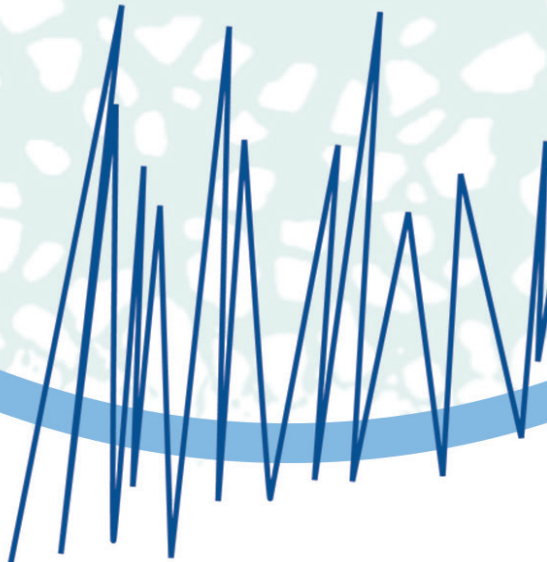
NHS

Royal Papworth Hospital

NHS Foundation Trust

Direct Current CardioVersion (DCCV)

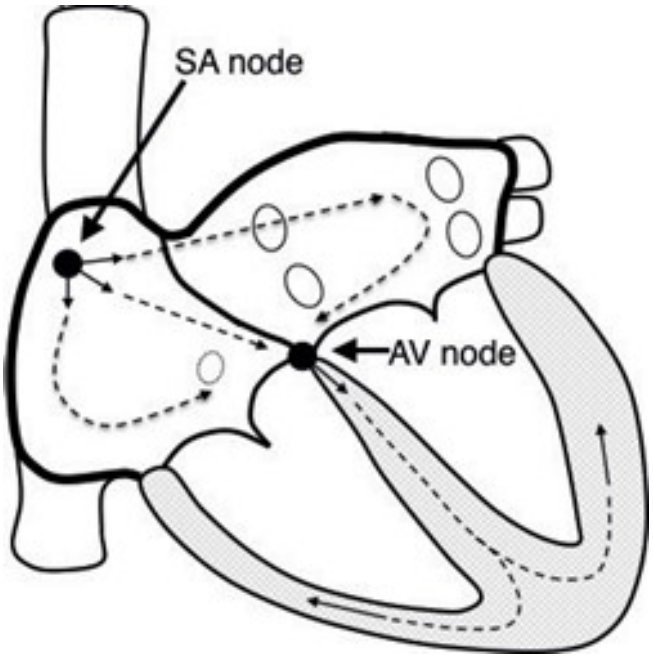
A patient's guide and consent form



Compassion
Excellence
Collaboration

Normal heart function

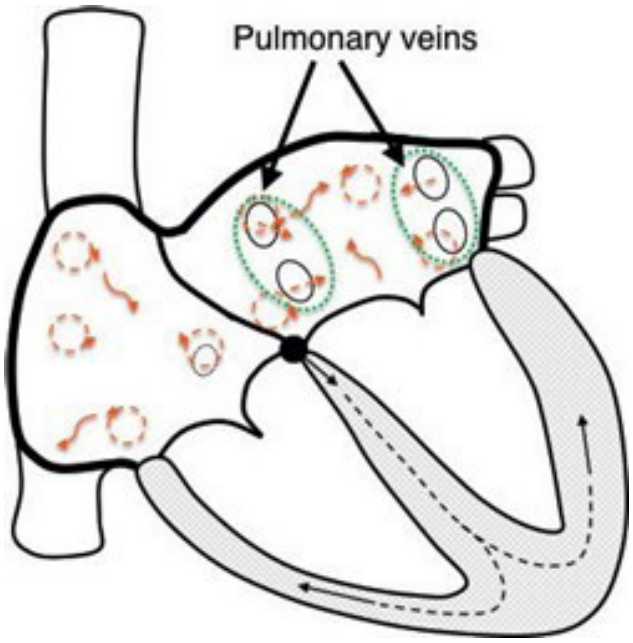
The heart is a muscular pump which delivers blood containing oxygen to the body. It is divided into two upper chambers, or 'atria', which collect blood returning via the veins, and two lower chambers, called ventricles, which pump blood to the body and lungs.



Normally, the heart beats in a regular, organised way at rates varying between 60 and 150 beats per minute, depending on activity levels. This is because it is driven by a specialised area of muscle in the right atrium called the sino-atrial (SA) node which emits electrical impulses.

These impulses spread through the atria making the atria contract and pump blood through to the ventricles. The impulses are channelled through another area of specialised cells, called the atrio-ventricular (AV) node, into the ventricles and then spread throughout the ventricles making them contract and pump blood to the body and lungs. The normal pathway the electrical impulses follow is called the 'conduction system'.

The SA node varies the heart rate according to the needs of the body. An example of this is shown during exercise, when the heart rate speeds up. When the heart is beating normally like this we refer to it as 'sinus rhythm' or 'normal sinus rhythm'.



Heart rhythm disturbance (arrhythmia)

Sometimes the electrical impulses travel through the heart in a different direction. This can be because of changes in the heart tissue that send the electrical impulses in abnormal directions.

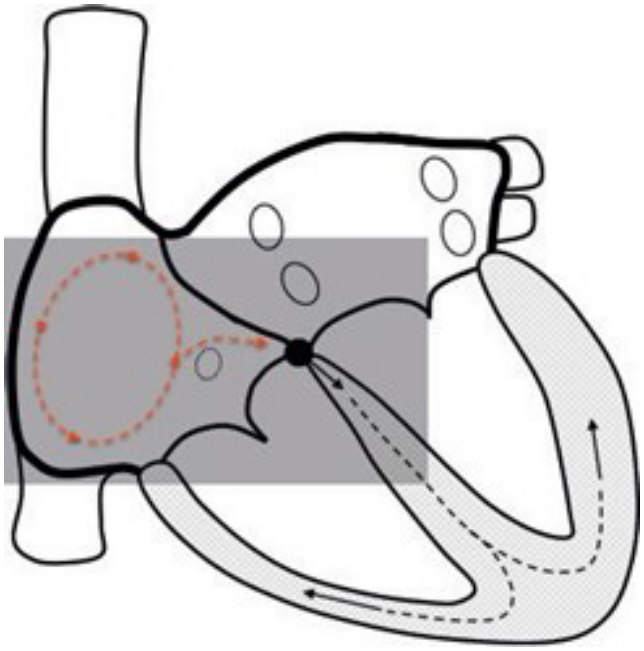
Atrial fibrillation (AF)

The abnormal electrical activity in AF is triggered and sustained from openings in the left atrium where the pulmonary veins return blood from the lungs. Hundreds of abnormal impulses occur in a random and chaotic manner, bombarding the AV node continuously.

The AV node allows as many impulses as possible to go through to the ventricles, but there is no pattern to this, which causes the ventricles to beat in an irregular manner. This rhythm may cause symptoms including palpitations, fatigue and breathlessness. This is when correcting the AF rhythm, usually with medications or ablation, may be of benefit.

Atrial flutter

Atrial flutter has many similarities to AF and some patients can get both arrhythmias at different times. The electrical impulses in typical atrial flutter are organised, unlike AF, and follow a defined circuit around the right top chamber.



What is a Direct Current CardioVersion (DCCV)?

A (DCCV) is a procedure used to try to correct an arrhythmia and restore the normal heart rhythm (sinus rhythm) by passing an electrical current through two pads. This is performed under a general anaesthetic/sedation.

Intended benefits of the procedure

The aim of the cardioversion is to restore the normal heart rhythm, called sinus rhythm. This may improve your quality of life by reducing symptoms of your arrhythmia, such as shortness of breath, fatigue and palpitations. For some patients, restoring sinus rhythm can also improve the pumping action of the heart, making it more efficient.

The DCCV procedure has a high success rate, however we cannot predict how long your heart will remain in sinus rhythm if we are successful.

Before your procedure

The arrhythmia nurses will contact you via telephone to arrange a date for your cardioversion. During this call, the nurses will discuss with you your past medical history, your current medications and carry out some risk assessments ready for your admission. We will also explain the procedure and give you the opportunity to ask questions.

It is vitally important that you take all your medications as prescribed pre-procedure. You will have been prescribed an anti-coagulant which you must have taken with no missed doses for four weeks prior to your procedure. If you are taking warfarin we need your INR levels to be greater than 2.0 for four weeks. Please ensure you have had weekly INRs leading to your procedure and ring these results through each week to the arrhythmia nurses on **01223 638947** so they can allocate you an appropriate date.

If you are taking Apixaban, Rivaroxaban, Edoxaban or Dabigatran you must take this without interruption. Please inform your arrhythmia nurse if you do miss a dose.

Please inform your nurse if you take a tablet called Digoxin as this should be stopped two days before the DCCV.

On the day of your procedure

Your DCCV will be carried out as a day case procedure.

Please ensure that you have nothing to eat after midnight. You may have water until 06:00 on the morning of your procedure.

On admission you will have a cannula and bloods taken. A pre-procedure ECG will be taken to confirm your heart rhythm. Your chest/back may need to be shaved to allow good adhesion of the pads.

Your procedure will be carried out in one of our procedure rooms with an arrhythmia specialist nurse (ASN), anaesthetist or anaesthetic associate and operating department practitioner.

You will have two pads applied to your back/chest and attached to our monitoring systems. The anaesthetist will administer sedation through your cannula. This is very short acting and normally does not require any breathing tubes in the mouth/throat. Once you are asleep we can deliver up to three bursts of energy through the pads to try to revert your arrhythmia into normal sinus rhythm.

After your procedure

After your procedure you will be woken up and then taken into recovery for monitoring. A post-procedure ECG will be performed to confirm your heart rhythm post-procedure. You can then return to the day ward where you will be given some food and fluid.

Your ASN will review you post-procedure. If any changes to your medications need to be made we will inform you, and provide a prescription where necessary.

You can then be discharged two hours after your procedure. Due to the anaesthetic/sedation you will not be able to drive for 24 hours post-procedure. Please ensure that you have transport home arranged and a friend or relative to stay with you overnight.

If you have a cardiac implantable electronic device (CIED)

If you have a CIED (pacemaker, defibrillator etc.) we will perform a device check following you cardioversion, to ensure that the settings are still suitable for you.

Risks associated with cardioversion

- Skin irritation
- Heart rhythm disturbances
- Stroke. Less than 1 in 100 (<1%)

Post-procedure

We advise you to rest for the remainder of the day. Do not return to work on the day of your cardioversion.

It is important that for the 24 hours following your cardioversion you:

- Do not drive
- Do not drink alcohol
- Have a responsible adult with you at all times
- Do not operate any potentially dangerous devices
- Make no important decisions including legal ones
- Refrain from vigorous physical exercise

You may find that you have some redness similar to sunburn from the pads. If this happens you can apply non-perfumed skin emollient/moisturiser. For severe cases we can administer some cream for you.

Follow-up

If you are on the waiting list for an AF ablation, your procedure appointment will be the next time that we see you. We will otherwise arrange for your referring consultant to speak with you in clinic following your cardioversion. Please continue your medications as prescribed up until this appointment.

If you have any concerns in that time, please feel free to contact the arrhythmia nurses on **01223 638947**.

Please affix patient label or complete details below.

Full name:

Hospital number:

NHS number:

DOB:

PIC 205: patient agreement to PI 205 - Direct Current CardioVersion (DCCV)

Intended procedure/surgery

_____

_____

Statement of health professional

(To be filled in by health professional with appropriate knowledge of proposed procedure, as specified in consent policy). I have explained the procedure to the patient. In particular I have explained:

The intended benefits of DCCV:
As detailed on page two of this booklet

The risks associated with DCCV:
As detailed on page eight of this booklet

Any extra procedures, which may become necessary during the procedure:

☐ Temporary pacemaker
☐ Other procedure - please specify below:

……

……

I have also discussed what the procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment) and any particular concerns of this patient.

This procedure will involve:

☐ General anaesthesia

Healthcare professional

Signed: ……

Date: ……

Name (PRINT): ……

Job title: ……

Contact details

……

……

Has a ReSPECT form been considered and, if relevant, appended to this form? (See page 11e for further details on ReSPECT)

☐ Yes ☐ No

Statement of patient

Please read the patient information and this form carefully. If the treatment has been planned in advance, you should already have your own copy of which describes the benefits and risks of the proposed treatment. If not, you will be offered a copy now. If you have any further questions, do ask - we are here to help you. You have the right to change your mind at any time, including after you have signed this form.

Yes	No	
☐	☐	**I agree** to the procedure or course of treatment described on this form and have read this information leaflet on 'DCCV procedure (PI 205' and had the opportunity to ask questions.
☐	☐	**I agree** to the use of photography for the purpose of diagnosis and treatment and I agree to photographs being used for medical teaching and education.

- **I understand** what the procedure is and I know why it is being done, including the risks and benefits.

Please affix patient label or complete details below.

Full name:

Hospital number:

NHS number:

DOB:

NHS

Royal Papworth Hospital

NHS Foundation Trust

- **I understand** that any tissue removed as part of the procedure or treatment may be used for diagnosis, stored or disposed of as appropriate and in a manner regulated by appropriate, ethical, legal and professional standards.
- **I understand** that any procedure in addition to those described on this form will be carried out only if necessary to save my life or to prevent serious harm to my health.
- I have listed below any procedures **which I do not wish to be carried out** without further discussion:

.....

.....

.....

.....

I have been told in the past by Public Health that I am at increased risk of CJD (Creutzfeldt Jakob disease) or vCJD (variant Creutzfeldt Jacob disease).

☐ Yes ☐ No

(Where patient indicates 'yes' health professional to refer to Trust CJD procedure DN092)

Statement of interpreter (where appropriate)

If an interpreter was present to support this consent, please state the name and number of the interpreter present:

Date: ……

Interpreter's number:……

Name (PRINT): ……

Interpreter PIN:……

If a telephone / video service has been used, please document the name of the interpreter and company below

.....

.....

Patient

Patient signature: ……

Date: ……

Name (PRINT): ……

Confirmation of consent

(To be completed by a health professional when the patient is admitted for the procedure, if the patient has signed the form in advance).

On behalf of the team treating the patient, I have confirmed with the patient that they have no further questions and wish the procedure to go ahead.

Signed: ……

Date: ……

Name (PRINT): ……

Job title: ……

Important notes (tick if applicable).

☐ Patient has advance decision to refuse treatment

☐ Patient has withdrawn consent (ask patient to sign/date here)

Patient signature: ……

Date: ……

Name (PRINT): ……

Please use and attach Consent form C for a young person who is not Gillick competent.

General anaesthesia

The procedure is usually carried out under deep sedation or a general anaesthetic administered by an anaesthetist. This commonly involves insertion of a cannula into a vein often in your hand or arm through which the anaesthetic is administered.

We use standard monitoring of your heart, blood pressure and oxygen levels. Oxygen is given for you to breathe through a clear plastic mask before going off to sleep until you are fully awake again. The duration of time that you can expect to be sedated or asleep is in the range of a few minutes up to 15 minutes. You may remember some things when you wake up such as movement or talking. This is more likely to occur if deep sedation is used.

Please talk to your anaesthetist if the thought of this worries you. You may feel clear headed soon afterwards, but this can take a little longer for some people.

You will typically meet the anaesthetist who will be looking after you at the time that you come for the procedure. However, if you have had prior problems with anaesthetics or have a family history of serious problems with anaesthetic agents, such as a rare condition called malignant hyperpyrexia or an allergy to an anaesthetic agent, please let a member of the arrhythmia team know. In this circumstance we would want to have more time to talk to you prior to your procedure and it may be appropriate for us to either see you in our anaesthetic pre-assessment clinic on a day in advance of your admission, or for us to see you earlier in the day at the time of admission for your cardioversion.

Similarly, if you feel very anxious about an anaesthetic and would like to discuss this with an anaesthetist before the day of your admission, please let a member of the arrhythmia team know so that this can be arranged.

We ask you to not eat for six hours and not drink for two hours before the procedure.

You will be given further admission instructions from the arrhythmia team.

Even though you may feel completely back to normal on discharge from the hospital, anaesthetic agents can still be present in your system for up to 24 hours. During this time we recommend you to not drive, to refrain from alcohol consumption and to take care with any activity where a loss of normal coordination may result in injury (for example hot cups of tea, cooking on a hot stove). If you are a regular social media user or participate in online financial activities, please bear in mind that your normal judgement may be impaired even if you feel normal. Please follow any specific instructions that the arrhythmia team may give you in addition to this.

There are a number of common and a few rare risks associated with a general anaesthetic which are important to know about. There may be some risks in addition to the following, which your anaesthetist may discuss with you if they think it is relevant for you.

Common risks (1 in 10) include:

- Bruising or bleeding around the site of the cannula
- Dry mouth or lips
- Sore throat
- Shivering
- Itching
- Nausea and vomiting
- Difficulty passing urine which may require a catheter to be inserted into your bladder. This is more likely if the procedure takes a long time or if you have experienced this type of problem before
- Temporary memory loss (mainly in over 60 year-olds olds)

All of the common risks are temporary and should settle down soon afterwards, however please let us know if you feel you are at increased risk for these.

Less common risks (1 in 100 – 1 in 3,000) include:

- Infection of a cannula or arterial line
- Corneal abrasion (1 in 2,800). We will protect your eyes whilst you are asleep, however occasionally patients may suffer an accidental scratch to the eye called a corneal abrasion. This can cause pain and blurred vision for a few days, but usually heals without long term consequences. More serious damage to the eyes resulting in permanent loss of vision is very rare
- Hoarse voice
- Vocal cord damage is also possible after an anaesthetic. This is more likely if we need to use a tube that passes between the vocal cords
- Dental damage. Please let us know if you have any loose teeth or fragile dental work
- Peripheral nerve damage that is permanent

These risks are less common, but please let us know if you are particularly worried about them.

Uncommon risks (1 in 10,000 – 1 in 20,000):

- Aspiration of gastric contents into the lung
- Allergy to an anaesthetic drug
- Awareness (1 in 20,000)

These may require admission to the intensive care unit or a longer stay in hospital.

The risk of death resulting from a general anaesthetic is extremely rare, around 1 in 100,000.

The risk of brain damage from sedation or general anaesthesia is so rare that it has not been put into numbers.

The reason we tell you about these potential complications is so that you can tell us if you think you may be at higher risk for getting one of these complications than another person. It is also so that you can make an informed decision about whether or not to go ahead with the procedure.

To put the uncommon risks into context it is often helpful to consider the many risks in our day to day lives that we do not even consider, for example for most people it is probably riskier to travel in a car than it is to have an anaesthetic.

Further information

Royal College of Anaesthetists
rcoa.ac.uk/patientinfo/risks

Recommended summary plan for emergency care and treatment (ReSPECT)

What is ReSPECT?

ReSPECT stands for 'Recommended summary plan for emergency care and treatment'. It is a process that helps people to think about what treatment is suitable in an emergency, should they be unable to make decisions at the time.

Why is it important?

We know that, when people are very unwell, they are often unable to think clearly about what treatment they may or may not want because their brain and body are overwhelmed by the illness. It is also normal for people to feel anxious about what is happening when they are sick and in hospital, and this can also make it difficult to think clearly. This is why we think it is a good idea, where possible, for decisions about medical treatment to be made in advance – before there is an emergency situation or crisis.

How does it work?

The ReSPECT process is designed to help conversations between you and your healthcare professionals: they need to make sure you understand your health problems and which treatments may or may not benefit you. You need to make sure the healthcare professionals understand what matters most to you and whether there is anything you are particularly worried about or would want to avoid.

This conversation is used to complete a ReSPECT form that records a person's health problems, their preferences and which medical treatments may or may not be suggested. The original form should stay with the patient, though it is extremely helpful to have a record of the content of the form on their electronic patient record.

A ReSPECT form is NOT a legally binding document and can be changed or withdrawn at any point.

The ReSPECT form is often used to indicate treatments that someone may not want and/or treatments that their healthcare professionals consider would no longer be of benefit to them.

If people are getting worse from progressive conditions, it may be helpful to consider in advance about things such as whether they would wish to go back into hospital and, if in hospital, what sort of treatments might or might not be helpful for them.

This often includes a decision on whether or not they should have attempted cardiopulmonary resuscitation (CPR) if their heart was to stop.

Who is it for / is this relevant for me?

This process has increasing relevance for people who have complex health needs, people who may be nearing the end of their lives and those who are at risk of sudden deterioration or cardiac arrest.

However, many people come to Royal Papworth to have major procedures or surgery with the intention of curing a progressive disease or with the intention of substantially prolonging their life and, if that is you, you may wonder how a ReSPECT discussion applies to you and others like you. One of the key things to understand about the ReSPECT process is that it can be used simply to document a person's wishes and priorities, without setting any limitations on what treatment they should have.

This is important because all the procedures and operations we do here come with the risk of complications. In the unlikely event that things do not go as planned, it is really helpful to have some idea about a person's preferences and about their fears, worries and hopes.

Once again, the document is not legally binding, but it can help those looking after you to know what you might want if you weren't able to say for yourself.

The ReSPECT form is a separate document.

It is possible that your clinical team will start a conversation about the ReSPECT process with you. Equally you can ask any member of your medical team if you would like to start this conversation yourself.

Royal Papworth Hospital NHS Foundation Trust

A member of Cambridge University Health Partners

Papworth Road
Cambridge Biomedical Campus
CB2 0AY

royalpapworth.nhs.uk

01223 638000

Alternative versions of this leaflet

Large print copies and alternative language versions of this leaflet can be made available on request.

View a digital version of this leaflet by scanning the QR code.

Royal Papworth Hospital

Foundation Trust Membership

Become a member
Have your say
Make a difference

Scan the QR code or head to royalpapworth.nhs.uk/membership to find out more.

Author ID:	Arrhythmia nurse
Department:	Cardiac rhythm management
Printed:	April 2026
Review date:	April 2028
Version:	3
Leaflet number:	PI 205

© 2026 Royal Papworth Hospital NHS Foundation Trust