TEST

Cardiac event monitors

A cardiac event monitor records your heart's electrical rhythm during occasional symptoms or abnormal rhythms.

WHAT IT MEASURES
Heart rhythm during symptoms or automatically detected events

SAMPLE
None; electrical signals recorded through chest electrodes

FASTING NEEDED?
No

HOW LONG IT TAKES
About 15-30 minutes to fit; worn days to weeks

RESULTS IN
Days after return; timing varies by monitoring service

USED FOR
Diagnosis and monitoring of intermittent heart rhythm problems

MAIN LIMITATION
Episodes may be missed if they occur outside monitoring

Overview

A cardiac event monitor is a portable electrocardiogram, or ECG, used to record your heart's electrical activity over time. It is usually worn for several days or weeks.

A standard ECG records only a few seconds of heart rhythm. A cardiac event monitor has more time to capture symptoms that come and go, such as palpitations, dizziness, or fainting.

Some monitors record when you press a button. Others automatically save rhythms that are unusually fast, slow, or irregular. Certain devices send recordings to a monitoring service through a phone or mobile connection.

Common types include external loop recorders, adhesive patch monitors, and mobile cardiac telemetry. An implantable cardiac monitor is a small device placed under the skin for much longer monitoring. Implantable monitoring involves a separate procedure and is generally considered when symptoms are uncommon or longer monitoring is needed.

Why the test is ordered

A cardiac event monitor may help determine whether symptoms happen at the same time as a heart rhythm change. It can also show that your rhythm was normal during an episode.

The test may be ordered to investigate:

An arrhythmia is a heart rhythm that is too fast, too slow, or irregular. The recording can identify the rhythm, but it may not explain why it happened. Other tests may be needed to assess the heart's structure or possible triggers.

- Palpitations, including pounding, fluttering, or skipped beats
- Unexplained dizziness, near-fainting, or fainting
- Episodes of an unusually fast or slow heartbeat
- Possible atrial fibrillation or another intermittent arrhythmia
- Symptoms not captured by a standard ECG or short Holter recording
- How often a known rhythm problem occurs

Who should have the test

This test is most useful when a possible rhythm problem happens intermittently. The monitoring period can be matched to how often your symptoms occur.

If symptoms happen every day, a continuous Holter monitor worn for a day or two may be enough. If they occur weekly or less often, an event monitor worn for longer may have a better chance of capturing an episode. Very uncommon but important episodes may lead to discussion of an implantable monitor.

A monitor may not be the right first test if you currently have severe or ongoing symptoms. New chest pressure, severe breathing difficulty, fainting with poor recovery, or signs of a stroke need urgent assessment rather than waiting for a monitor recording.

How to prepare

Fasting is not needed. You can usually eat, drink, and take your regular medicines as normal. Do not stop heart or blood pressure medicines unless the clinician who prescribed them gives you specific instructions.

Wear a loose top that makes it easy to reach your chest. Avoid putting lotion, oil, or powder on your chest that day because these can prevent the adhesive electrodes from sticking.

Tell the fitting team about skin allergies, particularly reactions to medical adhesives. Also mention a pacemaker, defibrillator, or other implanted electrical device.

Ask about bathing before leaving the appointment. Some monitors are water-resistant, while others must be removed or kept dry. Instructions differ between models.

What happens during the test

For most external monitors, small adhesive electrodes are attached to your chest. The skin may be cleaned, and a small amount of hair may be clipped to improve contact. Wires may connect the electrodes to a recorder, or the monitor may be a single adhesive patch.

You will be shown how to activate the monitor when symptoms begin. Usually, this involves pressing a button. Record what you felt, what you were doing, and the time in a paper diary or phone app. This helps match your symptoms to the ECG.

Some devices record continuously but save selected periods. Others automatically detect possible rhythm changes and may transmit them to a monitoring centre. An automated alert is not a confirmed diagnosis; the recording must be reviewed.

Continue your usual activities unless you receive different instructions. Return or mail the equipment as directed when monitoring ends.

Understanding your results

The report describes the rhythms recorded and whether they matched your symptoms. It may include your heart rate, the duration of recorded events, and the type of rhythm seen.

Possible findings include a normal rhythm, extra early beats, atrial fibrillation, or periods when the heart was unusually fast or slow. Extra beats are common and must be interpreted alongside your symptoms, health history, medicines, and other tests.

A normal rhythm during symptoms can be useful. It suggests that a detectable rhythm change did not explain that particular episode. It does not rule out an event that happened while the monitor was disconnected, outside the monitoring period, or without a usable recording.

There is no single universal "normal range" for an event-monitor report. Interpretation varies by laboratory or monitoring service, age, sex, pregnancy status, medicines, device settings, and clinical context.

What affects the results

Poor contact between an electrode and your skin can create a noisy or unreadable tracing. Sweat, chest hair, skin oils, loose adhesive, and repeated movement can all interfere with the signal without anything being wrong with the monitor.

Muscle activity during exercise or physical work can resemble electrical interference. Exercise can also cause a genuine change in heart rate, so noting what you were doing is important.

Other factors include:

A delayed transmission does not always mean the event was lost. Some monitors store recordings until a connection becomes available.

- Removing the monitor for bathing or swimming
- Forgetting to press the event button
- Recording the wrong symptom time in your diary
- A low battery, damaged lead, or detached electrode
- Poor mobile reception delaying transmission from connected monitors
- Medicines, caffeine, alcohol, nicotine, illness, stress, or dehydration changing your actual rhythm

Accuracy and limitations

An event monitor is more likely than a brief ECG to find a rhythm problem that comes and goes. Its usefulness still depends on an episode occurring while you are wearing it and on the recording being clear.

The monitor can miss a problem if the monitoring period is too short, an electrode comes off, the device is not activated, or the rhythm falls outside its programmed detection settings. Symptoms without an ECG change may also need investigation for causes unrelated to heart rhythm.

Movement and poor electrode contact can produce patterns that look abnormal. Automatic software may flag these as possible events even when no true arrhythmia occurred. A trained reviewer therefore checks the tracing before the result is interpreted.

A Holter monitor may be better for symptoms that happen daily. Longer patch monitoring, mobile cardiac telemetry, or an implantable monitor may be considered when symptoms are less frequent. Other tests, such as an echocardiogram or exercise ECG, answer different questions and cannot be replaced by an event monitor.

Risks and complications

External cardiac event monitoring is painless and does not use radiation. The most common problem is mild itching, redness, or soreness beneath the adhesive.

Tell the monitoring service if you develop significant blistering or spreading irritation. They may advise changing the electrode position or using a different adhesive.

An implantable cardiac monitor has additional risks because it is placed under the skin. These can include bruising, bleeding, discomfort, infection, or movement of the device. These risks should be discussed before the procedure.

What happens next

The recordings are reviewed after the device is returned, although connected monitors may send important recordings earlier. Your result may be compared with your symptom diary, previous ECGs, medicines, and medical history.

Routine follow-up may include reassurance, longer monitoring, medicine review, or another heart test. A technically poor recording may need to be repeated.

Do not wait for the monitor or its report if you develop severe chest pressure, severe shortness of breath, fainting with delayed recovery, or stroke signs such as facial drooping, arm weakness, or difficulty speaking. Use emergency services. Pressing the event button does not request emergency help.

For equipment failure, a detached electrode, or mild skin irritation, contact the monitoring service using the routine number provided.

Common questions

Can I drink coffee while wearing a cardiac event monitor?

Usually, yes. Follow your normal routine unless you were given different instructions. Record coffee or energy-drink use if it appears to trigger symptoms; caffeine can genuinely change your heart rate rather than merely distort the test.

Does the time of day matter?

No special appointment time is usually needed. Wearing the monitor during sleep and normal daily activities can help show when an event occurs.

Can I exercise beforehand or while wearing it?

You can generally exercise unless you have been told to restrict activity. Sweat and vigorous movement may loosen electrodes or create a noisy tracing. Note the activity and symptoms, and follow the device's water-resistance instructions.

Can I shower with the monitor on?

It depends on the model. Some patches can tolerate limited water exposure, while wired devices may need to be removed. Use the instructions supplied with your specific monitor.

What if I forget to press the button?

Write down the symptom and approximate time. The device may have recorded it automatically or continuously, but this is not guaranteed.

Can I sleep normally?

Yes. Keep the monitor attached as instructed and try not to pull on any wires. Sleep recordings may capture rhythm changes that you do not notice while awake.

Sources

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