Heart disease is the number one cause of death for both men and women in the United States, claiming nearly 1 million lives every year. Improved treatments are helping many people, but the best option is preventing heart disease in the first place.

Preventing Coronary Artery Disease

**WHAT IS CORONARY ARTERY DISEASE (CAD)?**
Coronary artery disease is blockage of the arteries of the heart. It results from damage to the coronary arteries that are the major blood vessels that supply blood, oxygen, and nutrients to the heart. Plaque in the arteries is usually the main culprit. When plaque builds up, it can narrow arteries and result in decreased blood flow to the heart.

**CAUSES OF CAD**
Coronary artery disease is thought to begin with damage or injury to the inner layer of a coronary artery, sometimes as early as childhood. The most common causes of damage include smoking, high blood pressure, high cholesterol, and diabetes.

**SYMPTOMS OF CAD**
At first, the decreased blood flow may not cause any obvious symptoms. As plaques build up and develop into significant blockages, patients may experience chest pain, shortness of breath and heart attack. Other associated symptoms may include abdominal pain and fatigue with exertion.

**TREATMENTS FOR CAD**
Initially, diagnostic testing is needed to determine the severity of the CAD. These tests may include electrocardiogram (EKG), stress testing, echocardiogram, and myocardial perfusion imaging. Medications that can treat CAD include statins (help lower cholesterol), anti-hypertensives (help lower blood pressure), beta-blockers (help slow heart rate), and medications like aspirin that block the activity of platelets. These anti-platelet medications help prevent your blood from thickening or clotting.

Coronary interventions may be needed, such as balloon angioplasty and placement of stents in the arteries, both of which widen narrowed or obstructed arteries and improve blood flow. For blockages that are severe, coronary artery bypass may be helpful or necessary, a surgery that grafts arteries or veins from elsewhere in the body to the coronary arteries, thus bypassing the blockages and improving blood supply.

**PREVENTING CAD**
Lifestyle modification is a key in preventing CAD. Tobacco use cessation, weight loss, stress reduction, healthy meals, and exercise are examples of how you can help prevent or even improve coronary artery disease.
A heart attack (also called an acute myocardial infarction or acute MI) is when a blood clot interrupts blood flow in the arteries that supply blood to the heart. The heart muscle begins to die. Many patients experience a sensation of chest pressure or chest discomfort when they are having a heart attack. However, some patients will experience different types of symptoms. If you think that you are having a heart attack, it is critical to call 911.

Who suffers heart attacks?
Individuals who are more prone to heart attacks are people who develop clogging of the arteries of the heart, a condition called coronary artery disease. Smoking, high cholesterol, high blood pressure, and diabetes are frequent causes of coronary artery disease that can develop into a heart attack.

Symptoms
Symptoms of a heart attack can vary from person to person. Some of the common symptoms are chest pain, squeezing pressure in the upper body, pain in one or both arms, the back, neck, jaw or stomach, nausea or indigestion, vomiting, lightheadedness or fainting, and/or breaking out in a cold sweat.

Treatment
Patients who suffer from a heart attack will undergo further evaluation, such as cardiac catheterization, which is the insertion of a catheter into a chamber or vessel of the heart.

There are several methods used to treat patients who are having a heart attack including coronary interventions (angioplasty and stent placement or coronary bypass surgery) and medications (clot-busting drugs or thrombolytic therapy). If a clot is causing a heart attack, an angioplasty is a procedure in which the artery that has been closed by the clot is re-opened. A stent will usually be placed at the site to keep the artery open.

Prevention
Aspirin is a critical medication for preventing heart attacks because it helps in decreasing the formation of clots.

Heart attack stats
- 1.5 million heart attacks occur in the U.S each year with 500,000 deaths
- A heart attack occurs about every 20 seconds with a heart attack death about every minute
- Almost 14 million Americans have a history of heart attack or angina
- About 50% of deaths occur within 1 hour of the heart attack—outside a hospital
- There is a 6% to 9% early mortality from heart attack for those who survive long enough to reach the hospital

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