

What is atrial fibrillation?

The heart has four areas, or chambers; two upper chambers known as the “atria”, and two lower chambers known as the “ventricles”. In a normal heart, the two atria listen to electrical signals and pump blood to the ventricles in a synchronized fashion. The ventricles then pump blood to the rest of the body. In atrial fibrillation, these electrical signals are disorganized, causing the atria to beat chaotically, irregularly and often rapidly; the atria will beat out of coordination with the ventricles. Because the atria are beating so rapidly and irregularly, the atria will “quiver” or “fibrillate”, instead of “pumping”. This irregular and fast heart beat can lead to symptoms of palpitations, shortness of breath, exercise intolerance, lightheadedness and weakness.

The causes of atrial fibrillation are usually due to conditions that change the structure of the heart overtime, causing it to dilate or enlarge. Some of these conditions include: long standing hypertension, heart attack, leaky valves, and congenital (birth) heart defects. Other times, there is no known cause for atrial fibrillation, and doctors call this “lone atrial fibrillation”.

Atrial fibrillation is diagnosed through an EKG or holter monitor, which records the electrical activity of your heart. An EKG will reveal the loss of a “p-wave”, which is diagnostic of a-fib.

Although atrial fibrillation usually isn't life threatening, it is considered a medical emergency because of the complications that may arise. Because the atria are quivering instead of effectively pumping, not all of the blood will leave the atria, and more will be left behind. This extra blood may pool in the atria due to sitting there for too long, and may form a “thrombus” or clot. This clot may then clog an artery in the heart causing a heart attack, or it may leave the heart and go to the brain causing a stroke. Therefore, it is important that people with a-fib are monitored regularly and are treated with medications that can help prevent clots, or slow the fast heart rate.

At Heart and Health we pride ourselves to have the commitment to screen, prevent, and treat our patients. Any person with significant risk factors and heart palpitations, increase heart rate, dizziness, should be screened and evaluated in order to prevent these unnecessary complication.

For more information please visit our website at [**Hearth and Health.com**](http://HearthandHealth.com)

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What is hyperlipidemia?

Hyperlipidemia is a condition of abnormally elevated lipids (fat) in your blood. These elevated lipids in your blood primarily refer to high cholesterol and high triglyceride levels. At normal levels, these lipids perform important functions in your body, but when present in excess, they can pose serious health problems.

The causes of hyperlipidemia usually come from lifestyle habits, or treatable medical conditions. Obesity, lack of exercise, smoking, and eating foods high in fat and cholesterol can all contribute to high lipids in the blood. Also, conditions such as hypertension, diabetes or hypothyroidism, if untreated, can contribute to hyperlipidemia.

Basically, elevated lipids in your blood can speed up a process called atherosclerosis, or hardening of your arteries. Normally, your arteries are smooth and unobstructed; but in a person with excess fat in their blood, this fat may form a sticky substance called "plaque". This plaque may stick to the inner walls of your arteries and eventually harden. Overtime, with untreated excess lipid levels along with aging, this plaque may increase and cause obstruction in the arteries. As arteries narrow, less blood can flow through. Reduced blood flow increases your risk of heart disease, stroke, and vascular disease. It may also cause severe chest pain (angina), due to the lack of blood supply to the heart.

Hyperlipidemia is diagnosed by a blood test which shows the amount of lipids and triglycerides present in your blood. An LDL (bad cholesterol) level of over 160 mg/dl, and a triglyceride level of over 150 mg/dl is considered high. People with diabetes should have levels even lower than this. There is also good cholesterol in your blood, called HDL, which should be kept over 40 mg/dl. Anything under this may also contribute to heart disease.

Just as in hypertension, hyperlipidemia may present with no symptoms, until blockage of arteries becomes severe. Fortunately, you may be able to reduce high lipid levels and, therefore, prevent or slow the progression of atherosclerosis. Lifestyle changes like exercising and eating a healthy diet can lower your lipid levels, and are often a first line treatment. There are also medications to treat this condition, when diet and exercise fail. At Heart and Health we pride ourselves to have the commitment to screen, prevent, and treat our patients. Any person with significant risk factors and heart palpitations, increase heart rate, dizziness, should be screened and evaluated in order to prevent these unnecessary complication.

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What is CAD?

CAD stands for coronary artery disease. Coronary arteries are the arteries that surround the heart and supply the heart with oxygen rich blood. Coronary artery disease happens when these arteries become obstructed and hardened, therefore reducing oxygen rich blood flow to the heart. This obstruction is due to the build up of cholesterol and fat, called plaque, on the inner walls. This process is known as atherosclerosis. As the plaque grows, less blood can flow through the arteries, therefore depriving the heart of the blood and oxygen it needs to function. This narrowing can lead to chest pain (angina), or if a complete occlusion occurs, may lead to a heart attack causing permanent damage to the heart. Other signs and symptoms of CAD include shortness of breath, exercise intolerance, weakness and palpitations.

Over time, CAD can also weaken the heart muscle and contribute to heart failure and arrhythmias. Heart failure means the heart can't pump blood well to the rest of the body. Arrhythmias are changes in the normal beating rhythm of the heart.

The causes of CAD are the same causes that contribute to hyperlipidemia. Obesity, sedentary lifestyle, smoking, diet high in fat and cholesterol, hypertension, diabetes and hypothyroidism may all contribute to the build up of plaque in the arteries.

CAD may initially may be suspected or diagnosed through a routine EKG. An EKG will show a previous heart attack, or one in progress, and will also show if you have an arrhythmia. An echocardiogram may then be done, which is a noninvasive technique of taking pictures of heart. It can show the structure and pumping activity, and any damage done to your heart. If your symptoms occur most often during exercise, your doctor may perform a treadmill stress test, in order to visualize your hearts activity during exercise. A coronary catheterization is the gold standard of diagnosis, and is an invasive procedure of injecting dye into your arteries and observing blood flow. It will outline blockages or any areas of plaque present in your arteries.

CAD is the most common type of heart disease. It's the leading cause of death in the United States for both men and women. Lifestyle changes, medicines, and/or medical procedures can effectively prevent or treat CAD in most people

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