HEALTH BASICS

Holter monitor

A Holter monitor is a wearable device that continuously records your heart's electrical activity.

WHAT IT IS
A wearable recorder of continuous heart electrical activity

WHERE IT COMES UP
Investigation of palpitations, fainting, dizziness, or suspected rhythm problems

WHY IT MATTERS
Links heart rhythms with symptoms during everyday activity

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
The clinician or cardiac monitoring service arranging the test

HOW IT IS CHECKED
Continuous electrocardiogram recorded through chest electrodes

Overview

A Holter monitor is a small device that records your heart's electrical activity while you go about your usual day. It is a type of ambulatory electrocardiogram, or ECG. "Ambulatory" means the recording happens while you are moving around rather than staying in a clinic.

It is often called a 24-hour ECG. However, some monitors record for 48 hours or longer. The chosen length usually reflects how often your symptoms or suspected rhythm changes occur.

A standard ECG records only a few seconds of heart activity. A Holter monitor records continuously, so it has more opportunity to capture a rhythm change that comes and goes.

The monitor is a test, not a disease or diagnosis. It does not treat or regulate your heartbeat. Its recordings help a clinician look for changes in heart rate or rhythm and compare them with any symptoms you noted.

How it works

Small adhesive patches called electrodes are placed on your chest. Thin wires may connect

them to a recorder worn on a belt, in a pocket, or around your neck. Some newer monitors combine the electrodes and recorder in a patch attached directly to the skin.

The electrodes detect the electrical signals that make your heart beat. The monitor stores these signals as an ECG recording. It does not send electricity into your body.

Fitting the monitor is usually painless. Some chest hair may need to be clipped so the electrodes stick properly. The monitoring service should explain how long to wear it and whether you can remove it.

You are usually encouraged to follow your normal routine. This helps show what your heart does during sleep, work, exercise, stress, and other everyday activities. Follow the service's instructions about bathing, swimming, or strenuous exercise because many devices must be kept dry.

You may be asked to keep a diary. Record the time and details of symptoms such as:

Also note what you were doing at the time. Some monitors have an event button that you can press when you notice a symptom. Pressing it marks that point in the recording, but the monitor continues to record throughout the test.

After the device is returned, software helps identify possible rhythm changes. A trained professional reviews the recording, including the times listed in your diary. The report then goes to the clinician who requested the test.

- A racing, pounding, or irregular heartbeat
- Dizziness or feeling faint
- Breathlessness
- Chest discomfort
- Unusual weakness

Why it matters for your health

A Holter monitor can show whether symptoms happen at the same time as an unusual heart rhythm. This link is important because palpitations, dizziness, or fainting can have many possible causes.

The recording may identify a heartbeat that is too fast, too slow, or irregular. It may also show pauses, extra beats, or problems with how electrical signals travel through the heart.

A clinician may request monitoring after an abnormal ECG or when a brief clinic ECG did not explain your symptoms. Monitoring can also help assess a known rhythm condition or check

how the heart responds after a treatment change.

A normal recording can be reassuring, but it does not always rule out an intermittent rhythm problem. If the relevant episode did not happen while you wore the monitor, a longer monitor or a different type of recorder may be considered.

The result should be interpreted alongside your symptoms, medical history, examination, medicines, and other tests. A Holter report alone does not explain every episode of chest discomfort, dizziness, or fainting.

What can go wrong

A Holter monitor may help detect arrhythmias, meaning abnormal heart rhythms. These can include atrial fibrillation, episodes of a very fast rhythm, an unusually slow rhythm, pauses, extra beats, or heart block. Heart block is a delay or interruption in the heart's electrical signals.

Not every unusual finding is dangerous. Occasional extra beats, for example, are common. Their importance depends on their type, frequency, associated symptoms, and your wider health information.

The test also has practical limitations. An electrode can loosen, wires can disconnect, or movement can create electrical interference called artefact. These problems may leave parts of the recording difficult to interpret.

The adhesive patches can cause mild redness, itching, or irritation. Tell the monitoring service if the skin becomes very sore, blistered, or swollen. Do not apply creams beneath the electrodes unless instructed, because this can stop them sticking.

A short monitoring period may miss an event that happens only occasionally. This does not mean the symptoms were not real. It means there may be no ECG evidence from that particular period.

A Holter monitor is generally reviewed after it is returned. It is usually not watched live and should not be treated as an emergency alert system.

Seek emergency help for severe or persistent chest pain or pressure, major difficulty breathing, fainting with slow recovery, or signs of stroke such as facial weakness, arm weakness, or difficulty speaking. Do not wait for the monitor to record the problem or for someone to review it.

What you can do

Before the test, ask how long you will wear the monitor and whether it can get wet. Check how to handle a loose electrode, where to carry the recorder, and when and where to return it.

Tell the service about skin allergies or previous reactions to adhesive dressings. Wear a loose top that makes fitting the electrodes easier.

Unless the clinician arranging the test tells you otherwise, continue your usual medicines and activities. Do not stop heart medicines just to make a symptom more likely to occur.

While wearing the monitor:

If an electrode comes off, follow the instructions you were given. Some services provide spare electrodes and show you where to replace them. If you were not given directions, contact the monitoring service rather than guessing.

Ask when and how you will receive the result. Analysis is not always immediate because a long recording must be processed and reviewed. If your symptoms continue after a normal test, ask whether the monitoring period captured a typical episode and whether further assessment is needed.

For mild skin irritation after removal, keep the area clean and avoid reapplying adhesive until it settles. Seek routine advice if the rash persists or worsens.

- Keep an accurate diary with times, symptoms, and activities
- Press the event button if instructed
- Check that wires remain connected without repeatedly removing electrodes
- Follow the device-specific instructions about bathing and exercise
- Return the equipment at the agreed time

Common questions

Can I sleep while wearing a Holter monitor?

Yes. The monitor is designed to record during sleep. Arrange the wires and recorder as instructed so they do not pull on the electrodes.

Can I shower or swim?

That depends on the specific device. Traditional recorders and their wires often must stay dry, while some patch monitors are water-resistant. Follow the instructions provided with your monitor.

Can I use my phone?

Ordinary phone use is usually possible. Keep the monitor protected and follow any instructions

about electronic equipment supplied by the service.

Is the test painful?

The recording itself should not hurt. Removing adhesive patches may be uncomfortable, and some people develop temporary skin irritation.

Does the monitor record sound or track my location?

A standard Holter monitor records heart electrical signals, not conversations. Features differ between devices, so ask the service if you are concerned about what a particular model stores.

What is the difference between a Holter monitor and an event monitor?

A Holter monitor usually records continuously for a set period. An event monitor is often worn longer and saves recordings when you activate it or when the device automatically detects a possible rhythm change.

What if I had no symptoms during the test?

The recording may still contain useful information, but it might not answer whether your usual symptoms are linked to a rhythm change. Ask whether longer monitoring would be appropriate.

Can a Holter monitor diagnose every heart problem?

No. It focuses on heart rate and rhythm. Other tests may be needed to examine the heart's structure, blood supply, or response to exercise.

Sources

- National Health Service. Electrocardiogram (ECG)
- MedlinePlus Medical Encyclopedia. Holter monitor (24h)
- Mayo Clinic. Holter monitor
- American Heart Association. Holter monitor
- Steinberg JS, Varma N, Cygankiewicz I, et al. 2017 ISHNE-HRS expert consensus statement on ambulatory ECG and external cardiac monitoring/telemetry. Annals of Noninvasive Electrocardiology . 2017;22(3):e12447