

Electrophysiology Study

Electrophysiology studies or EP studies, are a minimally invasive diagnostic procedure aimed at observing, locating and diagnosing problematic or undesirable heart arrhythmias. Generally, arrhythmia can be observed and diagnosed through outpatient Holter monitor testing in the community, however, there are times where the clinical scenario requires a more detailed diagnostic approach. EP studies can often be utilised if multiple arrhythmias are detected or where arrhythmia require stimulation to trigger. Often (but not always) Dr Hunt will go on to ablate the arrhythmia during the same procedure.

In recommending this procedure, your doctor has determined that on balance, the benefits and risks of the procedure outweigh the benefits and risks of not proceeding. As such, your doctor believes there is a net benefit to you going ahead and that the procedure should be successful overall.

What are the risks involved in an EP Study?

As with all procedures, Electrophysiology studies carry their own risk profiles that can range from common occurrences, through to uncommon and rare instances. All Risks should be taken into consideration when considering an EP study to determine if the procedure is an appropriate treatment option for yourself during consultation with your treating cardiologist.

Common risks and complications can include but are not limited to:

- Bruising to the surgical access site/puncture site and surrounding tissues that can take weeks to heal completely in some instances.

Uncommon risks and complications can include but are not limited to:

- Blood pooling around the heart (tamponade) that requires immediate drainage or surgical intervention in extreme cases.
- Damage to an artery in the groin that can require surgical repair in some cases.
- Incidences of death due to this procedure are considered incredibly rare but are still possible

What Can I Expect During The Procedure?

Once checked into hospital for your procedure, you will be taken through an admission process where a detailed medical history is taken, preprocedural blood tests are collected and your body is prepared by shaving off any hair to your groin, chest and back. This is undergone to ensure a sterile surgical field can be created to reduce any chance of infection and ensure that any cardiac mapping pads or electrodes can be appropriately

placed on your chest or back in a way that is both effective for use and easy to comfortably remove.

You will then be taken to the anaesthetic holding bay where your anaesthetist will discuss their part in the procedure, your airway management process (as general anaesthetic is required) and discuss any queries or concerns you may have prior to the introduction of any medications. Upon entering the cardiac catheter laboratory, you will be prepared for your procedure by the cardiac scientists who will position you on the table and apply mapping pads, defibrillation pads and various electrodes to your body prior to anaesthetic administration.

At the commencement of the procedure once you have been sedated and surgically prepared by the staff assisting with the procedure, the doctor will insert two to three small access sheaths or tubes into your right groin under ultrasound guidance before passing a catheter up through your femoral vein and into your heart. This is performed under x-ray.

Once the catheters have been advanced into position, the heart is visualised into a 3D model through the use of a mapping catheter before a series of electrical measurements are taken to pinpoint the location and nature of the arrhythmia.

The entire procedure is generally reasonably quick, taking around 1 hour to complete however can take up to 2 hours if any ablation is required at the same time. At the completion of the procedure, the patient is transferred to the post anaesthetic recovery area for observation. Once the catheters have been removed, patients generally have to remain flat without moving their hips/legs for up to 2-4.

Provided no complications are observed post-operatively, patients are generally discharged that day.

Before Your Procedure

It is important that you fast prior to your procedure in line with your anaesthetists' instructions. Generally, a fast time of 6 hours for solid food and 2 hours for water is required in order to prevent any complications with the use of anaesthesia during your procedure.

For patients taking Ozempic, Trulicity, Saxenda, Wegovy or Mounjaro, the anaesthetic guidelines require you to continue your medication as normal, commence a clear fluid diet 24 hours prior to your procedure and completely fast for 6 hours immediately prior to your procedure to minimise the potential for anaesthetic related complications.

Note: Clear fluids includes water, apple juice, broths, black coffee and black tea. Any non-transparent fluids such as milk, smoothies, juice containing pulp or soups are not considered clear fluids and can cause a delay in your procedure time if consumed.

After Discharge Process

Prior to discharge from hospital, patients are advised of any changes to their regular medications and advised of their follow up process. This usually consists of an investigative Holter monitor appointment to assess the effectiveness of the ablation by observing cardiac activity for 24h hours, followed by an appointment with the in 6 -8 weeks.

While these appointments are at times made prior to discharge, they are sometimes made by the clinic staff after the patient has discharged and back in their home environment. If an appointment has not been made after 4 weeks, you should contact the clinic to discuss a date and time for review.