	97	335	28.96	109	684	15.94
Age-adjusted			21.79			29.93			16.69

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Prevalence Tables: Original Cohort

Table 5–48. Prevalence of Myocardial Infarction by Age and Sex, 1998–2002
[MI based on ECG evidence and hospital examination or autopsy report of recent MI]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
75–84	65	317	20.50	36	130	27.69	29	187	15.51
85–94	116	623	18.62	52	188	27.66	64	435	14.71
≥95	10	79	*12.66	1	17	*	9	62	*16.13
≥75	191	1,019	18.74	89	335	26.57	102	684	14.91
Age-adjusted			19.87			27.12			15.34

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–49. Prevalence of Angina Pectoris by Age and Sex, 1998–2002
[Angina pectoris based on physician interview of patient]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
75–84	74	317	23.34	32	130	24.62	42	187	22.46
85–94	123	623	19.74	59	188	31.38	64	435	14.71
≥95	18	79	*22.80	3	17	*	15	62	*24.19
≥75	215	1,019	21.10	94	335	28.06	121	684	17.69
Age-adjusted			22.50			26.00			20.71

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–50. Prevalence of Heart Failure by Age and Sex, 1998–2002
[HF based on physician review of medical records and strict diagnostic criteria]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
75–84	68	317	21.45	30	130	23.08	38	187	20.32
85–94	131	623	21.03	43	188	22.87	88	435	20.23
≥95	17	79	*21.52	2	17	*	15	62	*24.19
≥75	216	1,019	21.20	75	335	22.39	141	684	20.61
Age-adjusted			21.35			22.74			20.40

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Prevalence Tables: Original Cohort

Table 5–51. Prevalence of Cerebrovascular Accident by Age and Sex, 1998–2002

[CVA based on occurrence of stroke and either hospital examination or physician review of hospital records]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
75–84	58	317	18.30	27	130	20.77	31	187	16.58
85–94	153	623	24.56	58	188	30.85	95	435	21.84
≥95	19	79	*24.05	2	17	*	17	62	*27.42
≥75	230	1,019	22.57	87	335	25.97	143	684	20.91
Age-adjusted			19.89			22.87			18.07

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–52. Prevalence of Hypertension by Age and Sex, 1998–2002

[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or taking antihypertensive medication]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
75–84	180	229	78.60	66	87	75.86	114	142	80.28
85–94	377	475	79.37	109	140	77.86	268	335	80.00
≥95	37	54	68.52	5	11	*	32	43	74.42
≥75	594	758	78.36	180	238	75.63	414	520	79.62
Age-adjusted			78.52			75.54			80.07

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* A rate not shown has an RSE > 30 percent.

FHS Prevalence Tables: Offspring Cohort

Table 5–53. Prevalence of Cardiovascular Disease by Age and Sex, 1998–2002
[MI, CHD, angina pectoris, HF, CVA, coronary insufficiency syndrome, or intermittent claudication]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	2	108	*	2	61	*	0	47	*
45–54	54	843	6.41	36	362	9.94	18	481	*3.74
55–64	152	1,290	11.78	90	608	14.80	62	682	9.09
65–74	287	1,076	26.67	184	516	35.66	103	560	18.39
75–84	178	440	40.45	96	203	47.29	82	237	34.60
35–84	673	3,757	17.91	408	1,750	23.31	265	2,007	13.20
Age-adjusted			11.64			15.42			8.20

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–54. Prevalence of Coronary Heart Disease by Age and Sex, 1998–2002
[MI, angina pectoris, coronary insufficiency, or fatal CHD

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	33	843	3.91	28	362	7.73	5	481	*
55–64	108	1,290	8.37	71	608	11.68	37	682	5.43
65–74	208	1,076	19.33	146	516	28.29	62	560	11.07
75–84	106	440	24.09	60	203	29.56	46	237	19.41
35–84	456	3,757	12.14	306	1,750	17.49	150	2,007	7.47
Age-adjusted			7.60			11.14			4.47

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–55. Prevalence of Myocardial Infarction or Fatal Coronary Heart Disease by Age and Sex, 1998–2002
[MI based on ECG evidence, hospital examination, or autopsy report of recent MI; fatal CHD based on hospital records and death certificate]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	17	843	*2.02	14	362	*3.87	3	481	*
55–64	65	1,290	5.04	50	608	8.22	15	682	*2.20
65–74	117	1,076	10.87	90	516	17.44	27	560	4.82
75–84	59	440	13.41	39	203	19.21	20	237	*8.44
35–84	259	3,757	6.89	194	1,750	11.09	65	2,007	3.24
Age-adjusted			4.40			7.10			1.96

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Prevalence Tables: Offspring Cohort

Table 5–56. Prevalence of Myocardial Infarction by Age and Sex, 1998–2002
[MI based on ECG evidence and hospital examination or autopsy report of recent MI]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	16	843	*2.02	13	362	*3.87	3	481	*
55–64	64	1,290	4.96	49	608	8.06	15	682	*2.20
65–74	114	1,076	10.59	88	516	17.05	26	560	4.64
75–84	58	440	13.18	38	203	18.72	20	237	*8.44
35–84	253	3,757	6.73	189	1,750	10.80	64	2,007	3.19
Age-adjusted			4.33			6.98			1.94

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–57. Prevalence of Angina Pectoris by Age and Sex, 1998–2002
[Angina pectoris based on physician interview of patient]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	0	108	*	0	61	*	0	47	*
45–54	23	843	*2.73	20	362	*5.52	3	481	*
55–64	69	1,290	5.35	46	608	7.57	23	682	*3.37
65–74	137	1,076	12.73	94	516	18.22	43	560	7.68
75–84	76	440	17.27	45	203	22.17	31	237	13.08
35–84	305	3,757	8.12	205	1,750	11.71	100	2,007	4.98
Age-adjusted			4.94			7.27			2.97

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–58. Prevalence of Heart Failure by Age and Sex, 1998–2002
[HF based on physician review of medical records of HF patients and strict diagnostic criteria]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	9	843	*	6	362	*	3	481	*
55–64	18	1,290	*1.40	9	608	*	9	682	*
65–74	47	1,076	4.37	33	516	6.40	14	560	*2.50
75–84	55	440	12.50	33	203	16.26	22	237	*9.28
35–84	130	3,757	3.46	82	1,750	4.69	48	2,007	2.39
Age-adjusted			2.56			3.57			1.57

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.
* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

FHS Prevalence Tables: Offspring Cohort

Table 5–59. Prevalence of Cerebrovascular Accident by Age and Sex, 1998–2002

[CVA based on occurrence of stroke and either hospital examination or physician review of hospital records]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	1	108	*	1	61	*	0	47	*
45–54	10	843	*	2	362	*	8	481	*
55–64	32	1,290	2.48	15	608	*2.47	17	682	*2.49
65–74	77	1,076	7.16	42	516	8.14	35	560	6.25
75–84	67	440	15.23	36	203	17.73	31	237	13.08
35–84	187	3,757	4.98	96	1,750	5.49	91	2,007	4.53
Age-adjusted			3.40			3.81			2.91

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–60. Prevalence of Hypertension by Age and Sex, 1998–2002

[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or on antihypertensive medication]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
35–44	18	105	*17.14	13	60	*21.67	5	45	*
45–54	201	816	24.63	103	350	29.43	98	466	21.03
55–64	544	1,234	44.08	271	573	47.29	273	661	41.30
65–74	594	989	60.06	299	469	63.75	295	520	56.73
75–84	265	372	71.24	113	161	70.19	152	211	72.04
35–84	1,622	3,516	46.13	799	1,613	49.54	823	1,903	43.25
Age-adjusted			34.54			38.29			30.72

Note: Rates are calculated from Pop values to two decimal places, not from the Pop values shown.

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

MESA Prevalence Table

Table 5–61. Prevalence of Peripheral Arterial Disease by Age, Race/Ethnicity, and Sex, 2000–2002
[PAD based on ABI < 0.9 and San Diego claudication modification of Rose/WHO criteria]

Part A		Total			Men			Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	34	1,824	1.86	12	850	*	22	974	*2.26
55–64	61	1,910	3.19	22	900	*2.44	39	1,010	3.86
65–74	130	2,020	6.44	68	963	7.06	62	1,057	5.87
75–84	127	1,060	11.98	51	500	10.20	76	560	13.57
45–84	352	6,814	5.17	153	3,213	4.76	199	3,601	5.53
Age-adjusted			4.48			3.98			4.92

Part B		White Men			Asian Men†			Black Men	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	5	313	*	1	107	*	3	223	*
55–64	8	349	*	1	102	*	9	233	*
65–74	20	388	*5.15	2	118	*	34	264	12.88
75–84	13	209	*6.22	3	63	*	24	125	19.20
45–84	46	1,259	3.65	7	390	*	70	845	8.28
Age-adjusted			3.11			*			6.70

Part C		White Women			Asian Women†			Black Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	10	353	*	2	107	*	8	284	*
55–64	15	389	*3.86	2	116	*	13	291	*4.47
65–74	17	393	*4.33	3	125	*	27	321	8.41
75–84	22	225	*9.78	6	65	*	33	157	21.02
45–84	64	1,360	4.71	13	413	*3.15	81	1,053	7.69
Age-adjusted			4.33			*2.93			6.81

Part D		Hispanic Men			Hispanic Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	3	207	*	2	230	*
55–64	4	216	*	9	214	*
65–74	12	193	*6.22	15	218	*6.88
75–84	11	103	*10.68	15	113	*13.27
45–84	30	719	4.17	41	775	5.29
Age-adjusted			3.74			4.61

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.
† Predominantly of Chinese descent.

MESA Prevalence Table

Table 5–62. Prevalence of Peripheral Arterial Disease by Age, Race/Ethnicity, and Sex, 2000–2002
[PAD based on ABI < 0.9]

Part A		Total			Men			Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	18	1,824	*0.99	6	850	*	12	974	*1.23
55–64	30	1,910	1.57	15	900	*1.67	15	1,010	*1.49
65–74	98	2,020	4.85	57	963	5.92	41	1,057	3.88
75–84	105	1,060	9.91	41	500	8.20	64	560	11.43
45–84	251	6,814	3.68	119	3,213	3.70	132	3,601	3.67
Age-adjusted			3.11			3.00			3.20

Part B		White Men			Asian Men†			Black Men	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	2	313	*	0	107	*	2	223	*
55–64	5	349	*	0	102	*	7	233	*
65–74	18	388	*4.64	1	118	*	29	264	10.98
75–84	10	209	*	3	63	*	21	125	*16.80
45–84	35	1,259	2.78	4	390	*	59	845	6.98
Age-adjusted			2.20			*			5.59

Part C		White Women			Asian Women†			Black Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	6	353	*	2	107	*	4	284	*
55–64	8	389	*	0	116	*	6	291	*
65–74	14	393	*3.56	2	125	*	22	321	*6.85
75–84	18	225	*8.00	6	65	*	31	157	19.75
45–84	46	1,360	3.38	10	413	*	63	1,053	5.98
Age-adjusted			3.01			*			5.13

Part D		Hispanic Men			Hispanic Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	2	207	*	0	230	*
55–64	3	216	*	1	214	*
65–74	9	193	*	3	218	*
75–84	7	103	*	9	113	*
45–84	21	719	*2.92	13	775	*1.68
Age-adjusted			*2.60			*1.47

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.
† Predominantly of Chinese descent.

MESA Prevalence Table

Table 5–63. Prevalence of Peripheral Arterial Disease by Age, Race/Ethnicity, and Sex, 2000–2002
[PAD based on San Diego claudication modification of Rose/WHO criteria]

Part A		Total			Men			Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	17	1,824	*0.93	7	850	*	10	974	*
55–64	34	1,910	1.78	10	900	*	24	1,010	*2.38
65–74	41	2,020	2.03	19	963	*1.97	22	1,057	*2.08
75–84	30	1,060	2.83	15	500	*3.00	15	560	*2.68
45–84	122	6,814	1.79	51	3,213	1.59	71	3,601	1.97
Age-adjusted			1.63			1.42			1.81

Part B		White Men			Asian Men†			Black Men	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	3	313	*	1	107	*	2	223	*
55–64	4	349	*	1	102	*	3	233	*
65–74	4	388	*	2	118	*	9	264	*
75–84	4	209	*	1	63	*	6	125	*
45–84	15	1,259	*1.19	5	390	*	20	845	*2.37
Age-adjusted			*1.15			*			*2.03

Part C		White Women			Asian Women†			Black Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	4	353	*	0	107	*	4	284	*
55–64	7	389	*	2	116	*	7	291	*
65–74	3	393	*	1	125	*	6	321	*
75–84	6	225	*	0	65	*	3	157	*
45–84	20	1,360	*1.47	3	413	*	20	1,053	*1.90
Age-adjusted			*1.44			*			*1.83

Part D		Hispanic Men			Hispanic Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	1	207	*	2	230	*
55–64	2	216	*	8	214	*
65–74	4	193	*	12	218	*5.50
75–84	4	103	*	6	113	*
45–84	11	719	*1.53	28	775	3.61
Age-adjusted			*			3.14

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.
† Predominantly of Chinese descent.

MESA Prevalence Table

Table 5–64. Prevalence of Hypertension by Age, Race/Ethnicity, and Sex, 2000–2002

[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or taking antihypertensive medication]

Part A		Total			Men			Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	421	1,824	23.08	192	850	22.59	229	974	23.51
55–64	789	1,910	41.31	347	900	38.56	442	1,010	43.76
65–74	1,128	2,020	55.84	531	963	55.14	597	1,057	56.48
75–84	681	1,060	64.25	293	500	58.60	388	560	69.29
45–84	3,019	6,814	44.31	1,363	3,213	42.42	1,656	3,601	45.99
Age-adjusted			39.90			38.08			41.52

Part B		White Men			Asian Men†			Black Men	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	67	313	21.41	17	107	*15.89	77	223	34.53
55–64	115	349	32.95	36	102	35.29	120	233	51.50
65–74	186	388	47.94	51	118	43.22	193	264	73.11
75–84	115	209	55.02	32	63	50.79	85	125	68.00
45–84	483	1,259	38.36	136	390	34.87	475	845	56.21
Age-adjusted			34.22			31.10			51.14

Part C		White Women			Asian Women†			Black Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	59	353	16.71	18	107	*16.82	106	284	37.32
55–64	130	389	33.42	36	116	31.03	185	291	63.57
65–74	181	393	46.06	64	125	51.20	224	321	69.78
75–84	142	225	63.11	45	65	69.23	121	157	77.07
45–84	512	1,360	37.65	163	413	39.47	636	1,053	60.40
Age-adjusted			33.16			34.42			55.99

Part D		Hispanic Men			Hispanic Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	31	207	14.98	46	230	20.00
55–64	76	216	35.19	91	214	42.52
65–74	101	193	52.33	128	218	58.72
75–84	61	103	59.22	80	113	70.80
45–84	269	719	37.41	345	775	44.52
Age-adjusted			33.64			40.42

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

† Predominantly of Chinese descent.

MESA Prevalence Table

Table 5–65. Prevalence of Chronic Obstructive Pulmonary Disease by Age, Race/Ethnicity, and Sex, 2000–2002

[COPD: Emphysema based on self-reported physician diagnosis or chronic bronchitis based on self-reported bronchitis within past 2 weeks]

Part A		Total			Men			Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	31	1,824	1.70	11	850	*	20	974	*2.05
55–64	55	1,910	2.88	21	900	*2.33	34	1,010	3.37
65–74	76	2,020	3.76	34	963	3.53	42	1,057	3.97
75–84	58	1,060	5.47	29	500	5.80	29	560	5.18
45–84	220	6,814	3.23	95	3,213	2.96	125	3,601	3.47
Age-adjusted			2.93			2.62			3.20

Part B		White Men			Asian Men†			Black Men	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	4	313	*	1	107	*	4	223	*
55–64	14	349	*4.01	0	102	*	6	233	*
65–74	15	388	*3.87	8	118	*	10	264	*
75–84	14	209	*6.70	8	63	*	4	125	*
45–84	47	1,259	3.73	17	390	*4.36	24	845	*2.84
Age-adjusted			3.24			*3.43			*2.58

Part C		White Women			Asian Women†			Black Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	10	353	*	2	107	*	4	284	*
55–64	17	389	*4.37	2	116	*	13	291	*4.47
65–74	17	393	*4.33	6	125	*	17	321	*5.30
75–84	17	225	*7.56	4	65	*	7	157	*
45–84	61	1,360	4.49	14	413	*3.39	41	1,053	3.89
Age-adjusted			4.17			*2.99			3.39

Part D		Hispanic Men			Hispanic Women	
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	2	207	*	4	230	*
55–64	1	216	*	2	214	*
65–74	1	193	*	2	218	*
75–84	3	103	*	1	113	*
45–84	7	719	*	9	775	*
Age-adjusted			*			*

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

† Predominantly of Chinese descent.

MESA Prevalence Table

Table 5–66. Prevalence of Asthma by Age, Race/Ethnicity, and Sex, 2000–2002

[Asthma based on self-reported physician diagnosis]

Part A	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	227	1,824	12.45	62	850	7.29	165	974	16.94
55–64	192	1,910	10.05	73	900	8.11	119	1,010	11.78
65–74	162	2,020	8.02	62	963	6.44	100	1,057	9.46
75–84	87	1,060	8.21	43	500	8.60	44	560	7.86
45–84	668	6,814	9.80	240	3,213	7.47	428	3,601	11.89
Age-adjusted			10.37			7.51			12.88

Part B	White Men			Asian Men†			Black Men		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	26	313	8.31	7	107	*	18	223	*8.07
55–64	34	349	9.74	9	102	*	18	233	*7.73
65–74	30	388	7.73	8	118	*	15	264	*5.68
75–84	21	209	*10.05	6	63	*	9	125	*
45–84	111	1,259	8.82	30	390	7.69	60	845	7.10
Age-adjusted			8.80			7.59			7.39

Part C	White Women			Asian Women†			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	56	353	15.86	5	107	*	61	284	21.48
55–64	44	389	11.31	4	116	*	36	291	12.37
65–74	31	393	7.89	5	125	*	42	321	13.08
75–84	12	225	*5.33	4	65	*	19	157	*12.10
45–84	143	1,360	10.51	18	413	*4.36	158	1,053	15.00
Age-adjusted			11.67			*4.42			16.16

Part D	Hispanic Men			Hispanic Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	11	207	*5.31	43	230	18.70
55–64	12	216	*5.56	35	214	16.36
65–74	9	193	*	22	218	*10.09
75–84	7	103	*	9	113	*
45–84	39	719	5.42	109	775	14.06
Age-adjusted			5.45			14.93

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

† Predominantly of Chinese descent.

MESA Prevalence Table

Table 5–67. Prevalence of Sleep Apnea by Age, Race/Ethnicity, and Sex, 2000–2002
[Sleep apnea based on self-reported physician diagnosis]

Part A	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	237	1,824	12.99	91	850	10.71	146	974	14.99
55–64	216	1,910	11.31	95	900	10.56	121	1,010	11.98
65–74	195	2,020	9.65	92	963	9.55	103	1,057	9.74
75–84	71	1,060	6.70	36	500	7.20	35	560	6.25
45–84	719	6,814	10.55	314	3,213	9.77	405	3,601	11.25
Age-adjusted			11.04			9.97			11.98

Part B	White Men			Asian Men†			Black Men		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	34	313	10.86	7	107	*	25	223	11.21
55–64	32	349	9.17	6	102	*	22	233	*9.44
65–74	30	388	7.73	10	118	*8.47	26	264	9.85
75–84	13	209	*6.22	4	63	*	9	125	*
45–84	109	1,259	8.66	27	390	6.92	82	845	9.70
Age-adjusted			9.17			*6.72			9.94

Part C	White Women			Asian Women†			Black Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	40	353	11.33	6	107	*	63	284	22.18
55–64	35	389	9.00	10	116	*	36	291	12.37
65–74	29	393	7.38	5	125	*	35	321	10.90
75–84	10	225	*	2	65	*	16	157	*10.19
45–84	114	1,360	8.38	23	413	*5.57	150	1,053	14.25
Age-adjusted			9.01			*5.74			15.76

Part D	Hispanic Men			Hispanic Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	25	207	12.08	37	230	16.09
55–64	35	216	16.20	40	214	18.69
65–74	26	193	13.47	34	218	15.60
75–84	10	103	*9.71	7	113	*
45–84	96	719	13.35	118	775	15.23
Age-adjusted			13.12			15.34

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.
† Predominantly of Chinese descent.

SHS Prevalence Tables

Table 5–68. Prevalence of Cardiovascular Disease in American Indians by Age and Sex, 1989–1992
[CHD or stroke]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	34	2,229	1.53	26	958	2.71	8	1,271	*
55–64	52	1,507	3.45	36	579	6.22	16	928	*1.72
65–74	42	813	5.17	30	309	9.71	12	504	*2.38
45–74	128	4,549	2.81	92	1,846	4.98	36	2,703	1.33
Age-adjusted			2.94			5.38			1.36

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–69. Prevalence of Coronary Heart Diseases in American Indians by Age and Sex, 1989–1992
[MI or angina pectoris]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	27	2,229	1.21	23	958	*2.40	4	1,271	*
55–64	39	1,507	2.59	28	579	4.84	11	928	*1.19
65–74	31	813	3.81	23	309	*7.44	8	504	*
45–74	97	4,549	2.13	74	1,846	4.01	23	2,703	*0.85
Age-adjusted			2.22			4.29			*0.87

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–70. Prevalence of Myocardial Infarction in American Indians by Age and Sex, 1989–1992
[Definite nonfatal MI based on chart record; fatal MI based on chart report or autopsy]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	16	2,229	*0.72	14	958	*1.46	2	1,271	*
55–64	14	1,507	*0.93	11	579	*1.90	3	928	*
65–74	14	813	*1.72	10	309	*	4	504	*
45–74	44	4,549	0.97	35	1,846	1.90	9	2,703	*
Age-adjusted			1.01			2.00			*

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

SHS Prevalence Tables

Table 5–71. Prevalence of Heart Failure in American Indians by Age and Sex, 1989–1992
[HF based on self-report and chart review]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	62	2,229	2.78	32	958	3.34	30	1,271	2.36
55–64	75	1,507	4.98	24	579	*4.15	51	928	5.50
65–74	47	813	5.78	20	309	*6.47	27	504	5.36
45–74	184	4,549	4.04	76	1,846	4.12	108	2,703	4.00
Age-adjusted			4.13			4.30			4.00

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

Table 5–72. Prevalence of Stroke in American Indians by Age and Sex, 1989–1992
[Nonfatal stroke based on chart review; fatal stroke based on chart review and autopsy/death certificate]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	9	2,229	*	4	958	*	5	1,271	*
55–64	15	1,507	*1.00	8	579	*	7	928	*
65–74	13	813	*1.60	9	309	*	4	504	*
45–74	37	4,549	0.81	21	1,846	*1.14	16	2,703	*0.59
Age-adjusted			0.86			*1.28			*0.59

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent. A rate not shown has an RSE > 30 percent.

Table 5–73. Prevalence of Peripheral Arterial Disease in American Indians by Age and Sex, 1989–1992
[PAD based on ABI < 0.9]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	74	2,126	3.48	25	886	*2.82	49	1,240	3.95
55–64	75	1,402	5.35	29	531	5.46	46	871	5.28
65–74	77	748	10.29	27	288	9.38	50	460	10.87
45–74	226	4,276	5.29	81	1,705	4.75	145	2,571	5.64
Age-adjusted			5.61			5.12			5.94

* This estimate is considered unreliable. A rate preceded by an asterisk has an RSE of 20–30 percent.

SHS Prevalence Tables

Table 5–74. Prevalence of Hypertension in American Indians by Age and Sex, 1989–1992

[Hypertension based on systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 mmHg, or taking antihypertensive medication]

	Total			Men			Women		
Age Group	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**	**N**	**Pop**	**Percent**
45–54	699	2,224	31.43	341	954	35.74	358	1,270	28.19
55–64	642	1,498	42.86	243	575	42.26	399	923	43.23
65–74	448	811	55.24	159	308	51.62	289	503	57.46
45–74	1,789	4,533	39.47	743	1,837	40.45	1,046	2,696	38.80
Age-adjusted			40.35			41.36			39.45

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Appendixes

A. Description of Each Study

B. Definition of Diseases in Each Study

C. Epidemiology Terms

D. Abbreviations

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Appendix A. Description of Each Study

Atherosclerosis Risk in Communities Cohort

The ARIC Cohort Study, initiated in 1987, is a population-based, longitudinal investigation of associations between established and suspected CHD risk factors and atherosclerosis and new CHD events in men and women, ages 45–64 at baseline, from four communities: Washington County, MD; Forsyth County, NC; selected suburbs of Minneapolis, MN; and Jackson, MS.[6, 7] Approximately 4,000 individuals were recruited from each community. Three of the cohorts reflect the race/ethnicity composition of the population; the fourth cohort, located in Jackson, is predominantly black.

A total of 15,792 participants received an extensive examination upon entry into the study in 1987–89; medical, social, and demographic data were gathered. Reexaminations were administered every 3 years: 1990–92, 1993–95, and 1996–98. In addition, the participants were contacted annually by telephone to ascertain their health status. They have been followed for seven primary endpoints: CHD, MI, angina pectoris, HF, stroke, PAD, and asthma.

Information on cause of out-of-hospital deaths was based on reviews of informant interviews and physician and coroner questionnaires, and in-hospital deaths were classified based on review of death certificates and hospital records.

Most of the incidence data reported for this *Chart Book* are for white and black men and women, ages 45–84, for 1987–2001, with incidence cases in the 75–84 age group predominantly from ages 75 to 79. Angina pectoris and PAD incidence are from ages 45 to 74. For prevalence, data are presented for persons ages 45–64 for 1987–89.

Person Years

Person years for hospitalized MI, hospitalized HF, hospitalized stroke, hospitalized asthma, and CHD were calculated from the date of the baseline examination to the earliest of the following: date of hospital admission for incident event, date of death, date of last follow-up contact, or December 31, 2001. Person years for angina pectoris determined by the Rose Questionnaire were calculated from the date of the baseline examination to the imputed date of angina, which is midway between the dates of the interview ascertaining the occurrence of angina and the previous interview with diagnosis of no angina.[4] For those without angina, person years were from the baseline to the earliest of the following: date of the last phone interview with diagnosis of no angina or December 31, 1998. Person years for stroke/TIA were calculated from the date of the baseline examination to the self-reported stroke/TIA date or the imputed date, which is midway between the dates of the interview ascertaining the occurrence of stroke/TIA and the previous interview with diagnosis of no stroke/TIA. For those without stroke/TIA, person years were from the baseline to the earliest of the following: date of the last interview with diagnosis of no stroke/TIA or December 31, 2003. Person years for PAD were calculated from the date of the baseline examination to the interpolated date of PAD, which is based on the dates of the clinic visit ascertaining the occurrence of PAD, i.e., when the ankle-brachial index (ABI) value was < 0.90 for men or < 0.85 for women and the previous visit with diagnosis of no PAD. For those without PAD, person years were from the baseline to the earliest of the following date: date of the last clinic visit with diagnosis of no PAD, or December 31, 1998. Note that ABI was not collected at visit 2.

Age-Adjustment Factors

The following factors are used to calculate age-adjusted estimates:

For Incidence:

Age Group	U.S. Population	Factors
45–54	37,030,000	0.404956
55–64	23,961,000	0.262035
65–74	18,136,000	0.198333
75–84	12,315,000	0.134676
45–84	91,442,000	1.000000

Angina Pectoris and PAD:

Age Group	U.S. Population	Factors
45–54	37,030,000	0.467982
55–64	23,961,000	0.302817
65–74	18,136,000	0.229201
45–74	79,127,000	1.000000

For Prevalence:

Age Group	U.S. Population	Factors
45–54	37,030,000	0.607139
55–64	23,961,000	0.392861
45–64	60,991,000	1.000000

Atherosclerosis Risk in Communities Surveillance

The ARIC Surveillance, initiated in 1987, is an ongoing, population-based study to estimate CHD incidence, case fatality, and mortality, and to describe the availability and use of medical care in the four communities: Washington County, MD; Forsyth County, NC; Minneapolis, MN; and Jackson, MS.[6, 7] Estimates of community-wide occurrence of hospitalized MI and CHD deaths are being determined for men and women, ages 35–74. The community surveillance involves abstracting and validating hospital records and death certificates and investigating out-of-hospital deaths.

Incidence data reported for this *Chart Book* are for white and black men and women, ages 35–74, for 1987–2001.

Age-Adjustment Factors

The following factors are used to calculate age-adjusted incidence:

Age Group	U.S. Population	Factors
35–44	44,659,000	0.360776
45–54	37,030,000	0.299145
55–64	23,961,000	0.193568
65–74	18,136,000	0.146511
35–74	123,786,000	1.000000

Cardiovascular Health Study

The CHS is a population-based, longitudinal study of the risk factors for clinical and subclinical CVD in adults, ages 65 years and over, in four communities: Forsyth County, NC; Sacramento County, CA; Pittsburgh, PA; and Washington County, MD. The original cohort of 5,201 men and women was recruited in 1989–90. An additional 687 blacks were recruited in 1992–93. Baseline examinations were given to the participants upon entry into the study. Presence of CVD was not an exclusion criterion.

Participants were examined annually through 1999 and contacted by phone at 6-month intervals. Since 1999, they have been contacted by phone every 6 months to ascertain and verify health status and medication use. Primary endpoints are MI, angina pectoris, HF, intermittent claudication/peripheral vascular disease, stroke (cerebrovascular accident), TIA, and all cause mortality.[8, 9, 10] Information for classification of death is obtained from death certificates, autopsy and coroners' forms (if available), hospital records, and interviews with attending physicians, next-of-kin, and witnesses.

Incidence data reported for this *Chart Book* are for white and black men and women, ages 65 and over, for 1989–2000. Prevalence data are for ages 70 and over, for 1999.

Denominators for Prevalence

For adjudicated endpoints (all but hypertension), the denominator is the number of participants alive on June 30, 1999. For hypertension, the denominator is the number of participants with a clinic visit between June 1998 and 1999.

Age-Adjustment Factors

The following factors are used to calculate age-adjusted estimates:

For Incidence:			For Prevalence:		
Age Group	U.S. Population	Factors	Age Group	U.S. Population	Factors
65–69	9,410,000	0.271096	70–74	8,726,000	0.344888
70–74	8,726,000	0.251390	75–79	7,415,000	0.293071
75–79	7,415,000	0.213621	80–84	4,900,000	0.193668
80–84	4,900,000	0.141166	85–89	2,679,000	0.105885
85–89	2,679,000	0.077180	90–94	1,153,000	0.045571
90–94	1,153,000	0.033217	≥95	428,000	0.016916
≥95	428,000	0.012330	≥70	25,301,000	1.000000
≥65	34,711,000	1.000000			

Coronary Artery Risk Development in Young Adults

The CARDIA study is a population-based, longitudinal investigation of the distribution and evolution of risk factors for CVD in 5,115 black and white men and women, ages 18–30 at entry from four urban areas: Birmingham, AL; Chicago, IL; Minneapolis, MN; and Oakland, CA.[11] The cohort was recruited in 1985–86 (Year 1) and follow-up examinations were conducted in 1987–88 (Year 2), 1990–91 (Year 5), 1992–93 (Year 7), 1995–96 (Year 10), and 2000–01 (Year 15). Although specifics of each examination have differed somewhat, data have been collected on a variety of factors related to heart disease. Subclinical atherosclerosis was measured via echocardiography during Years 5 and 10 and computed tomography during Year 15.

Prevalence data are reported for white and black men and women, ages 18–30, for 1985, the baseline examination, and black and white men and women, ages 33–45, for 2000, Year 15.

Age-Adjustment Factors

The following factors were used to calculate age-adjusted prevalence estimates:

Data for 1985:			Data for 2000:		
Age Group	U.S. Population	Factors	Age Group	U.S. Population	Factors
18–24	26,258,000	0.547280	33–39	30,108,000	0.572537
25–30	21,721,000	0.452720	40–45	22,479,000	0.427463
18–30	47,979,000	1.000000	33–45	52,587,000	1.000000

Framingham Heart Study

The FHS, initiated in 1948, is a population-based, longitudinal investigation of physiological, environmental, and genetic factors influencing the development of CVD in men and women initially free of those conditions. Almost all of the study subjects are white. The original cohort of 5,209 men and women, ages 28–62 at entry, was recruited in Framingham, MA, and was given an extensive baseline examination.[12] Since 1948, they continue to participate every 2 years in a detailed medical history, physical examination, and laboratory tests.

Enrollment of the original cohort's offspring and their spouses began in 1971; by 1975, 5,124 men, women, and children, ages 5–70 at entry, had been recruited. After receiving an extensive baseline examination, they continue to return to the study every 4 to 8 years for a detailed medical history, physical examination, and laboratory tests.[13]

The cohorts have been followed for six primary endpoints: CVD, MI, angina pectoris, HF, stroke, and hypertension. In the case of hospital deaths, investigators reviewed death certificates and hospital records to determine the cause of death. The cause of each out-of-hospital death was investigated and validated.

In this *Chart Book*, data from the original and offspring cohorts are presented in combined and separate form in the tables, but are combined for the charts. For the original cohort, incidence is reported for men and women, ages 55 and over, for 1980–2003; for the offspring study, incidence is reported for men and women, ages 35–84, for 1980–2003. Prevalence for the original cohort is reported for men and women, ages 75 and over, for 1998–2002; for the offspring study, prevalence is reported for men and women, ages 35–84, for 1998–2002. Data from the original cohort from 1948 to 1979 were not included because of the disparity with the other studies, and prevalence and mortality from CVD have changed dramatically since then.

Age-Adjustment Factors

The following factors are used to calculate age-adjusted estimates:

For Incidence and Prevalence (Both Cohorts):

Age Group	U.S. Population	Factors
35–44	44,659,000	0.318172
45–54	37,030,000	0.263520
55–64	23,961,000	0.170710
65–74	18,136,000	0.129210
75–84	12,315,000	0.087738
85–94	3,832,000	0.027300
≥94	428,000	0.003049
≥35	140,361,000	1.000000

For Incidence (Original Cohort):

Age Group	U.S. Population	Factors
55–64	23,961,000	0.408389
65–74	18,136,000	0.309108
75–84	12,315,000	0.209896
85–94	3,832,000	0.065312
≥95	428,000	0.007295
≥55	58,672,000	1.000000

For Prevalence (Original Cohort):

Age Group	U.S. Population	Factors
75–84	12,315,000	0.742986
85–94	3,832,000	0.231192
≥94	428,000	0.025822
≥75	16,575,000	1.000000

For Incidence and Prevalence (Offspring Cohort):

Age Group	U.S. Population	Factors
35–44	44,659,000	0.328131
45–54	37,030,000	0.272077
55–64	23,961,000	0.176053
65–74	12,315,000	0.133254
75–84	3,832,000	0.090484
35–84	36,101,000	1.000000

Multi-Ethnic Study of Atherosclerosis

The MESA is a population-based, longitudinal study to investigate the prevalence, correlates, and progression of subclinical CVD in a cohort of 6,814 white (38 percent), black (28 percent), Asian—predominantly of Chinese descent (12 percent), and Hispanic (22 percent) men and women, ages 45–84.[14] Participants were recruited from six communities: Baltimore City and Baltimore County, MD; Chicago, IL; Forsyth County, NC; Los Angeles County, CA; New York, NY; and St. Paul, MN. The baseline examinations were administered from July 2000 to August 2002. Follow-up examinations were scheduled at 18-month or 2-year intervals through 2007. Participants are also contacted every 9 to 12 months throughout the study to assess clinical morbidity, mortality, and interventions received.

Prevalence data from MESA reported in this *Chart Book* are mainly based on the baseline examination of white, black, Asian, and Hispanic men and women, ages 45–84, in 2000–02.

Age-Adjustment Factors

The following factors are used to calculate the age-adjusted estimates for prevalence:

Age Group	U.S. Population	Factors
45–54	37,030,000	0.404956
55–64	23,961,000	0.262035
65–74	18,136,000	0.198333
75–84	12,315,000	0.134676
45–84	91,442,000	1.000000

Strong Heart Study

The SHS is a population-based, longitudinal investigation to estimate the morbidity and mortality rates from CVD and the levels of CVD risk factors in three geographically diverse groups of American Indians. Initiated in 1988, the study recruited 4,549 men and women, ages 45–74 years, from 13 American Indian tribes and communities in three geographic areas: North and South Dakota, Oklahoma, and Arizona.[15] The Aberdeen Area Indian Health Service and the Missouri Breaks Industries Research, Inc. are studying the Oglala Sioux and the Cheyenne River Sioux in South Dakota, and the Spirit Lake Tribe in North Dakota; the University of Oklahoma Health Sciences Center is studying the Apache, Fort Still Apache, Kiowa, Comanche, Wichita, Delaware, and Caddo in Southwestern Oklahoma; and the MedStar Research Institute is studying the Pima, Maricopa, and Papago in the Gila River, Salt River, and Ak-Chin Indian Communities near Phoenix, AZ.

The study involves two components: a survey of the prevalence and incidence of and risk factors for CVD, and a review of death certificates and health care records. The survey phase consists of three examinations for CVD risk factors, clinical cardiac disease, and the use of medical services for CVD care. The cohort has been followed for major cardiovascular endpoints: CHD, MI, HF, stroke, and other CVD and for all-cause mortality.

Data reported in this *Chart Book* are for American Indian men and women, ages 45–74, for 1989–2000 for incidence and 1989–92 for prevalence. Additional information from the SHS can be found in the SHS data book.[16]

Age-Adjustment Factors

The following factors are used to calculate the age-adjusted estimates for incidence and prevalence:

Age Group	U.S. Population	Factors
45–54	37,030,000	0.467982
55–64	23,961,000	0.302817
65–74	18,136,000	0.229201
45–74	79,127,000	1.000000

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Appendix B. Definition of Diseases in Each Study

Atherosclerosis Risk in Communities Cohort: Diagnoses

Disease	Incident Event*	Prevalent Event*
Cardiovascular disease	NA	Self-reported prior physician diagnosis of stroke, MI by ECG, history of MI, history of coronary artery bypass graft (CABG) surgery, or angioplasty of coronary artery
Coronary heart disease	MI or fatal CHD	MI by ECG, history of MI, history of CABG, or angioplasty of coronary artery
Myocardial infarction	Hospitalized for definite or probable MI; expert committee review of hospital records of symptoms, ECG, and cardio-biomarkers	MI by ECG, history of physician diagnosed MI, or self-reported hospitalized heart attack
Angina pectoris	Determined by the Rose Questionnaire at annual phone interviews	Determined by the Rose Questionnaire at baseline
Heart failure	Hospital discharge ICD-9 code 428 or 518.4	Self-reported current use of medication for HF
Stroke/transient ischemic attack	Self-reported physician diagnosis at annual phone interviews and clinic visits	Self-reported prior physician diagnosis
Stroke	Hospitalized for definite or probable ischemic stroke and expert committee review of hospital records	Self-reported prior physician diagnosis
Peripheral arterial disease	ABI evaluated at visit 3 or visit 4. PAD was those with ABI < 0.9 for men and < 0.85 for women. (ABI was not collected at visit 2.)	ABI < 0.9 for men, < 0.85 for women
Hypertension	NA	Self-reported current use of medication for hypertension, systolic blood pressure ≥140 mmHg, or diastolic blood pressure ≥90 mmHg
Asthma	Hospital discharge ICD-9 code 493	Self-reported prior physician diagnosis of asthma
Chronic obstructive pulmonary disease	NA	Self-reported prior physician diagnosis of chronic bronchitis or emphysema

Note: Cause of out-of-hospital deaths was based on reviews of informant interviews and physician and coroner questionnaires, and in-hospital deaths were classified based on review of death certificates and hospital records.

* These diagnostic criteria were sent to the NHLBI by the ARIC Cohort investigators along with the data.

Atherosclerosis Risk in Communities Surveillance: Diagnoses

Disease	Incident Events*	Prevalence Events
Myocardial infarction and fatal coronary heart disease	Hospitalized for definite or probable MI or death from CHD	NA
Myocardial infarction	Hospitalized for definite or probable MI; computer algorithm diagnosis based on symptoms, ECG, and cardio-biomarkers	NA

Note: Cause of death was abstracted and validated from death certificates and hospital records. Out-of-hospital deaths were investigated and validated.

* These diagnostic criteria were sent to the NHLBI by the ARIC Cohort investigators along with the data.

Cardiovascular Health Study: Diagnoses

Disease	Incident Event* †	Prevalent Event*
Cardiovascular disease	CHD, HF, stroke, TIA, or claudication	CHD, HF, stroke, TIA, or claudication
Coronary heart disease	MI, angina pectoris, CABG, angioplasty, or fatal atherosclerotic CHD	Confirmed history of MI, angina pectoris, angioplasty, or CABG surgery at baseline or incidence of any of the above prior to June 30, 1999
Myocardial infarction	Evolving Q-wave MI; or cardiac pain plus abnormal enzymes and either an evolving ST–T pattern or new left bundle branch block	Confirmed history of MI at baseline defined as old MI on ECG (Minnesota codes 1-1-1 through 1-2-5 plus 1-2-7) or segmental wall-motion abnormality on ECG, or hospital discharge or physician diagnosis of MI; OR incident MI prior to June 30, 1999
Angina pectoris	Angina diagnosed by a physician plus receiving medical treatment for angina (nitrates, beta-blockers, or calcium-channel blockers); OR chest pain plus one or more of the following: CABG surgery or ≥70% obstruction of any coronary artery, or ST depression > 1 mm on exercise testing plus positive Rose Questionnaire	Confirmed history of angina at baseline defined as use of nitroglycerin or nitrates; or use of beta-blocker or calcium-channel blocker plus no history of hypertension, or history of CABG surgery or angioplasty, or hospital discharge or physician diagnosis of angina; OR incident angina prior to June 30, 1999
Heart failure	CHF diagnosed by a physician plus receiving medical treatment (diuretic plus either digitalis, vasodilator, or angiotensin converting enzyme inhibitor); OR either cardiomegaly and pulmonary edema on chest x-ray or dilated ventricle and wall-motion abnormalities by ECG or contrast ventriculography	Confirmed history of CHF at baseline defined as use of diuretic plus either digitalis or vasodilator, or dilated ventricle plus wall-motion abnormality plus decreased systolic function on ECG, or hospital discharge or physician diagnosis of CHF; OR incident CHF prior to June 30, 1999
Stroke	Abrupt onset of new neurological deficit lasting at least 24 hours with specific localizing findings confirmed by unequivocal physical examination or laboratory data without evidence for underlying nonvascular cause	Self-report of stroke and physician diagnosis at baseline or incident stroke prior to June 30, 1999
Transient ischemic attack	Rapid onset of focal neurological deficit lasting no more than 24 hours, assessed to be due to ischemia, without evidence for underlying noncardiovascular cause	Self-report of TIA and physician diagnosis at baseline or incident TIA prior to June 30, 1999
Peripheral arterial disease	Exertional pain relieved by rest plus either claudication diagnosed by physician or ankle-arm systolic ratio ≤ 0.8; OR one of the following: ultrasonographically or angiographically demonstrated obstruction of ulcerated plaque; or absence of Doppler Pulse in any major vessels; or positive exercise test for claudication; or bypass surgery, angioplasty, or thrombocytolysis for PAD	History of PAD at baseline defined as ankle-arm systolic ratio ≤ 0.8, or history of CABG surgery or angioplasty for PAD, or absence of lower limb, or hospital or physician diagnosis; OR incident PAD prior to June 30, 1999
Hypertension	NA	Reported history of hypertension and use of anti-hypertensive medication, or a seated blood pressure >140/90 mmHg at the clinic visit between June 1998 and 1999

Note: Information for classification of death is obtained from death certificates, or hospital records.

* These diagnostic criteria were sent to the NHLBI by the CHS investigators along with the data.

† Incident event is counted among participants free of the specified disease at baseline.

Coronary Artery Risk Development in Young Adults: Diagnoses

Disease	Incident Event	Prevalent Event*
Cardiovascular disease†	NA	Responding or being designated as yes in either of the following conditions: MI, angina, rheumatic heart disease, mitral valve prolapse, peripheral vascular disease, stroke, or hypertension
Coronary heart disease	NA	Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have heart attack or angina?"
Myocardial infarction	NA	Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have heart problems? If yes, a heart attack?"
Angina pectoris		Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have heart problems? If yes, angina?"
Stroke	NA	Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have stroke or TIA?"
Peripheral vascular disease	NA	Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have peripheral vascular disease (problem with circulation to the legs)?"
Hypertension	NA	Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have hypertension?" and, "Are you taking medication for high blood pressure?" A systolic blood pressure ≥140 mmHg or diastolic ≥90 mmHg
Rheumatic heart disease	NA	Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have heart problems? If yes, rheumatic heart disease?"
Mitral valve prolapse	NA	Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have heart problems? If yes, mitral valve prolapse?"
Asthma	NA	Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have asthma?"
Emphysema		Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have emphysema?"
Chronic bronchitis	NA	Self-reported yes response at each exam to "Has a doctor or nurse ever said that you have chronic bronchitis?"

* These diagnostic criteria were sent to the NHLBI by the CARDIA investigators along with the data. They are confined to 2000, examination 15.

† Prevalent event as stated is confined to 2000, Table 5–23. Prevalent event for 1985, Table 5–22, excludes peripheral vascular disease and stroke.

Framingham Heart Study: Diagnoses[12]

Disease	Incident and Prevalent Events*
Cardiovascular disease	CHD, HF, cerebrovascular disease, or intermittent claudication
Coronary heart disease	CHD includes MI, angina pectoris, coronary insufficiency, and CHD death. Hard CHD includes MI or CHD death
Myocardial infarction	Recent or acute MI was designated when there were serial changes in the ECGs indicating the evolution of an infarction, including S-T segment elevation in the ECG associated with later inversion of T waves and the loss of initial QRS potentials (i.e., development of "pathologic" Q waves of ≥0.04 second duration), followed by serial changes indicating reversion towards normal. An old or remote MI was considered to be present when the ECG showed a stable pattern including a pathologic Q wave of ≥0.04 second or loss of initial QRS potential (R wave) in those leads in which this would not be expected to occur. Also, an old MI was indicated when changes from a previous tracing showed development of loss of R-wave potential or appearance of pathologic Q waves not otherwise explained. More weight was given to this finding if a T-wave abnormality was also associated. Beginning in Original Cohort Exam 4, a hospital report for a subject showing a rise in the serum glutamic oxalacetic transaminase to a level of at least 60 units along with a history of prolonged ischemic chest pain was accepted as evidence of MI. Subsequently, in 1962, pathologic elevation of another enzyme was included: lactic dehydrogenase > 500 units. An autopsy report showing an acute, new, or recent infarction of the myocardium was accepted as evidence of MI. Because it is not possible to date an old MI found on autopsy, such evidence was not included in the clinical diagnosis.
Angina pectoris	Brief recurrent chest discomfort of up to 15 minutes duration, precipitated by exertion or emotion and relieved by rest or by nitroglycerine, was regarded as angina pectoris if two physicians interviewing the subject agreed that this condition was definitely present. This diagnosis was based on evaluation of a subjective manifestation; no abnormality in the ECG after exercise or at rest was required.
Heart failure	Investigators and physicians of the clinical staff form a panel to review the records of all subjects ever diagnosed as having CHF, definite or doubtful, applying a set of strict criteria, as follows: A definite diagnosis of CHF required a minimum of two major or one major and two minor criteria, the criteria existing concurrently. The minor criteria were used only when not attributable to some condition other than CHF. Major criteria: 1. Paroxysmal nocturnal dyspnea 2. Distended neck veins (in other than the supine position) 3. Rales in presence of unexplained dyspnea 4. Cardiomegaly and left to right shunt or increasing heart size 5. Acute pulmonary edema described in hospital record 6. Ventricular gallop 7. Increased venous pressure (greater than 16 cm H_2O from right atrium) 8. Circulation time (greater than 24 seconds, arm to tongue) 9. Hepatojugular reflux 10. Pulmonary edema, visceral congestion, cardiomegaly shown on autopsy Minor criteria: 1. Bilateral ankle edema 2. Night cough 3. Dyspnea on ordinary exertion 4. Hepatomegaly 5. Pleural effusion 6. Decrease in vital capacity by one third from maximum recorded 7. Tachycardia (120 beats per minute or more) Arbitrary major or minor criterion: 1. Weight loss (10 pounds or more in 5 days) combined with improvement in respiratory symptoms in 5 days while on therapy for CHF

Disease	Incident and Prevalent Events*
Cerebrovascular accident	The diagnosis of overt vascular disease of the brain was based on the occurrence of stroke. Minimal criteria of nonhemorrhagic stroke consisted of the sudden onset of a localizing neurologic deficit (such as hemiparesis, aphasia, homonymous hemianopia); for stroke due to intracranial hemorrhage, a change in the state of consciousness, headache, and signs of meningeal irritation in association with bloody spinal fluid under increased pressure with or without other localizing neurological deficits. A diagnosis of embolus to the brain was made if a source for embolus (i.e., atrial fibrillation, rheumatic heart disease with mitral stenosis, recent MI, bacterial endocarditis) was present, the clinical course consistent (i.e., rapid onset and clearing, slightly bloody spinal fluid, a more localized deficit), or the occurrence of associated peripheral emboli elsewhere noted. A consultant neurologist and the clinical staff of the study reviewed hospital and clinic protocols. Starting after Original Cohort Exam 8, they have examined patients in the hospital with stroke.
Hypertension	Systolic blood pressure ≥140 mmHg or diastolic blood pressure ≥90 mmHg or taking antihypertensive medication

Note: Cause of death was determined by a panel of physicians who reviewed the death certificate and additional information obtained from records supplied by a hospital, attending physician, pathologist, or coroner.

* The same "sequence of events" codes used for incidence types were used for prevalence types. Prevalence was defined as being alive at or after January 1, 1998.

Multiple-Ethnic Study of Atherosclerosis: Diagnoses

Disease	Prevalent Event*
Peripheral arterial disease	Definition 1: ABI < 0.9 Definition 2. San Diego claudication modification of Rose/WHO criteria[17]
Hypertension	Systolic BP ≥140 mmHg or diastolic BP ≥90 mmHg, or on antihypertensive medication
Asthma	Participant self-report of physician diagnosis of asthma
COPD	Participant self-report of physician diagnosis of emphysema or self-report of bronchitis within the past 2 weeks

* These diagnostic criteria were sent to the NHLBI by the MESA investigators along with the data.

Strong Heart Study: Diagnoses

Disease	Incident or Prevalent Event*
Cardiovascular disease	CHD and stroke
Nonfatal CVD Definite MI	Minnesota Codes 1.1 and 1.2 except 1.26 and 1.28 and no code 7.1 or 7.4 ***OR*** verified diagnosis of definite MI (evolving diagnostic ECG ***AND/OR*** diagnostic ECG and abnormal enzymes ***AND/OR*** prolonged cardiac pain and abnormal enzymes)
Definite CHD	Definite MI ***OR*** cardiac catheterization proven CHD (one or more vessels ≥50% stenosis); diagnosis of CABG; angiogram showing occlusion; interventional procedure such as percutaneous transluminal coronary angioplasty (PTCA), stent, or laser therapy; abnormal stress ECG and abnormal imaging, positive function test of ischemia (such as treadmill) ***OR*** angina by Rose Questionnaire if accompanied by Minnesota Codes 4.1 or 5.1 or verified medical history of possible MI
Nonfatal stroke	History of rapid-onset localizing neurologic deficit and/or change in state of consciousness of > 24-hour duration and without other causes ***OR*** evidence of focal lesion by MRI or CAT scan
Fatal CVD Definite fatal MI	Definite MI (defined above) within 4 weeks of death ***OR*** acute MI diagnosed by autopsy ***AND*** no known nonatherosclerotic or noncardiac atherosclerotic process that was probably lethal
Definite sudden CHD death	Death witnessed as occurring within 1 hour after the onset of severe cardiac symptoms, or within 1 hour after the participant was last seen without symptoms ***AND*** no documentation of definite acute MI within 4 weeks prior to death by criteria for definite MI ***AND*** no known nonatherosclerotic or noncardiac atherosclerotic process that was probably lethal
Definite fatal CHD	Death certificate with consistent underlying or immediate cause(s) (ICD-9 codes 410–414) ***AND*** no documentation by criteria of definite acute MI within 4 weeks prior to death ***AND*** criteria for sudden death not met ***AND*** no known nonatherosclerotic or noncardiac atherosclerotic process that was probably lethal ***AND*** previous history of MI according to relative, physician or hospital records, or definite MI (see criteria above) or possible MI ***OR*** autopsy reporting severe atherosclerotic coronary artery disease or old MI without acute MI ***OR*** rapid death (death occurring > 1 and ≤ 24 hours after the onset of severe cardiac symptoms or after subject was last seen without symptoms)
Possible fatal CHD	No documentation by criteria of definite acute MI within 4 weeks prior to death ***AND*** no documentation by criteria of definite sudden death ***AND*** no documentation by criteria of definite fatal CHD ***AND*** death certificate with consistent underlying or immediate cause (ICD-9 codes 410–414) ***AND*** no known nonatherosclerotic or noncardiac atherosclerotic process that was probably lethal
Definite fatal stroke	Cerebral infarction or hemorrhage diagnosed at autopsy ***AND*** no other disease process or event that could cause localizing neurologic deficit or coma ***OR*** history of rapid onset or localizing neurologic deficit and/or change in state of consciousness ***AND*** documentation of localizing neurologic deficit by unequivocal physician or laboratory finding within 6 weeks of death with > 24 hours duration of objective physician findings
Possible fatal stroke	Death certificate with consistent underlying or immediate cause (ICD-9 codes 431–437) ***AND*** no evidence at autopsy examination of the brain, if performed, of any disease process other than cerebral infarction or hemorrhage that could cause localizing neurologic signs
Other fatal CVD	Definite other fatal CVD: Autopsy evidence consistent with other CVD as cause of death ***OR*** death certificate with consistent underlying or immediate cause ***AND*** adequate documentation in medical records Possible other fatal CVD: Death certificate with consistent underlying or immediate cause, but does not satisfy any of the above criteria
Heart failure	Incident nonfatal HF was defined as new HF found by chart review. Prevalent HF was defined as baseline self-reported HF and chart review HF that occurred before the baseline examination.
Peripheral arterial disease†	Left or right ABI < 0.9
Hypertension†	Systolic blood pressure ≥140 mmHg or diastolic blood pressure ≥90 mmHg or taking antihypertensive medication

* These diagnostic criteria were sent to the NHLBI by the SHS investigators along with the data.
† Prevalence only.

Appendix C. Epidemiology Terms

Many of the definitions and explanations found in this appendix have been paraphrased from the cited sources.

Age adjustment: Statistical method that takes the differing age structure into consideration when making comparisons of incidence and prevalence rates between populations. In this *Chart Book*, age adjustment is a weighted average of rates, with the weights (age adjustment factors) being derived from the age distribution of the U.S. resident population for 2000. Age-adjusted rates should be viewed as relative indexes rather than actual measures of risk. They are computed by the direct method, applying age-specific rates in a population of interest to the standard age distribution, in order to eliminate differences in observed rates that result from age differences in population composition.[2,3]

Binomial distribution: A probability distribution associated with two mutually exclusive outcomes, i.e., presence or absence of a disease.[18]

Cohort study: Epidemiologic study in which a subset (cohort) of a population with a common feature, usually age, is identified and followed for several years for the occurrence of disease or other outcomes. Alternative terms for cohort study are *follow-up*, *longitudinal,* and *prospective study*.[18]

Community surveillance: For the ARIC Surveillance, a collection of data from medical and vital records on a defined population in four communities to monitor the frequency of cases of CHD over time.[19]

Endpoint: First occurrence of a disease (same as "event").

Event: Transition from a nondiseased to a diseased state.[19]

Incidence: Number of new cases of a disease that occurs during a specified period of time in a population at risk for developing the disease, i.e., free of the particular disease at baseline.[18,19] In a cohort study, because subjects are observed for different lengths of time, the number at risk over time is calculated in *person years*. Incidence summed over a period of time is called *cumulative incidence.*

Longitudinal study: See cohort study.

Outcome: Synonymous with "endpoint" or "event."

Person years: A unit based on the length of follow-up time and the number of people at risk. One person year is equivalent to observing one person over 1 year, or two people over a half of a year, for example. The number of person years of observation summed for all subjects becomes the denominator for the incidence rate.[18]

Population-based study: A study conducted in a sample taken from a defined population group in a defined community.[18]

Prevalence: The proportion of the host population with a specified disease (or with a marker of past or present occurrence of the disease) at a specific time.[18,19] Depending on the context, the word prevalence may be confined to just the numerator, i.e., the number of persons with the disease, or to the prevalence ratio (or rate).[5]

Prospective study: See cohort study.

Relative standard error: A measure of an estimate's reliability. The RSE of an estimate is obtained by dividing the standard error of the estimate by the estimate itself. It is expressed as a percentage of the estimate and is calculated as follows: RSE = 100 x (SE/r), where "SE" is the standard error and "r" is the estimate.[5]

Reliability of an estimate: The degree of stability exhibited when a measurement is repeated under identical conditions. The degree to which the results obtained by a measurement procedure can be replicated.[18]

Standard error: A measure of the precision of an estimate. It is the standard deviation of the estimate, i.e., it measures variation in an estimate that is based on a sample of a population.[18]

Validity: The degree to which a measurement measures what it purports to measure.[18]

Appendix D. Abbreviations

ABI	ankle-brachial index
AMI	acute myocardial infarction
ARIC	Atherosclerosis Risk in Communities Study
CABG	coronary artery bypass graft
CARDIA	Coronary Artery Risk Development in Young Adults
CHD	coronary heart disease
CHF	congestive heart failure
CHS	Cardiovascular Health Study
CI	confidence interval
COPD	chronic obstructive pulmonary disease
CVA	cerebrovascular accident
CVD	cardiovascular disease
ECG	electrocardiogram
FHS	Framingham Heart Study
HF	heart failure
ICD	International Classification of Diseases
MESA	Multi-Ethnic Study of Atherosclerosis
MI	myocardial infarction
N	number of persons with the disease
NA	not available
NCHS	National Center for Health Statistics
NHANES	National Health and Nutrition Examination Survey
NHLBI	National Heart, Lung, and Blood Institute
PAD	peripheral arterial disease
Pop	population
RSE	relative standard error
PY	person years
SE	standard error
SHS	Strong Heart Study
TIA	transient ischemic attack

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