Palpitation

Information for people who have palpitations, and for their family and friends
What are palpitations?

Palpitations are an awareness of the heartbeat. The heart may be beating at a normal rate, rapidly, slowly or irregularly, or it may be missing beats.

Most palpitations are quite harmless although they can be quite unpleasant or even alarming. Everyone experiences them at some time, including people with no evidence of heart disease. They have many causes including fear, anger, exercise, fever, stomach upsets or drinking alcohol.

However, some palpitations are caused by disease. These palpitations may be particularly unpleasant as the heartbeat may be very fast, very slow or very irregular. Bouts of palpitations may last for seconds, minutes or even hours. Some people have very rare attacks; others have attacks every day. Many attacks occur suddenly and unexpectedly but a few may be provoked by specific circumstances such as anxiety or exercise. Palpitations that cause symptoms such as sweating, faintness, chest pain or dizziness usually indicate that there is an upset in heart rhythm that needs further investigation.
Normal heart rhythms

The heart is a muscular pump which circulates blood through the body and lungs. It has four chambers - two upper ones called the right and left atria, and two lower ones called the right and left ventricles.

The heart’s pumping action is controlled by tiny electrical impulses produced by a special part of the right atrium called the ‘sinus node’. This is sometimes called the heart’s natural ‘pacemaker’. The rhythmic impulses produced by the sinus node cause the atria to contract and push blood into the ventricles. The atria are joined to the ventricles but the electrical impulses all travel through to the ventricles via one special place, called the atrio-ventricular node or ‘AV node’. This acts like a junction box and is sometimes called the ‘AV junction’. The impulse is delayed a little before it enters the ventricles through fibres which act like ‘wires’ (the Purkinje system). When the impulse reaches the ventricles they both contract, pushing the blood out of the heart to the lungs and the rest of the body. So, in a normal heart rhythm, each impulse from the heart’s pacemaker makes the atria and the ventricles contract regularly and in the correct sequence.

Sometimes the heart will beat faster or more slowly, depending on your state of health and whether you have been exercising or resting. When the heart is beating fast, this is called ‘sinus tachycardia’. When it is beating slowly it is called ‘sinus bradycardia’. These are normal heart rhythms and do not mean that there is anything wrong with your heart.
**Sinus tachycardia (normal but fast rhythm)**

While you are resting, your heart’s pacemaker fires off between 50 and 100 impulses a minute. It is the pumping of blood that produces your pulse, which can be felt for example at the artery in your wrist. By taking your pulse, doctors can examine the rate and rhythm of your heart.

Doing exercise creates certain reactions in the nervous system and in the body’s chemicals, which make the pacemaker speed up. When the heart rate produced by the sinus node goes above 100 beats a minute, the rhythm is called ‘sinus tachycardia’. (Tachy = fast, cardia = heart.) The chemicals involved are called ‘catecholamines’, one of which is adrenaline. Adrenaline is also released when we are frightened; it prepares our body for action. The heart beats rapidly and powerfully to pump out more blood, to make you ready for ‘fight or flight’.

The heart rate may also be increased if you have an overactive thyroid gland or if you have a fever (for example with influenza), or anaemia.

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**Sinus bradycardia (normal but slow rhythm)**

When the sinus node slows the heart rate to below 60 beats a minute, the rhythm is called ‘sinus bradycardia’. (Brady = slow, cardia = heart.) Many athletes have sinus bradycardia. Also, when you feel sick or nauseous it is normal for your heart to slow down. Sometimes the heart may slow down too much and produce a faint.
“My heart sometimes seems to have an extra beat”

Extra heartbeats - called ‘ectopic beats’ - are very common. They may be extra beats either from the atria (atrial) or ventricles (ventricular). They are more common in people who have heart disease, but most people have at least one ectopic beat in every 24 hours.

Most ectopic beats go unnoticed. If you do notice an ectopic beat it feels like a thud in the chest, or an irregular heart rhythm. Sometimes you may notice one when you are in bed lying in a position where you can ‘hear’ your heart rhythm. Tiredness or alcohol may accentuate these extra beats. Some people believe that coffee and tea may provoke ectopic beats but this does not happen often.

Ectopic beats are not in themselves dangerous and they do not damage your heart.

Fast, regular beats

If you feel your heart is beating too fast, but still regularly, this can be one of three things:

- normal sinus tachycardia (see page 6) or
- supraventricular tachycardia (which is common) or
- ventricular tachycardia (which is not common).

Supraventricular tachycardia (Also known as SVT, or Paroxysmal SVT or PSVT)

Supraventricular tachycardia is a disturbance of heart rhythm caused by rapid electrical activity in the upper parts of the heart. In these attacks the heart beats very fast, usually at a rate of between 140 and 240 beats a minute. In most cases the heart is normal in every other way.

Symptoms may be uncomfortable but are not harmful. The most common symptom is palpitation, but there may also be dizziness or even, very occasionally, fainting. Attacks usually start in youth and may recur over many years but tend to lessen as the person gets older. Some people find that certain things can trigger an attack, such as an emotional upset, physical activity, certain foods and drinks (especially coffee), or alcohol.