

## **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.

## **Risk Factors and Challenges**

### *General*

#### **AAPIs Overall**

- **Educational level and hypertension.** Among the AAPI population overall, educational level has been negatively correlated with hypertension. (Stavig et al., 1984, 1998). However, among Filipino men, college education has been positively correlated with hypertension. (Angel et al., 1989).
- **Boredom, depression, and hypertension.** One study found that feelings of boredom during the past two weeks and feelings depression or unhappiness were related to a higher rate of hypertension. (Angel et al., 1989). In addition, it has been suggested that the more social support a person gets from close friends and his or her spouse, and the greater a person's external involvement in society, the lower the prevalence of hypertension. (Stavig et al., 1984, 1989).
- **Medication and hypertension.** In one study, medication controlled hypertension poorly in an AAPI sample. The level of control among AAPIs was 9%, compared with 16% among the overall hypertensive population. Only 8% of Filipino patients who took antihypertensive drugs could control their blood pressure levels. (Stavig et al., 1988).
- **Smoking.** Rates of smoking among different AAPI ethnic groups are influenced by age, gender, place of birth, level of education, level of acculturation, and other sociocultural factors. (Tamir and Cachola, 1994).
- **Awareness of cholesterol's role in cardiovascular disease.** Lack of knowledge or awareness of the role of cholesterol in CVD is especially typical of Hawaiian and Filipino Americans and among those in Southeast Asian ethnic groups. (Tamir and Cachola, 1994).

#### **Recommendation**

Establish prevention and education programs, and emphasize the role of cholesterol in existing CVD prevention and treatment programs. It is estimated that a 5 mg/dL drop in mean cholesterol levels produces a 4.3% drop in mortality rate. (Tamir and Cachola, 1994).

#### **Asian Indians**

- **Children and grandchildren of Indian immigrants are at greatest risk.** The children and grandchildren of Indian immigrants could have the highest risk for heart problems, given that their lifestyles are likely to be much more inactive than their parents'. Scientists anticipate that this phenomenon will not be visible for a few more years, however. (Lyons and Manchikanti, 2002).

#### **Filipinos**

- **Hypertension is poorly controlled by medicine.** In one study, only 8% of Filipino patients who took antihypertensive drugs could control their blood pressure levels. (Stavig et al., 1988).
- **Alcohol consumption** is positively correlated with elevated blood pressure levels in AAPIs, especially among the Filipino-American population. One study indicated that those whose alcohol intake was one standard deviation above the average alcohol consumption had an estimated 22.6% prevalence rate of hypertension, in contrast to a 14% prevalence rate among persons whose alcohol intake was one standard deviation below the average. (Stavig et al., 1984).

### **Southeast Asians**

- **Lower treatment rates and knowledge levels.** Southeast Asians (Cambodians, Hmong, Laotians, and Vietnamese) were found to have lower hypertension treatment rates and knowledge levels compared with hypertensive subjects from other groups. (Stavig et al., 1984, 1998). Whereas 17% of Southeast Asian refugees in one sample were found to be hypertensive, only 2% were on hypertensive medication. In particular, **Cambodians and Vietnamese have the lowest hypertension awareness rates, drug treatment levels, and control rates among all ethnic subgroups in California.** (Stavig et al., 1984). A heart health study in Ohio revealed that of 94% of Cambodian, Laotian, and Vietnamese immigrants had no knowledge of CVD, and 85% had no knowledge of prevention. (Hong and Bayat, 1999)
- **Vietnamese unaware of cholesterol levels.** Based on reports from the Centers for Disease Control and Prevention, in 1992, a significant proportion of Vietnamese men (56%) and women (55%) had never had their cholesterol levels checked, compared with 41% of men and 35% of women in the mainstream. (Hong and Bayat, 1999).

### *Diet and Exercise*

#### **Chinese**

- **Traditional versus Western diet.** Westernized Chinese are moving away from the traditional diet rich in vegetables, rice, and green tea and adopting the typical American diet that contains more animal fats—a dietary shift that may be increasing their risk of heart disease and stroke. (United Press International, 1999).

#### **Pertinent Fact**

There is growing recognition of the importance of physical activity in preventing CVD. Increased physical activity improves the efficiency of the heart muscle by increasing the heart's pumping capacity and increasing oxygen delivery to the tissues, both at rest and during exercise. (Tamir and Cachola, 1994).

- **Changing diet and exercise habits after immigration.** A 1994 study comparing dietary habits, physical activity, and body size among Chinese in North America and those in China found that the North American Chinese obtained a significantly higher percentage of calories from protein and fat and a lower percentage from carbohydrates. Although the majority of North American Chinese were born in Asia, the comparison group in China was leaner and more physically active than their counterpart group in North America. The authors concluded that assimilation into a Western lifestyle, along with changes in diet, physical activity, and body size, accounted for the different chronic disease rates of the two populations. (Hong and Bayat, 1999).

### **Changing Behavior**

As emphasized in the Healthy People 2000 working group's recommendations, it is important to understand the cultural context and health needs of different immigrant populations to effectively change their health- and diet-related behavior. (Hong and Bayat, 1999).

### **Southeast Asians**

- **Dietary changes among recent immigrants.** In a study of recently settled Southeast Asian refugee families in the US, rice remained the staple food, but foods such as steak and soft drinks were highly preferred. Within four years of arrival, 92% of the refugees reported changes in their diet, and 63% reported gaining weight (10 pounds on average). The study also found that 30% of the teenagers in these families had the major responsibility for meal preparation, and 25% of the teenagers did most of the food shopping, pointing to the need to include this group in nutrition education programs. (Hong and Bayat, 1999).

### **Pacific Islanders**

- **American Samoan diet high in cholesterol and sodium.** A community-based study of the diets of people living in the US territory of American Samoa and those in Western Samoa (renamed Samoa in 1997) reported substantial differences in nutrient intake. The intake of cholesterol and sodium was higher among inhabitants of American Samoa regardless of age, gender, education, occupation, and lifestyle. (Hong and Bayat, 1999).

### **Overweight and Obesity**

Overweight and obesity are major contributors to many preventable causes of death. On average, higher body weights are associated with higher death rates. Those who are overweight and obese have a substantially greater risk of developing high blood pressure, high cholesterol, type 2 diabetes, heart disease and stroke, gallbladder disease, arthritis, sleep disturbances and breathing problems, and certain types of cancer. (US DHHS, 2000).

### **Asian Indians**

- Asian Indians often cook with ghee (clarified butter) and fry many foods. (Kaiser Permanente, 1999).

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