

Cardiovascular Services

Electrophysiology

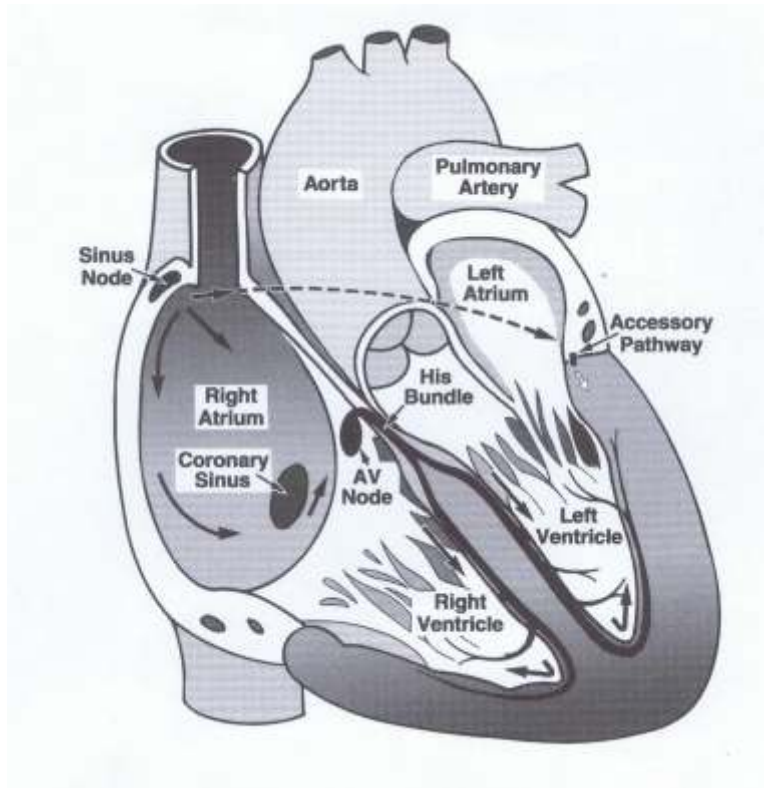
What you need to know about

Electrophysiology Study

How the heart works

The heart is a hollow, muscular organ that pumps blood throughout the body. The heart has four chambers, two upper (atria) and two lower (ventricles). The heart depends on its electrical system to deliver signals and make the heart beat normally.

For a normal heartbeat, an electrical signal starts in the sinus node, travels through right and left atria, then through the AV node to the right and left ventricles. If a signal starts in different location, it travels an abnormal pathway.



What is an electrophysiology study ?

In some people, the signal starts elsewhere in the heart and follows an abnormal pathway (see page 1). This can cause the heart to beat very slowly (bradycardia) or very fast (tachycardia).

During an electrophysiology (EP) study, two or more catheters (long, flexible wires) are inserted through veins in the leg, arm and/or neck, into the heart. Then X-ray equipment is used to position the catheter in the chamber of the heart. The heart rhythm is monitored on a special screen to show the electrical pathway of each heartbeat.



Preparing the test

You will arrive two hours before your EP study. You may have blood tests, X-rays and an electrocardiogram(EKG).

You will be asked not to eat or drink anything for six to eight hours before the test. You may take sips of water with your medications.

If you are taking heart rhythm medications (antiarrhythmics), you may be instructed to stop them about 48 to 72 hours before the test. Tell the nurse right away if you feel palpitations, dizziness, shortness of breath, pain or any symptoms similar to what you have had outside the hospital.

If there is a possibility that you are pregnant, be sure to let the doctor know.

An intravenous (IV) line will be started in a vein in your arm. You'll be taken to the EP lab about 30 minutes before your scheduled test time.

During the test

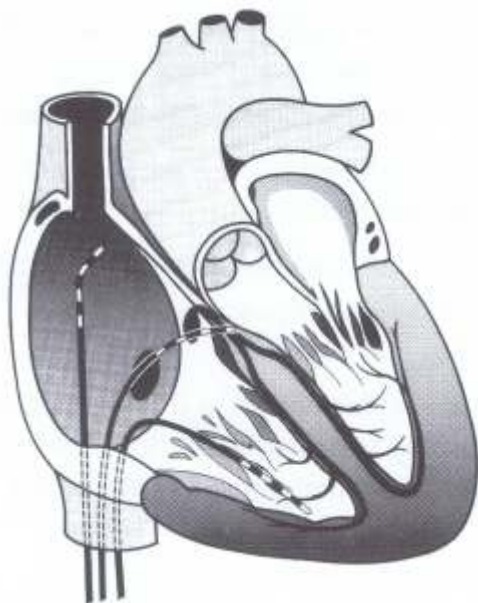
The EP study is done in a room (called the “EP lab”) that has special equipment and heart- monitoring machines. A trained team of doctors, nurses and technicians are present during the test. You may be awake during the test (unless you are told otherwise). Here's what will happen in the EP lab:

- The areas where the catheters are to be inserted will be shaved and scrubbed with an antiseptic solution.
- The doctor will numb these areas with a local anesthetic.
- Catheters may be inserted into veins in your arm and groin and positioned in your heart (see page 5). You may feel some pressure or slight discomfort as the catheters are inserted.
- Using the catheter, the doctor will try to start, and then observe, any abnormal heart rhythm.
- If an abnormal rhythm is found and does not stop by itself, the doctors will try to restore the regular rhythm with medication or by “pacing” the heart.
- If the medication and pacing are unable to stop a very fast rhythm, it may be necessary to deliver an electrical shock using patches placed on your chest and back prior to the procedure.

(continued on page 5)

During the test (continued)

You will be asked to lie as quietly as possible during the study because the recording equipment is sensitive to any motion. If you feel pain, nausea, dizziness or palpitations, tell the staff right away. The test will take about 1 to 1.5 hours. When it is finished, the catheters will be removed and pressure will be applied to prevent bleeding. A pressure dressing may be applied and kept on for at least six hours. Sometimes other procedures are scheduled after the EP study.



Placement of catheters in the heart for the EP study.

After your EP study

After your procedure, you will be taken to your room or to a recovery room. Your heart rate, blood pressure, and dressing are checked while you lie in bed for about 6 hours, keeping your leg straight to prevent bleeding. You may have tenderness and bruising at the insertion sites. You may eat when you feel up to it. Your doctor will discuss results with you and your family.

Once home, limit your activity for the first 24 hours. Move about, but don't strain or try to lift heavy objects. Shower the day after your procedure, but wait for another day or two before taking a bath.

Call your doctor or EP nurse immediately if:

- You notice new pain, swelling or redness at the catheterization sites.
- You feel dizzy, short of breath, have palpitations or any other symptoms.
- You develop a fever.

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