What is an Implantable Loop Recorder?
An implantable loop recorder is a small electrical device that is able to continuously record the heart activity. It is often used to help find a cause for recurrent unexplained syncope when there is a strong suspicion of a heart rhythm cause but all other simple tests have been normal. It can also be used to monitor patient’s heart rhythm after atrial fibrillation ablation procedures.

The implantable loop recorder comes in many different sizes is generally about the size of a computer USB and sits underneath the skin. There are no wires to the heart. It allows continuous recording of the heart’s activity so that we can diagnose arrhythmias.

What is involved in an Implantable Loop Recorder Implantation?
Insertion of an Implantable Loop Recorder is a very common procedure. It is performed under local anaesthetic with sedative medication to make you feel comfortable. The procedure takes approximately 15-20 minutes and is performed in the cardiac catheter laboratory. This is a special room that has a patient table, X-Ray tube, ECG monitors and other equipment. The staff in the lab will all be dressed in hospital theatre clothes and during the procedure will be wearing hats and masks.

Many ECG monitoring electrodes will be attached to your chest area. A nurse or doctor will insert an intravenous line usually into the back of your hand. This is needed as a reliable way to give you medications such as antibiotics and pain relief medications as part of the procedure.

The area is prepared with a special sterile solution that may feel cold. You will be covered by a large sterile sheet that will partly cover your face. You will be able to look out from under the sheet to the side and a nurse will be present at all times. You will be given oxygen to breathe by a small tube that is positioned under your nostrils or by a mask that covers your face.
A small ~2cm incision is made in the chest wall as shown in the diagram above. A small pocket (shaded pink) is made underneath the skin to accommodate the device. The device is inserted into the pocket and the wound is then closed with dissolvable sutures. A small scar ~2cm may be visible on the chest initially but will fade with time.

The device is able to pick up the electrical activity from the heart from the outside of the chest without any wires as it sits in the tissue over the heart, just like an ECG.

**Monitoring your heart rhythm when you go home.**
Although the device is monitoring your heart rhythm continuously, it can be manually activated to record a short segment of your heart rhythm when you are experiencing symptoms. We can then use this recording to determine if your symptoms are due to an abnormal heart rhythm. Our pacemaker technicians will explain to you how to manually activate your implantable loop recorder.

If you experience one of your episodes when you are back at home, please call our department and we arrange for the device to be checked.

**What happens prior to your procedure?**
You will receive a letter from the hospital bookings clerk or from the Doctors secretary outlining the date of your procedure and date and time of your admission to the hospital.

If you are taking anti-coagulation (blood thinning) medication eg warfarin then you will need to stop this for approximately 5 days prior to your procedure. Your doctor may arrange for you to have daily heparin injections after you stop the warfarin.

Patients having the procedure at the Royal Melbourne Hospital will be required to attend the pre-admission clinic on the day prior to the procedure. Some country patients may need to make arrangements to stay overnight with family or friends.
At the pre-admission clinic you will see a doctor who will record your medical history. You will also require an ECG and blood test. The doctor will also confirm the time you should be at the hospital for admission the following day.

You will be required to fast for at least six hours before each of the procedures. If your procedure is in the afternoon you may have a light breakfast. If your procedure is in the morning, **DO NOT EAT OR DRINK AFTER MIDNIGHT**, except for sips of water to help you swallow your pills.

After the procedure you will have some bruising and discomfort in the area of the implantable loop recorder that may persist for several weeks. This bruising can create a bluish discolouration over the upper chest and arm. This is normal.

**You should avoid strenuous activities with your arm or from lifting the arm above your head for a period of 4 weeks. You should refrain from driving for 2 weeks. You should not go swimming, play golf, or bowling for 4 weeks.**

A sterile dressing is left over the pacemaker for 6 days. The dressing is waterproof and you can shower with it on. **You can carefully remove this dressing yourself on the 6th day after the procedure.** At this stage the wound is sufficiently healed to allow you to shower with the dressing removed.

You will be allowed to go home on the day of the procedure after a few hours once the sedation has worn off. You will be given an appointment in our pacing clinic approximately one month after the implant.

**What should I do if I have concerns after the implant?**
Usually the discomfort and swelling from the wound settles gradually over several weeks. If the wound becomes increasingly tender reddened and swollen or you have any other concerns, you should **contact us.**

**What are the Risks of Implantable Loop Recorder Insertion?**

*Implantable Loop Recorder Implantation* is a very common and low risk procedure and should a complication arise, it will be dealt with at once.

Although most people undergoing pacemaker implantation do not experience any complications, you should be aware of the following risks:

- **Haematoma** (large bruise) - this may occur at the pacemaker insertion site. This may be uncomfortable and can take several weeks to settle.
- **Infection** – There is a very small chance that the pacemaker will develop an infection. Should this occur, it is usually necessary to remove the pacemaker in order to clear the infection.

If there are any questions about your procedure please contact Karen Halloran via The Department of Cardiology on 93427313