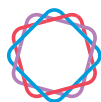




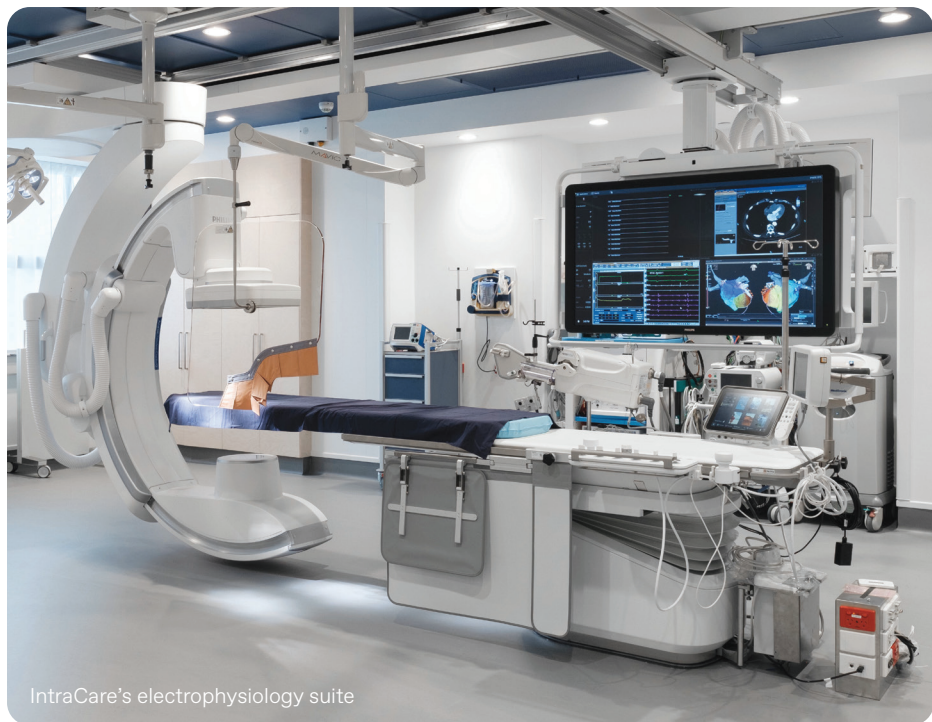
YOUR GUIDE TO

Pulmonary Vein Isolation (PVI)



IntraCare

Electrophysiology



IntraCare's electrophysiology suite

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About this procedure

This guide provides information about a pulmonary vein isolation (PVI) procedure. It includes details about what is involved, how to prepare and what to expect during and after the procedure. Please use this in addition to information from your doctor and nurse.

A PVI procedure is performed in an electrophysiology (EP) suite at IntraCare in Epsom. Your cardiologist will be assisted by our team of nurses and other highly skilled personnel.

Both IntraCare and Allevia Hospital will be involved with your care for this procedure. Allevia Hospital are responsible for your admission, preparation and aftercare in the Cardiac Investigation Unit (CIU).

What is atrial fibrillation?

Atrial fibrillation (AF) is an abnormal and irregular heart rhythm that originates in the top chambers of the heart (atria). The electrical signals which cause the heart chambers to contract, become disrupted and erratic. The two atria quiver (fibrillate) instead of contracting. The pulse becomes irregular and may be too fast, too slow or alternate between extremes.

Why do I need a PVI?

AF can lead to symptoms of breathlessness, palpitations, dizziness, fatigue and in severe cases can weaken the heart muscle. People with AF are at a higher risk of stroke because blood can stagnate in pockets of the atria instead of being pumped through the heart normally, forming blood clots.

The goals of treatment for AF include regaining a normal heart rhythm (sinus rhythm), controlling the heart rate, reducing symptoms, and reducing the risk of blood clots and stroke. It is important to note sometimes the first PVI ablation may not be successful long term. If AF returns, you may require another PVI ablation procedure.

What is pulmonary vein isolation?

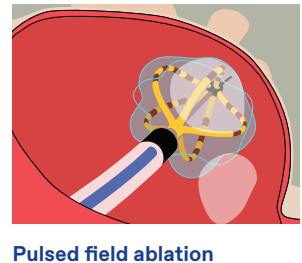
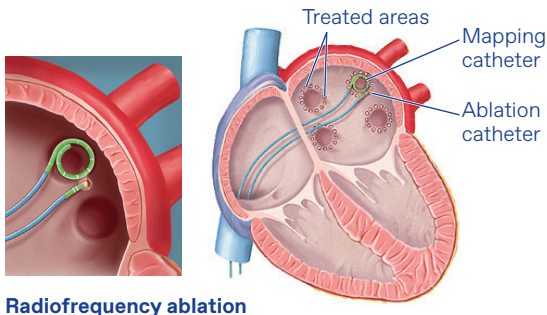
Pulmonary vein isolation (PVI) or pulmonary vein ablation is a treatment for AF. Ectopic beats (extra heart beats) that trigger off episodes of AF, have been found to originate from the pulmonary veins; the vessels that lead into the left atrium.

A PVI ablation forms a ring of electrically isolated tissue around each pulmonary vein, preventing the ectopic beats from triggering AF.

This ring-shaped barrier is formed by ablating the tissue. There are two ablation methods:

- Radiofrequency Ablation (RFA) – ‘cauterising’ the tissue.
- Pulsed field ablation – high voltage energy is applied across the cell membrane, causing formation of small pores. This process is called electroporation.

Your cardiologist will recommend an ablation technology for your individual circumstances, based on the best evidence available. Both technologies have a high success rate when used in the appropriate circumstances.



Before your procedure

Pre procedure phone call

A nurse from IntraCare will call you 24–48 hours prior to your procedure to discuss the following information:

- Your admission time.
- When you should stop eating and drinking.
- Medication instructions.
- Allergies (including medications, contrast dye, dressings/plasters and food).
- Answer any further questions.

Fasting Instructions

To ensure your safety during the procedure, it is important that you follow the fasting guidelines below:

Food – **Stop 6 hours prior** to procedure. Do not consume any of the following within 6 hours of your planned procedure time:

- Solid food
- Milk-based products
- Soluble fibre
- Jelly

Fluids – Clear (transparent) fluids are encouraged up to **2 hours before** your planned procedure time. These include:

- Water
- Clear juices
- Cordials
- Black tea or coffee

Avoid fluids containing milk, pulp, or jelly.

Sip-Til-Send (STS) Protocol*

- Unless advised otherwise, you can sip up to **200ml of water per hour** in the 2 hours before your planned procedure time.

* Your nurse will confirm during your pre-procedure phone call whether this protocol is suitable for you.

Anticoagulation (blood thinner)

You will be prescribed a blood thinning medication by your cardiologist prior to the procedure if you are not taking one already e.g. Dabigatran (Pradaxa), Rivaroxaban, Warfarin or Clexane. **It is very important to NOT miss any doses of your blood thinner for 1 month prior to your PVI ablation.** Please contact IntraCare if you have any questions about this.

On the day (important anticoagulation/blood thinner instructions)

- Please continue to take your regular blood thinner (anticoagulant) e.g. Dabigatran/ Pradaxa, Rivaroxaban, Apixaban, Warfarin as usual (uninterrupted) on the day of your procedure.
- If you are taking Warfarin, our nurses will review your INR levels prior to your procedure and advise any medication changes if necessary.

Other regular medications

Please continue to take these unless advised otherwise by your cardiologist. If you are taking a diuretic or water pills (e.g. frusemide, spironolactone), you may need to withhold this on the morning of the procedure. It is important that you let us know if you are taking the following medications: Liraglutide (Victoza™, Saxenda™) Dulaglutide (Trulicity™), Semaglutide (Ozempic™, Wegovy™), Tirzepatide (Mounjaro™).

Reminders for the day of your procedure

- If you are on regular medication, please bring this with you in its original packaging.
- Please leave all your jewellery and valuables at home. You are welcome to bring your mobile phone in with you.
- We recommend wearing loose-fitting clothing and shoes that are easy to slip on/off.
- You are encouraged to bring a friend or a family member as a support person before and after your procedure.
- Please bring an overnight bag with you as it is likely you will need to stay the night, unless otherwise discussed with your cardiologist.
- The planned procedure time is an estimate only and may vary. We will keep you informed of any unexpected delays on the day.

Informed consent

As with any procedure, there are potential risks involved. Your cardiologist and anaesthetist will explain the procedure, discuss possible risks and answer any questions you may have. Your whānau or support person are welcome to be part of this discussion. You will then be asked to sign the consent form. This will occur either at an earlier appointment, or on the day of your procedure.

Your procedure

A PVI procedure is performed under general anaesthetic and can take 1–3 hours.

Preparation

Once you are in the EP suite, the team will perform a safety check-in to confirm your name, date of birth and the procedure you are having. A small intravenous (IV) line will be inserted into a vein in your arm for medication to be injected. We may need to remove hair with clippers at the access site for sterile preparation. Please avoid shaving the area yourself as this may cause minor abrasions to the skin, increasing the risk of infection.

Several adhesive patches, small and large will be placed on your back and chest for monitoring and 3D mapping if required. Other devices for monitoring blood pressure, heart rate and oxygen levels will be fitted to ensure your safety during the procedure. We will carefully position and tuck your arms at your sides to ensure that sterility and safety are maintained.

The procedure

Once you are asleep, an anti-septic solution will be applied to the groin area to clean the skin. A small tube called a sheath will then be placed in the femoral vein (groin area). The ablation catheter is then passed up to the heart via this sheath and positioned in the left atrium (top chamber of the heart), by making a tiny hole in the septum between the right and left atria. This hole closes naturally after the procedure.

In many patients, a 3D electro-anatomical map is made of the left atrium, to help guide the catheters to exact locations. The ablation catheter is then moved to the entrance of each pulmonary vein so the ablation can be performed. Once the procedure is complete, the catheters and sheaths are removed from the vein.

After your procedure

You will be transferred from IntraCare to CIU, where the Allevia Hospital team will look after you in your recovery. While an overnight stay is common, you may be discharged the same day. This will be determined by your cardiologist on the day of the procedure. Prior to your discharge, the nurses will provide instructions on medication, procedure site care, and resuming your usual daily activities.

Recovery and discharge

- Following your procedure, it is important that you **do not drive for 48 hours**. Please ensure you have a family member or friend to drive you home from the hospital, as you may still be under the effects of anaesthesia or sedation.
- You will need to arrange someone to be at home with you on the day of your discharge and overnight to support you in your recovery.
- Due to the general anaesthetic, you may feel lethargic afterwards with reduced concentration. For this reason, for 24 hours after your procedure:
 - Do not do any activity requiring strength, concentration, or full alertness.
 - Do not make any legal decisions or sign legal documents.

- You may feel discomfort in the throat where the breathing tube was placed. This discomfort should improve over the next couple of days. You can take a lozenge to relieve the pain.
- Due to the nature of ablation, it is common to experience some chest discomfort for a few days.
- For a few weeks after your ablation, you may experience, occasional skipped heart beats or brief palpitations. These symptoms are common and will decrease with time.

Resuming travel and activities

- You will be able to return to work within a week of having the procedure unless your job involves heavy lifting (>5kg).
- You can begin light exercise after 1 week.
- If you have had a PVI ablation procedure, do not fly domestically for 48 hours, short international flights (e.g. Australia) for 2 weeks or long-haul international flights for 6 weeks.

Medication

- You will need to continue taking your blood thinning medication (anticoagulant) e.g. dabigatran/pradaxa or rivaroxaban for up to 3 months following your procedure. Your cardiologist will discuss this with you in more detail.
- Your cardiologist will discuss any medication changes with you, if necessary. If you have any questions regarding your medications after your procedure, please contact your cardiologist.

Follow up appointment

You will be seen in clinic at The Heart Group approximately 1–3 months following your atrial fibrillation ablation. If you have minor concerns prior to your follow up appointment, please arrange to see your general practitioner (GP) or contact IntraCare.

Femoral (groin) site care

It is normal to experience some bruising at the puncture site. During the first 5-7 days after your procedure:

- Do not do any heavy lifting (>5kg) or strenuous exercise.
- Try not to excessively cough, sneeze, or strain as this puts pressure on the puncture site which may cause it to bleed.
- Do not sit in a bath, hot tub or spa until the skin has fully healed (5-7 days)
- Do not cross your legs while sitting.
- You may resume walking if your puncture site is not painful.

Additional care instructions:

- If skin adhesive (glue) was used to close the skin at the puncture site, it will naturally wear off over time as it comes into contact with clothing. If any adhesive remains after two weeks, you may gently peel it off.
- If a dressing was applied to your groin, it can usually be removed after a few days.
- It is common for a closure device (ProGlide) to be used to seal the vein. It involves a small stitch placed inside the blood vessel to help it close. This stitch is completely internal and does not need to be removed.

Haematoma

A haematoma is a collection of blood under the skin that is sometimes painful. A small hard lump (similar in size to a pea) may also be felt under the skin and remain for several weeks:

- If a large lump (haematoma) occurs, lie down, and get another person to press down firmly on the centre of the haematoma for approximately 10 minutes.
- If after releasing pressure, the haematoma reoccurs, keep applying the pressure and go to your local accident and emergency department.

Bleeding

- It is common for there to be a small amount of ooze. If this occurs, lightly press on the area for 5-10 minutes.
- If there is significant bleeding, you should lie flat, and another person will need to apply firm pressure for 10 minutes. If this does not stop the bleeding, call an ambulance.

Seek immediate medical attention (dial 111 for an ambulance) if there is excessive bleeding from the puncture site or if you are experiencing severe chest pain.

Please take this booklet and your discharge summary with you if visiting the GP, afterhours or hospital.

**If you have any concerns after your procedure, please contact IntraCare:
Monday to Friday: 09 630 1961 (between 6:30am and 6:00pm).
For after-hours, weekends, and public holidays, contact 027 482 0763.**

How to find us

IntraCare Epsom

Both IntraCare and Allevia Hospital will be involved with your care for this procedure.

When you arrive, please report to the Allevia Hospital Admissions Lounge (2 on the map).

Directions to the Admissions Lounge:

- From the Level 1 Carpark – Walk across the footbridge towards the main reception. Take the Yellow Lift to Level 2. The Admissions Lounge will be on your right as you exit the lift.
- From the Ground Floor Carpark – Follow the blue walkway to the Yellow Lift and take it to Level 2. The Admissions Lounge will be on your right as you exit the lift.

98 Mountain Rd, Epsom, Auckland 1023

P: +64 9 630 1961 (Monday to Friday 6:30am–6:00pm)

P: +64 27 482 0763 (after hours, weekends and public holidays)

E: admin@intracare.co.nz

W: intracare.co.nz

Where to park

A 10 minute patient ‘drop off zone’ is available on the level 1 carpark. Head up the ramp as you enter the carpark from the Main Entrance (Gate 1) on Mountain Road.

The first 30 minutes are free and apply only once the vehicle licence plate number has been entered into a payment terminal. Patient parking is available on all levels of the car park. Parking limits apply, and parking spaces are marked (P90, P180, and All Day Parking).

The Allevia Hospital parking is managed by a separate company, and a fine may be issued if your vehicle breaches any of the parking terms and conditions.

There is free 120 minute parking available nearby on Mountain Road, Gilgit Road and Almorah Road after 9am.



Main entrance to patient and visitor car park
 ~ 250 spaces

Walkway to main reception
 Pedestrian access to main reception from car park

Yellow Lift

- | | |
|--|--|
| 1 Allevia Hospital reception and Allevia Radiology 1 reception | 8 Awanui Labs (blood tests) |
| 2 Admissions Lounge | 9 Allevia Radiology 2 (CT, ultrasound) |
| 3 Canopy Cancer Care | 10 The Heart Group |
| 4 ARO (Auckland Radiation Oncology) | 11 Allevia Radiology PET-CT Canopy Cancer Care |
| 5 Allevia Café and outdoor dining courtyard | 12 Allevia Specialist Centre |
| 6 Allevia Pharmacy | 13 Allevia Radiology 1 (MRI/X-ray) |
| 7 IntraCare | A B C D E Allevia Specialist Centre entrances |



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