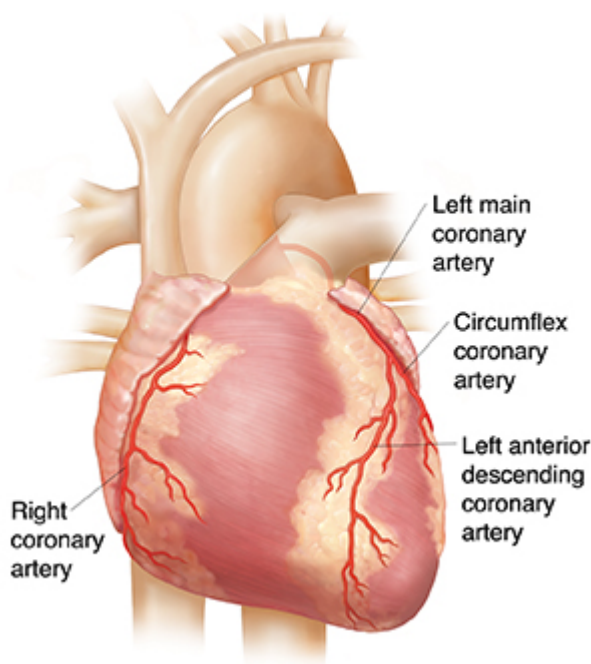


Understanding Coronary Artery Disease (CAD)

Your heart is a muscle. To work right, this muscle needs a steady supply of oxygen. The **coronary arteries** are blood vessels that carry oxygen-rich blood to the heart muscle. Coronary artery disease (CAD) is when there's a problem in these blood vessels. The coronary arteries get blocked, resulting in reduced blood supply to the heart muscles.



Healthy artery. A healthy coronary artery has no blockages. Blood easily flows through it. Healthy arteries can supply all the oxygen-rich blood your heart muscle needs.



Damaged artery. Some things can damage the lining of an artery. These include smoking, high blood pressure, and high blood sugar. CAD starts when this damage leads to the buildup of plaque along the artery wall. Plaque is made of cholesterol and other fatty deposits. It narrows the arteries that send blood to your heart muscle. It also makes the walls of the arteries stiff. This is called atherosclerosis.



Narrowed artery. As more plaque builds up, an artery has trouble sending blood to your heart muscle when it's needed the most, such as during exercise. You may not feel any symptoms at rest. The oxygen needed by the heart is not as much as during exertion. Symptoms may occur when the oxygen demand by heart muscles is not met by the blood supply through the narrowed artery. You may feel pressure, tightness, aching, or pain in your chest, jaw, neck, back, or arm. This is called angina.



Blocked artery. A piece of plaque can break off. This is called ruptured plaque. It can fully block the artery. But more often, a blood clot forms on a piece of ruptured plaque. Together

these block the narrowed artery. Then blood can't reach the heart muscle supplied by the blocked artery. It causes damage to the heart muscle. You may feel crushing pressure or pain in or around your chest. This is a heart attack (acute myocardial infarction). It's a medical emergency.

