

Patient information factsheet

Ablation procedure

Your doctor has recommended you have the above procedure.

This factsheet has been written to help you understand what is involved. If there is anything you do not understand, or you are unsure why you need this treatment, please ask a member of your healthcare team, who will be happy to explain further.

To help you understand this factsheet please refer to our “how the heart works” factsheet first. This is available on: www.uhs.nhs.uk or ask a member of your healthcare team.

What is an ablation?

An ablation is a procedure that aims to control or correct certain types of abnormal heart rhythms (arrhythmia). It is used to treat abnormal heart rhythm that has not responded to medication. In some cases having an ablation can reduce the need to continue taking medicine.

How does the procedure work?

Your arrhythmia is caused by an area of extra electrical activity (short circuit) within your heart. For your heart to beat normally again, the extra pathway or group of cells (foci) responsible for your arrhythmia must be blocked.

Ablation uses a small amount of energy, either heat or cryo (cold) on the area of your heart that's causing the abnormal heart rhythms. This causes scar tissue to form which blocks the area from generating or conducting the fast impulses that cause your arrhythmia. The normal conduction pathway takes over; your heart rhythm returns to normal, providing relief from your symptoms.

This technique has a high success rate of curing many different types of arrhythmias. It is performed under a local anaesthetic, with sedation to help you to relax.

X-ray screening is used during ablation, so if you think you may be pregnant you should let us know before the procedure.

Risks of the procedure

Ablation is safe; however as with any procedure there are potential risks. Your individual risk of complications will be identified and fully explained by our doctors before you have your procedure. Ablation is performed safely in both children and adults.

If you are known to have underlying coronary heart disease the procedural risks are slightly increased.

- **Bruising and bleeding:** this is common in the groin following the procedure. This usually disappears within a week and does not cause a problem.

Patient information factsheet

- **Blood vessel damage:** occasionally the catheter electrodes can accidentally damage the blood vessels when being moved into position within the heart. The risk of this happening to you is between 3% and 5%. Serious injury to the blood vessels requiring a surgical procedure to repair the damage is extremely rare and occurs in less than 1% of patients.
- **Pulmonary embolism, or deep vein thrombosis (DVT):** the risk of developing blood clots in the legs (DVT) or heart that travel to the lungs (pulmonary embolism) is rare, less than 1%.
- **Transient ischaemic attack (TIA) / cerebrovascular accident (CVA) - commonly called a stroke:** the brain cells in the part of the brain served by the affected blood vessel die of lack of oxygen and nutrients due to a blockage. Symptoms can be slurred speech, limb/ facial weakness and loss of memory or recall depending on the area of the brain affected. The difference between a TIA and CVA is the duration of your symptoms (less than 48 hours is usually classified as a TIA). This is rare, less than 1%.
- **Cardiac tamponade:** during placement, the catheters may puncture the heart muscle causing blood to collect around the heart. If this happens the doctor may need to insert a drain to remove it. The risk of this happening to you is less than 1%. This risk increases slightly if your doctor needs to make a transseptal puncture.
- **Heart block:** the AV node is normally the only electrical connection between the top and bottom chambers of the heart. Very occasionally during ablation the AV node is damaged, which stops the impulse travelling to the bottom chambers. This is referred to as a 'heart block'. If this happens you will need a permanent pacemaker fitted before you leave hospital to maintain a normal, regular heartbeat. (A pacemaker is a small battery-operated device that sends out electrical signals to start a heartbeat when your heart is beating too slowly). The risk of needing a permanent pacemaker is less than 2%.
- **Death:** this is extremely rare but with any procedure there is always a small risk.

Additional risks

Occasionally we have difficulty gaining access through the blood vessels in the groin. In this case we will access the blood vessels through the chest wall. To do this we make a small incision in the chest wall to pass catheter electrodes through the blood vessels into the heart, this has potential additional risks:

- **Pneumothorax:** (if the vein under your collarbone is used) very occasionally, the catheter electrodes can puncture the lung wall. Air leaks out of the lungs and collects in the space between the lung and chest wall, resulting in partial or complete collapse of the lung. If this happens the doctor may need to insert a drain to reinflate your lungs. The risk of this happening to you is less than 1%.
- **Haemothorax:** (if the vein under your collarbone is used) the catheter electrodes can sometimes damage the chest wall causing blood to collect in the chest cavity. If this happens the doctor may need to insert a chest drain. This is extremely rare and the risk of it happening to you is less than 1%.

Success rate

Success rate: the ablation procedure is not always successful. The success rate depends on where the problem is within your heart. Your doctor will discuss the success rate of your particular procedure with you on an individual basis before you sign your consent form. If the procedure is unsuccessful it may be possible to repeat it at a later date.

Before admission

If you are taking medication to control your heart rhythm, the admission coordinator may advise you to stop taking your tablets five days before your procedure. This is to allow your

Patient information factsheet

doctor to make a better assessment of your heart rhythm. Stopping your tablets may cause your symptoms to return.

- If you are taking warfarin (blood thinner), regular blood tests will be needed for at least four weeks before the procedure, usually at your doctor's surgery. We ask that you keep your INR between 2.0 and 3.0. A record of this should be kept in your yellow warfarin book. We also request that you check your INR three days before your admission to confirm it is in range to enable the procedure to go ahead.
- If you are taking an alternative anticoagulant (for example, Dabigatran, Rivaroxaban, Apixaban or Edoxaban) then you will be given an individual management plan to follow.
- You will be advised not to eat or drink before your procedure, specific instructions will be on your admission letter.

If you have any questions please talk to the CRM admissions coordinator about the medicines that you are currently taking. Contact details are the last page of this factsheet.

The above advice should be followed unless your admissions letter advises otherwise.

Before the procedure

On your arrival to the ward a nurse will talk to you and your family about your hospital admission and answer any questions you may have. Before the procedure, you will have blood tests taken and an electrocardiogram (ECG) recorded. A doctor will also see you to explain the procedure, and ask you to sign a consent form to ensure you understand the procedure and the associated risks. If you have any worries or questions please do not be afraid to ask. It is important to tell your nurse or doctor if you have any allergies or have had a previous reaction to drugs or other tests. If you are having the procedure done under a general anaesthetic, you will also talk to an anaesthetist.

A doctor or nurse will need to insert a small needle into a vein in your hand (cannula) in order to give you drugs during the procedure. You will also be asked to shave your groin and if necessary your upper chest, and be given a hospital gown to wear.

If you are diabetic, your nurse will discuss your tablets/insulin dose with you, because not eating may affect your blood sugar levels.

How long will the procedure take?

Your doctor will advise you on the potential length of your procedure.

During the procedure

You will be taken to the catheter lab where a nurse will stay with you and be there to reassure you throughout the procedure. There is a lot of equipment in the room, which is used to monitor your heart rhythm. You will be awake during the procedure, but to help you relax your doctor will give you a short acting sedative.

The doctor will inject a local anaesthetic into your groin to numb your leg. This may sting a little and you may feel some mild discomfort. When the local anaesthetic has taken effect, the doctor will insert a small tube (sheath) into your groin. You should not feel any pain, but let your doctor know if you do. Through the sheath the doctor will gently thread several flexible wires (catheter electrodes) into your heart. These special wires will record and destroy (ablate) the extra electrical signals from within your heart. The type of arrhythmia you have will determine how many wires your doctor will use for your ablation. The catheters are about

Patient information factsheet

the size of a small drinking straw. The doctor carefully moves the catheters into different positions within your heart under x-ray screening (sometimes, your doctor may also put a catheter into one of your veins below your collarbone). You should not feel pain during this part of the procedure.

Once the catheters are in place, your doctor will attempt to start your arrhythmia by giving your heart small electrical impulses (paced beats) to make it beat at different speeds. This allows the doctor to collect detailed information about the cause of your arrhythmia and pinpoint where the area of extra electrical activity responsible for your arrhythmia is within your heart. During this time you may feel your heart speeding up, slowing down or missing a beat. This may cause you some mild discomfort, however, this is a normal part of the procedure and in the controlled setting of an ablation is not a danger to you. Sometimes, your doctor may also need to give you drugs to bring on your arrhythmia.

The doctor will use the ablation catheter to deliver a small amount of energy (either heat or cold) directly onto the area of extra electrical activity to create a scar.

During the procedure it is sometimes necessary for your doctor to make a small hole inside the heart (transseptal puncture) in order to gain access to the left side of the heart. This hole will usually seal up quickly after the procedure. Extremely rarely, the hole may remain open; if this happens you may need surgery to close it.

You may feel a slight burning sensation or heaviness in your chest during this part of the procedure. The formation of scar tissue as a result of ablation will not interfere with the normal conduction or function of the heart. This means that after ablation your heartbeat will only follow the normal electrical pathway.

Please tell your nurse or doctor if you experience **any symptoms** during the procedure, for example:

- chest pain
- dizziness
- or shortness of breath.

Palpitations

It is common to experience palpitations (extra heartbeats) during the procedure, due to the catheter electrodes stimulating your heart. Your heartbeat will usually return to its normal rhythm very quickly without needing further treatment. However, very occasionally an extra treatment (called cardioversion) is needed. If this is the case, you will be given a short-acting sedative to make you sleepy. Once you are asleep a defibrillator is used to send electrical energy to the heart muscle to restore the normal rhythm and rate.

After the procedure

After your ablation procedure you will stay in the catheter lab and continue to be monitored for approximately 20 minutes. The doctor will then stimulate your heart again in an attempt to start your arrhythmia. If this is not possible the ablation is considered a success.

Firm pressure will be applied to your groin where the catheter was inserted to stop any bleeding.

You will then be moved to the recovery area where you will be monitored for a short time. On returning to the ward you will need to rest for a few hours. You may feel a little sleepy

Patient information factsheet

until your sedative has worn off. The nurse will record an ECG, check your blood pressure, pulse and feel your foot pulses, and check your groin for any bleeding. It is important that you remain in bed and avoid bending your affected leg for approximately two hours after the catheters have been removed. This is to prevent any bleeding from the puncture site. After this time you will be able to get up if there are no complications.

You will be able to eat and drink normally as soon as you return to the ward. The nurse will remove the small needle in your hand. If you feel any palpitations or dizziness after the test, please let the nurse know. You may also have a chest x-ray to make sure that you do not have a pneumothorax (pocket of air) in your lung.

It is not uncommon to experience palpitations (extra heartbeats) on and off for a few weeks after the procedure, until the small scars created in the heart heal. Sometimes, you may feel as if your abnormal heart rhythm is returning, but then it suddenly stops. These sensations are normal and you should not be alarmed. However, if you feel your abnormal heart rhythm has returned, you should contact your GP.

Results

Your doctor will usually discuss the results and ongoing treatment plan with you and your family after the procedure.

Going home

You will normally be able to go home the same day. It is important to ask a family member or friend to collect you and drive you home. If you are being discharged home the same day as your procedure we would advise you to have someone stay with you for the night. If you don't have anyone who can stay with you overnight, please let your CRM coordinator know before your procedure.

Before going home, your doctor or CRM nurse will advise you regarding the medicines you will need to take, or stop and your follow-up care.

Caring for your wound

You will have a small dressing on your puncture site that can be removed the next day. It is important to keep the area clean and dry until it has healed. If you notice any swelling, redness or oozing please let your GP know.

Resuming normal activities

You can resume your normal daily activities when you leave hospital. You should not strain or lift heavy objects for a few days so the incision site can heal. Unless your job requires you to lift heavy objects, you can return to work in a day or two.

Driving

After a successful catheter ablation the DVLA instructions state that you shouldn't drive for at least two days, we recommend that you do not drive for one week. If you hold a Group 2 PSV licence (lorries/buses) you are not allowed to drive for six weeks and need to inform the DVLA.

Follow-up care

The cardiac rhythm management (CRM) team will give you specific follow-up instructions when you leave hospital. The doctor will write a letter to your GP detailing your hospital stay and treatment.

Patient information factsheet

Cancellations

Unfortunately we do sometimes have to cancel procedures. If this happens to you, we will always try to explain the reason. We fully appreciate that this is a stressful time for you and your family and we will do our best to provide you with a new date that is convenient for you as soon as possible.

Who will perform my procedure?

Your procedure will be performed by a specially trained doctor with appropriate experience (although we aren't able to guarantee that you will be treated by a particular member of staff). If the doctor is undertaking training on this procedure they will be supervised by an appropriately qualified colleague

Contact us

If you have any questions regarding your procedure please call: **023 8120 8436** to speak to a cardiac rhythm management (CRM) clinical nurse specialist.

You can also email: uhs.crmnurses@nhs.net

If you have a query relating your admission date please contact the cardiac rhythm management coordinator on: **023 8120 8772**.

Useful links

The following websites also provide useful information:

www.bhf.org.uk

www.heartrhythmcharity.org.uk

An online version of this factsheet is available on our website www.uhs.nhs.uk.

Navigate to: Our services > Blood, heart and circulation > Cardiac rhythm management > Useful information and resources.

For a translation of this document, or a version in another format such as easy read, large print, Braille or audio, please telephone **023 8120 4688**.

For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit www.uhs.nhs.uk/additionalneeds