Advara HeartCare

Catheter Ablation for Atrial Fibrillation

Patient Information

What is it?

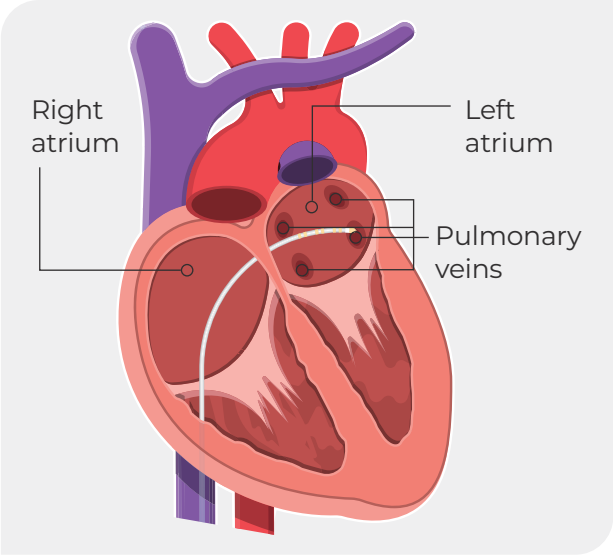
Catheter ablation is used to treat abnormal electrical impulses that cause heart rhythm problems (arrhythmias).

The procedure uses special wires that are advanced into the heart to give the treatment. For people who experience atrial fibrillation, the treatment is typically directed around the pulmonary veins (blood vessels bringing blood back from the lungs to the heart) where they connect to the left atrium (the left top chamber of the heart).

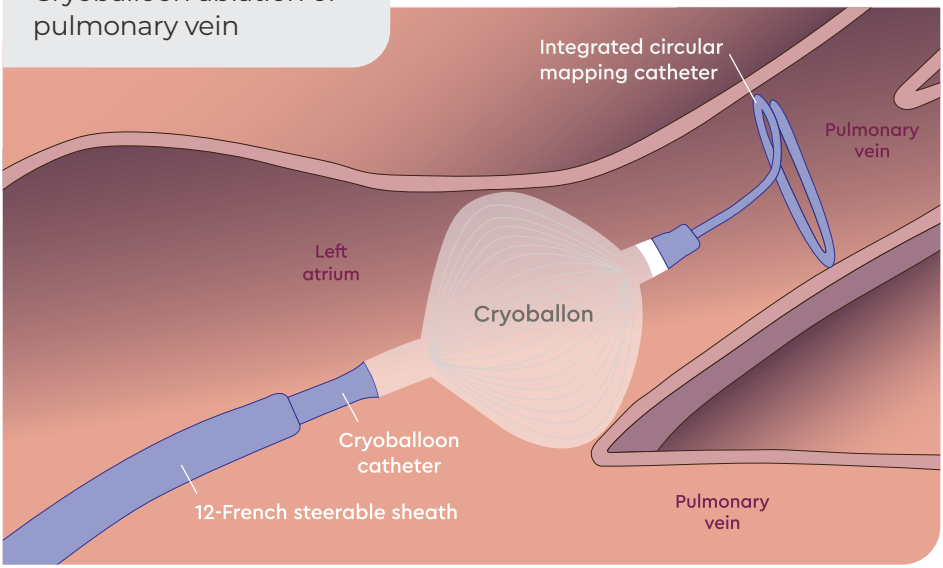
Research shows that most abnormal electrical impulses that trigger episodes of atrial fibrillation come from this region of the heart.

Why perform ablation for atrial fibrillation?

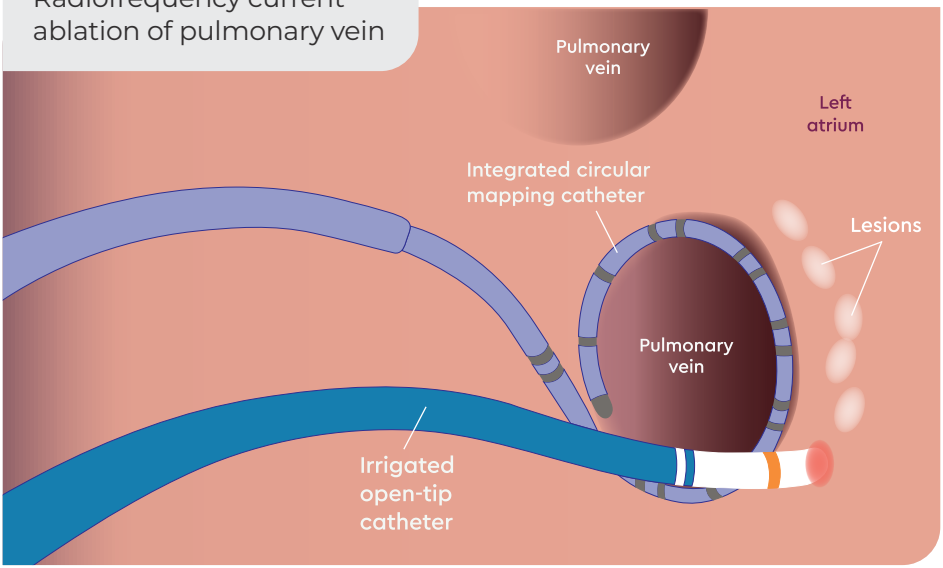
Some patients continue to experience symptoms from their atrial fibrillation despite medications and other treatments such as cardioversions (electrical shock under anaesthetic to reset the heart rhythm). For these patients, catheter ablation may be effective at controlling or even curing atrial fibrillation.



Cryoballoon ablation of pulmonary vein



Radiofrequency current ablation of pulmonary vein



Reference: Kuck, K., Brugada, J., Fürnkranz, A., Metzner, A., Ouyang, F., Chun, K., ... Tondo, C. (2016). Cryoballoon or Radiofrequency Ablation for Paroxysmal Atrial Fibrillation. The New England Journal of Medicine, 374(23), 2235–2245.

How successful is this procedure?

Success rates for this type of treatment are **greater than 70% in people** who are having intermittent episodes of atrial fibrillation, where success is the restoration and maintenance of normal heart rhythm **for at least one year**.

- Success rates are lower if the heart has been in persistent atrial fibrillation for some time
- Several techniques of catheter ablation have been developed for atrial fibrillation, and success rates can vary
- The cardiologist performing your procedure has been specifically trained in the latest techniques

Atrial fibrillation will return for small numbers of patients. In these cases, medications can be retried or a repeat procedure can be performed to improve success.

What should I expect?

The procedure may be performed under a **general anaesthetic or under sedation.**

- Small incisions are made in the groin region and several catheters are passed up through the veins into the heart
- Small punctures are made from inside the heart to advance the catheters across into the left atrium where the treatment will be delivered

First, information is collected by the catheters from inside of the heart.

- Then ablation treatment is performed around each point where the pulmonary veins connect with the left atrium
- Information is then re-collected to ensure that electrical impulses are no longer exiting from inside the pulmonary veins, triggering atrial fibrillation (so called “pulmonary vein isolation”)
- Other areas of the heart will be checked for abnormal electrical impulses which could cause atrial fibrillation, and additional treatment may be performed

At the completion of the procedure, pressure will be applied to seal over the incisions.

- You will be taken to recovery and then back to your ward bed for monitoring overnight
- You will be asked to lie still for six hours to prevent any bleeding from the incision points

An important safety aspect of the procedure is the prevention of blood clots from forming on the catheters during the procedure, or inside the heart during the healing period. Clots can potentially travel off in the bloodstream and cause stroke.

You may be instructed to take tablet blood thinner treatment for several weeks before the procedure. Your cardiologist will use additional blood thinners during the treatment.

The team performing the procedure includes:

- the Advara HeartCare cardiologist
- three catheter laboratory nurses
- an anaesthetist and anaesthetic nurse
- a radiographer
- a cardiac scientist
- a 3D mapping cardiac scientist

Preparation

Do not eat or drink anything for six hours prior to your catheter ablation procedure.

- You may be instructed to stop any antiarrhythmic (heart rhythm) medications three days prior
- A CT scan of your heart may be performed before your procedure

Make sure you **read the consent form** and understand the risks involved with this procedure, for example, stroke, cardiac tamponade, bleeding or bruising, infection and blood clots. Please clarify any concerns or queries with your cardiologist before signing the form.

What happens after the procedure?

In the first 24 hours after your procedure, it is common to have some minor bruising and discomfort at the incision sites in the groin and some mild chest discomfort.

You will generally be discharged from hospital the morning after your procedure.

- You will be instructed to take blood thinner treatment for at least two months, and possibly longer
- It is common to have some palpitations and even episodes of atrial fibrillation in the first two to three months of healing, and you will be advised to continue any antiarrhythmic medications during this time
- Avoid exercise and heavy lifting for the first few days, and then resume normal activities after the first week