

Information for patients and carers

Direct Current Cardioversion (DCCV) Nurse-led



What is a cardioversion?

Each normal heartbeat is triggered by an electrical impulse in an area of the heart known as the sinus node. Usually, the sinus node sends an organised electrical signal through the heart resulting in perfectly timed, rhythmic heartbeats. Sometimes, chaotic electrical signals can make the chambers (atria) of the heart flutter (fibrillate), this is known medically as atrial fibrillation or AF and results in an irregular, and sometimes, fast heartbeat. If AF has been unresponsive to drug therapy, electrical cardioversion can be carried out.

Cardioversion is the use of a brief electric shock to restore normal heart rhythm. It is particularly used to treat atrial fibrillation (AF) and atrial flutter.

This is a simple procedure completed by a trained nurse using a machine called a defibrillator, which is carried out under anaesthetic in theatre as a day case.

Why do I need a cardioversion?

Some people have no symptoms, but others may experience shortness of breath, a feeling or sensation that your heart is pounding or racing, light-headedness and fatigue. Depending on your specific medical history and symptoms, your cardiologist may recommend a cardioversion to return your heartbeat to a normal rhythm, and your symptoms should improve.

Are there any risks?

Cardioversion is a safe and simple procedure, and complications are rare. However, potential risks include but are not limited to:

- Risk of stroke - less than 1%. To minimise this risk, you will need to be on an anticoagulant drug to thin your blood
- Dangerous rhythm - In about 1% of cases, a potentially dangerous heart rhythm called ventricular fibrillation may occur during the procedure, but this would be dealt with immediately and reverted by a repeat shock
- Slow heart rate - Very rarely, your heart rate may become too slow immediately after the procedure. This is usually only a

temporary problem and often rectifies itself. However, if a slow heart rate were to continue, other treatment (such as pacing) would be necessary to restore a satisfactory heart rate. The risk of this happening is 1 in 1000

- The procedure may not be successful - Cardioversion is not 100% guaranteed to work. In some cases, patients revert to AF following a period of being in sinus rhythm, for others it is not possible to achieve a normal rhythm (sinus rhythm)
- Localised skin burns or chest wall discomfort - It is not uncommon for patients to experience some skin irritation following a cardioversion or some generalised aching in the chest itself. It is important to remember that this will resolve itself and that it is not a serious problem and only temporary

What should I do before I come into hospital?

To reduce the risks and prevent clot formation during the cardioversion, you will be prescribed a blood thinning drug called Warfarin or a Direct Oral Anticoagulation (DOAC) for at least six weeks before the procedure.

Warfarin will need to be carefully monitored to get the dose right for you. It is very important that the balance is exactly right between your blood being too thick and clotting, or too thin and making you bleed too easily. Special blood tests called International Normalized Ratio's (INR) will be done weekly and your cardioversion appointment can only be arranged after these show a suitable and stable range between two and four over a period of four weeks.

DOAC medication e.g. Rivaroxaban, Apixaban, Dabigatran and Edoxaban, must have been continued without any missed doses over a period of three weeks preceding the cardioversion otherwise the procedure will need to be rescheduled as the risk of stroke is too high.

When you are stable and nearing the top of the waiting list, you will be sent an appointment to attend for pre-assessment. This will involve having an Electrocardiogram (ECG) and bloods.

What will happen on the day?

Please note if you feel unwell on the day of your procedure, please contact the Cardiac Catheter Suite (01772 524382) prior to attending. Please bring all your medication, slippers/flip flops and something to read with you on the day. You must not eat or drink anything from 6am on the day of your procedure; this includes not chewing gum or sucking sweets. Please take your usual morning medications at 6am with your food/drink. We ask you to arrive on the ward no earlier than the time on your letter and anticipate you to be discharged around 4pm but this is only approximate as circumstances vary. On arrival you will be shown to your allocated bed space and asked to change into a theatre gown (please remove all jewellery and bras if wearing). After this the nurse will take your physical observations including blood pressure, oxygen saturations, temperature, ECG and ask you some questions. Your cardioversion can only take place if these results are satisfactory and will be rescheduled for another day if they are not.

Before the procedure can take place, you will be asked to sign a consent form which will be kept in your medical records.

The procedure

The procedure will take place in theatre. A heart monitor will be attached to your chest and your blood pressure; oxygen saturations and breathing will be monitored throughout. An oxygen mask will be placed over your mouth and nose. The defibrillator pads will be attached to your back and chest. Once the anaesthetist is happy that the anaesthetic is working the defibrillator will be used to give a controlled electric shock to restore a normal heart rhythm. It may take more than one attempt for it to be successful, but you will not be aware of this due to the anaesthetic.

How will I feel afterwards?

You will be taken back to your bed area where you will receive care from a nurse specially trained to look after patients who have had sedation. A second ECG will be performed following your cardioversion. The nurses will record your pulse, blood pressure and oxygen

saturations, will tell you when you can have something to eat and drink and will let you know when you can be discharged home.

You must have someone to drive you home and someone to stay with you overnight.

The DVLA stipulate that you must not drive for 48 hours following your cardioversion.

You can return to work when you feel well enough after the 48 hours.

A follow up appointment with your cardiology team will be requested.

You will need to continue to take all your usual medications (including Warfarin/DOAC) until told otherwise by your GP or cardiologist.

It is important to continue to avoid caffeine, excess alcohol and smoking for this procedure to be beneficial.

Unfortunately, cardioversion does not always manage to restore the heart rhythm to normal. It is important that you continue to take your medications as instructed by the doctor and to keep your appointments.

Contact details

Cardiac Catheter Suite **01772 524382**.

Sources of further information

www.lancsteachinghospitals.nhs.uk

www.nhs.uk

www.accessable.co.uk

www.patient.co.uk

www.lancsteachinghospitals.nhs.uk/veteran-aware

www.heartrhythmalliance.org

www.bhf.org.uk

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Our patient information group review our leaflets regularly, if you feel you would like to feedback on this information or join our reading group please contact on email address:

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