About Coronary Artery Disease

What is Coronary Artery Disease?

Coronary artery disease or CAD is a long-term process in which cholesterol and other substances slowly build up on the inner lining of the arteries that supply blood to the heart muscle. This substance is called “plaque”. Plaque buildup inside the arteries causes them to narrow, thereby, reducing the flow of blood and oxygen supply to the heart muscle.

What causes Coronary Artery Disease?

There are many risk factors which contribute to the development of coronary artery disease. Your age, sex, and family history are risk factors that you cannot control. However, there are several risk factors you can control including 1) total cholesterol / LDL cholesterol levels, 2) blood pressure, 3) weight, 4) smoking, 6) activity level, and if you have diabetes, 7) blood glucose.

How is Coronary Artery Disease diagnosed?

There is no single test to diagnose CAD. Your health care practitioner will ask about your medical and family history, your risk factors, and perform a physical exam. Your health care practitioner may also order one or more of the following tests: fasting lipid profile (blood test), EKG, exercise stress test, stress echocardiogram, nuclear heart scan or coronary angiography. These tests are used to not only diagnose CAD, but also to determine the extent and severity of the disease.

A Guide to Controlling Your Risk Factors

Controlling coronary artery disease begins with knowing your risk factors and taking action. It is important to note that the medical evidence is compelling that aggressive control of risk factors improves survival and decreases the likelihood of a second heart attack.

Stop Smoking and Avoid all Second-hand Smoke

If you smoke, develop a plan to QUIT. Discuss the role of support groups and/or medications with your with your health care practitioner.

Cigarette smoke should be completely avoided by individuals with coronary artery disease. Recent research indicates that exposure to second hand smoke is a risk factor for experiencing a second heart related event (i.e. heart attack)

High Cholesterol

Cholesterol is soft, fat-like substance found in your blood stream. The two most important kinds of cholesterol that you need to be aware of are: low-density lipoprotein (LDL) and high density lipoprotein (HDL).

LDL is the “bad” cholesterol. When you have too much of it, it can build up on the walls of the arteries that supply the heart with blood. This causes narrowing and reduced blood flow. HDL is the “good” cholesterol because a high level of it seems to lower your risk for heart attack. See the chart below for recommended targets

<table>
<thead>
<tr>
<th>Cholesterol</th>
<th>Recommended Goal</th>
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<tr>
<td>LDL - “Bad” Cholesterol</td>
<td>Less than 100 mg/dL</td>
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<tr>
<td>HDL - “Good” or Healthy Cholesterol</td>
<td>Greater than 40 mg/dL</td>
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Have your cholesterol levels checked at least annually and know your results and what they mean.

More frequent testing may be indicated depending on your course of treatment. Eating plenty of fresh fruits and vegetables, exercising and avoiding smoking are simple steps you can take to help improve your cholesterol numbers. ‘Statins’ or other cholesterol lowering medications may be ordered to assist you in achieving your cholesterol goals. Discuss treatment goals with your health care practitioner.

Diabetes

If you have diabetes, it is very important to keep your HbA1c level less than 7.0%. Diabetes accelerates the build up of plaque in artery walls that leads to coronary artery disease and puts you at higher risk of experiencing a heart attack or stroke. Lifestyle modification and medication can help you obtain an optimal HbA1c level.

High Blood Pressure

All patients with coronary artery disease should regularly monitor their blood pressure. You should aim for a blood pressure below 140/90 mm/Hg. Individuals with diabetes should aim for a blood pressure below 130/80mm/Hg. Changes to diet and regular exercise (monitored by your health care practitioner) can help control these numbers. In addition, your physician may prescribe medication to help you achieve goal blood pressure. It often takes more than one medication to reach goal.

Physical Inactivity

Patients with established coronary artery disease should exercise regularly under the guidance of their health care practitioner. The frequency and intensity of your exercise program should be determined and monitored by your health care practitioner. If you have led an inactive lifestyle, your health care practitioner may complete an exercise tolerance test to determine your capabilities and identify any potential problems. You should work to the optimal goal of 30 minutes of exercise on a daily basis. You may be referred to a cardiac rehabilitation program. Physical activity will help lower your cholesterol levels, manage your stress, and improve the quality of your sleep.

Weight Management

It is important to maintain a healthy weight to help reduce your risk for future cardiac events. Be sure your practitioner measures your weight at each visit. Your body mass index (BMI) can then be calculated using your height and weight. A healthy BMI is considered 25 or less. If you are overweight, develop a plan for loss with your health care practitioner that includes the right balance of physical activity and caloric intake to meet your goals.

Depression

Several studies have shown that people who have been diagnosed with coronary artery disease are at an increased risk for depression. It is important to remember that depression is a disease of the whole body and not a sign of personal weakness. The good news is that there are very effective treatments for depression, and most people who receive proper treatment find relief. Often people benefit from a combination of therapy and medication. If you have had the following feelings for two weeks or longer contact your health care practitioner

1. Do you feel sad, blue, or depressed almost all day, every day?
2. Do you get less pleasure from things such as work and friends? Have you lost interest in things you used to enjoy?

Where can I find additional information and resources on coronary artery disease and its treatment?

American Heart Association
7272 Greenville Avenue
Dallas, TX 75231-4596
1-800-AHA-USA1
www.americanheart.org

Centers for Disease Control and Prevention
1600 Clifton Road
Atlanta, GA 30333
1-800-311-3435
www.cdc.gov

National Heart Lung and Blood Institute
Health Information Center
P.O. Box 30105
Bethesda, MD 20824-0105
301-592-8573
www.nhlbi.nih.gov