

Cardiovascular Disease and AAPIs

Heart disease is the leading cause of death for all people in the US, and stroke is the third leading cause of death. Heart disease and stroke are also major causes of disability and significant contributors to increasing health care costs in the US. The mortality rate for cardiovascular disease (heart disease, stroke, and chronic obstructive pulmonary disease) is greater than the combined rate for all leading causes of death (cancer, unintentional injuries, pneumonia/influenza, diabetes, suicide, kidney disease, chronic liver disease and cirrhosis). (US DHHS, 2000). The major risk factors for cardiovascular disease are hypertension, smoking, hypercholesterolemia, high alcohol consumption, and lack of physical activity. (Tamir and Cachola, 1994).

Cardiovascular disease (CVD) refers to a wide variety of heart and blood vessel diseases and conditions, including coronary heart disease (CHD), stroke, high blood pressure, and high blood cholesterol. CHD accounts for the largest proportion of heart disease. (US DHHS, 2000). Medical research continually contributes to a body of data that confirms that certain populations are disproportionately affected by diabetes and CVD. (US DHHS, 2003).

Condition: Hypercholesterolemia

For adults, a normal blood cholesterol level is 200 mg/dL or lower; borderline is 200 to 239 mg/dL, and 240 mg/dL or above is considered high. Based on the 1998 Heart and Stroke Statistical Update, an estimated 96.8 million American adults (51%) have blood cholesterol levels of 200 mg/dL or higher. (Hong and Bayat, 1999).

Condition: Hypertension

Hypertension (high blood pressure) is a leading cause of stroke, renal disease, and cardiac disease for all populations in the US. (Tamir and Cachola, 1994). Hypertension is defined as elevated blood pressure, or systolic blood pressure of 140 mmHg or higher and diastolic blood pressure of 90 mmHg or higher. One in four American adults has high blood pressure. (Hong and Bayat, 1999). Contributors to hypertension include age, gender, relative body weight, alcohol consumption, ethnicity, place of birth, educational level, psychological factors, and knowledge and awareness. (Tamir and Cachola, 1994).

Among some AAPI groups, there is a high prevalence of heart disease risk factors, and these factors vary among ethnic groups. (Tamir and Cachola, 1994). This section provides information on the incidence, health practices and beliefs, health challenges, and adherence factors related to CVD and stroke for AAPIs.

Incidence of Disease

APIs in General

- **Lower percentages of APIs have high blood cholesterol.** According to the 1998 Heart and Stroke Statistical Update, 27% of API men and 26% of API women age 18 and older have high blood cholesterol, compared with 51% for the US population as a whole. (Hong and Bayat, 1999). It is important to note that these figures do not reflect the great variation among the ethnic groups included in the API category.
- **Some groups have higher levels of serum cholesterol.** Although limited data exist concerning cholesterol levels among APIs, in general, **Japanese, Hawaiian, and Filipino Americans are more likely to have higher levels of serum cholesterol** compared with other API ethnic groups. (Tamir and Cachola, 1994).

Lifestyle Interventions

A number of studies have shown that lifestyle interventions can help prevent high blood pressure and reduce blood cholesterol levels. For high blood pressure, these interventions include increasing the level of aerobic physical activity, maintaining a healthy weight, limiting the consumption of alcohol to moderate levels (for those who drink), reducing salt and sodium intake, and eating a reduced-fat diet high in fruits, vegetables, and low-fat dairy products. Moreover, studies show that a diet low in saturated fat, dietary cholesterol, and total fat—along with physical activity and weight control—can lower blood cholesterol levels. (US DHHS, 2000).

- **Slightly lower percentages of APIs have high blood pressure.** The age-adjusted prevalence of hypertension is 8.35% for API women (compared with 10.96% for white women) and 9.67% for API men (compared with 10.32% for white men). (Hong and Bayat, 1999).

Chinese

- **Low rates of hypertension, but low awareness of risk factors.** A 1979 study in California showed that Chinese have relatively low prevalence rates of hypertension. (Stavig et al., 1984, 1988). However, among those who were hypertensive, only 46% (versus 56% in the overall population) were aware that they had high blood pressure. Only 50% knew that high blood pressure can lead to serious illnesses (compared with 79% overall), and only 15% knew that the symptoms of high blood pressure are not felt (compared with 31% overall). (Hong and Bayat, 1999).

Filipinos

- **High rates of hypertension.** Relatively high rates of hypertension have been reported for Filipino Americans. In the California Hypertension Survey of 1979, Filipinos had the second highest overall prevalence of hypertension (27%). Filipinos also had significantly higher

adjusted mean systolic and diastolic blood pressure compared with other Asian ethnic groups in a study among health plan members in northern California. (Hong and Bayat, 1999).

- **Poor control, but high awareness.** The rate of uncontrolled hypertension for Filipinos is almost as high as the well-documented high rate for blacks. Although Filipinos who are hypertensive are more likely to be aware of their condition and be treated for it compared with other AAPI groups, their control rate is poor (8%). (Hong and Bayat, 1999).
- A study of **uncontrolled hypertension** in AAPIs found that Filipinos have significantly higher rates of uncontrolled hypertension than do Chinese and Japanese Americans. (Angel et al., 1989). Possible contributors to the high rate of hypertension among Filipinos are environmental factors after immigration to the US and sodium-load handling. (Tamir and Cachola, 1994).

Asian Indians

- **Asian-Indian immigrant men have a higher prevalence of myocardial infarction.** One study compared Asian-Indian immigrants with whites and found that Asian Indians had a higher prevalence of myocardial infarction (men only), a higher prevalence of non-insulin-dependent diabetes, a lower prevalence of cigarette smoking, a lower prevalence of obesity, a lower prevalence of hypertension (men only), lower levels of high-density lipoprotein (HDL) cholesterol, and lower hypertriglyceridemia. (Hong and Bayat, 1999).
- **The prevalence of coronary heart disease is increasing.** The prevalence of CHD in Asian Indians is rapidly increasing. Although the reasons for this increase are not fully understood, it is likely related to changes in lifestyle, Westernization of diet, and the increasing prevalence of diabetes, hypertension, and dyslipidemia. (Deedwania, 2002).
- **High heart disease rates may be genetic.** Asian Indians have one of the highest rates of heart disease in the world—three times higher than the US rate. Despite fairly healthy lifestyles, many Asian Indians have very high triglyceride levels and low levels of HDL, as well as a high incidence of diabetes. A recent study suggests that a genetic abnormality may be the cause. (University of Maryland Medical System, 1999).

Southeast Asians

- **Hypertension is the most common risk factor.** A study of cardiovascular risk factors in Southeast Asian Americans found that hypertension was the most commonly defined risk factor among the sampled population of Cambodian, Hmong, Laotian, and Vietnamese immigrants: 27% had a moderate to high risk, and 14% had a high risk. Lower prevalence rates were found for hypercholesterolemia, cigarette smoking, and body mass index. (Bates et al., 1989).
- **Higher hypertension among Hmong immigrants.** In a 1997 study of CVD risk factors among newly arrived nonrefugee Hmong in Fresno, California, versus Hmong living in Thailand, the consequences of migration and its impact on nutrition were examined. The

researchers found that hypertension was one of the most commonly defined risk factors among the Hmong immigrants. They had a significant increase in both fat and salt intake compared with their counterparts in Thailand. (Hong and Bayat, 1999).

- **Prevalence of hypercholesterolemia in Vietnamese living in California.** In a 1991 behavioral risk factor survey of Vietnamese in California, the estimated prevalence of hypercholesterolemia was 38% for men and 32% for women. By comparison, among the overall US population, rates of hypercholesterolemia were 29% for men and 28% for women. (Hong and Bayat, 1999).

Pacific Islanders

- **Higher weight and blood pressure among US Samoans.** San Franciscan Samoans reportedly weigh significantly more than either the native population in Samoa or the migrant population in Hawaii. (Pawson and Janes., 1982). Fifty-five percent of the men and 46% of the women exceed the 95th percentile for weight. Mean blood pressure is higher among migrant men, and Samoan men living in California have higher overall rates of hypertension than do those living in Hawaii. (Hong and Bayat, 1999).
- **Native Hawaiians at higher risk of heart disease and stroke.** Native Hawaiians have a higher risk of premature CHD and stroke due to obesity, hypertension, hypercholesterolemia, smoking, and diabetes. Awareness of hypertension is high (80% of men; 86% of women), but control is poor (20% of men; 39.3% of women). (Hong and Bayat, 1999).
- **High serum cholesterol levels point to high cardiovascular risk for native Hawaiians.** Native Hawaiian men and women have prevalence rates of 50% and 45%, respectively, for cholesterol levels of 200 mg/dL or higher. For those aged 50 to 59, the prevalence rate of cholesterol levels of 240 mg/dL or greater may be as high as 40%. (Curb et al., 1991; Heiss et al., 1991; Lipid Research Clinics Program Epidemiology Committee, 1979).

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