

Heart arrhythmia and palpitations

Depending on a person's age and level of fitness, the heart beats (on average) between 60 and 100 times every minute. Almost everyone experiences a palpitation occasionally. This may be the result of a very brief period of irregular heartbeat.

In the healthy heart, a palpitation or two may be caused by:

- Exertion
- Rush of adrenalin
- Anxiety or emotional upset.

This type of heart arrhythmia typically feels like a skipped beat, followed by a heavy thud. The occasional palpitation that does not affect your general health is nothing to worry about. However, consistent irregularities of the heartbeat should be investigated by a doctor.

If palpitations are accompanied by light-headedness, fainting or chest pain, you should seek urgent medical help by calling triple zero (000).

The workings of the heart

The heart, blood vessels and blood make up the circulatory system. The main role of the circulatory system is to deliver oxygen and nutrients to every cell and take away their waste products. The heart sits inside the chest, in front of the lungs and slightly to the left.

The heart is actually a double pump, made up of four chambers. The upper right chamber (right atrium) takes in deoxygenated blood, which is then squeezed into the lower right chamber (right ventricle) and pumped to the lungs. Oxygenated blood from the lungs travels to the left upper chamber (left atrium) and, from there, enters the lower left chamber (left ventricle) and is pumped around the body. The contractions of the chambers make the sound of heartbeats. A special cluster of cells, situated in the right atrium and called the sinus node, regulates the heart rate.

Symptoms of arrhythmia

Occasional palpitations during periods of emotional or physical stress are normal and are nothing to worry about. The symptoms of more serious heart arrhythmia include:

- Persistent palpitations that feel like pounding, galloping or fluttering
- Chest pain
- Dizziness or fainting
- Sweating
- Shortness of breath
- Light-headedness
- Fullness in the throat or neck.

Two categories of arrhythmia

Heart arrhythmia is categorised into two types:

- **Tachycardia** – this is when the heart beats quickly. Most episodes of tachycardia are experienced in the upper chambers of the heart, or atria. Those that occur in the lower chambers, or ventricles, are more serious. Arrhythmias in the ventricles are associated with sudden cardiac death, particularly if the ventricles are reduced to quivering rather than beating. This is called 'ventricular fibrillation', commonly known as a cardiac arrest. It should be noted that tachycardia is normal after vigorous exercise.

- **Bradycardia** – this is when the heart beats slowly. Bradycardia can be caused by problems with the sinus node, the specialised cluster of cells in the heart that regulate the heartbeat. In other cases, there may be a problem with the electrical ‘cabling’ between the top and bottom chambers of the heart. This can result in the intermittent transfer of electrical signals, which can cause the heart to beat very slowly. It should be noted that people who are physically fit may have a slow ‘resting heart rate’ and a normal bradycardia.

Drugs can cause arrhythmia

Some cases of arrhythmia can be traced to certain medications or drugs, including:

- Appetite suppressants
- Beta blockers
- Caffeine
- Cocaine
- Amphetamines
- Nicotine in cigarettes
- Some asthma medications
- Thyroid medications.

Serious disorders

Heart arrhythmia can be a symptom of more serious underlying disorders, including:

- Previous heart attacks that have scarred the heart tissue
- Heart valve or heart muscle abnormalities
- Congenital heart disease
- An overactive thyroid gland
- Problems with the electrical circuitry of the heart
- Significant electrolyte abnormalities.

Medical tests

If you are troubled by persistent irregularities of heartbeat, you should consult with your doctor for a thorough medical examination. Recommended tests could include:

Resting ECG or electrocardiogram – records a detailed snapshot of your heart rate and rhythm.

Monitoring with a 24-hour portable ECG recorder – a small, discreet monitor that continuously records your heart rate and rhythm for long periods.

Chest x-rays.

Treatment for heart arrhythmia depends on the cause. It is important to remember that not all chronic arrhythmias are dangerous or life threatening. Sometimes, the heart is perfectly healthy but its regular beat is interrupted as the result of emotional upset or stress. In these cases, stress management and healthy lifestyle changes may be helpful.

Treatment

Depending on the type of arrhythmia, options for treating serious cases of heart arrhythmia include:

- **Medication** – to ‘stabilise’ the rhythm.
- **A pacemaker** – a small electronic device that electrically stimulates the heart to maintain an appropriate heart rate.
- **Defibrillation** – mild electrical current to ‘reset’ the heartbeat.
- **Electrophysiology study** – a type of ‘keyhole surgery’ for the heart where the site of the arrhythmia is located with specially designed catheters and eliminated by one or more bursts of radio frequency energy.

In an emergency, always dial triple zero (000) for an ambulance – this may include collapse with loss of consciousness, or chest pain or discomfort lasting for at least 10 minutes.

Where to get help

- In an emergency, always dial triple zero (000) for an ambulance
- Your doctor
- Specialist cardiologist
- Heart Foundation, Heartline Tel. 1300 36 27 87 www.heartfoundation.com.au

Things to remember

- A heart that persistently beats irregularly, too fast or too slow is considered to be experiencing heart arrhythmia, or abnormal heart rhythm.
- Many short-lived heart arrhythmias, felt as palpitations (an awareness of the heartbeat), are caused by stress or emotional upset.
- Seek urgent medical help by calling triple zero (000) if palpitations or abnormal heart rhythms are accompanied by fainting, light-headedness or chest pain.

This page has been produced in consultation with, and approved by:

Heart Foundation

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