

# Nicholas Gall MSc MD FRCP

## Consultant Cardiologist

**Central London Consulting Rooms:**  
London Bridge Hospital  
Cromwell Hospital  
London Independent Hospital

**NHS:**  
King's College Hospital

**Outer London Consulting Rooms:**  
Blackheath Hospital  
Chelsfield Park Hospital  
Shirley Oaks Hospital  
Sloane Hospital

### **INFORMATION FOR PATIENTS UNDERGOING ELECTROPHYSIOLOGICAL (EP) STUDIES**

This is a test which will examine the electrical activity in your heart. Some people have slow heart rhythms and others fast heart rhythms. These can cause symptoms such as palpitations, breathlessness, dizziness and even blackouts. Some people have not had a rhythm problem but may be at risk of one. We use this test to investigate these problems so that we will be able to decide on the best treatment.

#### **IMPORTANT**

- **If you are taking warfarin we will need to ensure that your INR (a measure of your blood's thinness) has been well controlled prior to the procedure. We will also need to control it for the procedure. Please arrange to have your INR checked 5 days before your procedure. Phone us on that day so that we can advise you whether to stop the warfarin. If this coincides with a weekend, phone us at the earliest opportunity. Please have your yellow book to hand when you phone. You MUST tell us if you are taking warfarin for an artificial heart valve or a recent clot in the leg (deep vein thrombosis /DVT) or on the lung (pulmonary embolus /PE).**
- **We may need you to stop some of your medication to allow us to perform the EP study. These might include anti-arrhythmic drugs (e.g. amiodarone, disopyramide, verapamil, diltiazem, flecainide, propafenone, mexiletine, quinidine, procainamide) or beta-blockers (e.g. atenolol, sotalol, metoprolol, bisoprolol, pindolol, nadolol, acebutalol, celiprolol, carvedilol). If you are taking one of the above please let us know at least 5 days before your admission so that we can advise you what to do.**
- **If there is any chance that you may be pregnant please let us know.**
- **If you are taking antibiotics on the days leading up to your procedure, please let us know so that we can advise you what to do.**
- **Please take all of your other tablets on the day of your admission and bring them with you.**
- **If you are a tablet-controlled diabetic please do NOT take your diabetic medication on the day of your admission. If you are diabetic on insulin please take half your usual dose of Insulin; we will check your blood sugar when you arrive.**
- **You must not eat or drink for four hours before your procedure.**

To examine the electrical activity in your heart we need to put wires into the heart to take electrical measurements. We will also pace your heart to examine how electrical activity

spreads through it. To do this we thread long, narrow electrical wires through the vein at the top of one of your legs or more rarely through the vein underneath the collarbone.

The test takes place in one of the Cardiac Catheter Labs. There will always be a nurse available to explain what is happening.

To get the wires into the vein we need to make a small puncture (like a blood test) in the skin. We use local anaesthetic to numb the area first to make this less uncomfortable. We can also give you sedation to help relax you (as much as you want). To position the wires in your heart we use a special X-ray camera. Once the wires are in place we can then make the measurements and try to start any fast or slow heart rhythms that you may be prone to. While the test is going on you may experience some palpitations but you shouldn't feel any other discomfort.

The test can vary in the length of time it takes, but it usually takes less than one hour. When it is completed, the wires are removed. With pressure the bleeding should stop within a few minutes. No stitches are necessary.

Afterwards you will be taken back to your bed on the ward where you must lie flat for a couple of hours to allow the veins to heal. You will be able to eat and drink, although you will have to do this lying down.

You will be given the results of the test on the same day, before you go home. Occasionally, in certain circumstances, it is possible that we discover that you are prone to dangerous heart rhythms. If this is the case we may want to keep you in for further treatment. You will be warned about this at your clinic appointment. As you will probably have had sedation, remember that you should have someone to take you home.

Once you are discharged home you may bath or shower as normal and resume all your normal activities. You may have a small bruise in your groin area, which will go in a few days. Return to work will depend on the results, so discuss this matter with your doctor.

### **Complications**

It is not possible to perform this study without an element of risk although this is very small. You should remember that there can be complications by not having a procedure performed. You should discuss this with your doctor. Potential risks include:

- **Vascular damage.** It is possible to damage the vein that is used to get the wires to your heart. This happens rarely (about 1 in every 500 cases) and can always be fixed with a small operation.
- **Pericardial effusion** (blood leak around the heart): this occurs in approximately 1 in 500 patients. Sometimes the effusion resolves on its own but occasionally a drain is needed; very rarely an operation is needed. If you suffer a blood leak your stay in hospital may be delayed by several days.
- **Serious arrhythmia.** In some studies we assess whether you are at risk of dangerously fast heart rhythms. If we start off a very fast heart rhythm during the study an electric shock may be needed to shock your heart back to normal. It is likely you will not remember this, but just remember a brief faint.
- **X-rays.** Your examination and/or treatment involves a period of x-ray scanning that will give you a relatively small x-ray dose. In some cases where we need to do more extensive investigation and treatment, there is a small chance that you will get a skin reddening reaction like sunburn which will fade after a few days. Please ask the radiographer if you require further information.

### **Items which you should bring with you:**

Current tablets/medicines, details of your GP, next of kin plus one other person (telephone numbers at home and at work), dressing gown, pyjamas/night dress.

**You may also need:**

Slippers, shaving equipment, mirror, comb/brush, flannel/sponge, towel, cloths for travelling home, change for the phone, reading glasses and hearing aid (if required).

**You should not bring:**

Television, jewellery (except wedding ring), large amounts of money.

**When you come into hospital further advice will be available from the doctors and nurses.**