

Catheter ablation for supra-ventricular tachycardia (SVT)

This leaflet explains what happens during your procedure called a catheter or radiofrequency ablation for supra-ventricular tachycardia (SVT). It includes the benefits, the risks and the alternatives. If you have any questions or concerns, please do not hesitate to speak with the doctors and nurses caring for you.

Confirming your Identity

Before your treatment or procedure our staff will ask you to confirm your name and date of birth and check your ID band. If you do not have an ID band, we will ask you to confirm your address.

If we don't ask these questions, then please ask us to check. Ensuring your safety is our primary concern.

How does my heart's electrical system work?

Your heart consists of two top and bottom chambers which pump side by side. The right side drains blood from your organs and circulates it through your lungs to pick up oxygen. This blood then returns from your lungs to the left side of your heart to be sent back to your organs. Each side has two chambers: the atrium at the top and the ventricle at the bottom.

Your heart needs an electrical impulse to make it beat.

In someone with a normal heart rhythm, the electrical impulse starts in the heart's natural pacemaker, called the sinoatrial (SA) node. The SA node is in the right-hand atrium.

The electrical impulse travels through your heart muscle and makes it contract. There is a junction between the atria and ventricles called the atrioventricular (AV) node that allows communication between these chambers. Your heart normally beats 50 to 100 times a minute when resting.

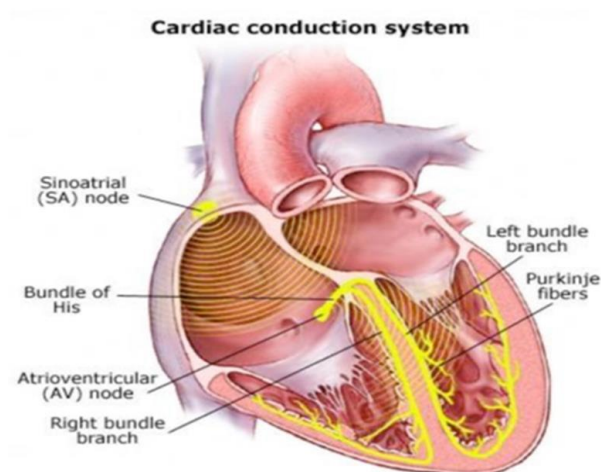


Image: Boston Scientific

What is supra-ventricular tachycardia (SVT)?

It is a type of abnormal heart rhythm (arrhythmia) that is usually caused by an extra electrical connection, or 'pathway', in the atria, the upper chambers of your heart. The extra pathway can disrupt the electrical system that controls your heart rhythm, so your heart suddenly beats much faster (above 100 beats a

minute). It can then suddenly slow down. This can happen when you are resting or doing exercise. You are often born with this extra pathway but it might only start to cause symptoms when you are an adult. SVT can make you feel quite unwell but it is usually harmless.

Symptoms can include:

- palpitations
- feeling tired
- shortness of breath
- chest pain or tightness
- feeling dizzy or light-headed.

How is SVT treated?

We can sometimes cure SVT – or at least greatly improve the symptoms – by carefully damaging (disrupting) very small areas of tissue around the extra electrical pathway. To do this, we thread a very thin ablation wire into your groin and guide it up to your heart. The end of this wire can be heated to cause the damage.

Why do I need this procedure?

Catheter ablation is a drug-free solution for a wide range of abnormal heart rhythms (arrhythmias). An ablation is usually performed when the arrhythmia is causing symptoms that interfere with your quality of life, such as stopping you from doing your job or normal daily activities, and when you haven't responded to other treatments, such as medicines.

What are the risks?

The risk of any of the following complications happening is very small. Before having your procedure, please feel free to discuss any concerns with the doctors or nurses caring for you.

- Minor bruising and tenderness in your groin.
- Damage to the blood vessels at the top of your leg causing a large bruise and possibly bleeding. This is usually treated by putting extra pressure on the area, but sometimes you may need a small operation to repair the damage.
- Palpitations during the procedure. We monitor your heart during the procedure so we will notice this and treat you, as necessary.
- If the extra pathway is near to the normal one (the AV node), this procedure may make you more likely to need a permanent pacemaker. This risk is 0.5%. If your doctor thinks you are at a particularly high risk, they may reconsider the need for an ablation and will discuss this with you.
- Heart damage or stroke caused by putting the catheters into your heart. This is very rare and happens in less than 0.1% cases.

If an emergency happens during the procedure, we will do whatever is possible to treat it. Although extremely rare, emergency treatment could include open-heart surgery.

What are the benefits?

In many cases the benefit is a cure with the aim to improve symptoms and quality of life.

Are there any alternatives?

Treatment will depend on the type of arrhythmia you have. Sometimes, simply finding out what you are feeling and why is enough. For example, lots of us get extra heartbeats (ectopic) from time to time and, although these can be a nuisance, they are usually harmless and require no treatment. Knowing they are not dangerous and trying not to focus on them can help you feel better.

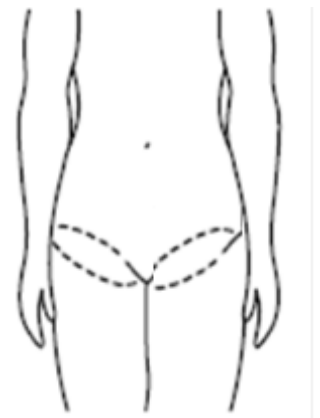
There are also several [medicines](#) that can help to keep your symptoms under control.

Will I have to stay in hospital?

The procedure is normally done as a day case and you do not have to stay in hospital overnight.

Do I need to prepare for the procedure?

- The night before you come into hospital, please shave the groin areas at the top of your right and left legs.
- On the morning of your admission, please shower. Avoid using oils and moisturisers.
- Bring all your medications to hospital with you.
- Please note we may ask you stop taking certain medications that can affect your heart rhythm before you come in for your procedure.



X-rays: important information

You will have x-rays during this procedure. If there is any chance you are pregnant, please let the doctor or nurse know before the procedure begins.

What happens before the procedure?

Pre-assessment

You will have a pre-assessment before your procedure where your nurse and/or doctor will explain the procedure and what to expect. They will also send/request several necessary investigations such as blood test, ECG, MRSA etc.

Eating and drinking: We would like you to stop eating and drinking at least six hours before you come in for your procedure. You may take any tablets with a small sip of water. If you wear dentures, you can keep them in if they fit well.

Consent: We must by law obtain your written consent to any operation and some other procedures beforehand. Staff will explain the risks, benefits and alternatives before they ask you to sign the consent form. If you are unsure about any aspect of the procedure or treatment proposed, please do not hesitate to speak with a senior member of staff again.

Preparing your procedure: When you arrive at the cardiac catheter suite, we will give you a hospital gown to wear and put a small plastic tube (cannula) into a vein in your arm using a needle. We will use this to give you any medication you need. You will be taken into the cardiac catheter laboratory and meet the team looking after you. This consists of your electrophysiologist (a consultant who specialises in heart rhythm problems), a cardiac physiologist, a radiographer and nurses.

What happens during the procedure?

You will be awake during the procedure but we may give you sedation that can make you feel drowsy. Please let us know if you are uncomfortable at any time during the procedure or if you feel very anxious.

We will ask you to lie as flat and relaxed as you can on the x-ray table, with a pillow on which to rest your head. If you find it hard to lie flat, please tell one of the arrhythmia nurses before you come in for your operation.

The cardiac physiologist will put some stickers on your chest, a blood pressure cuff on your arm and a probe on your finger. This will allow them to check your heart rate, blood pressure and oxygen levels during the procedure. You may also be given an oxygen mask to wear over your face.

We will clean your groin with antiseptic solution and inject it with a local anaesthetic. The anaesthetic will sting for a short while and then your groin will feel numb.

The electrophysiologist will put some thin plastic tubes (catheters) into the main vein in your groin. This should not be painful but you may feel some pushing.

They will then put the long thin wires to record electrical signals from inside your heart into the tubes and thread them until they reach your heart. The wires are guided into position using x-ray equipment. The x-ray machine will move around you to take pictures from different angles.

Once the wires are in the correct place, the doctor will look at your heart's electrical system to find the extra electrical pathway that is causing your SVT. They do this by recording the electrical signals on a computer.

We use a special machine (an artificial pacemaker) to give your heart small electrical impulses and make it beat at different rates. You may be aware of your heart racing or missing beats but do not worry: the electrophysiologist is making this happen.

If you feel uncomfortable, please let the electrophysiologist or the nurse know.

You may be given a drug to make your heartbeat abnormally fast. This will be given through the cannula in your arm. You may be aware of your heart racing and feel flushed for a few minutes.

When the electrophysiologist has found the problem electrical pathway, they will do the ablation. They usually do this using radiofrequency energy, which heats the tip of one of the wires in your heart and damages (disrupts) the problem area. You must stay still when they are doing this and you may be aware of a slight discomfort in your chest. This usually goes away after the ablation has stopped.

The electrophysiologist often needs to repeat this process several times during the procedure. There is often a waiting time of up to 20 minutes at the end of the procedure to ensure it has worked.

How long does the procedure take?

The shortest ablation can take as little as 15 minutes with an overall planning time included to ninety minutes to two hours. However, a more difficult and complex procedure can take three or four hours. However, this usually includes preparation before and a recovery period afterwards.

We closely monitor each patient for 15 to 30 minutes after the procedure to make sure it has been a success before returning them to the recovery ward.

What happens after the procedure?

The wires and catheters will be taken out. A small plaster will be put on the wound. You will then be moved to the recovery ward for close observation before discharge home.

You will need to lie flat for about two hours to allow the wound in your groin to heal. Your nurse will check your blood pressure, pulse and wound, give you a drink and make sure that you are comfortable. Once you can sit up a little, they may give you something to eat. You will have an electrocardiogram (heart tracing) and be encouraged to rest. Your doctor or arrhythmia nurse will discuss the results of your procedure with you later in the day and you should be able to go home by early evening.

What happens when I go home?

Going home: You must have someone to collect you from the ward and stay with you for the first night in case your wound bleeds or you feel unwell. We do not advise using public transport to travel home.

Driving: The DVLA states that you must not drive for two days after this procedure.

Going back to work: You will need to take one week off work after the catheter ablation.

Medications: Keep taking your medications as prescribed unless told otherwise by your medical team. In some cases, you may be asked to take aspirin for up to one month following the procedure.

Follow-up appointment: you will be reviewed in the outpatient/telephone clinic about three to six months after the procedure.

Chest ache: You may have mild chest ache for a few weeks after the procedure. This is a normal part of recovery and you can ease it by taking a painkiller such as paracetamol.

Will I still have any symptoms?

It is quite common to have some extra or missed heartbeats and this can happen for a few months after your procedure but if you have your original palpitations again it is important to try to have an ECG when this is happening. You can have one at your GP surgery or in the Emergency Department (A&E).

If you have these symptoms, please call the arrhythmia nurse specialists or tell your doctor at your next clinic appointment.

If you have any new medical concerns when you return home, please contact your GP (home doctor). If it is an emergency, please go to your nearest Emergency Department (A&E) or call 999.

Who can I contact with queries or concerns?

If you or your family have any general queries or concerns about this procedure, contact the Arrhythmia clinical nurse specialists' team. Please leave a message and they will return your call as soon as possible.

Tel: 020 8725 4140, 9am to 5pm, Monday to Friday

Email: stg.arrhythmianurses@stgeorges.nhs.uk

In an emergency, call 999 and ask for an ambulance.

Useful sources of information

- www.atrialfibrillation.org.uk
- www.arrhythmiaalliance.org.uk/
- www.bhf.org.uk
- www.gov.uk/government/organisations/driver-and-vehicle-licensing-agency

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111

AccessAble

You can download accessibility guides for all our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



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