

# Cardioversion

Cardiology

## Introduction

This booklet aims to:

- Tell you more about this procedure which your doctor has already explained to you
- Help you understand what will happen to you
- Explain the possible risks of this procedure
- Explain other alternatives if you do not wish to go ahead with the procedure
- Make sure you know as much as possible about the procedure before you agree to it and sign the consent form

## Why has the doctor recommended this procedure?

You have an irregular heart beat. This is called atrial fibrillation or atrial flutter (AF). Such abnormal heart rhythms are common. One way of treating this heart rhythm problem is to attempt to cardiovert (shock) the heart back into its normal rhythm. This is done by delivering a controlled electrical shock to the chest wall using a machine called a defibrillator. This procedure is called cardioversion and is carried out under a short acting general anaesthetic.

Your doctor may have recommended cardioversion because you suffer from breathlessness, fatigue or palpitations. If your normal heart rhythm can be restored, these symptoms may be relieved. People in atrial fibrillation / flutter have a higher risk of developing blood clots in the heart because the blood flow through the heart is not as smooth as when the heart is beating in a regular rhythm.

## Consent

We must seek your consent for any procedure or treatment beforehand. Your doctor will explain the risks, benefits and alternatives where relevant before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed please do not hesitate to ask for more information.

## What are the benefits?

- Relief of your symptoms so improving your quality of life

**The prevention of infection is a major priority in all healthcare and everyone has a part to play.**

- **Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available**
- **If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111**
- **Keep the environment clean and tidy**
- **Let's work together to keep infections out of our hospitals and care homes.**

## What are the risks?

- A very small risk (0.5%, or 1 in 200 procedures) of dislodging a clot from the inside of your heart which may lead to a stroke. This risk is reduced by giving you medication to thin your blood (see 'Why do I need anticoagulation treatment?' on page 3)
- A small risk of a reaction to the anaesthetic
- After cardioversion your heart may change to another abnormal rhythm or rate which may require a temporary pacemaker
- Having this procedure performed does not prevent AF from recurring. The chances of returning to AF are 35% in any one year. If this happens, you may be able to have further cardioversion

## What are the alternatives?

There may be alternatives to cardioversion available to help regulate your heart's rate and rhythm. Which ones might be suitable for you will depend upon the type of arrhythmia you have and your general health. Some alternative treatments are listed below.

- **Anti-arrhythmic medication:** This may be given orally or intravenously (through the vein)
- **Ablation:** This is a procedure that is different to cardioversion. It involves creating a lesion in a small part of your heart muscle, so forming a scar. It aims to stop any faulty electrical signals that your heart is making. It's often done by placing a thin tube through one of your veins (often one in your groin) into your heart to freeze a small area. The heart tissue that is causing the problem can then be treated via this tube

If your doctor has recommended cardioversion they will explain to you the reasons for this and your options if you choose not to have this procedure. Please take this opportunity to ask questions and discuss any concerns you may have.

## What is shared decision making?

The choice about which treatment is best for you will be made together with your doctor. This will be based on the risks and benefits of the treatment and your individual circumstances.

## What happens if I decide not to have the procedure?

The usual advice would be to continue on medications on a long term basis. If you change your mind about having cardioversion, contact your GP or consultant's secretary. However, if the rhythm has been present for a long time, such as over a year, cardioversion may not be successful.

## Why do I need anticoagulation (blood thinning) treatment?

Anticoagulants (blood thinning drugs, for example Warfarin) or a newer blood thinning medications, such as Rivaroxaban, Dabigatran, Apixaban or Edoxaban are given to reduce the likelihood of blood clots forming. If you are not already taking an anticoagulation drug, it will be prescribed for you within the next two to three weeks. If this is not done, please contact your consultant's secretary.

When you take Warfarin you will have regular blood tests to check your blood clotting levels (INR). The INR level must be 2.0 or higher for at least four weeks prior to the procedure to ensure the risk of clots forming is reduced to a minimum. Please continue to have your INRs done weekly until you are invited to attend for your procedure.

If you have been prescribed a newer anticoagulant you will not require an INR blood test but will require regular blood tests to monitor kidney function. After the procedure, if successful, you will have to stay on the anticoagulants for at least one month. Your doctor will then review your progress and decide whether you can stop taking them. You must not stop your anticoagulation therapy unless instructed to by a doctor.

## When will I be ready to have cardioversion?

Once you have started your Warfarin treatment, you will need to contact us after each blood test. When your INR reaches 2.0 or more you must attend anticoagulation clinic weekly and then phone the result through to 01902 694271 anytime, (this is an answering machine) or 01902 481748. When leaving a message please state clearly your name, hospital number, your INR result and the date it was taken.

Please contact us weekly until we contact you with an appointment for your procedure.

Some patients may also need to take an antiarrhythmic drug (a drug to stabilise the heart rhythm) for a period of time before they can have cardioversion.

## What preparation is needed?

Please continue to phone weekly INR results, until you are contacted for an appointment.

If you take Apixaban, Rivaroxaban, Edoxiban or Dabigatran, it is important that these are taken continually but if you do miss a dose, please make a note of the date which can be discussed with a member of the arrhythmia team.

Once you are listed for cardioversion you will be asked to attend a pre-assessment clinic in the Heart & Lung Centre. This clinic is run by nurses and your appointment will usually take place a few days before the procedure. You will be assessed to make sure you still need cardioversion and that you are physically fit to have an anaesthetic.

## At the pre-assessment clinic:

- Blood samples are taken to check your blood count, body chemistry and your INR
- A heart tracing (ECG) will be performed to see if your heart is still in an abnormal rhythm. Occasionally it may have returned to a normal rhythm itself, and you will not need the procedure
- Blood pressure, pulse, height and weight are recorded and a series of questions are asked about your general state of health
- We will need to know what medication you are currently taking; please bring it with you in the original containers
- If you have any allergies, it is important to tell us
- Please tell us if you are pregnant or think you may be pregnant
- We will go through the procedure with you and you will be able to ask any questions
- Later that day we will contact you to let you know if your blood results are within the accepted limits and if so, we will tell you when and where to attend for cardioversion

## Before you come to hospital

If you follow the instructions below you will help us to make sure your procedure goes ahead as planned:

- You will need to arrange transport to and from hospital as it is not safe to drive for 24 hours following a general anaesthetic
- After the procedure, ideally you should have someone to stay with you overnight at home whilst you recover from the anaesthetic. If this is not possible, please let us know
- Leave any items of value, credit cards, large amounts of money, etc. at home
- Remove jewellery, make-up and nail varnish
- Don't eat or drink for four hours before the procedure

## Medication

You may be taking a drug called Digoxin which is given to slow the heart down. Please stop taking this drug two days before the procedure. It is important that most of the Digoxin is out of your system, you may experience some palpitations (racing of the heart) as this happens.

Take all your other medication as normal. If you take medication within 4 hours of the procedure take with only a sip of water. If you are diabetic, see the section below.

## Diabetic medication:

- If you take tablets to control your diabetes, do not take them on the morning of the procedure. Bring them with you to take with food which you will be offered after the procedure
- If you take insulin, do not take your morning insulin and do not have anything to eat. We will try to ensure you are first on the list for the procedure. Bring your insulin with you to take after the procedure, when you will be offered food

## What happens during the procedure

- You will be allocated a bed which you will stay on for the entire procedure
- Nurses will go through a checklist to make sure you are prepared, including a check of your blood pressure, pulse and oxygen levels
- The anaesthetist and doctor / specialist nurse will explain what they are going to do and give you the opportunity to ask any questions before signing the consent form
- You will need to remove clothing from the waist up, a gown will be provided for you to wear
- If necessary we will clip any excess hair that may obstruct the procedure
- A small plastic tube (cannula) will be inserted into a vein in your arm to enable the anaesthetic or other medication that may be needed to be given intravenously (through the vein)
- You will be taken on your bed to the room where the procedure is carried out and given the anaesthetic
- Two pads will be attached to your chest through which the electrical current is delivered. It may take more than one attempt to alter your rhythm; a maximum of four attempts will be made

## What happens after the procedure?

You will return to the ward on your bed to recover from the anaesthetic, you may still be wearing an oxygen mask. Your blood pressure and pulse rate will be monitored and a repeat tracing of your heart rate and rhythm taken.

When you are awake you will be offered food and drink, the cannula will be removed from your arm and you may get dressed.

The whole process will take approximately four hours, depending on your recovery time after the anaesthetic. Before you go home the doctor / specialist nurse will discuss the outcome of the cardioversion.

You may experience some discomfort in your chest area for a few days afterwards, as though you have been 'thumped' in the chest. There may also be slight redness and soreness of the skin where the pads have been attached. The use of non perfumed cream will soothe it. If necessary, take painkillers of a type that you know suits you.

## For 24 hours after your anaesthetic

- Do not drive a car or ride a bicycle
- Do not operate machinery or do anything requiring skill or judgement
- Do not sign any documents or make any important decisions because your concentration will be reduced
- Do not drink alcohol

- Do not take sleeping pills
  - Ideally have a responsible adult to stay with you while you recover from the anaesthetic
- You should allow 48 hours before returning to work

## Will I need to come back to hospital?

- If your cardioversion was successful you will attend a follow up clinic

## If your cardioversion was not successful:

- The doctor will review your medication before you go home and may prescribe an anti-arrhythmic drug that will increase the chances of a future cardioversion being successful
- Unfortunately not everyone is suitable to have more than one attempt at cardioversion. The doctor will discuss this with you on an individual basis as necessary
- If your cardioversion was initially successful but you unfortunately return back into atrial fibrillation, please contact 01902 481748 and an ECG will be arranged

## How to contact us

### **Cardiac Catheter Suite**

Third Floor  
Wolverhampton Heart and Lung Centre  
New Cross Hospital  
Wolverhampton  
WV11 0QP  
Tel: 01902 694273

### **Arrhythmia Nurses**

Cardiology Ward  
Third Floor  
Wolverhampton Heart and Lung centre  
New Cross Hospital  
WV11 0QP  
Tel: 01902 694271 or 01902 481748

## Additional information is available from:

### **Wolverhampton Coronary Aftercare Support Group (WCASG)**

Heart & Lung Centre  
New Cross Hospital,  
Wolverhampton  
Email: [WCASG79@gmail.com](mailto:WCASG79@gmail.com)  
Tel: 01902 755695 Mobile: 07889 063647  
Website: [www.have-a-heart.net](http://www.have-a-heart.net)

### **British Cardiac Patient Association**

15 Abbey Road  
Bingham  
Nottingham  
NG13 8EE  
Email: [admin@bcpa.co.uk](mailto:admin@bcpa.co.uk)  
National Helpline: 01223 846845  
Website: [www.bcpa.co.uk](http://www.bcpa.co.uk)

**British Heart Foundation**  
Greater London House  
180 Hampstead Road  
London  
NW1 7AW  
Tel: 0845 070 8070  
Website: [www.bhf.org.uk](http://www.bhf.org.uk)

**Arrhythmia Alliance**  
PO Box 3697  
Stratford-Upon-Avon  
Warwickshire  
CV37 8YL  
Email: [info@heartrhythmcharity.org.uk](mailto:info@heartrhythmcharity.org.uk)  
Website: [www.heartrhythmcharity.org.uk](http://www.heartrhythmcharity.org.uk)

## English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

## Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

## Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

## Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

## Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

## Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。