

## Defibrillator (ICD) Implantation

- Reference Number: HEY-452/2017
- Departments: Cardiology

This leaflet has been produced to give you general information. Most of your questions should be answered by this leaflet. It is not intended to replace the discussion between you and the healthcare team, but may act as a starting point for discussion. If after reading it you have any concerns or require further explanation, please discuss this with a member of the healthcare team.

**This leaflet has been produced to give you general information about defibrillator (ICD) implantation.**

### WHAT IS A DEFIBRILLATOR?

ICD stands for implantable cardioverter defibrillator. If your doctor has suggested that you need an ICD you may have experienced or may be at risk of experiencing an abnormal, fast heart rhythm.

An ICD constantly monitors your heart rhythm and can deliver various electrical impulses to correct potential problems. It is made up of a small pulse generator, contains a battery, electronic circuits and sophisticated leads that connect the generator to the heart. An ICD, like a pacemaker, is usually placed under the skin below your collarbone.

Most modern ICDs have three main functions:

- If your heart rhythm is too slow, the device can give your heart extra support by working as a normal pacemaker (anti-bradycardia pacing).
- If your heart beats too fast, the ICD can return your heart back to a normal rhythm (anti-tachycardia pacing or ATP).
- If the anti-tachycardia pacing does not bring your heart back to a normal rhythm, or if the ICD senses a faster, dangerous rhythm called ventricular fibrillation, the ICD can then give a shock (defibrillation) to the heart to restore normal rhythm.

Some modern ICDs only provide defibrillation. These are suitable for patients not in need of cardiac pacing.

## WHY DO I NEED A DEFIBRILLATOR?

You might need a defibrillator if:

- You have already had a life threatening abnormal heart rhythm and are at risk of having it again.
- You have not had a life threatening heart rhythm, but you have had tests that show you are at risk of one in the future. This is usually because you have inherited certain faulty genes and may have a condition such as Cardiomyopathy (<https://www.bhf.org.uk/heart-health/conditions/cardiomyopathy>), Long QT syndrome (<https://www.bhf.org.uk/heart-health/conditions/long-qt-syndrome>) or Brugada Syndrome (<https://www.bhf.org.uk/heart-health/conditions/brugada-syndrome>).
- You have another type of heart condition, such as heart failure (<https://www.bhf.org.uk/heart-health/conditions/heart-failure>) and have had or are at risk of having a life-threatening abnormal heart rhythm.
- You have had other treatments to correct your heart rhythm that have been unsuccessful.
- You need a pacemaker fitting.

## CAN THERE BE ANY COMPLICATIONS OR RISKS?

The risks from having a defibrillator implanted are small. Bruising around the operation area is common, but please be assured that this usually resolves within a week or so and is nothing to be concerned about. Rarely, infection around the defibrillator can occur; the intravenous antibiotics given prior to the procedure aim to prevent this complication. It is possible for the lining of the lung to be punctured during the procedure, which can result in the lung collapsing (pneumothorax). This occurs in only approximately 1:100 cases and may be treated by inserting a tube into the chest (chest drain) to allow the lung to re-inflate. This does not leave any long term damage or ongoing problems.

## HOW DO I PREPARE FOR THE PROCEDURE?

Please read the information leaflet. Share the information it contains with your partner and family (if you wish) so that they can be of help and support. There may be information they need to know, especially if they are taking care of you following this examination.

**Pre-admission:**



You will be required to attend the pre-admission clinic prior to your procedure date. At this appointment, a specialist nurse will confirm your personal details and conduct a nursing and medical assessment. They will also perform a physical examination to ensure you are medically fit for the procedure. Your procedure will be explained and you will have the opportunity to ask any questions. You may then be asked to sign a consent form. Blood samples will be obtained and swabs taken for MRSA (a bacteria responsible for infection) screening and an ECG (heart tracing), will be performed.

**Fasting:**

You should fast for 6 hours before your procedure. That means nothing to eat or drink from 12 midnight if your admission is at 7:30am, or nothing to eat or drink from 5:00am if your admission is at 11:00am.

**Medication:**

Some medications have to be stopped before the procedure. The nurse at your pre-admission appointment will tell you if this is necessary for you.

**It is very important that you bring all of your current medications or a current prescription with you to any appointment.**

**If, for any reason you do not attend the pre-admission appointment or if you have any questions about your medication or should you require further advice on the issues contained in this leaflet, please do not hesitate to contact:**

■  
**Cardiac Nurse Practitioners on telephone no: (01482) 461647**

■  
**Cardiology 5 Day Ward on telephone no: (01482) 461518/461517**

**WHAT HAPPENS DURING THE PROCEDURE?**

You will be asked to put on a hospital gown and you will have a small needle (cannula) placed into a vein in the back of your hand or in your arm. You will be given intravenous antibiotics through the cannula before the procedure to reduce the risk of any infection. A small area around the collar bone will be shaved if necessary. The procedure is performed in the Cardiac Catheterisation Laboratory under a local anaesthetic. You will be awake for the procedure, but the insertion site will be numb.

You will lie on your back in the theatre, your body will be covered with sterile theatre towels and the skin around the neck will be cleaned with a cold antiseptic solution.

The area where the device is to be fitted will be given a local anaesthetic to numb the area so the procedure will be comfortable. A small pocket is made under the skin to make room for the device. The vein lying under the collar bone to gain access to the heart more electrodes are carefully directed to the correct position in the heart chamber(s). X-rays are used to guide the placement of the leads. The leads are then connected to the defibrillator. The leads are then inserted into the pocket made earlier. The skin is then closed with dissolvable stitches or glue.

### WHAT HAPPENS AFTER THE PROCEDURE?

When the procedure is over, you will return to the ward. You will remain in hospital overnight following the defibrillator implantation. You will have a dressing over the wound which should be changed every 4 hours. As the sutures are dissolvable you do not need to worry about them after the ICD is implanted unless you are worried that the wound has become infected (ie redness, offensive discharge, swelling).

Before discharge the device will be checked by the medical team. A chest X-ray will be performed. You will be given full instructions on returning to your usual activities when you are discharged.

You should not drive yourself home following the procedure. It is recommended that you do not drive for at least 1 month following implantation. Specific instructions will be given to you by the medical team and are also available on the DVLA website.

## GENERAL ADVICE AND CONSENT

Most of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion with the healthcare team.

### Consent to treatment

Before any doctor, nurse or therapist examines or treats you, they must seek your consent or permission. In order to make a decision, you need to have information from health professionals about the treatment or investigation which is being offered to you. You should always ask them more questions if you do not understand or if you want more information.

The information you receive should be about your condition, the alternatives available to you, and whether it carries risks as well as the benefits. What is important is that your consent is genuine or valid.

That means:

- you must be able to give your consent
- you must be given enough information to enable you to make a decision
- you must be acting under your own free will and not under the strong influence of another person

### Information about you

We collect and use your information to provide you with care and treatment. As part of your care, information about you will be shared between members of a healthcare team, some of whom you may not meet. Your information may also be used to help train staff, to check the quality of our care, to manage and plan the health service, and to help with research. Wherever possible we use anonymous data.

We may pass on relevant information to other health organisations that provide you with care. All information is treated as strictly confidential and is not given to anyone who does not need it. If you have any concerns please ask your doctor, or the person caring for you.

Under the Data Protection Act (1998) we are responsible for maintaining the confidentiality of any information we hold about you. For further information visit the following page: Confidential Information about You (<https://www.hey.nhs.uk/patients-and-visitors/confidential-information-about-you/>).



If you or your carer needs information about your health and wellbeing and about your care and treatment in a different format, such as large print, braille or audio, due to disability, impairment or sensory loss, please advise a member of staff and this can be arranged.

