

# Implantation of a pacemaker

## Consent information for patients



Your doctor has recommended that you are fitted with a pacemaker. A pacemaker is a small, metal, battery-powered device that sends impulses to the heart muscle when the heart beats too slowly. Your cardiologist will consider the different types of pacemaker available and select the one that best meets your particular needs and circumstances.

The procedure is usually carried out using local anaesthetic (to make your skin and the area below go numb) and sedation (to make you feel drowsy).

## How do I prepare for the appointment

We will let you know before you come for the procedure (usually by letter), whether there are any specific instructions you need to follow. The letter will include important directions for stopping eating and drinking.

Please make sure you have a shower, bath or wash before you come into hospital/on the ward before your procedure. This helps to make sure your skin is clean and reduces the risk of infection.

## What happens before the procedure?

The doctor (or nurse) will explain the procedure to you, including the risks and benefits. You will then be asked to sign a consent form to confirm you are happy for the procedure to go ahead.

You will need to change into a hospital gown for the procedure. You may be able to keep your underwear on as long as it contains no metal (such as sequins or poppers).

Before the procedure, a small plastic tube (called a cannula) will be inserted in your arm, so that we can give you antibiotics (to reduce the risk of infection) and pain relief during the procedure. We will offer you sedation if you would like to have this, which will make you feel relaxed and sleepy.

If you have any concerns, please do not hesitate to ask, as we would like you to be as relaxed as possible about the procedure. We will be happy to answer any queries you may have.

## What happens during the procedure?

You will be asked to lie on your back on a narrow, firm table, which is positioned under an X-ray camera. This is used to help guide the doctor during the implantation. It is important that you lie still during the procedure, so that the pictures produced by the X-ray are not blurred. If you need to move or scratch an itch, please let the staff know.

We will connect you to monitoring equipment to check on your heart rate, blood pressure and the level of oxygen in your blood.

We will clean your skin with an antiseptic solution, which may feel cold and wet, and your chest will be covered in sterile drapes. This helps us to keep the wound as clean as possible. You will be given a local anaesthetic, which will be given as an injection under your skin and below your collar bone, on the side where your pacemaker will be placed. This may sting at first, but will soon go numb.

You will be offered some light sedation to help you to relax. You can choose not to have sedation. The sedation will help you feel calm and sleepy, but you will still be awake. You should not feel anything during the procedure but will still be aware of what is happening. If you choose to have sedation, this will be given into the cannula.

The pacemaker will be implanted under your skin in a pocket that the cardiologist will make in front of the muscle on the left or right side of your upper chest, near your collar bone. As with any surgical procedure, there will be a visible scar and there may be a small bump where the pacemaker is placed.

The pacemaker will be connected to your heart using one or two flexible leads, that pass through a vein under your collar bone. The doctor will insert the leads into your heart using X-ray images to guide them.

Moving the leads inside your heart is completely painless. You may feel some pressure or a fluttering sensation when the leads are being positioned. Please let the doctor or nurse know if you feel uncomfortable at any point, so that we can give you further sedation or pain relief.

The wound is closed using a single long stitch in the skin, rather than lots of small stitches. This may be a non-dissolvable stitch, which will need to be removed by the Practice Nurse at your GP's surgery, or may be a dissolvable stitch, which will disappear over the next few weeks. You will be told which stitch you have and what you need to do before you are discharged.

The wound will be covered by a dressing. Please keep it covered for seven days. During this time, try to avoid getting the dressing very wet. You will need to have a wash, rather than a shower or bath. After seven days you can remove the dressing and bath and shower as normal. If at any point you have any concerns about your wound, please see your practice nurse or GP.

The procedure takes from 45 minutes to 1 and a half hours.

## Benefits

The main benefit of having a pacemaker is that it helps to protect you from the symptoms and dangers of slow heart rhythms.

## Risks

All medical procedures have a risk of complications. There are some risks associated with implantation of a pacemaker that are important to know about:

- 1 in 100 people develop a collapsed lung (pneumothorax) as a result of a needle perforating (making a hole in) their lung. This often requires no treatment but may require the insertion of a chest drain, to help reinflate the lung.
- 1 in 500 people develop a collection of blood around the heart (a cardiac tamponade), as a consequence of a lead making a hole in the wall of the heart. This can be dangerous, but we will treat it immediately.
- 2 in 100 people may experience lead displacement within 30 days of the procedure. This means that the leads would need repositioning during a repeat operation. We will carry out a chest X-ray and special ECG to confirm the pacemaker is working correctly before you go home.
- It is common to experience wound pain, bleeding and bruising in or around the wound area. We strongly advise that you take painkillers to help with this.
- Around 1 in 100 people develop a large collection of blood, called a haematoma, over the pacemaker. This usually gets better by itself, but may need to be treated with a further operation.
- 1 in 50 people experience arrhythmias (an irregular heart beat), which can usually be treated at the time.
- 1 in 200 people can develop an infection of the pacemaker after implantation. If this happened you would need the pacemaker and leads to be removed. To minimise this risk, you will be treated with antibiotics before and occasionally during the implantation.

**Your doctor will recommend that you have a pacemaker if they feel that the benefits of the procedure clearly outweigh the risks. The figures quoted are average figures for all cases. Your doctor will discuss with you any specific risks that may apply to you, before the procedure.**

## Alternatives

There is no alternative way to treat your condition.

## What happens after the implantation?

Once you are fully awake, you should be able to eat and drink.

You will normally be able to go home in the afternoon, early evening, or the following day, depending on the time that your procedure was carried out and how well you recover.

After the implantation of a pacemaker, you will not be allowed to drive yourself home. You will need to travel home with a relative or friend. You should also not go home on public transport after this procedure. You will need to be taken home by car. This will be more comfortable for you and also quicker for you to return to the hospital if there are any complications on the journey home.

You will normally be seen in the outpatient clinic about eight weeks after the implantation, and then at least once a year to check how well the pacemaker is working.

Pacemakers are extremely reliable and well-made devices, but still need to be regularly monitored over the long-term.

When the time comes for the battery (generator) to be replaced, you will need to come into hospital for a small operation for a new pacemaker generator to be fitted.

## Driving

If you have a Group 1 driving licence, the DVLA states that you cannot drive for one week after the pacemaker has been implanted; for some people this period is longer. We will tell you when you can return to driving.

If you have a Group 2 licence (HGV and similar), the DVLA states you cannot drive for 6 weeks.

## How to contact us

### **Cardiac Rhythm Management, Office (Pacemaker Office)**

01865 220 981

(Monday to Friday, 9.00am to 5.00pm)

### **Cardiac Angiography Suite**

01865 572 615

(Monday to Friday, 7.30am to 9.00pm)

### **Cardiology Ward**

01865 572 675

(24 hours)

## Further information

For further information we recommend the following websites:

### **British Heart Foundation**

Tel: 0300 330 3322

Website: [www.bhf.org.uk](http://www.bhf.org.uk)

### **Arrhythmia Alliance**

Tel: 01789 867 501

Website: [www.heartrhythmcharity.org.uk](http://www.heartrhythmcharity.org.uk)

### **Please note:**

The department where your procedure will take place regularly has professional observers. The majority of these observers are health care professionals, qualified or in training and, on occasions, specialist company representatives. If you do not wish observers to be present during your procedure please let a doctor or nurse know.

If you have a specific requirement, need an interpreter, a document in Easy Read, another language, large print, Braille or audio version, please call **01865 221 473** or email **[PALSJR@ouh.nhs.uk](mailto:PALSJR@ouh.nhs.uk)**

Approved by: Cardiac Directorate  
July 2016  
Review: July 2019  
Oxford University Hospitals NHS Foundation Trust  
Oxford OX3 9DU  
[www.ouh.nhs.uk/information](http://www.ouh.nhs.uk/information)

