

# Ventricular Tachycardia Ablation

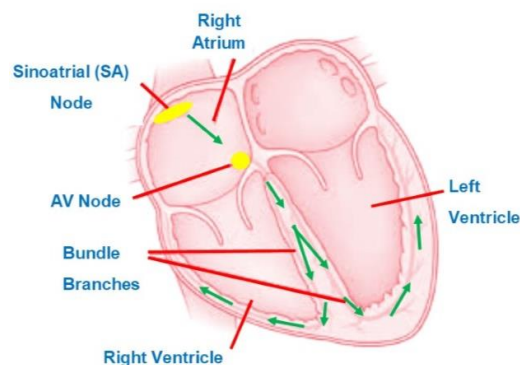
A Guide for Patients and Families

For further information please talk to your Cardiologist.

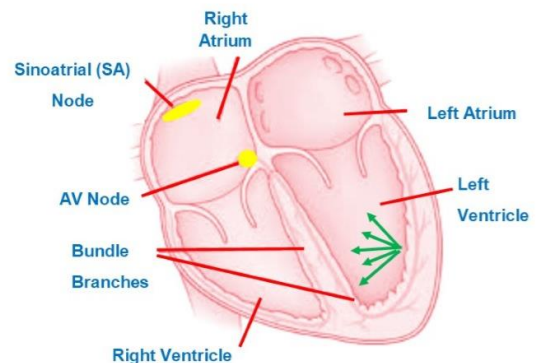
## WHAT IS VENTRICULAR TACHYCARDIA (VT)?

- Ventricular tachycardia (VT) is an abnormal rapid heart rhythm.
- Your heart has 4 chambers, 2 atria (upper) and 2 ventricles (lower). The chambers usually contract (beat) in a co-ordinated way to pump blood to your body and brain. This helps to maintain a normal blood pressure.
- Normally your heart beats between 60 and 100 times per minute. The atria contract first and then the ventricles. In VT, the ventricles beat at a fast rate (120 to 300 beats per minute) and are no longer co-ordinated with the atria.
- This abnormally fast heart rate makes the contractions weak and can give you palpitations (a feeling of rapid or abnormal heart beat), dizziness, light headedness, cause you to faint or have a cardiac arrest. If you already have a special cardiac device called a defibrillator implanted under your skin, you may experience multiple episodes of heart racing, or shocks.
- Going in and out of VT or having many extra beats from the ventricles (Premature Ventricular Ectopics/PVCs) may not be good for your heart. This can affect your long term health such as reduced heart function, reduced energy levels, light-headedness, short of breath, or chest pain. Your doctor will advise you if your VT or PVCs should be treated with medications or a procedure called an ablation.

Normal Sinus Rhythm



Ventricular Tachycardia



## WHAT CAUSES VENTRICULAR TACHYCARDIA

- VT or PVCs can happen in patients with a weakened heart muscle (cardiomyopathy) or when scar tissue forms in the heart after a heart attack.
- VT or PVCs can also happen in patients with normal hearts (idiopathic VT). It is usually due to a small nest (focus) of very excitable heart tissue that fires off randomly, like a muscle twitch.
- Your Cardiologist will discuss your medical history with you and may do some tests to work out if you have VT and what type it is. These tests might include;
  - Recording an electrocardiogram (ECG). Sticky dots and leads are placed on your chest, arms and legs to record your heart rhythm.
  - A holter monitor where 3 or more sticky dots are attached to your chest and you are asked to wear a recorder on a belt for up to 7 days.
  - A cardiac echo, cardiac magnetic scan (MRI) or a CT scan to take special pictures of the heart to detect scar tissue.
  - An electrophysiology study (EPS). A procedure in which catheters (tubes) are inserted into your heart from a small cut in your groin. The electrical system of your heart can then be stimulated to try and work out where an abnormal heart rhythm is coming from.
  - If you have an implantable cardioverter defibrillator (ICD) it may be checked for any abnormal heart rhythms.

This information will tell your cardiologist what type of VT you have, where in your heart it is coming from and the best way to treat it.

VT can come from different sites such as;

- The inside surface of the heart (endocardial)
  - Deep within the ventricular muscle (mid-myocardial)
  - The outside surface of the heart (epicardial)
  - Around a heart valve or in the veins or coronary arteries surrounding the heart.
- VT can be treated in a number of ways. Options include medications, insertion of an implantable defibrillator (ICD).



- Medications may not work in treating the VT or PVCs or may have side effects.
- Repeated shocks from an ICD may cause pain, discomfort, anxiety or depression, and may lead to worsening in heart function.
- Catheter ablation may be an option for you if your doctor advises you so.

### WHAT ARE THE RISKS?

Your doctor has recommended a VT Ablation for you as they believe the benefits to you outweigh the risk of not going ahead with the procedure. There are risks and complications related to this procedure. They include but are not limited to the following;

#### **Common risk and complications (more than 5%) include;**

- Minor bruising at the puncture site.

#### **Uncommon risks and complications (1- 5%) include;**

- Heart block where a pacemaker may be needed.
- Major bruising or swelling at the groin puncture site. This may need surgery to drain the blood from the bruise, repair a damaged blood vessel or block a bleeding blood vessel with special stents or coils, or require a blood transfusion.
- A hole is accidentally made in the heart or heart valve. This will need urgent heart surgery to fix.
- Blood clots in the lungs (Pulmonary embolism) or leg (DVT) causing pain or swelling.
- Skin injury from radiation. This may cause reddening of the skin.
- A stroke. This may cause long term disability.
- Heart attack, if there a blockage in the arteries supplying the heart from clots dislodging in the heart or aorta, or if the burns (ablation) is too close to the coronary arteries.
- Heart failure, if too much fluid accumulates in your lungs as a result of the fluids given during the procedure.

#### **Rare risks and complications (less than 1%) include;**

- Death as a result of this procedure is rare.  
Need for emergency life support called ECMO.

## Extra risks related to Epicardial VT Ablation include;

- Damage to abdominal organs (liver, spleen or bowel) or blood vessels below your diaphragm. This may need major surgery to fix.
- Accidental puncture of the right ventricle when gaining access to your epicardial space. This may require drainage with a catheter (tube) or heart surgery to fix.
- Heart attack. If the VT focus is close to the coronary artery there is a risk of damaging the coronary artery that supplies the heart muscle with blood and oxygen. To reduce this risk a coronary angiogram may be performed before the ablation is done to check how close the focus is to the coronary arteries.
- Damage to the phrenic nerve causing diaphragm paralysis. This can lead to difficulty breathing. Extra steps are taken during the procedure to minimise this risk.
- Injury or infection in the lung.

## BEFORE THE PROCEDURE

- If you are taking Rivaroxaban or Apixaban you may be asked to switch to another blood thinning medication such as Warfarin or Dabigatran at least 2 days before your procedure.
- If you are diabetic and take Metformin (Diabex®, Diaformin®) stop taking 2 days before and 2 days after your procedure. If you take Empagliflozin or Dapagliflozin (Forxiga®, Xigduo XR®, Jardiance®, Jardiamet®, Glyxambi® or Qtern®) stop taking 3 days before your procedure.
- Your healthcare team will be in contact with you well ahead of the procedure to advise you on any other medications that need to be stopped.
- Please let us know if you are allergic to Iodine, contrast medium or any other medications.
- Continue to take all your medications unless instructed by your cardiologist.
- Do not eat anything 6 hours before your procedure and only drink clear fluids until 2 hours before your procedure.
- Please arrange a friend or family member to take you home from hospital and stay with you for your first night at home. You cannot go home alone or in a taxi.

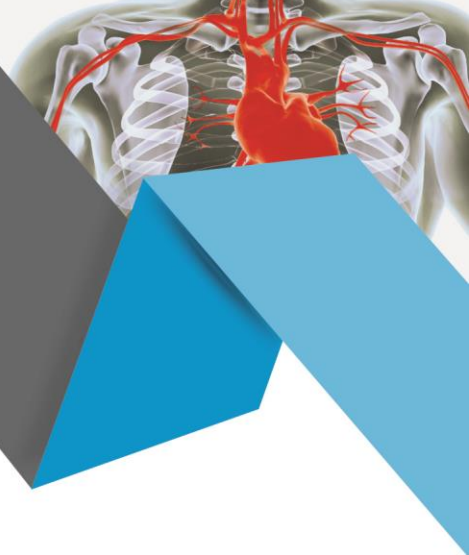




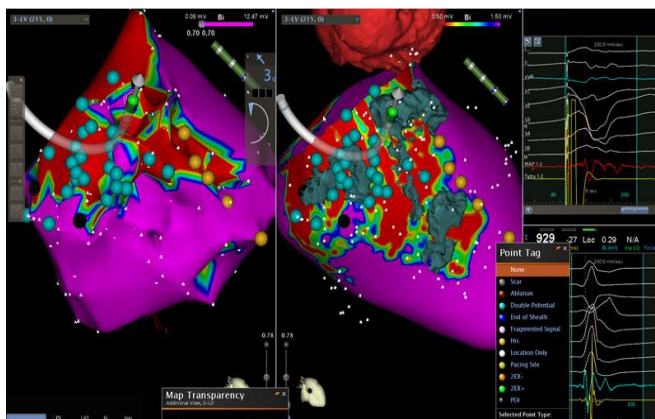
- You will change into a hospital gown, be given an ID armband and your groin clipped of any hair. Your healthcare team will take your vital signs (blood pressure and pulse) and insert an IV (intravenous) line into a vein in your arm.
- Ask any questions that you or your family may have and sign a form consenting to the procedure.

### DURING THE PROCEDURE

- The ablation is done in the Cardiac Catheterisation Laboratory (Cath Lab) a specialised procedural area that looks like an operating theatre. It is a sterile lab and the staff will be wearing gowns, masks and caps. You will lie flat on your back on a narrow table where you will be prepared for the procedure. ECG dots are put on your chest, and a blood pressure sleeve on your arm to monitor you during the procedure.
- Cold gel patches will be placed on your chest and back.
- The procedure will either be done under local anaesthetic with sedation or a general anaesthetic (GA). This will depend on the type and location of your VT. Your healthcare team will discuss this with you before your procedure.
- You will be given sedation and analgesia either by the anaesthetist or nurse to make you comfortable during the procedure. You may have an oxygen mask on your face. If you have a general anaesthetic, once you are asleep a tube will be put into your trachea (wind pipe) and you will be connected to a ventilator (breathing machine) for the procedure. If you have sedation you will be able to breathe on your own but be made sleepy and relaxed during the procedure. A nurse will be available to assist you if you have any concerns during your procedure.
- Your groin and/or chest will be cleaned with an antiseptic solution and you will be covered in a sterile drape.
- If the procedure is performed under sedation the doctor will inject local anaesthetic in the groin where the catheters (tubes) are to be placed. After that, you may feel pressure as the doctor inserts the catheters, but you should not feel pain. If there is any discomfort you should tell the nursing staff so that more local anaesthetic and sedative medication can be given.
- Catheters (tubes) the size of a small drinking straw are then placed inside your heart, these are used to locate and ablate your VT.

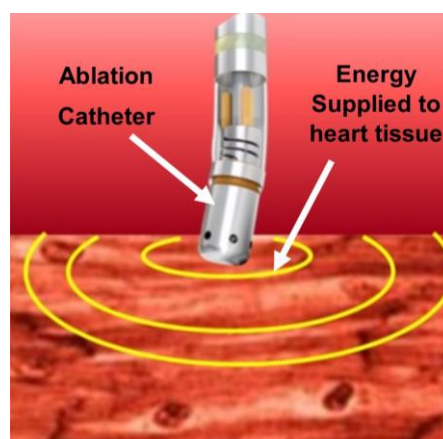


- A three-dimensional (3D) computer mapping system is used to guide your ablation procedure. This allows the catheters to be moved and positioned inside your heart without the need for constant X-rays. This helps to limit radiation as well as make an electrical map of your heart to locate the focus of your VT.



The red area on the image above shows where the electrical signal from your VT starts.

- If the focus of your VT is on the left side of the heart a small hole is made with a needle (transeptal puncture) to cross from the right side of your heart to the left. This is done under ultrasound guidance or x-rays.
- When the VT focus is located, radiofrequency energy is applied to a small area of the heart tissue to create a scar to stop the abnormal electrical activity.
- Radio frequency ablation (RFA) makes it possible to cure your VT rather than treat your symptoms with medication or an ICD.



- During procedure you will be asleep and should not feel any discomfort.

## HOW LONG WILL THE PROCEDURE TAKE

The procedure will take 2 ½ -4 hours.

## AFTER THE PROCEDURE

- When the procedure is over the catheters are removed. The incision is closed by pressing firmly on the site to stop bleeding. You will be woken up and taken to the recovery unit.



- You will then return to the ward where you will need to lie flat for several hours to reduce the risk of bleeding from your groin. The nursing staff will tell you when you can sit up and when you can eat and drink.
- You will need to stay overnight for monitoring.
- Your doctor will see you before discharge to explain the results of the procedure.
- Avoid strenuous activity such as running or hard labour for 5 days after your procedure.
- Do not lift objects more than 5kg (10lbs) for 7 days after your procedure.

### AFTER DISCHARGE AT HOME

- Slowly return to normal activities and full activity/work after a week.

### WOUND SITE CARE

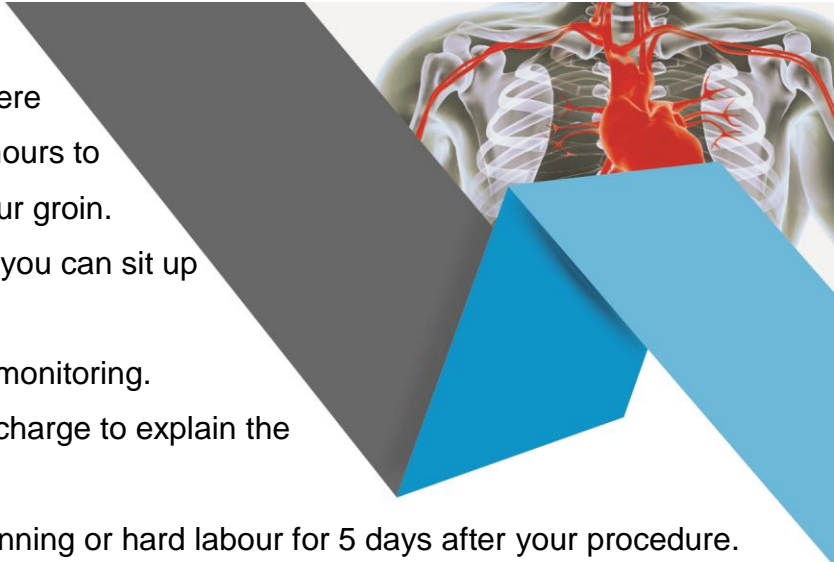
- The dressing on your groin can be removed the day after your procedure.
- You may take a shower the day after your procedure, do not take a bath or go swimming for 7 days after your procedure. Do not scrub the wound site for a week, lightly wash and pat dry. Avoid creams, lotions or ointments to the wound site.
- Notify your nurse or doctor straight away if you notice any of the following:
  - Worsening numbness or discomfort (mild discomfort is normal)
  - A lump that is getting bigger
  - Constant redness or warmth
  - Yellow ooze/pus from the wound site

### IF THERE IS BLEEDING OR A LUMP GETTING BIGGER AT THE WOUND SITE:

- 1) Lie down straight away and apply firm pressure (enough to feel the heart beat under your fingers) to the site for 15 minutes.
- 2) If bleeding continues or is a large uncontrolled amount or you feel faint or dizzy **call '000' immediately. Do not drive yourself to the hospital.**
- 3) Continue to apply pressure until help arrives.

### DRIVING ONCE YOU ARE HOME

- Do not drive for at least 2 weeks after your procedure. You should also not drive if there are any other symptoms that may affect your ability to control a vehicle.
- More information can be obtained from your Cardiologist or the Roads and Maritime Services.



## FOLLOW UP

- Please see your local doctor in 3 days and make an appointment to see your cardiologist in 4 weeks after leaving the hospital.
- Take medications as per your discharge letter until follow up with cardiologist.

## QUESTIONS FOR YOUR CARDIOLOGIST

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A free and confidential interpreter service is available 24 hours, 7 days a week, Ask staff to arrange an interpreter for you. AUSLAN is also available.

Carers provide care and unpaid assistance to others. They may be family members, friends or neighbours. Please notify staff if you have a carer.

All of our health facilities and grounds are 100% smoke free. For assistance to quit contact Quitline on 137 848

Off street parking is available on the hospital campus for a fee.

We welcome your feedback on this brochure as a way of continually improving our service. Send your feedback to: [WSLHD-Get\\_Involved@health.nsw.gov.au](mailto:WSLHD-Get_Involved@health.nsw.gov.au)

