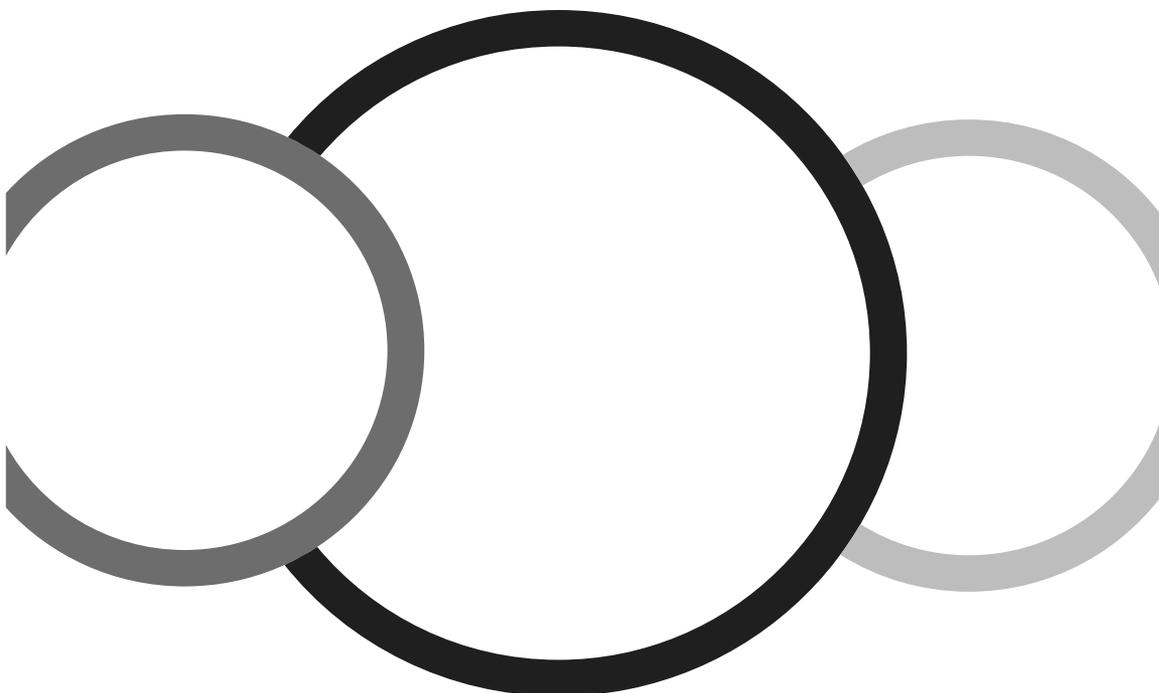


## Patient information

# Cardioversion



Following your recent discussion with your doctor or nurse about treatment for your irregular heart rhythm, it has been arranged for you to have a procedure called a cardioversion.

This leaflet will give you information about the procedure and what you can expect, there may be slight variations in care pathways, this will be dependent upon whether you are having your cardioversion at Basildon Hospital or the Essex Cardiothoracic Centre.

If you have any questions at any time, please contact the relevant department:

- For Basildon Hospital (Cardiac nurse specialists)  
01268 524900 Ext 4081 or 4082
  - For the Essex Cardiothoracic Centre (Arrhythmia nurses)  
01268 39402, email: [arrhythmia.nurses@btuh.nhs.uk](mailto:arrhythmia.nurses@btuh.nhs.uk)
- .....

## **How the heart works**

The heart is a muscular pump which delivers blood containing oxygen to the body. It is divided into two upper chambers (atria) which collect blood returning through the veins; and two lower chambers (ventricles) which pump blood out.

The heart has an electrical system. This normally drives the heart to beat in a regular organised way, at a rate of 60-100 beats per minute.

Each normal heart beat begins with an electrical impulse from a group of specialist cells called the sinus node (SA node). These electrical impulses travel across the top two chambers

of the heart, down through the atrioventricular node (AV node), then spread across the bottom chambers, causing the heart to contract and pump.

When a heart is beating normally we refer to this as sinus rhythm, or normal rhythm.

Sometimes the electrical system in the heart does not follow the normal electrical conduction system causing an irregular or abnormal heart beat; the medical term for this is 'arrhythmia'. When an arrhythmia causes symptoms, for example palpitations, skipped beats, dizziness, fatigue or feeling faint, then a cardioversion may be used in order to manage the arrhythmia.

## **Types of arrhythmia**

Planned cardioversion is typically used to treat atrial arrhythmias. Atrial arrhythmias originate in the upper heart chambers and are the most common type of arrhythmia, and while they can cause symptoms, they do not cause sudden cardiac death and symptoms such as fainting are rare. Atrial arrhythmias are categorised according to their underlying mechanism of action.

Most patients will be diagnosed with either atrial fibrillation or atrial flutter.

### **Atrial fibrillation (AF)**

AF is the most common atrial arrhythmia experienced world-wide. AF consists of chaotic abnormal electrical activity in the atria which cause them to beat randomly, quickly and inefficiently. AF results in an irregular heart beat and sometimes a very fast heart rate. AF is not life threatening and fainting is rare but the irregular heart-beat, particularly if rapid, can lead to palpitations, dizziness, chest discomfort and fatigue. Due to the reduced effectiveness of atrial beats, AF results in an increased risk of stroke. Patients diagnosed with AF should be

assessed regarding the need for anticoagulation (blood thinning medication).

### **Atrial flutter**

Atrial flutter is an abnormal electrical circuit which can cause the atria to beat very rapidly. The abnormal circuit is most commonly found in the atria on the right side of the heart but can be present in the atria on the left side of the heart. Atrial flutter is an organised and regular arrhythmia but can be responsible for rapid heart rates which may be associated with symptoms such as palpitations, shortness of breath, chest discomfort or fatigue. Atrial Flutter is not considered a life threatening rhythm but can increase your risk of stroke; patients with atrial flutter should be assessed to see if they need anticoagulation (blood thinning medication) to reduce their risk of stroke.

### **Anticoagulation (blood thinning medication)**

Patients diagnosed with either atrial fibrillation or atrial flutter should be assessed regarding their individual risk of stroke and their need for anticoagulation. Every patient undergoing a cardioversion for atrial fibrillation or atrial flutter will need to be

anti-coagulated for a period of time before and after their procedure. However some patients will eventually be able to stop anticoagulation and others will require lifelong indefinite anticoagulation therapy. Your specific requirement for anti-coagulation will be discussed with you during your pre-assessment clinic appointment

Maintaining therapeutic anti-coagulation is very important both before and after your cardioversion, the following advice is provided depending upon which anti-coagulant you are taking.

### **Warfarin**

Once you have been advised of your admission date we generally recommend increasing the frequency of your INR checks, if needed, to either once a week or once every two weeks for a month before and a month after your cardioversion. This allows us to have a record of your INR levels and to make sure you have stable and consistent results. Please bring all your INR results to your pre-assessment clinic appointment.

### **Rivaroxaban, Apixaban, Edoxaban and Dabigatran**

If you are taking any of the above anti-coagulants it is

extremely important that you do not miss any doses both before and after your cardioversion. If you believe that you have missed or may have missed any doses of your anti-coagulant it is important that you advise the nurse when you attend your pre-assessment clinic appointment.

Specific advice regarding management of your anti-coagulation will be discussed with you during your pre-assessment clinic appointment and written advice will be provided.

### **What is a cardioversion?**

A cardioversion is a very common procedure to treat irregular heart rhythms such as atrial fibrillation or atrial flutter.

A controlled electric shock is given into your chest wall, which is synchronised with your own heartbeat. You will not feel the electric shock as you are given an anaesthetic to make you fall asleep or sedation to make you very sleepy.

The procedure is successful in about 90% of patients.

It is more successful when people have had an irregular rhythm for a short time, usually a few months.

You will have your cardioversion as a day patient. Usually this means that you will not need to stay in hospital overnight.

Points to note:

- If required, a date will be arranged for you to have a pre-admission assessment. This will take place at either Basildon Hospital or the Essex Cardiothoracic Centre. A nurse will take some details to make sure you are well enough to have your procedure. Your blood pressure, ECG, weight and pulse will be checked.
- Part of your pre-assessment appointment may include seeing a nurse who will discuss your procedure with you and answer any questions you may have. Alternatively, you may receive a telephone call from a specialist nurse to provide you with specific procedure information.
- If you have any special needs or requirements, please tell the nurse during your pre-admission assessment appointment.
- You will need to arrange for somebody to bring you to the hospital and collect you by car or taxi on the day of your

procedure. You will not be able to drive yourself. You will not be able to drive or travel by public transport for 24 hours following discharge.

- Unless you require someone to stay with you during your admission to interpret or to assist with special needs, we ask that relatives or friends return to collect you when you are ready to go home and that an adult is able to stay with you overnight.
- If you take warfarin, please bring your INR results with you to the pre-assessment clinic.
- If you need ambulance transport because of your medical condition please use the following details;
- If you are being admitted to Basildon Hospital, please contact the waiting list coordinator:  
01268 524 900 ext 4536
- If you are being admitted to the Essex Cardiothoracic Centre, please contact the Patient Activity Office  
01268 524 900  
ext 4191 or 4192

## On the day

On the day of your procedure please remember:

- To bring all your medication, in its original container
- To bring something to read such as a book or newspaper.
- Rarely, an overnight stay in hospital is needed, please bring an overnight bag with your preferred nightwear, dressing gown, slippers and toiletries.
- For security reasons please do not bring anything that is valuable with you into hospital. The hospital regrets that it cannot accept responsibility for loss or damage to property belonging to patients.
- Please do not wear jewellery, makeup or nail varnish. Your wedding ring may be left on if you wish and we will cover it with tape.
- You should not have anything to eat from midnight on the morning of your admission. You are able to have some water for morning medication no later than 06.00am.

## Should I take my normal medication?

- Unless advised by the nurse at your preadmission

assessment appointment, you should take all your usual medication with a small sip of water.

- You may be taking medications that need to be withheld prior to your procedure. If so this will be discussed and explained to you during your preadmission assessment or by telephone before your admission.
- Advice regarding your anti-coagulation will be given during your pre-admission assessment or by telephone before your admission.
- If you are diabetic the management of your diabetes and your diabetic medication will be discussed with you during your preadmission assessment.

## What happens on the day of the procedure?

- You should attend the relevant department as specified on your admission letter. This will be the Day Surgery Unit at Basildon Hospital or Thames ward at the Essex Cardiothoracic Centre.
- You will be seen by either an anaesthetist, doctor or specialist nurse who will ensure that you are

fit to proceed with the cardioversion and any anaesthetic or sedation requirements.

- You will be seen by the specialist nurse or cardiac nurse practitioner who will ensure you understand the procedure, the potential risks and benefits, you will need to sign a consent form.
- If you have any questions or concerns during this process, please ask.

### **Are there any side effects or possible complications?**

- **Dislodged blood clots.**  
Some people who have irregular heartbeats have blood clots in their hearts. Cardioversion can cause these blood clots to move to other parts of your body. This can cause life-threatening complications, such as a stroke or a blood clot traveling to your lungs (pulmonary embolism).  
  
This is why taking anticoagulation medication consistently before and after your cardioversion is so important.
- **Abnormal heart rhythm.**  
In rare cases, some people who undergo cardioversion

end up with other heart rhythm problems during or after their procedure. This is a rare complication. If it happens, it usually shows up only minutes after your procedure, so your doctor can give you medications or additional shocks to correct the problem.

- **Skin burns.**

Rarely, some people have minor burns on their skin where their electrodes were placed. This is similar to a mild case of sunburn.

You may experience some soreness in your chest after the procedure. You will be given pain relief to help this if needed.

There is a possibility that the procedure will not be successful.

Even after a successful procedure, there is a chance that the heart may change back into an irregular rhythm at some time in the future.

If the procedure is successful, you should feel less short of breath and have more energy, enabling you to lead a more active life.

The general anaesthetic or sedation used for the

procedure is short-acting. Complications are very rare and can be dealt with by the nurses caring for you.

### **What happens during the procedure?**

Your cardioversion will take place in either the operating theatre at Basildon Hospital or a designated room on Thames ward at the Essex Cardiothoracic Centre..

You will be connected to a cardiac monitor so that your heart rhythm can be observed.

You will be given either a general anaesthetic by the anaesthetist or sedation via a cannula.

Pads will be placed on your chest and a controlled electric shock is given into your chest wall, which is synchronised with your own heartbeat.

You will not feel the electric shock due to the anaesthetic or sedation you have been given.

### **What happens after the procedure?**

You will need some time to recover from the procedure and for the effects of the anaesthetic or sedation to wear off.

You should be able to go home

a few hours after the procedure.

We will phone your friend or family member when you are ready to go home.

Before you go home you will be given the results of your procedure.

A letter will be sent to your GP informing them of the procedure, its outcome and any further management that may be necessary.

You will be informed of any change in your medication before you go home.

You will also be told how to care for your skin if there is any soreness/redness.

Once at home you should rest for the remainder of the day.

You must not drink alcohol, take any recreational drugs, drive, operate machinery or sign any legal documents for 24 hours after the procedure.

### **How will I find out if the procedure was a success?**

You will be told whether the procedure has been successful before you are discharged.

If the procedure has been successful you will receive an appointment to be seen in a specialist nurse led clinic.

If the procedure has not been successful you will be referred back to your consultant and you will be given an outpatient follow up appointment for the next available clinic with your consultant or nurse specialist in order to discuss future management options.

### **Are there any alternatives?**

As there are many different reasons why people have an irregular heart rhythm, the alternatives are discussed with each patient based on their individual circumstances.

Alternative procedures will have been discussed with you at your recent appointment with your doctor.

### **Post-discharge advice**

Even if the procedure is successful, there is a possibility that your heart could revert back to an abnormal heart rhythm after your discharge home.

**If you experience palpitations or a racing heartbeat** or have any questions, please follow the advice below;

- If you are under the care of Basildon Hospital please contact your GP
- If you are under the care of the Essex Cardiothoracic Centre please contact the arrhythmia nurses: 01268 394021 or email [arrhythmia.nurses@btuh.nhs.uk](mailto:arrhythmia.nurses@btuh.nhs.uk)

**If you become acutely unwell and experience chest pains, severe shortness of breath or blackouts you should seek urgent medical attention.**

### **Where can I find further information?**

Atrial Fibrillation Association  
[www.afa.org.uk](http://www.afa.org.uk)

Arrhythmia Alliance  
The Heart Rhythm Charity  
[www.heartrhythmcharity.org.uk](http://www.heartrhythmcharity.org.uk)

Patient Advice and Liaison Service (PALS) 01268 394440  
Email: [pals@btuh.nhs.uk](mailto:pals@btuh.nhs.uk)

[www.basildonandthurrock.nhs.uk](http://www.basildonandthurrock.nhs.uk)





Not to be photocopied

This information can be provided in a different language or format (e.g. large print, Braille or audio version) on request.

Basildon and Thurrock University Hospital is a smoke free environment.

For help and advice to stop smoking you can call the national helpline on 0300 123 1044 or visit: [www.nhs.uk/smokefree](http://www.nhs.uk/smokefree)

The Trust will not tolerate aggression, intimidation or violence.

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01268 524900 Minicom 01268 593190  
[www.basildonandthurrock.nhs.uk](http://www.basildonandthurrock.nhs.uk)

Patient Advice and Liaison Service (PALS)  
01268 394440 [pals@btuh.nhs.uk](mailto:pals@btuh.nhs.uk)