



## **Pacemaker and ICD Interrogation**

To receive the maximum benefit from your pacemaker, you will need to have regular follow-up to ensure that it is working properly. This follow up can be arranged by you to be performed by your cardiologist or local hospital device clinic (if they have such a clinic), or your follow up can be through the MidOhio Cardiology and Vascular Consultants (MOCVC) Device Clinic. This clinic is specially designed to provide follow-up care, evaluation and reprogramming of cardiac devices such as pacemakers, defibrillators, or implantable loop recorders. To contact the MOCVC Device Clinic, please call 614-262-6772 or 800-851-7342 and ask to reach a nurse in the MOCVC Device Clinic. Our clinic hours are Monday - Friday, 8:00AM - 4:30PM.

### **PACEMAKER INTERROGATION**

The first device evaluation will occur about 4 months after implantation. A post card will be mailed to you to remind you to schedule this appointment. You will need to provide the device staff with a list of your current medications, so please bring a copy with you to every visit to the Device Clinic.

During your first office evaluation, a nurse that is specially trained and certified in evaluating pacemakers and defibrillators will perform a device evaluation called an "interrogation". During this test, the nurse will utilize a telemetry "wand" to evaluate the pacemaker in a painless manner. This device interrogation will assess if the pacemaker lead wires going into the heart are functioning normally, that the battery level is okay, and will assess if there have been any abnormal heart rhythms detected by the pacemaker. The device nurse will review all the test results with you during your visit and answer any questions you have relating to your pacemaker. After this first pacemaker evaluation, subsequent intensive in-office pacemaker evaluations occur about every 6-12 months.

We recognize that you may have other questions regarding your heart, but since the device nurse is best trained to offer advice regarding your pacemaker system, we suggest that medical care questions be directed to your physician(s).

### **ICD INTERROGATION**

The First Evaluation of your defibrillator will be approximately 3-4 months after implantation. This evaluation will be performed by a MOCVC Electrophysiologist and will require an outpatient visit to Riverside Methodist Hospital. This hospital visit is required to safely perform a complete evaluation of the defibrillator and will require about half a day at the hospital. During this simple outpatient procedure, you will be taken to the electrophysiology lab and medication will be given to help you relax and sleep. During this procedure your heart rhythm and oxygen level are closely monitored by a nurse. Your electrophysiologist will then run some tests to assure that your ICD will function correctly in the event of a lethal heart rhythm and make any necessary adjustments. This appointment will be arranged by MOCVC and information about when and where to arrive will be provided to you.

Subsequent routine evaluations of your ICD will occur about one year after it is implanted. A postcard will be mailed to you from MOCVC prompting you to call to schedule this appointment. You will need to provide the device staff with a list of your current medications, so please bring a copy with you to every visit to the Device Clinic.

During your first office evaluation, a nurse that is specially trained and certified in evaluating ICDs and pacemakers will perform a device evaluation called an "interrogation". During this test, the nurse will utilize a telemetry "wand" to evaluate the ICD in a painless manner. This device interrogation will assess if the ICD lead wires going into the heart are functioning normally, that the battery level is okay, and will assess if there have been any abnormal heart rhythms detected by the ICD. The device nurse will review all the test results with you during your visit and answer any questions you have relating to your ICD.

We recognize that during this evaluation of your ICD that you may have other questions regarding your heart, but since the Device nurses are best trained to offer advice regarding your ICD system, we suggest that medical care questions be directed to your physician(s).

**If I Receive An ICD Shock** - This is a scary experience and can be associated with discomfort, but feel reassured that this therapy is the most successful and safest method to promptly terminate dangerous heart rhythms. Also, the shock does not cause damage to the heart muscle.

The primary therapy of an ICD is to deliver a shock to excessively fast heart rhythms to convert the heart rhythm back to normal. If before and after the ICD shock you have little or no symptoms such as shortness of breath and/or chest pain, then you can contact the MOCVC Device Clinic at 614-262- 6772 during office hours, Monday through Friday from 8:00AM- 4:30PM. In general, there is no need to go to an emergency room.

However, if you receive 2 or more shocks within a week, we would like to hear from you immediately. If you receive repeated ICD shocks for one episode, then this requires emergency evaluation by calling 911 emergency services. If CPR and other lifesaving activities are needed, they should be started immediately.

### **Frequently Asked Questions About ICDs**

**Q:** If someone is touching me when I am shocked, will they too receive a shock?

**A:** No.

**Q:** How are the specific parameters for my ICD measured and changed?

**A:** The ICD contains a computer chip that can be evaluated and reprogrammed in a painless manner. By using a hand-held device placed over your clothes, on top of the ICD, we can retrieve information about the ICD battery, leads as well as alter specific features for your ICD.

**Q:** How long will my ICD device and leads last?

**A:** A typical ICD battery life is 3-5 years. The ICD leads have a longevity of approximately 7-10 years. Both the battery life and the performance of the leads will be monitored through frequent evaluations by the MOCVC Device Clinic, or follow up can be coordinated with your local hospital or cardiologist.

**Q:** What happens when the ICD battery becomes low?

**A:** When the ICD battery is measured low through routine follow up with the MOCVC Device Clinic, you will be notified and scheduled for replacement of the ICD generator. Replacement of the ICD generator is a simple outpatient procedure. The electrophysiologist will open the ICD skin pocket and unplug the leads. The leads will be tested to make sure they function properly. After testing, the leads are connected to the new ICD pulse generator, tested and the pocket is closed. The entire operation often takes less than an hour.

**Q:** What should I do if I hear "beeping" from my ICD?

**A:** If you hear an audible "beep" from your ICD, please contact the MOCVC Device Clinic the next working day, Monday - Friday 8:00AM - 4:30PM at 614-262-6772. There are many defibrillators that emit a tone when there is a parameter that needs to be assessed. In general, this is not an emergency.

**Q:** What should I do if I feel a thumping in my chest?

**A:** Sometimes patients with a biventricular ICD can experience an unusual sensation of "thumping" on the left side of their chest, usually most pronounced if they are in a certain position such as when they roll onto their left side. This thumping may be due to the electrical impulse from the biventricular pacemaker causing stimulation of a nerve on the outside of the heart (called the phrenic nerve). This nerve travels to the diaphragm and can cause the diaphragm to beat, which creates these symptoms. Fortunately, this problem can be managed by reprogramming your ICD. You should contact the MOCVC Device Clinic the next working day, Monday - Friday 8:00AM - 4:30PM at 614-262- 6772, but this problem usually does not require a visit to your emergency room.

**Q:** What should I do if I notice my ICD incision is red, swollen or that fluid is leaking from the incision site?

**A:** If you have these symptoms or changes along your ICD incision, we believe that it is important for you to contact your local physician (if you are out of town) or MidOhio Cardiology to evaluate the ICD. This may be a simple matter of minor blood collection within the ICD pocket or it may be an early sign of an infection.

**Q:** What are the recommendations regarding driving with an ICD?

**A:** After an ICD is implanted, many patients are correctly concerned about their ability to safely operate a motor vehicle. Guidelines regarding when to return to driving are dependent upon why the device was implanted and whether the implanted device is a pacemaker or defibrillator.

**Q:** When can I return to work?

**A:** The decision when to return to work is based on the particular job and working environment as well as consideration of other heart issues. Please be certain that this issue is addressed by MOCVC before your discharge, or feel free to contact us. We are very familiar with providing documentation and forms if there is a need to provide information to your employer.

**Q:** Can an ICD prevent a heart attack?

**A:** No, an ICD cannot prevent a heart attack, which is due to a blockage in the blood flow to the heart muscle.

**Q:** Does an ICD treat other heart rhythm abnormalities like atrial fibrillation?

**A:** An ICD is designed to treat rapid heart rhythms from the bottom chamber of the heart as well as excessively slow heart rhythms that are treated with pacing therapies. However, an ICD does not treat rapid heart rhythm problems from the top chambers of the heart, such as atrial fibrillation.

**Q:** What type of interactions may occur with my ICD and a microwave, cell phone, store security devices, airport security or arc welding?

**A:** There is no interaction between a microwave and an ICD.

We would prefer that you use a cell phone on the opposite side of your ICD but, in general, the likelihood of complications between an ICD and cell phone is quite low.

When going through airport security, it is important that you inform the airport security personnel that you have an ICD. You will need to show your device ID card and you should be asked to be hand searched. An ICD pulse generator may be sensitive to anti-theft systems often found in stores and public libraries. These systems will not adversely affect the ICD if you walk through them in a normal manner without lingering near them.

Arc welding can interfere with the function of an ICD, but this interaction depends on the type of arc welding that is performed. If you use an arc welder, please discuss this issue with your electrophysiologist.

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Your doctor has just referred you to a MidOhio Cardiology and Vascular specialist for a test. Immediately, all sorts of questions come to mind. Will I experience discomfort? How long will the test take? These questions and others are natural. Please click on the appropriate procedure to understand how to prepare and what to expect when you arrive on test day. Remember that you should consult your physician. The following information does not replace a physician's instruction.