

# Arrhythmia Management

## Pacemaker implant

A pacemaker is a silver dollar sized device that is implanted in the upper chest wall to regulate your heart rate. Pacemaker implantation is considered routine surgery and our surgeons have performed many. The procedure takes place in the operating room and usually takes an hour or two.

A small incision is made in the chest wall under a local anesthetic. The pacemaker leads are usually threaded through the incision into a large blood vessel in the upper chest and into the heart. Using the same incision, a small pocket is created under the skin to hold the pulse generator. The leads are then hooked up to the pulse generator. The generator battery will last 5 – 15 years depending on the amount of use you require.

After the procedure, you stay in the hospital over night. It is normal for the sight to be tender and swollen. This will be controlled with medication and resolve over the next several weeks. You will be discharged home with an antibiotic and pain medications.

## ICD implant

An implantable cardioverter defibrillator (ICD) is a device used to treat fast heart rates that occur in the lower chambers of the heart (the main pumping chambers). The ICD system is implanted like a pacemaker, but is slightly larger. The ICD detects both bradyarrhythmias (slow heart rates) and tachyarrhythmias (fast heart rates) and delivers electrical therapy to treat these rhythm disorders that could otherwise be fatal.

## Maze procedure

The maze procedure is a surgical treatment for atrial fibrillation or flutter. It has been reported to correct atrial fibrillation in 90-99% of people. Atrial fibrillation is an abnormality of the electrical system of the heart. The electrical impulses travel chaotically through the atria (upper chambers), which cause the atria to become unsynchronized and are then unable to fill and contract fully. When the atria do not contract fully, blood may sludge in the atria (or a specific portion of the atria called the left atrial appendage) and increase the risk for stroke.

This procedure is often combined with other surgical procedures (bypass or valve surgery). Small incisions are made on the inside surface of the upper heart chamber (atria). Scar tissue, which does not conduct electrical activity, forms and prevents erratic electrical signals from recurring. Strategically placed incisions may be made to form a specific channel in an attempt to direct electric signals through a controlled path, or maze, to the lower heart chambers (ventricles). Our surgeons are using the latest techniques, which include the use of radiofrequency ablation and pulmonary vein isolation, thereby reducing the number of incisions made in the heart.

You may be a candidate for this procedure if:

- You have symptoms from atrial fibrillation which medications have been unable to control.
- You are at high risk for embolic events (stroke), have had previous strokes, or cannot take blood thinners.
- You have an enlarged left atrium by echocardiogram.
- You have atrial fibrillation and are scheduled for an open-heart procedure.

If you feel any of the above apply please discuss it in more detail with your surgeon or cardiologist.