



Northumbria Healthcare
NHS Foundation Trust

Pacemaker and Defibrillator implantation

Issued by Cardiology



Pacemaker or defibrillator implantation is a short surgical procedure where a small electrical device (the pacemaker or defibrillator) is implanted under the skin of the upper part of your chest. Having a pacemaker or defibrillator fitted can greatly improve your quality of life if you have problems with your heart rhythm and the device can be lifesaving for some people.

For ease, only a pacemaker is referred to in the rest of this leaflet but the advice is the same for a defibrillator.

How does a pacemaker work?

The pacemaker is a small metal box attached to one or more wires, known as pacing leads, which run to your heart. If the pacemaker senses that your heart has missed a beat or is beating too slowly, it sends signals at a steady rate. If it senses that your heart is beating normally it does not send out any signals.

What should I do before my pacemaker implantation?

If for medical reasons you need help with transport to get to the hospital please contact:

- Patients who live in **Northumberland** and **Newcastle** should contact NEAS PTS Contact Centre on 0191 2151515.

- Patients who live in **North Tyneside** should contact ERS Medical on 0191 3017687.

We will normally arrange for you to attend the Cardiology department a few days prior to your procedure for pre-assessment. This is to make sure nothing has changed since it was decided that you needed the pacemaker and to plan what is to happen on the day.

Please continue to take your medication as prescribed by your doctor and bring all your medication into hospital with you. If you take a water tablet (furosemide) then you may be asked not to take this on the morning of the procedure. If you take anticoagulants (warfarin / rivaroxaban / apixaban / edoxaban / dabigatran) or antiplatelets (clopidogrel / prasugrel / ticagrelor) to thin your blood then you may be asked to stop it for a few days prior to admission but this will be discussed with you at pre-assessment.

You can

Drink clear fluids up until two hours prior to your procedure. You should not eat anything for six hours prior to the procedure. This means no breakfast if your procedure is scheduled for the morning. If your procedure is scheduled for the afternoon then you can have a light breakfast.

If you have a hairy chest then the area where the device is to be fitted may be shaved. This will be done by the team

at the hospital. You should **not** do it yourself. You will be asked to sign a form giving your consent for the procedure. The risks involved will be outlined and you will have the opportunity to ask any questions. A cannula will be placed in a vein and prior to the procedure you will receive an injection of antibiotics to reduce the risk of infection.

What happens during a pacemaker implantation?

Having a pacemaker implanted is a relatively straightforward process. It is done under local anaesthetic and takes 1 – 2 hours to complete. You will be awake and aware of what is happening.

Most commonly, the pacemaker is placed under the skin near the collarbone on the left side of the chest. The pacemaker is attached to pacing leads guided through a blood vessel to the heart.

The stitches used to close the wound are dissolvable and entirely under the skin. You will not be able to see them and they do not need to be removed. A sterile dressing will cover the wound.

What are the risks of the procedure?

Pacemaker implantation is a safe procedure with a low risk of complications. These risks will be outlined on the

day of the procedure when you sign your consent form. The biggest concern is that the pacemaker loses the ability to control the heartbeat, most commonly because the wire moves out of the correct position. Further surgery may be required to reposition it should this happen.

Also, as with any time there is cut in the skin, there is a risk of infection or bleeding. Lastly, there is a small risk of damage to the lung on the side of the pacemaker (pneumothorax). Most of the time, this damage repairs itself with no need for specific treatment.

What happens after the procedure?

The arm on the same side as the pacemaker will be placed in a sling. This is to remind you that you should avoid strenuous activity involving this arm for a period of 1 week. However, the arm should be taken out of the sling regularly and used gently to avoid the shoulder stiffening up. It is recommended that you avoid large movements of the arm on the same side as the pacemaker for 6 weeks. After this, you should be able to do most activities.

Most people are well enough to leave hospital on the same day or day after the procedure. This will be the case providing the pacemaker is checked and found to be functioning normally and no complications of the procedure are identified on a chest X-ray. Transport

home can be arranged should it be needed. You should tell the nursing staff on the day of the procedure if this is the case.

Your wound will be checked and the dressing removed. You will either have a new dressing applied and given a supply of more dressings to take home, or the wound will be sprayed with a sterile waterproof adhesive to keep it clean and dry. You should avoid a bath or showering for 48 hours but can then wash as normal providing you do not scrub the area or keep it submerged in water for the next 7 days. It is likely to be a little bruised and sore and you should take simple painkillers if needed. After going home, if you experience significant discomfort, inflammation or oozing from the wound you should contact the Cardiac Rhythm Management department.

You will be able to feel the pacemaker, but you will soon get used to it. At first, it may be a little uncomfortable when you lie in certain positions but this will settle down.

The pacemaker needs to be checked regularly and an appointment will be made for the first of these checks around 1-2 months following the procedure.

Where can I find more information?

British Heart Foundation

www.bhf.org.uk/heart-health/treatments/pacemakers

Arrhythmia Alliance

www.heartrhythmalliance.org/aa/uk/pacemaker

Contact information

Cardiology Admin Assistant

Wansbeck General Hospital
01670 529480

Cardiac Rhythm Management

Wansbeck General Hospital
01670 529794

Alternative Formats

If you would like a copy of this information in large print, another language, audio tape or other format please call the Contact Centre on **03 44 811 8118**

Other sources of information

NHS 111

NHS Choices

www.nhs.uk/pages/homepage.aspx

NICE (National Institute for Health and Clinical Excellence)

www.nice.org.uk

Patient Advice and Liaison Service (PALS)

Freephone: **0800 032 0202**

Text: 01670 511098

Email: northoftynepals@nhct.nhs.uk

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General Enquiries **03 44 811 8111**

www.northumbria.nhs.uk

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