

# Dual-chamber pacemakers for symptomatic bradycardia due to sick sinus syndrome without atrioventricular block

Information for the public

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[www.nice.org.uk](http://www.nice.org.uk)

## What has NICE said?

Dual-chamber pacemakers are recommended as a possible treatment for people with symptomatic bradycardia due to sick sinus syndrome without atrioventricular block.

## What does this mean for me?

If you have symptomatic bradycardia due to sick sinus syndrome, without atrioventricular block, and your doctor thinks that a dual-chamber pacemaker is the right treatment, you should be able to have the treatment on the NHS.

## Why has NICE said this?

Dual-chamber pacemakers were recommended because they work better than other treatments available on the NHS. Although dual-chamber pacemakers cost more than single-chamber pacemakers, this was justified by the clinical benefits provided.

NICE looks at how well treatments work in relation to how much they cost compared with other treatments available on the NHS.

## The condition and the treatment

When the heart beats at a slower rate than normal, this is called bradycardia. This may not cause any symptoms, but when symptoms do occur, they include fainting, falls, dizziness, confusion, chest pain and difficulty breathing. When bradycardia occurs with these symptoms, it is called symptomatic bradycardia.

Common causes of symptomatic bradycardia are sick sinus syndrome and atrioventricular block. Sick sinus syndrome is the name given to a group of heart rhythm conditions caused by a problem with the heart's natural pacemaker (the sinus node), which becomes unable to produce the electrical impulses the heart needs to beat at the normal rate. Atrioventricular block is a condition where electrical impulses from the sinus node to the lower chambers of the heart are slowed or blocked. Sick sinus syndrome can happen with or without atrioventricular block. This guidance relates only to those people with sick sinus syndrome and no evidence of atrioventricular block (for recommendations on sick sinus syndrome with atrioventricular block, or atrioventricular block alone, please see [NICE technology appraisal guidance 88](#)). Symptomatic bradycardia caused by sick sinus syndrome without atrioventricular block can be treated using a pacemaker.

A pacemaker is a small device placed under the skin in a small surgical procedure. It is connected to the surface of the heart by tiny wires. The pacemaker is able to detect if the heartbeat is too slow, or if an electrical impulse is not produced. It then produces an electrical impulse to start or control the beat of the heart.

Pacemakers can be either single-chamber or dual-chamber, depending on the way they are connected to the heart. Single-chamber pacemakers are connected to only either the upper or the lower chamber of the heart. Dual-chamber pacemakers are connected to both the upper and lower chambers of the heart.

NHS Choices ([www.nhs.uk](http://www.nhs.uk)) may be a good place to find out more

## Sources of advice and support

- Action Heart, 01384 292233, [www.actionheart.com](http://www.actionheart.com)
- Arrhythmia Alliance, 01789 450 787, [www.rrhythmiaalliance.org.uk](http://www.rrhythmiaalliance.org.uk)
- British Cardiac Patients Association, 01223 845845, [www.BCPA.co.uk](http://www.BCPA.co.uk)
- South Asian Health Foundation, [info@sahf.org.uk](mailto:info@sahf.org.uk), [www.sahf.org.uk](http://www.sahf.org.uk)
- STARS – Syncope Trust and Reflex anoxic Seizures, 01789 867 503, [www.stars.org.uk](http://www.stars.org.uk)

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## Accreditation

