

Coronary Heart Disease Risk Factors

Heart disease is the leading cause of death in developed nations despite known ways to prevent and treat heart problems. One common type of heart disease is called **coronary heart disease**, sometimes referred to as coronary artery disease. The arteries of the heart (**coronary arteries**) supply blood flow to the heart muscle. **Plaque** (buildup of fatty material) damages the coronary arteries, and blood **platelets** (cells in the blood that help clotting) can stick to these damaged areas, causing blockage of blood flow. This can lead to **ischemia** (lack of oxygen to the heart muscle cells) or **myocardial infarction** (heart attack). **Risk factors**—things that make it more likely for a person to develop coronary heart disease—have been identified through many scientific studies. Some of the most important information about coronary heart disease risk factors has come from the Framingham Heart Study, a study of families in Framingham, Massachusetts. Managing the controllable risk factors can decrease an individual's chances of having coronary heart disease. This is important because coronary heart disease may not produce any symptoms until a person experiences a heart attack or sudden cardiac death. Sudden cardiac death is the first sign of heart disease in many persons. The December 2, 2009, issue of JAMA contains an article about predicting an individual's risk of developing coronary heart disease.

RISK FACTORS

- Age (older than 40 years for men, 45 years for women)
- Male sex
- Family history of coronary heart disease
- Smoking
- **Hypertension** (high blood pressure)
- Diabetes
- Obesity
- Unhealthy cholesterol levels—high total cholesterol, low HDL cholesterol, high LDL cholesterol, high triglycerides
- Low physical activity
- Accumulation of abdominal fat ("apple" body shape)

PREVENTION

- Stop smoking
- Exercise at least 30 minutes most days of the week
- Treat high blood pressure
- Control blood sugar if you have diabetes
- Lose excess weight and maintain a healthy weight through a balanced diet and exercise
- Eat lots of high-fiber fruits, vegetables, and whole grains
- Limit intake of animal fats, *trans* fats, sugars, and starches
- Lower your cholesterol through diet, exercise, and medications if prescribed by your doctor

MAKE CHANGES FOR A HEART-HEALTHY LIFESTYLE

Small changes each day can add up to a much healthier life and decreased risk of developing coronary heart disease. Even losing 10% of excess body weight can dramatically lower heart disease risk. Taking walk breaks at work, scheduling appointments for exercise, exercising with a friend or family member, actively playing with your pet or children, and taking the stairs instead of the elevator are all small steps to improve overall fitness. Get 30 minutes of physical activity most days of the week and 2 days of strength and flexibility training per week. Involving your spouse or partner and family can improve success rate of lifestyle changes and make everybody healthier at the same time. Adding whole-grain foods to your diet can easily be done without sacrificing taste: use red meats sparingly, eat white meat from chicken or fish in small portions (4 ounces), add nuts, and avoid processed foods, while eating at least 5 servings of fruit and vegetables each day.

FOR MORE INFORMATION

- American Heart Association
www.americanheart.org
- National Heart, Lung, and Blood Institute
www.nhlbi.nih.gov

Calculate your own personal risk at

- Framingham Heart Study
www.framinghamheartstudy.org/risk/index.html

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page Index on JAMA's Web site at www.jama.com. Many are available in English and Spanish. A Patient Page on coronary artery disease was published in the November 24, 2004, issue; one on cardiac stress testing was published in the October 15, 2008, issue; one on myocardial infarction was published in the January 30, 2008, issue; one on percutaneous coronary intervention was published in the February 11, 2004, issue; and one on acute coronary syndromes was published in the July 2, 2008, issue.

Sources: American Heart Association; National Heart, Lung, and Blood Institute; Framingham Heart Study; American College of Cardiology; American Diabetes Association

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