PREPARING FOR YOUR

ELECTROPHYSIOLOGY (EP) STUDY

INFORMATION THAT WILL HELP YOU STAY HEALTHY

BEFORE YOUR EP STUDY

- You may be asked not to eat or drink anything for 6 to 8 hours before your EP study. Follow your doctor's guidelines for eating and drinking.
- Tell your doctor about all of the medications you take. It is very important to tell your doctor if you are taking a blood thinning medication, such as Warfarin (Coumadin®).
- Ask if you should stop taking any of your medications before your EP study. You may be asked to stop taking some of your medication 2 to 3 days before the procedure.
- Check with your doctor before you take any over-the-counter medications. Some medications may interfere with your test results.
- Have someone drive you to and from the hospital or clinic.

What can you expect?

An EP study usually takes several hours. The amount of time needed may vary depending on whether another procedure is done.

Your doctor will discuss the benefits and risks with you. This is a good time to ask questions.

WHAT IS AN EP STUDY?

Your doctor has recommended that you have an electrophysiology (EP) study. An EP study helps your doctor locate areas within your heart that may be causing an abnormal rhythm. Heart **rhythm** is the speed and pattern of the heartbeat. Heart rhythm problems are sometimes called **arrhythmias**.

Your heart has its own electrical system. Signals from the electrical system regulate the heart's rhythm. Normally, the heart beats at an even, steady pace. If there is a problem with the heart's electrical system, the heart may beat too fast or too slowly, *or* it may beat in an irregular manner. Heart rhythm problems can affect how well your heart is able to pump blood.

HOW IS AN EP STUDY DONE?

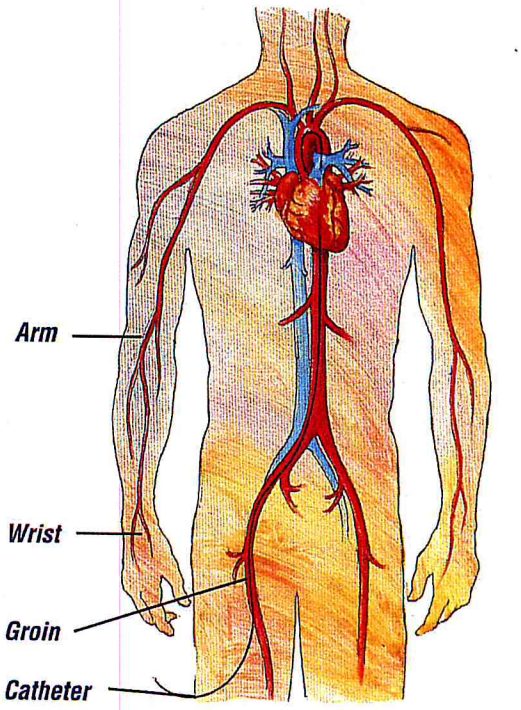
In an EP study, electrodes are attached to one or more thin flexible tubes called catheters. The catheters are inserted through a vein in the groin, arm, wrist, neck or the subclavian area just under the collarbone — and threaded to your heart. Once in place these electrodes serve two purposes.

First, the electrodes read electrical activity in different areas of the heart. The speed at which electrical impulses travel is measured as well.

The electrodes also send impulses to stimulate the heart. The purpose of stimulating the heart is to trigger the same type of arrhythmia that is causing the problem.

This test helps identify what type of heart rhythm problem you may have and where the problem occurs in the heart. Your doctor can then determine how to treat your heart rhythm problem.

CATHETER INSERTION AREAS



Your home recovery:

Ask your doctor when you can participate in sports, exercise and other activities. Do not push or pull heavy objects or lift more than 10 pounds for 2 or 3 days (or for as long as your doctor recommends).

Call your doctor if you have:

- bleeding at the insertion site
- shortness of breath
- chest discomfort
- bruising or swelling that increases around the insertion site
- a fever over 101 degrees F
- a return of your irregular heartbeat

It is normal to have a small soft to firm lump at the insertion site. This will go away within a few days.

Your test results

The results of your test will be discussed with you as soon as all of the information is available. Medication may be prescribed to treat your heart rhythm problem.

A **pacemaker** (small electrical device) may be needed to help your heart keep a steady beat.

An **implantable cardioverter defibrillator** (ICD) may be needed to correct an abnormal heart rhythm.

Whatever your doctor's recommendation, you can rest assured that it is based on the best possible information.

Before your EP study, the area where the catheters will be placed is cleaned and may be shaved. You will be given medication through an IV to help you relax. The procedure will be performed in a special area of the hospital or clinic. This area may be called an EP lab. You will see X-ray equipment and video monitors which look like TV screens.

DURING YOUR EP STUDY

- A small incision will be made in the area where the catheters will be inserted. The catheters will then be threaded through the vein and positioned in the heart. Your doctor will watch the movement of the catheters on the video monitor. You may feel some pressure when the catheters are inserted; however, you will not feel the catheters moving through your body.

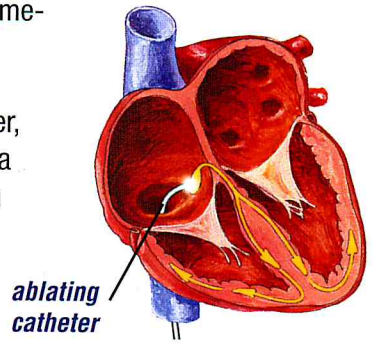
- Once the catheters are in place, electrical impulses will be sent through your heart to trigger arrhythmias. You may feel some of the symptoms you have had in the past, such as dizziness, a rapid heartbeat, palpitations or shortness of of breath. Tell the staff if you have any of these symptoms.

- If an arrhythmia is triggered, it can be stopped by using the electrode catheters or by delivering an electrical shock to the heart. While this may sound frightening, remember that your test is being done in a safe environment. Your doctor, the technicians and the nursing staff are highly trained and experienced in treating all types of arrhythmias.

When an abnormal heart rhythm is triggered, medications are sometimes given to see if they may be effective in treating the heart rhythm problem.

CARDIAC ABLATION

A procedure called **cardiac ablation** is sometimes done during an EP study. To perform this procedure, an ablating electrode catheter is placed in the heart. Through the special catheter, radiofrequency energy is applied to a small area of tissue. The energy destroys only the problem cells so they can no longer send the signals that are causing the irregular heart rhythms.



AFTER THE PROCEDURE

The catheters will be removed. Pressure may be applied to the insertion site to prevent bleeding. The site may then be sealed with stitches, a sticky plug or a bandage. You will be asked to lie flat for some time to allow a seal to form over the area. During this time, the insertion site will be checked often. If you notice bleeding, let your nurse know right away. Your doctor will tell you when you can go home. Once your abnormal heart rhythm is treated, you can continue with all the activities you normally enjoy.