

AUTOMATIC IMPLANTABLE CARADIOVERTER-DEFIBRILLATOR (AICD)

■ WHAT IS AN AUTOMATIC IMPLANTABLE CARADIOVERTER-DEFIBRILLATOR (AICD)?

The automatic implantable cardioverter-defibrillator (AICD) is a device designed to monitor the heartbeat. This device can deliver an electrical impulse or shock to the heart when it senses a life-threatening change in the heart's rhythm. Like a pacemaker, the AICD is small enough to be implanted under the skin in the upper chest. The AICD system consists of:

- A pulse generator that can send an electrical impulse or shock to the heart
- Electrodes that sense the rhythm of the heart and deliver a shock to the heart muscle
- Batteries designed to last 4 to 5 years and deliver about 100 shocks
- A small computer chip that tells the AICD when to deliver a shock

Your doctor can also program the AICD to deliver a variety of sophisticated electrical therapies depending on the type of abnormal rhythm problem being treated.

■ WHEN ARE AICDS USED?

Some people are at very high risk for sudden death. For these people, an AICD can deliver the appropriate treatment and in most cases prevent sudden death. Today, the indications for an AICD are:

- People whose heart suddenly stops
- People who have had documented excessive rapid heartbeats (ventricular tachycardia)
- Or patients who are at risk for the above rhythm problems due to:
 - A poor or inadequate blood flow to the heart
 - A severe heart attack (MI)
 - An enlarged heart (cardiomyopathy) or related conditions like congestive heart failure

■ HOW DO I PREPARE FOR AICD SURGERY?

Follow the specific instructions given to you by your doctor. In general you should:

- Not eat or drink anything after midnight the day before the procedure. You can have sips of water.
- Check with your doctor about which medications to take and which medications you should hold. You may be asked to hold certain medications (like aspirin for example) 1-3 days prior to the procedure.
- Bring a list of all your medications and the dose with you to the hospital. This includes any over-the-counter medications you may be taking.
- Complete any blood work, chest x-rays and EKG's that your doctor has ordered prior to the procedure.

- Make arrangements for someone to drive you to and from the hospital. Your doctor will let you know when it is ok to begin driving again.

■ WHAT HAPPENS DURING THE PROCEDURE?

An intravenous (IV) line will be started in your arm. Your doctor will inject a local anesthetic to numb the site where the device will be placed. Typically AICDs are implanted just under the collarbone, usually on the left side. Your doctor will make a small incision in the skin. From there, lead wires are passed through a vein to your heart and then tested to check their position in your heart. A little pocket is made under the skin for the pulse generator. It is about the size of a book of matches. The leads are connected to the pulse generator, and tested. Then your doctor will close the incision and program the device.

■ WHAT HAPPENS AFTER THE PROCEDURE?

After the procedure your heart rhythm will be monitored and you will be watched for any signs of bleeding or swelling at the incision site. Hospital stays are usually no more than overnight, and there is a quick return to normal activities. When you go home after AICD surgery, you should:

- Limit the use of your arm on the side where the device was placed for the next 2 days.
- Avoid “windmill” exercises or any similar repetitive movement.
- Avoid heavy lifting- no more than 10 to 15 pounds.
- Keep the incision clean and dry for one week. Avoid putting lotions or oils on the incision. Wear loose clothing over the incision area.
- Bathing is allowed but during the first 48 hours take precautions to keep your incision dry.

■ WHAT HAPPENS ONCE YOU ARE HOME?

Living with an AICD should give you the comfort that treatment for a life-threatening condition can be delivered to you whenever and wherever you need it. There are some things you’ll need to be aware of, including:

- In the event of a life-threatening heart rhythm, you may faint before the AICD corrects the rhythm. Serious injury could occur if you faint while driving or swimming alone. Consider any activities you are about to engage in. If you are likely to injure yourself if you faint, then consider avoiding the activity or having a friend or family member with you.
- You will need regular follow up visits to your doctor so the device can be monitored. Monitoring shows whether the device is sensing the heartbeat properly, how many shocks have been delivered, and how much power is left in the batteries.
- Some electrical equipment can interfere with the ICD. You should avoid: large generators, electric motors, arc welders, transmission towers, high-voltage power lines, large stereo speakers, magnetic therapy products, battery-powered cordless power tools and running car engines (do not lean over the engine). Cellular phones have the potential to cause momentary interference with an AICD, but no lasting damage. For that reason, we recommend that you do not carry your cell phone directly over your pacemaker. It is safe to walk through security archways and theft detection systems. However, the AICD may set off the alarm. If this happens, show the security personnel your wallet card (AICD card) indicating that you have an AICD.

- In the event of an emergency, you should carry a card indicating that you have an AICD. You should also carry a complete list of medications and doses with you. This should also include a list of emergency contacts and their phone numbers.
- It is important to notify all health care personnel (including your dentist) that you have an AICD.
- If you feel your heart racing, there is the possibility that the device may deliver a shock. Find a place to sit or lie down and have someone stay with you throughout the event. Instruct your family and friends to call an ambulance if you receive several shocks or remain unconscious for more than a few seconds.

■ WHEN SHOULD I CALL MY DOCTOR?

You should notify your doctor in the following situations:

- Within 24 hours of receiving a shock
- If your symptoms of rapid heart beat last longer than 2 minutes
- If you receive a shock and do not feel well afterwards
- Before having medical or dental procedures