

What is a pacemaker?

A pacemaker is a small device that helps control an abnormal heartbeat. It is inserted under your skin just beneath your collarbone and is generally connected to your heart via leads (or electrodes). When your heart beats too slowly, the pacemaker sends electrical signals to your heart to regulate its pace so that it can pump blood effectively. The device is programmed to your individual needs and can be adjusted over time as needed.



One type of pacemaker available – about 5cm wide
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An abnormal heartbeat (arrhythmia) can be caused by natural ageing, muscle damage following a heart attack, some genetic conditions and even certain medications. By regulating your heart beat, a pacemaker can help alleviate symptoms associated with arrhythmias such as dizziness, fainting, shortness of breath and tiredness.

Am I suited to a pacemaker?

Before recommending a pacemaker, your cardiologist will perform a number of diagnostic tests to assess your heart's structure and function. These are generally non-invasive and may include an echocardiogram (ultrasound of your heart), an exercise stress test (on a treadmill), and an electrocardiogram (to measure your heart's electric impulses). They may also organise for your heart to be continuously monitored over a 24 hour time period or longer, via a holter monitor (portable electrocardiogram) or loop recorder (implanted electrocardiogram).

The results from these tests will help your cardiologist determine whether your symptoms can be improved with a pacemaker and your overall suitability to the procedure. Our team can provide you with more detail on each of these tests if required.

What does a pacemaker implant involve?

A hospital procedure

A pacemaker is implanted in hospital by your cardiologist and a team of cardiac technicians. In most cases, you will need to stay overnight in hospital. The procedure takes around 1-2 hours and is performed under local anaesthetic with sedation. This means that you will be given pain relief and sedatives to relax but will be awake throughout the procedure.

Before the procedure, an intravenous (IV) line will be inserted into your arm or hand to administer medications before and during the procedure. The skin under your left collarbone will be cleaned and a local anaesthetic will be injected into the area so that you don't feel any pain. Your cardiologist will then make a small incision and insert one or more of the pacemaker's leads into a major vein. With the help of x-ray, the leads will be guided to your heart and secured to the correct position/s. Once secured and tested, the leads will be connected to the pacemaker and the device will be inserted just under your left collarbone. The incision will then be stitched and your wound dressed.

Throughout the procedure, your heartbeat and blood pressure will be monitored and further medication and anaesthetic may be delivered via the IV line if needed.

After the procedure, you will be moved to a recovery ward and further testing will be performed. Most patients can return home the day after the procedure. Your cardiologist will advise if any driving restrictions apply.

What happens after the pacemaker is implanted?

Your recovery

For a few days, you may feel mild discomfort at the site of insertion which can usually be relieved with simple painkillers. Your cardiologist will advise which analgesic agents you may use. If you experience any signs of infection (such as fever, swelling, redness, oozing from the wound) or if you feel unwell, please contact your cardiologist. You can shower but try to keep the wound/dressing clean and dry for one week.

Returning to normal activity

Once you have returned home, you may feel tired for a few days as you recover, but can generally resume your normal activities within 1-2 weeks. However, you should avoid heavy lifting and lifting your arm above shoulder level for one month (the arm on the side of your pacemaker).

Pacemaker check one week later

About one week after the implantation, your cardiologist will check your pacemaker and wound at a follow-up appointment at a Macquarie Heart clinic (Chatswood or Dee Why). Testing the pacemaker is non-invasive and is performed with a hand-held device that transmits information wirelessly. At this time, your pacemaker can be adjusted to fit your pacing needs. You will also need to attend ongoing regular reviews at the clinic to check the pacemaker's battery and rhythm.

What do I need to prepare before the hospital procedure?

- You may need to stop certain medications such as blood thinners prior to the procedure. Your cardiologist will advise if this applies to you.
- You will need to fast for a few hours prior to your procedure. A hospital representative will call you the day before and advise from what time you need to stop eating/drinking.
- In most cases, you will need to stay overnight in hospital. Your cardiologist will advise if any driving restrictions apply.

Are there any risks associated with a pacemaker insertion?

This procedure is generally very safe however some complications may include bruising, bleeding and infection. There is also the potential risk of damage to the blood vessels or nerves near the pacemaker. Your doctor will discuss the risks with you.

What precautions do I need to take when living with a pacemaker?

It's unlikely that electrics will interfere with your pacemaker, however you should take some precautions and carry your pacemaker identification card at all times (provided to you in hospital).

Medical procedures: Some medical procedures can interfere with pacemakers, especially those that involve exposure to electromagnetic energy. This includes therapeutic radiation for

cancer and shockwave lithotripsy. Your pacemaker may also need to be adjusted before and after any surgery. Before any medical procedure or surgery, always tell the doctor/clinic staff that you have a pacemaker.

Metal detectors/Security checks: Your pacemaker may be detected by a metal detector but is unlikely to be affected. As a precaution, always notify staff and show your pacemaker identification card *before* entering a security check.

How long do pacemaker batteries last?

The batteries can last anywhere from 5-15 years and depends on your heart and type of pacemaker. Regular checks at our clinic help ensure that your pacemaker continues to work as it should and be adjusted when needed.

How much does the procedure cost?

As a pacemaker insertion is a hospital procedure, your out-of-pocket costs will depend on whether you are admitted as a private or public patient. If you have private health insurance and have the procedure done at a private hospital, your health fund will generally cover a portion of the cost. The hospital can provide you with an estimate.

If you are admitted as a public patient to a public hospital, your costs will be covered by Medicare, however you may need to wait longer to have the procedure performed.

Any questions or concerns?

Please call us:

Chatswood clinic: (02) 9411 3930

Dee Why clinic: (02) 9133 7050