



DECISION AID

Treatment for a slow heart rate (bradycardia arrhythmia)

You have been diagnosed with a heart condition that means your heart beats too slowly (bradycardia). One possible cause is atrioventricular block (AV block). If you only have a mild form of this heart rhythm disorder, you might not have any symptoms. But severe cases can result in dizziness, weakness, breathing difficulties, fainting or even death.

A pacemaker can be an effective way to treat the symptoms and prevent complications. This device is put in your body (implanted) during a surgical procedure. It sends electrical signals to the heart muscle to make sure your heart beats fast enough. Whether a pacemaker is suitable for you will mainly depend on what's causing your slow heart rate, whether you have any symptoms and, if so, what they are.

The aim of this decision aid is to help you choose a suitable treatment together with your doctor.

Please note: A slow heart rate is often the result of damage to the heart – for example, due to coronary artery disease (CAD) or heart failure. Then you might need other examinations and treatments that are not listed or described in this decision aid.

TREATMENT OPTIONS FOR A SLOW HEART RATE (BRADYCARDIA ARRHYTHMIA):

- **Medication:** Medication is only considered in an emergency – in severe new cases of AV block, for instance. It is a temporary solution until you get a pacemaker. If the thing that's causing the slow heartbeat can be remedied quickly (like poisoning or inflammation), medication is sometimes enough on its own.
- **Pacemaker:** This device makes sure your heart beats regularly and fast enough. In an emergency, it's possible to use an external pacemaker as a temporary solution. But the long-term approach is to have a pacemaker implanted.

In an emergency – like if your heart can no longer pump blood around your body – you're usually not able to make decisions. One thing you can do, though, is think about what you would want to happen in these situations. Then you can write it down (in a living will, for example) and discuss it with your loved ones.

LONG-TERM TREATMENT WITH AN IMPLANTED PACEMAKER:

You can read about the pros and cons of an implanted pacemaker on the following pages. They also describe who can have an implant and what happens if you decide not to have one.

PERSONAL DECISION

This decision aid probably won't include all of the information that you need. You will still have to talk to a doctor, but the decision aid can help you. Your decision will depend on various things, including:

- Which symptoms you would like to improve and how distressing they are.
- Which type of heart problem is causing the slow heartbeat.
- Whether your heartbeat is constantly too slow or just occasionally.
- Whether the cause can be treated or avoided – for instance, if the abnormal heartbeat is a side effect of medication like antidepressants or blood-pressure-lowering drugs.



Don't let anyone pressure you into a decision! Even if the symptoms are very distressing, take the time to find out what you need to know and make a decision.

PROS AND CONS OF AN IMPLANTED PACEMAKER

	With an implanted pacemaker	Without an implanted pacemaker
What exactly happens?	The procedure to implant the device is done in a hospital. You will be given a local anesthetic or a brief, light general anesthetic. The surgeon sews the pacemaker into place under the skin or muscle in your upper chest. Then they push the electrode leads through a vein and into your heart.	Nothing is done to influence your heartbeat over the long term. If there's a medical emergency because your heart is beating very slowly, you can be given medication or an external pacemaker.
How does the heartbeat change?	The pacemaker sends electrical signals to make your heart beat regularly and fast enough. The device can be programmed to make your heart beat faster when under strain than at rest.	Your heartbeat stays the same over the long term, so it is still abnormal.
What are the potential risks and side effects?	The implantation procedure can result in infections, wound-healing problems and bleeding (if blood vessels, the lungs, or the wall of the heart are injured). There is a slight risk of the electrode leads moving out of place or being damaged over time. Malfunctions and "pacemaker syndrome" (with a pounding heart, dizziness and shortness of breath) are also rare. This syndrome can happen if the upper and lower heart chambers aren't in sync with one another.	If your abnormal heartbeat is harmless and your heart is otherwise healthy (if you have first-degree AV block, for example), you're unlikely to have any problems. If your condition is more severe, symptoms like dizziness, weakness or fainting may occur or get worse. Not having treatment also means not doing anything to prevent complications like cardiac arrest (when the heart stops beating).
Who is it suitable for?	People with severe (third-degree) AV block or moderate (second-degree) AV block with an increased risk of complications (Mobitz type 2) – whether they have any symptoms or not. People with <ul style="list-style-type: none"> • first-degree AV block, • second-degree AV block and a low risk of complications (Mobitz type 1), • a faulty sinus node (sick sinus syndrome), • bundle branch block, if they also have symptoms (like fainting episodes, faster exhaustion or dizziness) that are clearly caused by the abnormal heartbeat.	For people who have <ul style="list-style-type: none"> • first-degree AV block, • second-degree AV block with a low risk of complications (Mobitz type 1), or • a faulty sinus node (sick sinus syndrome), but no resulting symptoms . If the cause of the abnormal heartbeat has been dealt with (for example, if the person stops taking the medication that was slowing their heart down), no treatment is needed after that either.

HELP WITH YOUR DECISION

Perhaps you're still not sure whether an implanted pacemaker would be a good option for you. You can make a note of your thoughts and any questions you still have about the various options here:

Treatment with an implanted pacemaker			
What do I like about this option?	<input type="radio"/>		
What don't I like about this option?	<input type="radio"/>		

IF YOU STILL AREN'T SURE, WHAT ELSE DO YOU NEED IN ORDER TO MAKE A DECISION?

With all the different pros and cons to consider, it can be hard to decide which is the right or wrong treatment for you. If you need more help:

- You will find a link to further information on the next page.
- You can talk to your doctor again.
- You can also talk to a different doctor and get a second medical opinion. You will find information about this option on the next page, too.
- You can talk about it with your friends and family.
- You can contact a patient information center or a support group.

YOU WILL FIND IN-DEPTH INFORMATION ABOUT THE FOLLOWING TOPICS ON THE INTERNET:



AV Block (heart block):
www.informedhealth.org/av-block



Second medical opinion:
www.informedhealth.org/SecondOpinion

PREPARING FOR THE DOCTOR’S APPOINTMENT

Do you still have any questions? What are you most concerned about? Write down any questions or thoughts you may have, and take this decision aid with you to the appointment. You can ask the doctor about anything you would like to know or discuss anything you are worried about.

You will find a list of questions – and can choose those that are most important to you – here:
www.informedhealth.org/questions

PUBLISHING DETAILS

This decision aid was developed by the Institute for Quality and Efficiency in Health Care (IQWiG, Germany). You will find information about our work and the sources used here:

www.informedhealth.org/our-approach

Last updated: 10/2022