



A guide to...

Catheter Ablation for Atrial Fibrillation

Patient Information

How to contact us

Arrhythmia Team, Cardiology
Watford General Hospital
West Hertfordshire Hospitals NHS Trust

Tel: 01923 244366 Ext: 3365 **Email:** westherts.cardionursing@nhs.net

If you need this leaflet in another language, large print, Braille or audio version, please call **01923 217 198** or email westherts.pals@nhs.net



Author	Dr Michael Koa-Wing Fang Feng Ting
Department	Cardiology
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This leaflet explains catheter ablation of atrial fibrillation (AF) and why it has been recommended for you. At the end of this leaflet, you will find a list of important points to remember and a list of contact numbers for further information, advice and support.

What is Atrial Fibrillation?

AF is a common abnormal heart rhythm arising from the top chambers of the heart call the atria (or auricles) which contract irregularly and chaotically. This can occur on/off with time (paroxysmal) or present all the time (persistent).

Why ablation for Atrial Fibrillation?

Your consultant has decided with you that your symptoms have not been controlled adequately with medication or that you do not want to take them for reasons such as side effects. Catheter ablation (pulmonary vein isolation) is an invasive treatment to reduce your symptom frequency, duration, and intensity to improve quality of life and reduce the need for more medications.

Abnormal electrical “triggers” within the four pulmonary veins that drain blood from the lungs to the left atrium are thought to be responsible for initiating AF. By electrically disconnecting or isolating these triggers within the veins, they can be prevented, and symptoms reduced. This can be done either by heating the tissue around the veins with radiofrequency energy or freezing it by cryoablation.

How successful is AF ablation?

Ablation is not a completely curative procedure. Success depends on several factors such as whether you are in it all the time, how long you have had it and whether other factors such as weight and blood pressure are controlled.

In “paroxysmal” patients, 60-70% will feel improvement after a single procedure by one year. In those in persistent AF, 50% will remain in normal rhythm by one year. More than one procedure may be required to gain long term rhythm control. “Symptomatic improvement” ranges from a reduction in frequency/severity of AF episodes to complete abolition of symptoms and long-term normal rhythm. Some patients may still require medication to control AF, but in many they can be stopped. The benefits can last several years, although AF can recur later in life.

A proportion of patients may not gain any benefit at all; hence you have been carefully selected for ablation based on symptoms and clinical profile. It is not generally recommended for those who do not have any symptoms or those who have only have very mild or very infrequent symptoms for this reason.

Ablation does not eliminate the need for blood thinning medications, which is based on other factors affecting your long-term risk of a stroke.

What happens prior to the procedure?

- You will have a detailed consultation with your specialist about the procedure to explain the process, benefits, and risks.
- If not already on them, if appropriate, you will likely be advised to commence on anticoagulant blood thinners to reduce the risk of stroke.
- You will receive a letter of invitation from the hospital (Imperial College Healthcare, Hammersmith Hospital) regarding where to go and which medications to stop and when.

How is the ablation performed?

- All cases are performed in a specialized X-ray room called the EP laboratory under either general anaesthetic or heavy sedation.
- Firstly, an ultrasound probe (transoesophageal echocardiogram) is passed through the mouth into the gullet to exclude clots in the heart before proceeding.
- Thin tubes (sheaths) are inserted into the veins at the top of both legs and specialised flexible wires (catheters) passed under X-ray guidance through the tubes to specific locations within the heart.
- Thereafter, depending on the technique used, pulmonary vein isolation will be performed using radiofrequency energy through a catheter designed to ablate rings around the veins within the atrium or Cryoablation performed using a special balloon that sits at the exit of the veins to the atrium.
- The procedure time can vary from two to four hours.
- At the end of the procedure all equipment will be removed, the anaesthetic is reversed, and you will be transferred to the recovery area.

What will happen after the procedure?

Once you fully wake up, you will be given something to eat and drink. You will remain on bed rest for approximately four hours after the procedure to reduce the risk of groin bleeding. Blood thinners will be restarted after the procedure. Usually, you will be monitored overnight and discharged the next day.

What are the possible complications?

Common but not serious

Chest pain and headache

- If you have sedation/local anaesthetic, you may feel some chest and shoulder discomfort during radiofrequency ablation as the tissue heats up. This can be controlled with pain relief during the procedure. Some discomfort may persist for a few weeks and can be managed with simple pain killers such as paracetamol. If this worsens you should contact us or the hospital that performed your procedure to advise.
- With cryoablation, temporary “ice-cream” headaches can occur during and a few hours after. This can also be managed with simple pain killers.

Bleeding

- A small amount of blood ooze from the groin(s) immediately after the procedure is common and can be controlled with some manual pressure.

Groin swelling or bruising

- Bruising at the top of the leg is common, due to the blood thinners. This is self-limiting but may take several weeks to resolve.

Uncommon but more serious complications

Groin problems (haematoma and false aneurysm)

- In 1 in 100 cases there is more bleeding than expected from the groin(s). Blood can collect and cause a tender collection under the skin called a haematoma. Tight bandages or a pressure clamp can be used to limit its size. Occasionally, the artery can be inadvertently damaged (false aneurysm). Most cases get better with bedrest, but sometimes an injection to plug the bleed is required. Rarely (<1 in 500 cases) an operation is required. If you notice groin pain or swelling once you are home, you should see a doctor to assess this.

Blood around the heart (pericardial effusion and tamponade)

- Sometimes the heart can be punctured, causing blood to accumulate in its surrounding sac, called a pericardial effusion. In most cases observation alone is needed but if the leak is large or if the heart cannot cope (tamponade) the blood must be drained. This is done by placing a thin tube attached to a drainage bag into the sac from the front of the chest under local anaesthetic. The drain is usually removed after 24-48 hours. The risk of a drain is about 1-2 in 100. Rarely, an operation to repair the hole is required (1 in 500 cases).

Nerve Damage

- The nerves that control your diaphragm muscle can be damaged from ablation. This occurs more frequently with Cryoablation (2%). It may cause breathlessness but usually resolves within six months.

Oesophageal Injury

- Temporary injury to the gullet/food-pipe can occur during the transoesophageal scan. Ablation can also cause injury to the gullet as it lies directly behind the left atrium of the heart. This can cause chest pain, especially on swallowing. In most cases this will get better within a week. Sometimes a short course of antacid tablets can improve symptoms.
- If the chest pain does not improve, worsens or you start to experience fevers and/or signs of a stroke such as weakness on one side then you should to seek help immediately. You will need urgent tests to exclude a hole in the gullet called an atrio-oesophageal fistula which would need an emergency operation to repair it. The risk of a fistula exceedingly rare, less than around 1 in 5000.

Stroke

- This is a very rare complication that can occur during and in the weeks after the ablation procedure. It happens in less than 1 in 100 (1%) cases and occurs because a small clot or a small bubble of air blocks the blood supply to a part of the brain. In most cases, symptoms will get better within 24 hours to a week. However, it can have permanent effects such as reduced mobility on the one side of the body or difficulty with speech and some it may lead to coma or even death. If a stroke occurs stroke specialists are on hand to manage your condition.

Permanent pacemaker

- Very rarely, the normal electrical system of your heart tissue can be damaged during the ablation, which would be corrected by a pacemaker. This occurs in 0.5-1% of cases.

Allergic reactions (anaphylaxis)

- Some patients may develop a rash from the medication, the equipment or from the stickers that are placed on the skin. If this happens, we can give you medication to counteract the allergic reaction.

Death

- The risk of death is less than 1 in 10 000 (0.01%).

What can I expect when I go home?

- Minor chest discomfort is not unusual in the days after the procedure. A pain killer and anti-inflammatory medications can be prescribed.
- You should rest for one to two weeks after the procedure. Most people require approximately one to two weeks off work, but this can vary. If your groin site starts to ooze, then lie down to help slow the bleeding, and press firmly on the puncture site for 10 minutes. If the wound continues to bleed after 10 minutes of firm pressure, go to your nearest A&E for further assessment.
- There are a number of activities that should be avoided to allow the groins to heal during your recovery.
 - Avoid lifting heavy objects for seven days
 - Avoid rigorous exercise for three months
 - The DVLA recommends that you do not drive for two days. If you have an HGV licence, driving may resume after two weeks provided there is no other disqualifying condition.
 - You should not fly within seven days.
- It may take up to four to six weeks to feel completely back to normal.

What if I get atrial fibrillation after my procedure?

Recurrence of atrial fibrillation or symptoms is not uncommon early after the ablation, particularly in the first three months as the heart is healing. This does not necessarily mean treatment failure. Your usual medications to control the heart rhythm will typically be continued for a number of months to reduce the risk of this. Blood thinners will usually be continued for at least three months after the ablation or continued long term.

If you think you are back in atrial fibrillation you should tell your cardiologist and get an ECG done as soon as possible to confirm as it may be necessary to perform a cardioversion to restore your heart to a normal rhythm during this healing phase.

What symptoms should make me seek urgent medical help?

If you experience any the following and this is of concern to you, then we urge you to contact your local hospital or GP:

- Increased swelling, pain or bleeding from the groin
- Increased shortness of breath
- Severe chest pain

If you get admitted to hospital within the first three months, it is very important that you notify the cardiologist who performed your AF ablation.

For further advice and support

Heart Assessment Unit (9am-5pm)
Hammersmith Hospital, Imperial College Healthcare
Tel: 020 3313 1663

Arrhythmia Alliance
Tel: 01789 450787
Email: info@arrhythmiaalliance.org.uk

Atrial Fibrillation Association
Tel: 01789 867 502
Email: www.afa.org.uk

The British Heart Foundation
Tel: 0300 330 3311
Email: www.bhf.org.uk

British Cardiac Patient Association
Tel: 01949 837070
Email: www.bcpa.co.uk

DVLA Medical Enquiries: 0300 790 6806 (car, motorcycle)
 0300 790 6807 (bus, coach, lorry)

NICE (National Institute for Health and Clinical Excellence) offers information for people who use NHS services. On their website you can find information about the care and treatment which should be offered to people with AF.

www.nice.org.uk