

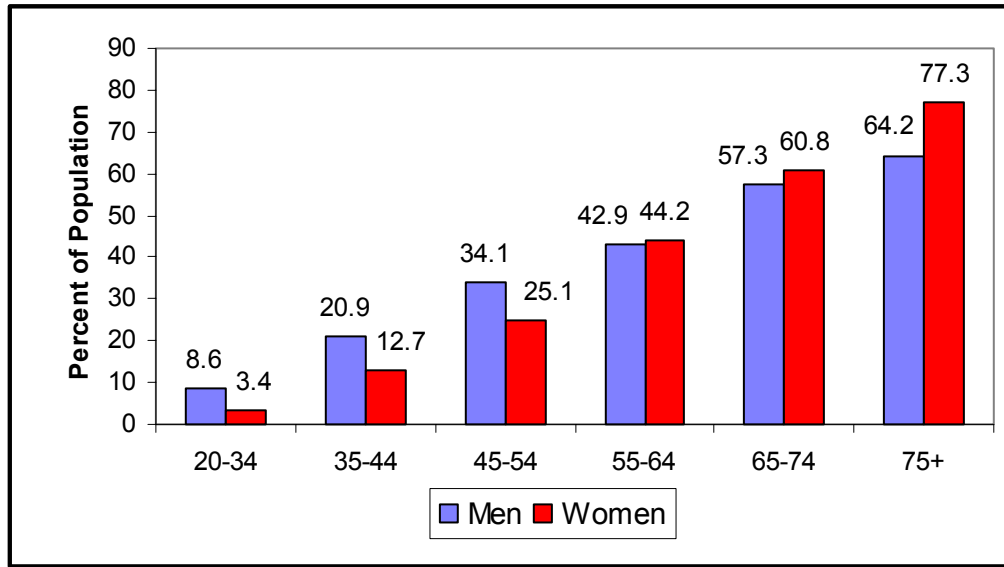
Biostatistical Fact Sheet -- Risk Factors

HIGH BLOOD PRESSURE

(ICD/9 codes 401-404) (ICD/10 codes I10-I15)

Prevalence of High Blood Pressure in Americans Age 20 and Older by Age and Sex

United States: 1988-94



Source: Health United States 2000, CDC/NCHS.

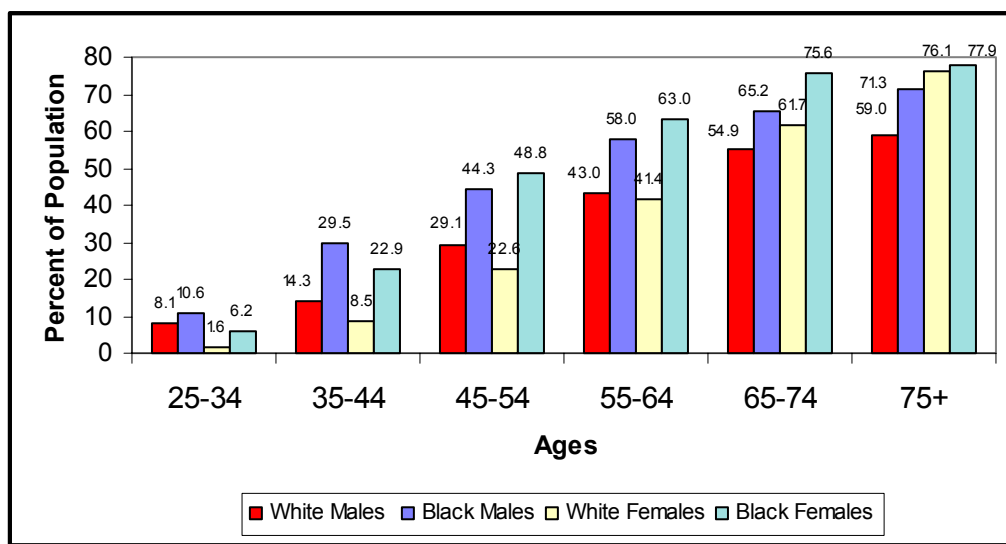
- High blood pressure (HBP or hypertension) was listed on death certificates as the primary cause of death of 42,997 Americans in 1999. HBP was listed as a primary or contributing cause of death in about 227,000 of the more than 2 million U.S. deaths that year.
- 1999 HBP mortality: males -- 17,194 deaths (440.0 percent of deaths from HBP); females -- 25,803 deaths (60.0 percent of deaths from HBP).
- About 50 million Americans age 6 and older have HBP, defined as systolic pressure of 140 mm Hg or higher or diastolic pressure of 90 mm Hg or higher, or taking antihypertensive medicine. (NHANES III [1988-91], CDC/NCHS)
- 1 in 5 Americans (and 1 in 4 adults) has HBP. (NHANES III [1988-94], CDC/NCHS)
- The cause of 90-95 percent of the cases of HBP isn't known; however, HBP is easily detected and usually controllable.
- People with lower educational and income levels tend to have higher levels of blood pressure.

Note: Death rates are age-adjusted per 100,000 population, based on the 2000 U.S. standard. Some data are reported according to ICD/9 codes and some use ICD/10 codes.

- From 1989 to 1999 the death rate from HBP increased 21 percent, but the actual number of deaths rose 46 percent.
- The 1999 overall death rate from HBP was 15.9. Death rates were 12.8 for white males, 46.8 for black males, 12.8 for white females and 40.3 for black females.
- As many as 30 percent of all deaths in hypertensive black men and 20 percent of all deaths in hypertensive black women may be attributable to HBP. (JNC V and VI [1991-94])
- Of those with HBP, 31.6 percent are unaware they have it; 27.4 percent are on medication and have it controlled; 26.2 percent are on medication but don't have their HBP under control; and 14.8 percent aren't on medication. (JNC VI [1991-94])
- A higher percentage of men than women have HBP until age 55. From ages 55-74 the percentage of women is somewhat higher; after that a higher percentage of women have HBP than men do. (*Health United States 2001, CDC/NCHS*)
- HBP is 2-3 times more common in women taking oral contraceptives, especially in obese and older women, than in women not taking them. (JNC V and VI)
- The prevalence of HBP among blacks and whites in the southeastern United States is greater and death rates from stroke are higher than among those in other regions.

Prevalence of High Blood Pressure in Americans Age 25 and Older by Age, Sex and Race

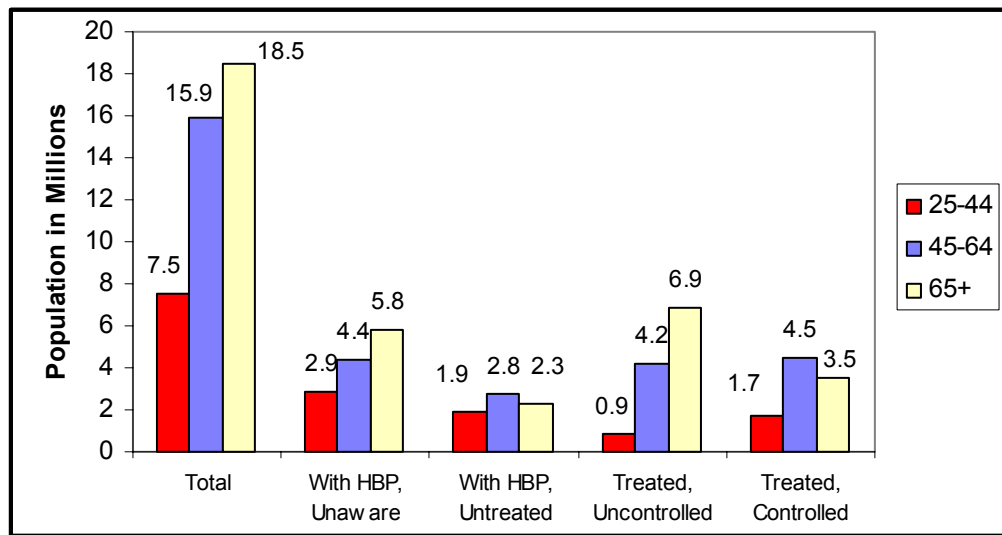
United States: 1988-94



Source: Wolz M, et al. Statement from the National High Blood Pressure Education Program: prevalence of hypertension. *Am J Hypertens.* 2000;13:103-104. These rates are based on two or more readings.

Estimated Number of Americans Age 25 and Older by Category of High Blood Pressure and Age

United States: 1988-94



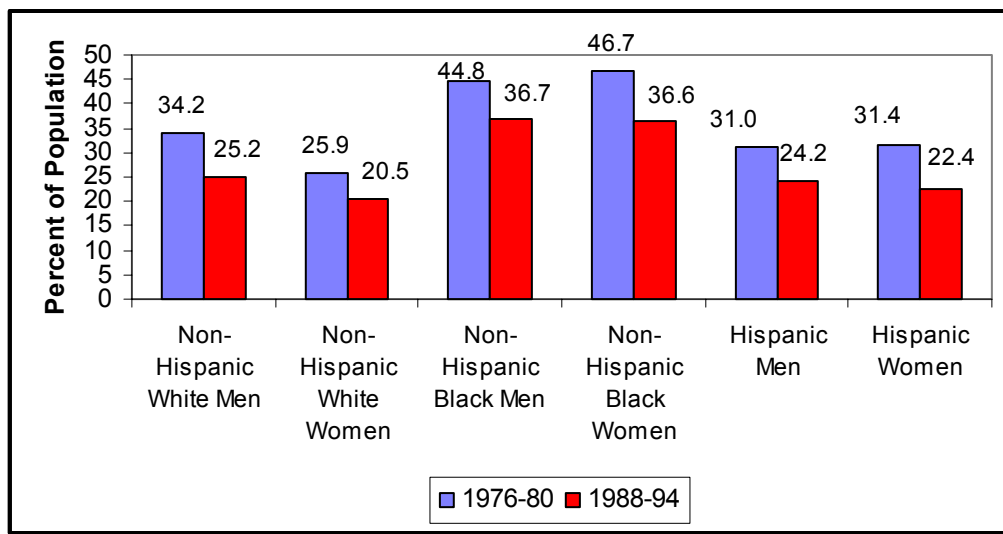
Source: *Characteristics of patients with uncontrolled hypertension in the United States. NEJM. 2001;345:479-486.*

- The prevalence of hypertension in blacks in the United States is among the highest in the world. Compared with whites, blacks develop HBP at an earlier age and their average blood pressures are much higher. As a result, compared with whites, blacks have a 1.3 times greater rate of nonfatal stroke, a 1.8 times greater rate of fatal stroke, a 1.5 times greater rate of heart disease death and a 4.2 times greater rate of end-stage kidney disease. (JNC V and VI)
- Among Americans age 18 and older, following are the median percentages who've been told by a professional that they have high blood pressure (BRFSS [1997], CDC/NCHS):
 - For whites, 23.0 percent.
 - For blacks, 30.9 percent.
 - For Hispanics, 18.6 percent.
 - For Asian/Pacific Islanders, 16.3 percent.
 - For American Indians/Alaska Natives, 20.7 percent.
- Among Americans age 20 and older, for non-Hispanic whites, 25.2 percent of men and 20.5 percent of women have HBP. For non-Hispanic blacks, 36.7 percent of men and 36.6 percent of women have HBP. For Mexican Americans, 24.2 percent of men and 22.4 percent of women have HBP. Estimates are age-adjusted. (NHANES III [1988-94], CDC/NCHS)
- Among Asian/Pacific Islanders, 9.7 percent of men and 8.4 percent of women have HBP. The estimate is age-adjusted (1980 standard). (NHIS [1986-90], CDC/NCHS)
- 73 percent of Japanese-American men ages 71-93 have HBP. (HHP, NHLBI)

- Among American Indians ages 45-74, 26.8 percent of men and 27.5 percent of women have HBP (defined as definite hypertension: systolic blood pressure of 160 mm Hg or higher or diastolic blood pressure of 95 mm Hg or higher on one occasion or reported to be currently taking antihypertensive medication). (SHS [1989-92], NHLBI)
- 172,000 males and 267,000 females diagnosed with HBP were discharged from hospitals in 1999.

Age-Adjusted Prevalence Trends for High Blood Pressure, Ages 20-74 by Race/Ethnicity, Sex and Survey

United States: 1976-80 and 1988-94



Source: NHANES II (1976-80) and NHANES III (1988-94), CDC/NCHS. Data based on multiple measures of blood pressure.

Source Footnotes

BRFSS -- Behavioral Risk Factor Surveillance System

CDC/NCHS -- Centers for Disease Control and Prevention/National Center for Health Statistics

HHP -- Honolulu Heart Program

JNC V -- Fifth Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure

JNC VI -- Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure

NEJM -- *New England Journal of Medicine*

NHANES II (1976-80) -- National Health and Nutrition Examination Survey II

NHANES III (1988-91) -- National Health and Nutrition Examination Survey III, Phase I

NHANES III (1991-94) -- National Health and Nutrition Examination Survey III, Phase II

NHANES III (1988-94) -- National Health and Nutrition Examination Survey III

NHIS -- National Health Interview Survey

NHLBI -- National Heart, Lung, and Blood Institute

SHS -- Strong Heart Study