

External stimuli from a strong magnet, arc welding devices and some strong electric fields can affect the unit but these are rare. The major clinical restriction is inability to have a MRI scan. There is no restriction to having a CT scan. Although the unit may activate the metal detector at airport security, they should not disrupt the AICD function. *In all other respects it is very much life as usual.*

How will I know and what will I feel if the AICD is activated?

If you were to develop ventricular tachycardia you may feel your heart racing, and the unit will then be activated to overdrive pace the heart rhythm back to normal. Should that fail, or should you develop ventricular fibrillation, you may lose consciousness. The unit would then discharge a small internal shock to revert the heart rhythm back to normal. If you were not awake at that time you would not feel anything, otherwise you will feel a thump in the chest. *Should your AICD be activated, you should come to hospital.* Under these circumstances, it is usually necessary to take extra medication to further reduce the risk of recurrence.

What happens if the AICD was not activated in the lifetime of the battery?

Since the probability of developing a life threatening arrhythmia is low, the vast majority of people will not require the use of the device over a 5-6 year period, however, because the background risk of an arrhythmia persists, it is recommended that the battery is simply renewed as required. In some patients who develop progressive symptomatic heart failure, there is an option to upgrade the device to a more sophisticated unit that can improve the synchrony of heart muscle function as well as providing the standard AICD function.

Can I have the AICD removed?

No. Like all other pacing devices, once it is inserted, the device must remain in place; however, the unit can be deactivated.

Why is this issue being presented now?

The issue is being presented now in view of the increasing evidence of the effectiveness and safety of the AICD device in eliminating the small background risk of sudden death in people with impaired heart function who are otherwise well and generally active.

Is it mandatory to have an AICD and do I need to decide now?

No. *The decision as to if and when to insert an AICD is yours to make at any time.* An AICD should be seen as something that we can offer and you can choose to have. *In general, an AICD is not offered to people with very advanced symptomatic heart failure, as it will not substantially affect their outcome. Hence the benefits are greatest in people who are otherwise well.*

It is recognised that the requirement for more investigation and intervention may expose people who are otherwise doing well to further risk and this is not something that every-one would like to consider. Furthermore, it is recognised that not everyone feels the same about living with a small background risk of sudden death.

Hence the thought of living with an AICD is not for everyone. That said, if you would like to know more about the AICD please write any questions down so that we can discuss any issues at our next appointment.

Patient Information: Automatic Implantable Cardioverter Defibrillators (AICD)

HEART



CARE

WESTERN AUSTRALIA

Patient Information: Automatic Implantable Cardioverter Defibrillators (AICD)

You, your family or a friend may have heard about a new form of cardiac pacing device used in patients with impaired heart muscle function called an automatic implantable cardioverter defibrillator (AICD). Unlike a normal pacemaker that is activated if the heart slows, an AICD is programmed to discharge a small internal shock to restore the heart rhythm should it develop an abnormally fast rhythm (ventricular tachycardia or ventricular fibrillation) that may lead to collapse.

Up until recently, these devices were only recommended in people who have had a life threatening ventricular arrhythmia, and in these cases we know that they work and have saved patients lives. Because all patients with reduced heart function have some background risk of developing a life threatening ventricular arrhythmia, we are beginning to offer an AICD to people with impaired heart function who are otherwise well. *This is because whilst medical therapy can reduce the risk of developing a life threatening ventricular arrhythmias to 1-2% pa, only an AICD can eliminate the risk of sudden death due to a cardiac arrhythmia.*

What does the AICD do?

In people who have never had a problem, the AICD is best thought of as an airbag in a car, which although not able to prevent an accident, can reduce the consequences should one occur. Hence an AICD can prevent sudden arrhythmic death among people with heart disease because it is able to detect and treat life-threatening arrhythmias should they occur.

Because the device is implanted, there are no ongoing issues of compliance. Unlike a tablet, you do not have to remember to take it, and there are no day-to-day side effects to deal with. Rather it is like a silent partner - always there, monitoring your heart and only becoming activated if required.

What does the AICD NOT do?

The AICD has no effect on heart function and does not alter the risk of developing heart failure, nor does it prevent the development of ventricular tachycardia or ventricular fibrillation. *Having an AICD will not necessarily improve your quality of life;* however, many people who have one feel a sense of satisfaction knowing that they are no longer exposed to the small background risk of sudden death due to a cardiac arrhythmia.

How is the AICD inserted?

The AICD is usually inserted under local anaesthetic, and in most cases is placed under the left collarbone over the front of the chest. During the procedure the device is tested, and at that particular time you will be given extra sedation. The procedure takes about an hour to perform.

What are the procedural risks of having an AICD inserted?

Almost all patients with known or suspected coronary disease must have had fairly recent angiogram prior to insertion of an AICD, and if significant coronary disease is found, may also have to undergo angioplasty or surgery if that was deemed necessary. The risks of inserting and AICD are no different to a standard pacemaker. There is a risk of wound pain, bleeding, infection and pneumothorax. There is also a 1:500 risk of thrombosis in the vein through which the pacing lead is inserted. This typically settles with anti-coagulation with warfarin.

What are the side effects of an AICD?

Once inserted an AICDs has no side effects; however, there have been occasions whereby an AICD has triggered inappropriately. This may cause a sudden brief thump, but in of itself causes no damage to the heart. The risk of this is low and if it was to occur, it can be prevented from re-occurring by adjusting parameters of the unit.

What follow up is required?

The battery is checked every 6 months, and this can be arranged at the time of your clinical visit. *On average, batteries will last 5-6 years* before needing replacement. Replacement and upgrade of the unit requires a procedure similar to the initial implantation, however, the lead usually does not require replacing.

What restrictions will I have as a result of having an AICD?

Other than usual restrictions that may be applied to you because of your heart condition, in the first 3 months after implantation, you will not be able to use a commercial drivers licence.