

## Who should investigate an Arrhythmia?

Troublesome palpitations should be investigated by your local cardiologist. Palpitations without high risk may settle with simple tablet treatment. Where they fail to respond successfully, with tablets, many such cases may be curable using **catheter ablation** techniques.

These keyhole methods are used by **interventional electrophysiologists**, specialist cardiologists trained in these techniques. Catheter ablation requires a **hospital procedure** to position **recording wires** in the heart through the veins using local anaesthetic.

These wires, or catheters, can determine the type of short-circuit that is giving rise to the arrhythmia. Usually an **extra electrical pathway** is present, and this can be **cauterised** using another specialised catheter. Most supraventricular arrhythmias can be cured using catheter ablation techniques.

Some ventricular arrhythmias can be cured using catheter ablation. However, since ventricular arrhythmias are often linked with damaged hearts, it is more common for such patient to need powerful drugs for suppression of arrhythmias, and implantable defibrillators. Sometime catheter ablation can help these patient too.

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### AIMS:

- ♥ To raise awareness of Cardiac Arrhythmias
- ♥ To improve diagnosis of Cardiac Arrhythmias
- ♥ To improve treatment of Cardiac Arrhythmias
- ♥ To improve quality of life for people living with Cardiac Arrhythmias

*Please remember these are general guidelines and individuals should always discuss their condition with their own doctor.*



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Promoting better understanding, diagnosis, treatment and quality of life for individuals with cardiac arrhythmias

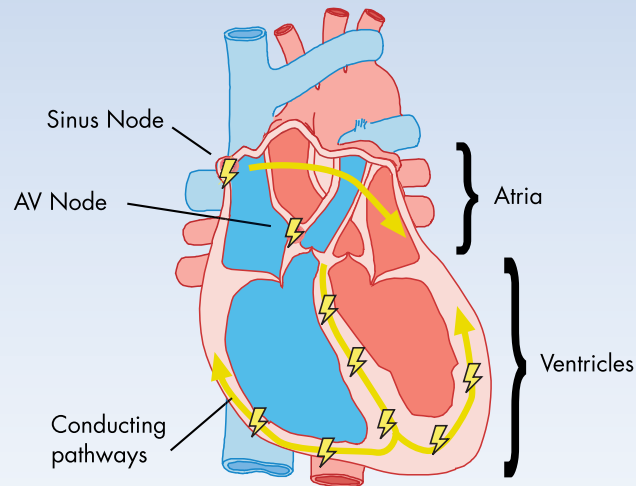
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## Patient Information



# What are arrhythmias and how can they be treated?

## The normal heart cycle



There is a normal electrical cycle of the heart that occurs with every heartbeat. An arrhythmia occurs when this electrical cycle is disturbed.

Normally, tiny electrical currents activate the top part of the heart, (**the atrium**), just before the bottom part of the heart. These are **the ventricles**, the muscular chambers that pump the blood to the lungs and around the body. When the heart rhythm goes too fast it is termed a **tachyarrhythmia**.

When it goes too slowly due to a failure of electrical activation, it is termed a **bradyarrhythmia**.

## Where do arrhythmias arise?

Most arrhythmias arising from the top of the heart, (**supraventricular**) are troublesome, but not life-threatening, although there are exceptions.

Many arrhythmias arising from the bottom chambers (**ventricles**), are life-threatening. Many arrhythmias can be completely cured by keyhole techniques, (**catheter ablation**).

**Ventricular** arrhythmias are often much harder to treat, and often require powerful drugs and implantable life-saving devices called **defibrillators**.

## Implantable defibrillators

These devices shock the heart back into a stable rhythm in life-threatening situations of **cardiac arrest**. External defibrillators are now available in many public places for use by bystanders who may witness a cardiac arrest. However, delays often occur in administering a life-saving shock.

Patients at high risk of a cardiac arrest occurring without warning and at any time, are given implantable defibrillators. These can detect and treat a cardiac arrest within seconds.

Implantable defibrillators are like large pacemakers, and can be implanted under local anaesthetic.

## Atrial Fibrillation

As well as going too fast or too slow, the heartbeat may be irregular and often fast and irregular. This is usually due to atrial fibrillation. Arrhythmias get

much more common in old age with some 750,000 people in the UK affected by atrial fibrillation.

Even where atrial fibrillation produces few symptoms, it can give rise to an increased risk of strokes.

## How is the risk of an arrhythmia determined?

Patients with arrhythmias and normal heart function are usually at low risk from their arrhythmia. Patients with arrhythmias and damaged hearts, often due to a previous heart attack that has left scarring on the heart muscle, may be at high risk from their arrhythmias.

## Symptoms in arrhythmias

Patients with arrhythmias often complain of awareness of the heart beating or "palpitation". Doctors will usually ask if the palpitations are rapid or if they are regular or irregular. Tests will be usually done to determine if the arrhythmia is associated with a normal or damaged heart function and these are used to assess the risk to the patient.

A key to successful treatment of an arrhythmia is to record the attacks on an ECG whilst they are happening. This gives further information about the nature of the arrhythmia, any risk, and the possibilities of successful treatment.