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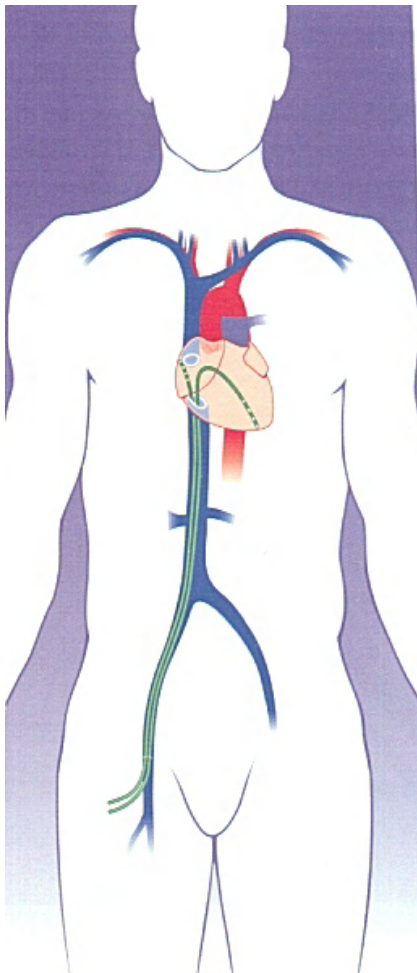
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Electrophysiology Study

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The Cardiac Electrophysiology Study (EPS), is a non-surgical test, often completed on an outpatient basis, that has emerged as the cornerstone of modern heart medicine to diagnose or treat many heart conditions that are caused by abnormal electrical activity in the heart, called "cardiac arrhythmia" by the medical team.

The electrophysiology test is completed in the electrophysiology laboratory that is a modern, quiet room with a bed, an X-ray camera and sophisticated computer equipment to conduct the testing. There is a full staff of professionals that attend to patient comfort and successful



testing along with the doctor or doctors present.

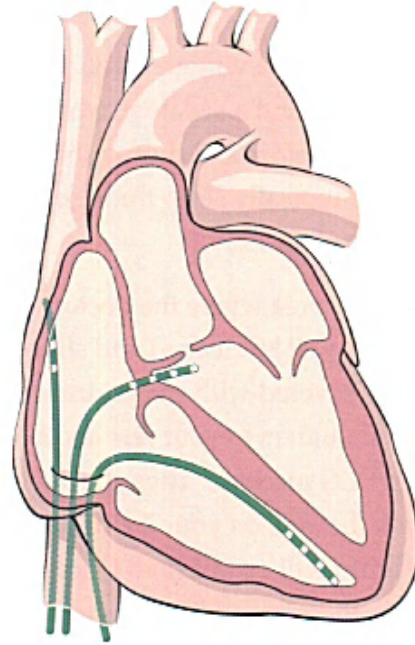
As the staff are administering medication to make the patient comfortable they will hook up ECG leads and place electrical patches on the front chest and side or back and clean and drape the skin over the blood vessel site or sites used for testing.

These regions are usually the groin (hip) area, sometimes the chest or neck areas are used as well. Once the patient is comfortable and drowsy, a dime-sized area of skin is numbed with local anesthetic like Novocain. Once the skin site is numb, a small flexible plastic tube called a sheath is placed through a small skin nick to the blood vessel just below the skin.

A thin flexible plastic wire called a catheter is advanced painlessly through the sheath in the skin and blood stream using the X-ray camera and positioned precisely along the specialized electrical structures within the heart using both the X-ray and electrical signals as guidance. The catheter positioning is routine and does not disturb the heart function and is not painful. Some patients are aware of "something in the chest" or extra beats during positioning, but this does not generally cause great discomfort.



During the study the patient is comfortable and usually quite drowsy. Many patients sleep during testing and this is quite acceptable. The health of the special cardiac electrical system is measured and any unnatural heart rhythm disturbances can be detected and understood using the sophisticated computer equipment present. Any unnatural heart rhythm disturbances, even threatening arrhythmias, detected during testing can be routinely and safely stopped by the medical staff. If a threatening heart rhythm disturbance is detected, it is much safer to study the problem in the confines of the modern laboratory than it would otherwise be outside the hospital, alone, without this expertise available. After testing, all catheters and introducing sheaths are removed. The small skin nicks are covered with a small dressing, and the patient is returned to the monitoring ward. As a routine, to prevent bleeding while the skin sites are healing, the patient is asked to stay quiet in bed keeping the legs straight for 4 to 6 hours.



The Risks of Electrophysiology Testing

The relative risks and benefits of testing should be discussed individually with the staff, and are usually compared with alternative options. In general, the risk of electrophysiology testing is quite small and acceptable relative to the significant benefits of improved diagnosis and treatment.