Risk Factors and Coronary Heart Disease

AHA Scientific Position

Extensive clinical and statistical studies have identified several factors that increase the risk of coronary heart disease and heart attack. Major risk factors are those that research has shown significantly increase the risk of heart and blood vessel (cardiovascular) disease. Other factors are associated with increased risk of cardiovascular disease, but their significance and prevalence haven't yet been precisely determined. They're called contributing risk factors.

The American Heart Association has identified several risk factors. Some of them can be modified, treated or controlled, and some can't. The more risk factors you have, the greater your chance of developing coronary heart disease. Also, the greater the level of each risk factor, the greater the risk. For example, a person with a total cholesterol of 300 mg/dL has a greater risk than someone with a total cholesterol of 245 mg/dL, even though everyone with a total cholesterol greater than 240 is considered high-risk.

What are the major risk factors that can't be changed?

- **Increasing age** — Over 83 percent of people who die of coronary heart disease are 65 or older. At older ages, women who have heart attacks are more likely than men are to die from them within a few weeks.

- **Male sex (gender)** — Men have a greater risk of heart attack than women do, and they have attacks earlier in life. Even after menopause, when women's death rate from heart disease increases, it's not as great as men's.

- **Heredity** (including **Race**) — Children of parents with heart disease are more likely to develop it themselves. African Americans have more severe high blood pressure than Caucasians and a higher risk of heart disease. Heart disease risk is also higher among Mexican Americans, American Indians, native Hawaiians and some Asian Americans. This is partly due to higher rates of obesity and diabetes. Most people with a strong family history of heart disease have one or more other risk factors. Just as you can't control your age, sex and race, you can't control your family history. Therefore, it's even more important to treat and control any other risk factors you have.

What are the major risk factors you can modify, treat or control by changing your lifestyle or taking medicine?

- **Tobacco smoke —** Smokers' risk of developing coronary heart disease is 2–4 times that of nonsmokers. Cigarette smoking is a powerful independent risk factor for sudden cardiac death in patients with coronary heart disease; smokers have about twice the risk of nonsmokers. Cigarette smoking also acts with other risk factors to greatly increase the risk for coronary heart disease. People who smoke cigars or pipes seem to have a higher risk of death from coronary heart disease (and possibly stroke) but their risk isn't as great as cigarette smokers'. Exposure to other people's smoke increases the risk of heart disease even for nonsmokers.

- **High blood cholesterol** — As blood cholesterol rises, so does risk of coronary heart disease. When other risk factors (such as high blood pressure and tobacco smoke) are present, this risk increases even more. A person's cholesterol level is also affected by age, sex, heredity and diet.

- **High blood pressure —** High blood pressure increases the heart's workload, causing the heart to thicken and become stiffer. It also increases your risk of stroke, heart attack, kidney failure and congestive heart failure. When high blood pressure exists with obesity, smoking, high blood cholesterol levels or diabetes, the risk of heart attack or stroke increases several times.

- **Physical inactivity** — An inactive lifestyle is a risk factor for coronary heart disease. Regular, moderate-to-vigorous physical activity helps prevent heart and blood vessel disease. The more vigorous the activity, the

greater your benefits. However, even moderate-intensity activities help if done regularly and long term. Physical activity can help control blood cholesterol, diabetes and obesity, as well as help lower blood pressure in some people.

- **Obesity and overweight** — People who have excess body fat — especially if a lot of it is at the waist — are more likely to develop heart disease and stroke even if they have no other risk factors. Excess weight increases the heart's work. It also raises blood pressure and blood cholesterol and triglyceride levels, and lowers HDL ("good") cholesterol levels. It can also make diabetes more likely to develop. Many obese and overweight people may have difficulty losing weight. But by losing even as few as 10 pounds, you can lower your heart disease risk.

- **Diabetes mellitus** — Diabetes seriously increases your risk of developing cardiovascular disease. Even when glucose (blood sugar) levels are under control, diabetes increases the risk of heart disease and stroke, but the risks are even greater if blood sugar is not well controlled. About three-quarters of people with diabetes die of some form of heart or blood vessel disease. If you have diabetes, it's extremely important to work with your healthcare provider to manage it and control any other risk factors you can.

What other factors contribute to heart disease risk?

- Individual response to **stress** may be a contributing factor. Some scientists have noted a relationship between coronary heart disease risk and stress in a person's life, their health behaviors and socioeconomic status. These factors may affect established risk factors. For example, people under stress may overeat, start smoking or smoke more than they otherwise would.

- Drinking **too much alcohol** can raise blood pressure, cause heart failure and lead to stroke. It can contribute to high triglycerides, cancer and other diseases, and produce irregular heartbeats. It contributes to obesity, alcoholism, suicide and accidents.

  The risk of heart disease in people who drink **moderate** amounts of alcohol (an average of one drink for women or two drinks for men per day) is lower than in nondrinkers. One drink is defined as 1-1/2 fluid ounces (fl oz) of 80-proof spirits (such as bourbon, Scotch, vodka, gin, etc.), 1 fl oz of 100-proof spirits, 4 fl oz of wine or 12 fl oz of beer. It's **not** recommended that nondrinkers start using alcohol or that drinkers increase the amount they drink.