

# Heart Arrhythmias

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An arrhythmia, also known as irregular heartbeat or dysrhythmia, is an abnormal heartbeat that may be unusually fast or unusually slow. In the majority of cases, a skipped beat is not medically significant and the person can continue their life as normal. The more serious arrhythmias, however, contribute to almost 500,000 deaths in the United States each year.

Arrhythmias can cause sudden cardiac death, stroke or even the formation of blood clots.

Arrhythmias can be caused by many factors such as coronary artery disease, electrolyte imbalances in the blood, changes in the heart muscle, injury from a heart attack, healing after heart surgery, or abnormal hormone levels. Some substances or medicines may also cause arrhythmias. They can also occur in what we would consider a normal, or healthy heart.

Detecting an arrhythmia in its early stages is crucial to the patient. The arrhythmia is more likely to progress and become more severe the longer it goes without diagnosis or treatment. Symptoms of arrhythmias may include, palpitations, fast or slow heartbeat, light-headedness, dizziness, chest pain, shortness of breath, paleness, and/or sweating. Once a physician believes a patient might have an arrhythmia they will use tests such as electrocardiograms, a Holter monitor, and/or stress tests to see if the patient's heart is beating normally.

Arrhythmias can occur in both the atria and the ventricles and there are many types that can arise in each such as, premature atrial contractions, premature ventricular contractions, atrial fibrillation, atrial flutter, AV nodal

reentrant tachycardia, ventricular tachycardia, ventricular fibrillation, bradyarrhythmias, sinus node dysfunction, and heart block. Prescribed medication, a pacemaker, cardioversions, cardiac ablations, left cardiac sympathetic denervation, and Maze procedure are some types of treatment for arrhythmias. Which procedure or medication the physician will give depends on what type of arrhythmia their patient has.



Medication such as Tambacor, Procainid, or Cordarone may be used to control heart rate. The patient may also be asked to take blood thinners such as Coumadin to lower the risk of blood clot formation.

A pacemaker may be used to deliver steady electrical impulses to guide the heart to beat in a healthy rhythm. Left cardiac sympathetic denervation (LCSD) surgery removes part of the nerves leading to the heart to reduce the heart's control over the sympathetic nervous system.

A cardioversion is a treatment to correct certain types of arrhythmia using a defibrillator. The defibrillator is used to deliver carefully timed and well-controlled electrical shocks to the chest wall. Cardiac ablation is a procedure in which catheters are introduced into the heart from blood vessels in the groin, legs and/or neck and radiofrequency energy is used to very carefully destroy (*ablate*) the abnormal areas of the heart muscle that are creating the arrhythmias.

The Maze procedure is a procedure that is usually reserved only for patients who are having severe symptoms despite other treatments. It involves open-heart surgery and the surgeon creates a new pathway for the heart's electrical signals to travel through.

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