

## Treatment Options

Many patients with arrhythmias require no treatment whatsoever. In fact, the most important aspect of any initial evaluation is to determine the significance of the arrhythmia and the need for any type of intervention.

The method of treatment depends upon the type and severity of the arrhythmia. Most non-sustained arrhythmias do not need treatment other than (perhaps) making some lifestyle changes. These changes include the following:

- Quitting or reducing caffeine intake
- Limiting alcohol use
- Avoiding certain medications (e.g., decongestants, ephedra)
- Using stress management techniques

For other patients, particular drugs may be used to control the abnormal heart rhythm. Examples include antiarrhythmic drugs, calcium channel blockers, and beta-blockers. Patients may also take drugs that thin the blood such as warfarin (Coumadin) or aspirin, especially those with atrial fibrillation, where the risk of stroke is increased.

In severe cases, antiarrhythmic medications may be recommended. These medications should be monitored carefully to prevent any side effects, which can include increased or worsened arrhythmias. Patients on such medications are encouraged to learn how to take their own pulse, so that any abnormal rhythm will be promptly detected.

If you are taking drugs for an arrhythmia, one of the following tests may be used to see whether your treatment is working: a Holter monitor while you are on drug therapy, an exercise ECG, or an electrophysiology study to see how easily the arrhythmia can be induced. Blood levels of antiarrhythmic drugs may also be checked.

However, the side effects of some of the drugs used to treat arrhythmias can be difficult to manage, and they can even induce new arrhythmias in some patients. Your doctor will take these side effects and your type of arrhythmia into account when deciding whether antiarrhythmic drugs may be an option for you.

Sometimes more invasive treatments are helpful, which include the following:

**Catheter Ablation:** This form of treatment is often applied at the same time doctors perform an electrophysiology study. Once doctors have identified the source of an arrhythmia during EP testing, they may proceed with a catheter ablation, a way to treat arrhythmias by cauterizing the abnormal electrical pathways causing the arrhythmia by using radiofrequency heat or freezing therapy (cryotherapy) applied through a special ablation catheter. With a success rate of more than 90-99 percent, depending upon the area of the heart being treated, this form of therapy can completely cure the arrhythmia in most cases and has been shown to be quite safe after many years of experience. EHMC has extensive experience in this procedure, and it was the first hospital in New Jersey to use cryoablation therapy for arrhythmia management.

**Cardioversion:** To quickly restore a heart to its normal rhythm, particularly one that is beating too quickly, the doctor may apply an electrical shock to the chest wall. This technique is called cardioversion, and may be applied externally or internally. This low-risk procedure is very commonly

used for persistent atrial fibrillation and atrial flutter. After cardioversion, drugs may be prescribed to prevent the arrhythmia from recurring.

**Pacemaker Implantation:** Pacemakers are used to treat people with a slow heart rate (bradycardia). An artificial pacemaker can take charge of sending electrical signals to make the heart beat if the heart's natural pacemaker or its electrical hub is not working properly. During a simple operation, this small electrical device, about the size of a matchbook, is placed under the skin. One or two special electrical cables (leads) extend from the device, through veins, to the right side of the heart. Electrical impulses travel from the device to the heart to maintain the proper heart rate.

**Implantable Cardioverter Defibrillator (ICD):** ICDs are devices used to correct serious ventricular arrhythmias -- such as tachycardia and fibrillation -- that can lead to sudden death. The defibrillator, which is about the size of a pager, is surgically placed inside the patient's chest. There, it monitors the heart's rhythm and quickly identifies serious arrhythmias. It immediately disrupts a deadly arrhythmia by delivering an electrical shock.

**Atrial Fibrillation/Pulmonary Vein Ablation Procedure:** If a person experiences frequent episodes of paroxysmal or persistent atrial fibrillation despite medication therapy, ablative therapy may be an option to prevent further episodes. Ablation therapy is when an energy source, currently radio frequency energy, is applied to an area in the heart that is a focus for an arrhythmia