

What is an arrhythmia?

An arrhythmia is an abnormal, or irregular, heartbeat. Arrhythmias happen when the electrical signals that tell the heart when to squeeze and pump blood are out of sync or muddled. As a result, the heart may beat too quickly, too slowly and/or unevenly.

For example, with bradycardia (“brady” means slow and “cardia” means heart), the electrical signals are too slow. As a result, the heart rate slows below what is considered healthy. If, however, the signals fire too fast, the heart rate can quicken and may push someone into having a tachycardia (“tachy” means rapid and “cardia” means heart).

Are arrhythmias dangerous?

Many are harmless, though it can be alarming to feel your heart flutter. Others can be dangerous, possibly even life-threatening, and need to be treated. For example, finding out you have atrial fibrillation (AFib) can help someone get on a blood thinner to prevent stroke. Having a stroke is more likely with this type of heart rhythm disorder.

What does an arrhythmia feel like?

One of the most common symptoms is heart palpitations. You may notice your heart flip-flopping, skipping beats, beating harder or racing. But not everyone with an arrhythmia will notice their heart beating out of sync.

Many people also report feeling:



Short of breath



Lightheaded
or dizzy



Overly tired



Chest pain,
discomfort
or pressure



Faint or have
had unexplained
fainting spells

If you think your heart may be out of its usual rhythm, talk with your health care team. Consider keeping a *diary of your symptoms* and when they happen. It's also helpful to write down what you were doing at the time or just before. Your notes will give you and your care team a more complete picture of what might be going on.

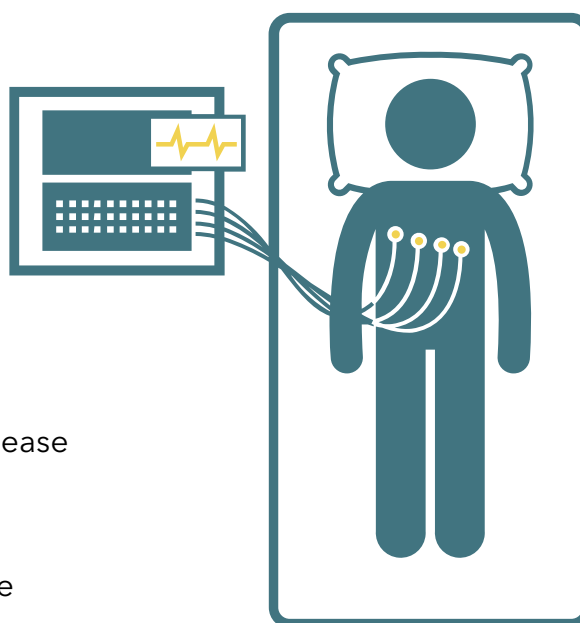
How do I know if I have an irregular heart rhythm?

If you have any symptoms, talk with your care team.

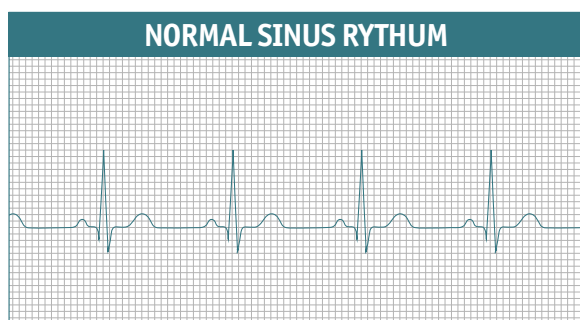
Your doctor can listen to your heart and use a simple test called an electrocardiogram (ECG) to see how your heart is beating. An ECG uses sensors (electrodes) that attach with sticky pads to your chest and often your arms or legs.

The ECG records your heart's rhythm and electrical activity for about 10 to 30 seconds. It creates a tracing, or picture, that can show any deviations or changes to your normal rhythm. Other tests may be done to look for conditions that can cause abnormal heart rhythms, such as heart disease or thyroid disease.

If necessary, heart monitors can be very useful in helping to detect a heart rhythm disorder or rule one out. These devices record the heart's rhythm and electrical activity for a longer period of time than an in-office ECG and as you go about your usual day and activities. These monitors are useful as many heart rhythm problems come and go quickly.



In-office ECG



What are examples of heart monitors?

There are several types of heart monitors and they may be talked about differently. For example, you may hear terms such as holter monitors, event monitors, patch recorders, implantable or internal heart monitors.



- **Holter monitor** - a small portable ECG that is typically worn around-the-clock and records heart activity for two to three days. Some Holter monitors can be used up to two weeks.



- **Heart event monitors or patch recorders** - are usually worn on your chest for up to 30 days. Many rely on the wearer to press a button to start recording the heart's activity when they feel something. Some are Bluetooth enabled, meaning that the information is shared in real-time with a company that sorts through the data and sends a report to the doctor. Others provide a report after the patch is sent back, usually by mail.



- **Internal heart monitor** - a device smaller than a AA battery is placed just under the skin near the heart. It can be used for up to four years to continuously record and pick up any abnormal heart rhythms. This is typically for people with unexplained strokes or fainting spells. Your care team will determine if you are a candidate.

These days, many people use smartphones, smartwatches, activity trackers and related apps to measure heart rate, record heart rhythm, or both. Ask your care team whether these are helpful to use in addition to heart monitors. Also, check with your care team about how to use and understand the information you get.



How do we decide which monitor to use?

It mostly comes down to how often you have symptoms.

For example, if you feel your heart start to race, flip-flop or skip beats most days, wearing a Holter monitor for two to three days is the way to go. If, however, your symptoms only happen every once in a while (let's say weekly or monthly), wearing a monitor for a few days won't be long enough to detect a heart rhythm issue, if there is one. In this case, an event recorder or a small patch that attaches to your chest that is worn for a longer period of time is the better choice.

Longer monitoring is also good for people who don't have symptoms, but a heart rhythm disorder is suspected. Or for people who have heart disease to see whether they also have an arrhythmia.

Your care team will talk with you with you about your health history and symptoms - including when and how long they last - to help you choose the right heart monitor. Think about how involved you'd like to be in the process. Some devices record the heart's activity on an ongoing basis without you doing anything, while others rely on you pressing a button or doing something to start a recording.

What are the risks of using a monitor?

Heart monitors are very safe. The sticky patches used to attach the sensors to the chest can cause skin irritation in some people. In case of skin irritation, there are some patches that are less likely to cause irritation that can be used.

Other people share that it takes time to adjust to wearing the monitor, but it gives them the peace of mind that information is being gathered to help give answers.

When an implantable monitor is used, there is a small risk of infection at the surgical site.

What do the results mean?

If you don't have symptoms while wearing it, the monitor won't have collected the information needed. Additional tests over a longer period of time may be needed.

If you do have symptoms while wearing it, then the monitor recorded the information needed to find out whether there is a problem with your heart's rhythm. In most cases, if you have symptoms while wearing a monitor and no changes to your heart rhythm are detected, then what you are feeling is not likely due to a heart rhythm disorder. Your care team may order other follow-up tests at that stage.

If the monitor doesn't pick up on a heart rhythm issue does that mean I don't have an arrhythmia?

It depends. What allows your care team to make a diagnosis is whether you have symptoms or an episode while you are wearing the monitor (assuming you are wearing it because of symptoms).

If you don't have symptoms while wearing it, the monitor won't have collected the information needed. Additional tests over a longer period of time may be needed.

Are there tips for using the heart monitors that I wear (for example a Holter monitor or patch recorder)?

Your care team should go over the instructions with you. In general, it's a good idea to:

- Wear the monitor as much as you can. Most are intended to be worn all the time, even when you are sleeping.
- Make sure the leads (wires) or sensors placed with a sticky pad are secure and in the right position.
- Avoid getting it wet. Some are water resistant, meaning you can shower, but you shouldn't bathe or swim with a monitor.
- Not use oils or creams on the skin near the sensors so they don't come loose.
- Begin recording your heart activity as soon as you start having symptoms to mark the time. This is if your device has a button or some other way to activate a recording.
- Keep a diary of any symptoms you have and write down what you were doing at the time.

How accurate are smartphones and watches?

They can be accurate, but you will need to share and verify the information with your care team. If you have an interest in using a watch or phone-based app to track your heart activity, ask your care team how best to use it.



Are there things that can trigger or make an abnormal heart rhythm worse? Is there anything I can do to stop or reduce the symptoms?

Yes. Everyone is different, but some common triggers include:

- Alcohol
- Being dehydrated/not drinking enough water
- Smoking or using tobacco
- Stress
- Some illnesses or viruses (for example, the flu, pneumonia or COVID-19)
- Some medicines, especially cold and allergy medications and nasal spray decongestants
- Not getting enough sleep
- Exercise, though this is not very common
- Recent surgery



When you notice that your heart is off beat, pay attention to and write down what you were doing at the time or just before. Use a symptom diary to help figure out what might push your heart into an abnormal rhythm.

You can find a symptom diary and other tools to use at [CardioSmart.org/HeartMonitors](https://www.CardioSmart.org/HeartMonitors).

How are heart rhythm problems treated?

It depends on the type of heart rhythm problem you have and if there is another heart issue thought to be causing the mixed-up electrical signals.

Treatments usually include:

- Lifestyle changes
- Medications
- In some cases, medical procedures may be needed (for example, to block abnormal electrical signals, to help keep the heart in a normal rhythm with a device inserted near the heart, to improve blood flow to the heart)

Not all irregular heart rhythms need to be treated. But routine heart checks and avoiding triggers may be recommended.



In general, it's a good idea to make healthy choices - for example, eating a heart-healthy diet, getting regular physical activity, not drinking too much alcohol, and adopting good sleep habits - and manage other health conditions, including staying at a healthy weight and controlling your blood pressure and cholesterol.