# Heart monitors: When they might be used and how they work



Heart rhythm problems | Information handout

A heart monitor may be recommended if you and/or your health care team have reason to think you might have an irregular heartbeat (called an arrhythmia). These monitors - and there are several kinds - are helpful because they provide more information about how your heart is beating than is possible using an electrocardiogram (ECG) in your doctor's office.



Heart monitors can help find or rule out a heart rhythm problem. The results will also help guide treatment, if needed.

# Why heart rhythm monitoring might be used

It's most often needed when there is a question about whether you have a heart rhythm issue that a standard ECG hasn't or may not pick up.

Some common reasons for using a heart monitor are if you have:

- Heart palpitations. For example, if you notice your heart is flip-flopping or beating unevenly or very quickly.
  - Many heart palpitations aren't serious and are more of a nuisance (for example with premature ventricular contractions, or PVCs, which are "extra" heartbeats). Still, it's important to know what is happening with your heart, and whether you need any follow-up visits.
- Other symptoms feeling overly tired, dizzy or faint - that suggest a heart rhythm disorder.
- Unexplained fainting spells, stroke, or mini strokes.

#### **Common arrhythmias**

Your heart rhythm is controlled by electrical signals. An arrhythmia happens if there is a misstep in the heart's usual rhythm.

Common arrhythmias include:

- Atrial fibrillation a rapid heartbeat that is also very erratic; it can cause the blood to pool and clot in the heart, increasing the risk of stroke
- Tachycardia heart rhythms that are too fast
- Bradycardia heart rhythms that are too slow

A normal resting heart rate is usually between 60-100 beats per minute and can vary throughout the day and with activity.

- **Heart disease.** Heart rhythm problems are common among people with heart disease, but many people may not have clear symptoms and may even have a normal ECG. Finding an abnormal heart rhythm early can help prevent other complications.
- To monitor your heart more closely after:
  - Starting or stopping a heart medicine
  - An ablation
  - A heart attack
  - Finding out you have hypertrophic cardiomyopathy or other heart problems linked to heart rhythm disorders

### Benefits of using a heart monitor

Heart monitors can help:

- Record your heart's activity as you go about your usual day at work, home or play - and for much longer than possible in the doctor's office.
- Pick up on irregular heart rhythms that don't happen very often. Many offbeat heart rhythms can come and go quickly.
- Detect irregular heartbeats even if you don't have symptoms.
- **Give you peace of mind** that your care team will see any changes to your heart's electrical activity and figure out if your symptoms are, in fact, related to your heart.

## **Types of heart monitors**

There are many different types of heart rhythm monitors. Each one is battery-operated and equipped with special sensors that can detect and record the ups and downs of the heart's rhythm.

Heart monitors vary in terms of:

- How long they record the heart.
- Whether the information is collected automatically or if the wearer needs to start a recording.



An in-office ECG won't always pick up on heart rhythm issues.

#### Devices that might be prescribed to diagnose or rule out an arrhythmia:

Device		How or where it's worn	How long it's usually worn or used	Things to keep in mind/or ask about
	Holter monitor	Around your neck with a strap so that it rests near the middle of your chest or on your belt	1-3 days (up to 2 weeks for newer models)	<ul> <li>Short-term monitor, best option if symptoms happen most days</li> <li>About the size of a deck of cards</li> <li>Need to avoid getting it wet or showering unless you have a waterproof cover</li> <li>Data is often reviewed after wearing it</li> </ul>
	Event monitors or patch recorders	Event monitors have sensors that attach to your chest using sticky adhesive; wires connect these sensors to a handheld monitor that you can put in your pocket or on your belt. Some types attach to your wrist.  Patch recorders are placed on the skin of your chest with sticky adhesive; they are usually small enough to be hidden under clothing and not have visible wires or leads; these wires are usually built into the device.	2-6 weeks, depending on the device	<ul> <li>Longer-term monitor, best if symptoms are not felt or if they happen only every once in a while</li> <li>Many ask the wearer to push a button when symptoms occur to record and store heart's electrical activity around that time; others send the information in real-time to a company that then sorts though the data and reports to the doctor</li> <li>Patch recorders may be easier to manage. You should be able to shower (once it is in place), exercise and sleep comfortably given its small size. These may only record activity for up to 14 days.</li> </ul>

4-1	Mobile Cardiac Outpatient Telemetry (MCOT)	Depends on the model	Usually up to 30 days	<ul> <li>Often considered to monitor symptoms</li> <li>A good Internet connection is important to transmit the data</li> <li>Keep the base monitor within 30 feet of your sensor</li> <li>You will need to replace patches every 5 days</li> <li>Automatically records and sends data to a base monitor and then to technicians who monitor ECG; you can also record a symptom by touching a button on the monitor</li> </ul>
	Internal heart monitor or implantable loop recorder	Inserted just under the skin near the heart through a small incision	Up to 4 years	<ul> <li>About the size of large paperclip</li> <li>Very simple to place on an outpatient basis without sedation; patients can drive themselves home after</li> <li>Records all the time</li> <li>Sends data from a home monitoring system through a secure website to a central monitoring station</li> <li>Can be easily removed if needed</li> </ul>



For devices that are placed on your chest, the area of the skin will be cleaned and prepped to be sure the sensors attach well and have good contact to record your heart activity. For men, chest hair in that area may need to be shaved off.

There are a number of factors that come into play when selecting which heart monitor is best for you, if one is needed. The choice mostly comes down to how often you have symptoms, if you do.



#### Other considerations:

- Whether you need real-time monitoring where the data is collected and sent to a central place where someone looks at it and sends a report to your care team.
- How involved you want to be in the process. Some devices record the heart's activity on an ongoing basis without you doing anything. Others rely on you pressing a button or doing something to start a recording.
- If you use your smartphone or smartwatch to track any heart measures and how this information might be used. These should be seen as add-on tools, and not a replacement for standard, medical testing. Care needs to be taken in interpreting the information you get.

Talk with your care team about whether a wearable would be helpful to use in addition to another monitoring test, as well as how to use and understand the information you get.



It's important to remember that a heart monitor can detect and help diagnose an arrhythmia, but it doesn't treat or correct a heart rhythm problem.