



Name: _____

EPS: ELECTROPHYSIOLOGY STUDIES

The following information is a brief description about EPS. If you have any questions after reading this information, please speak with your nurse.

WHAT IS AN ELECTROPHYSIOLOGY STUDY?

- ❖ A catheter attached to a special temporary pacemaker is inserted and advanced to the heart. Using the special pacemaker, the doctor will try to stimulate part of the heart causing the irregular heartbeats (arrhythmia) you have been experiencing.

WHY IS IT DONE?

- ❖ The EPS study is a diagnostic procedure to obtain a reading of the impulses that are causing an irregular heartbeat from the inside of the heart.

WHERE IS THE PROCEDURE DONE?

- ❖ Cardiac Catheterization Laboratory, 5th floor, Tisch Hospital.

HOW LONG DOES IT TAKE?

- ❖ The procedure takes about 1-2 hours, but this does not include transportation time and preparation time.



WHAT PREPARATION IS NEEDED?

Done at Pre-Admission Testing several days to a week before.

- ❖ Blood tests, an EKG and a chest x-ray will be done.
- ❖ You will have a history and assessment done by a nurse, an educational session with a nurse educator and discuss the procedure with a doctor from the EPS Lab.
- ❖ After the procedure has been explained to you, you will be asked to sign a consent form giving your permission for the test.
- ❖ Check with the doctor about what medications you should take the day of the EPS Study.

DAY OF THE PROCEDURE:

- ❖ If your procedure is scheduled for the morning, do not have anything to eat or drink from midnight before the procedure. If you are scheduled later in the day, you may be permitted a liquid breakfast.
- ❖ Take your medications as instructed. You may take them with a sip of water.
- ❖ Report to the Admitting Office (560 First Avenue) at the time instructed. You will then be directed where to proceed.
- ❖ Before the procedure, urinate to empty your bladder and change into a hospital gown.
- ❖ Remove all jewelry and metal objects. Give all valuables to your care partner. You can wear your dentures.



WHAT HAPPENS DURING THE PROCEDURE?

- ❖ When you arrive at the EPS lab, you will be assisted to a special x-ray table.
- ❖ You will be attached to a heart monitor (EKG) and a blood pressure cuff will be placed on your arm.
- ❖ You will have an intravenous (IV) placed in your arm. Medication to sedate you (usually Valium) can be given through the IV during the procedure. This will make you drowsy, but easily awakened to answer questions.
- ❖ Two large patches will be attached: one to the front of your chest and one to the back.
- ❖ The area(s) where the doctor will insert the catheter(s) (long thin tube) to perform the test will be cleansed first with antiseptic. This will feel cold.
- ❖ An injection of a local anesthetic to the site to numb the areas, will be given before the catheter is placed.
- ❖ Using fluoroscopy, this catheter is advanced (using special x-ray equipment) through the vein in the right (and sometimes left) groin (the femoral veins), but other veins can be used, until it reaches the heart.
- ❖ You may feel extra or skipped heartbeats (palpitations) when the catheter which has wires attached to a special pacemaker is placed in the heart. Tell the EPS team what you feel.
- ❖ **IMMEDIATELY TELL THE STAFF IF YOU FEEL CHEST PAIN, CHEST HEAVINESS, OR CHEST DISCOMFORT OF ANY KIND.**
- ❖ The physician will attempt to bring on the irregular heartbeat (arrhythmia) that you have been experiencing, by stimulating your heart. If the arrhythmia can be induced, the doctor will treat it with medications or other techniques.
- ❖ When the test is over the doctor will remove the catheter (s) and apply pressure over the area where the catheter was inserted. This is to prevent bleeding.
- ❖ You will return to the Observation Room in the Cooperative Care Unit on a stretcher.
- ❖ During the procedure, you may require cardioversion (a small electrical shock delivered to our chest). It does not hurt your heart. It may give your skin a “sun burn” in a small area that resolves soon after.



WHAT HAPPENS AFTER THE PROCEDURE?

- ❖ Once in the Observation Room, you will be closely monitored by the staff. Your care partner should stay with you in the Observation Room.
- ❖ You must keep the leg in which the catheter was placed straight. Do not bend it. Your nurse will give you specific instructions as to how long you should do this.
- ❖ Your blood pressure, pulse and temperature will be taken frequently. Your catheter insertion site will also be checked for any bleeding.
- ❖ You will be able to resume your meals once you are awake from the sedation.
- ❖ A staff member will help you get out of bed for the first time after your test.
- ❖ Tell the nurse immediately if you have palpitations, chest pain or any other unusual sensations.

DISCHARGE INFORMATION

- ❖ Your cardiologist, as well as the physician from the EPS laboratory, will meet with you prior to discharge and discuss the results of your study.
- ❖ You will be given specific discharge instructions, but generally you can remove the small bandage over the insertion site in 24 hours and then you may bath.
- ❖ You should not drive yourself or take public transportation home.
- ❖ Usually, you can resume your normal activities the following day, or as directed by your physician.



ABOUT THE HEART'S ELECTRICAL IMPULSES

The heart beats in response to electrical impulses that originate in specialized cells. Normally, these impulses are initiated by cells in the SA (sinoatrial node). They follow a standard path through the heart. When the electrical impulses travel this normal pathway the heart is said to have a regular or normal rhythm. Sometimes the electrical impulses do not follow the normal pathway or there are extra or abnormal electrical impulses being sent to the heart. This creates an abnormal heart rhythm of which you may or may not be aware. Some people can feel their hearts beating in their chest or may describe a pounding or beating sensation in the chest. This sensation is called a palpitation. Sometimes a person does not feel the abnormal heart beats but may feel faint or pass out. Lightheadedness, dizziness, weakness, and trouble sleeping are other problems a person may experience with an abnormal heart rhythm. This test is being done to find out if the electrical impulses in your heart are abnormal and determine the best way to treat the problem.



CARE PARTNER INSTRUCTIONS

Care partners have an important role, and should stay with the patient for 24 hours after the procedure, if possible. The nurse in the Observation Room will be instructing the care partner in observation he/she needs to make.

In general, your responsibilities include:

- ❖ Remind the patient to keep involved limb straight, for at least 2 hours after the procedure.
- ❖ Ensure patient remains in bed, as instructed.
- ❖ Check the color and temperature of the limb involved, as instructed.
- ❖ Record patient's fluid intake and output of urine on sheet provided.
- ❖ Check dressing for bleeding, and surrounding area for bleeding, discoloration or bruising.

If you have any questions or observe any of the above, contact the nurse by dialing extension 37447 or in case of emergency, extension. 72000.

SPECIAL INSTRUCTIONS OR QUESTIONS:

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