

Electrophysiology Study Information Sheet

General indications for the procedure:

An electrophysiology study is a procedure used to evaluate the electrical conduction system of the heart and reproduce abnormal rapid heart rhythms. This allows diagnosis of heart rhythm problems and is helpful in determining the cause and possible treatments of slow and fast heart rhythm problems.

Description of Procedure:

An electrophysiology study is performed by inserting several long platinum electrode-tipped catheters through the femoral (groin) veins and/or arteries and using very low energy electrical stimuli to excite (pace) the upper and lower chambers of the heart. Prior to the procedure, the groin(s) is/are numbed and intravenous sedation is given to cause drowsiness. The primary discomforts of the procedure are the sensation of rapid heart beat (palpitations) and the local discomfort in the groin(s). Medications are given to lessen these symptoms. Monitoring of oxygen levels, blood pressure, and heart rate are done during the procedure.

Risks of the Procedure:

Mild bleeding may occur with the procedure. A small collection of blood in the groin known as a hematoma is the most common risk. More severe bleeding is rare. A clot may form in the veins and require treatment with blood thinning medication. Arterial clotting is very rare. Damage to the blood vessels, heart muscle or valves may occur. Cardiac perforation is usually asymptomatic, however if enough blood collects rapidly in the sac around the heart a rapid decline in blood pressure may occur. The blood may be withdrawn with a needle and a drainage catheter left in place for 24-48 hours. If the bleeding does not cease emergency surgery will be required. The likelihood of needing emergency surgery is very rare. Additional rare complications include stroke, heart attack and death.

Procedure Alternatives, if any:

Unexplained loss of consciousness may be evaluated with a tilt table test. Arrhythmic diagnosis may be facilitated by long term monitoring with an external or implantable loop recorder.

Probable Consequences of Refusing Procedure:

A life-threatening heart rhythm disturbance may be left undiagnosed and untreated.

Person(s) Performing the Procedure:

The key portions of the procedure will be performed by a physician who is a member of the medical staff of Rush University Medical Center and/or a clinical cardiac electrophysiology fellow who is observed by a physician who is a member of the medical staff. Fellows are licensed physicians in approved post residency training programs. Parts of the procedure which they perform will be based on their level of competency.