

Heart Arrhythmias

Supraventricular Tachycardia



Supraventricular tachycardia (SVT)

These are a group of arrhythmias caused by abnormal electrical signals in the upper chambers of the heart, causing the heart rate to suddenly become abnormally fast.

Some people with SVT may not experience any symptoms, and SVTs are generally not life threatening. When symptoms are present, they can include:



- Fast heart rate



- Chest pain or discomfort



- Shortness of breath



- Dizziness or fainting



- Fatigue

Treatments can include:



- **Manoeuvres to stop SVT:** These are usually the first treatment used for SVT, and they aim to stimulate a nerve called the vagus nerve. Activating this nerve can slow your heartbeat temporarily, which can help to break an abnormal heart rhythm. Manoeuvres can include a Valsalva manoeuvre (where you hold your breath and push down with your abdominal muscles, as you might during a bowel movement), coughing hard, or blowing through a straw. Your doctor may also try massaging your neck where the carotid artery splits into two branches. If these techniques don't work, other treatments may be tried.



- **Medicines:** Medicines such as calcium channel blockers or beta blockers may be prescribed. Blocking calcium has an effect on the sinus and atrioventricular nodes which control the heartbeat, and so calcium channel blockers can help to control arrhythmias. Beta blockers work by slowing the heart rate, which can improve symptoms such as palpitations and fatigue.



- **Chemical cardioversion:** A medicine called adenosine may be given through a vein. This only lasts a few seconds, but you can feel quite unwell for those few seconds. Most people recover very quickly, and feel better with their heart being back in normal rhythm. Most people with an SVT can have this and avoid an electrical cardioversion (see next).



- **Electrical cardioversion:** This procedure gives an electric shock to the heart to help it get back to a normal rhythm. Electrode pads are placed on the chest, and medicine is given through a vein to put you to sleep during the procedure. The electrodes are connected to a cardioversion machine (defibrillator) via wires. This machine checks the rhythm of your heart and delivers shocks to the heart to restore a normal rhythm. Once you are asleep, the procedure usually only takes a few minutes. Risks include: developing another abnormal heart rhythm, dislodging existing blood clots, or skin damage where the electrodes are placed. These risks are uncommon, and your doctor will discuss the risks and benefits of this treatment with you. For most people, the procedure quickly restores a normal heartbeat, allowing you to get back to your usual activities.



- **Catheter Ablation:** In this procedure, heat or cold energy is used to modify the tissues that create the abnormal signals. Risks of ablation can include: infection after surgery, damage to blood vessels or heart valves, a new or worsening arrhythmia (in some rare cases needing a pacemaker), blood clots, stroke or heart attack. Your doctor will discuss the risks and benefits of this treatment with you. Although there are a number of possible risks, the procedure is generally considered low risk, and can be done with an overnight stay or as a day procedure.





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