

What is a Holter monitor?

Holter monitoring is continuous monitoring and recording of the ECG, BP, or both for 24, 48 h 14 days and 28 days. It is useful for evaluating intermittent arrhythmias and, secondarily, for detecting hypertension. The Holter monitor is portable, enabling patients to participate in normal daily activities. Patients are asked to record symptoms and activities so that they may be correlated with events on the monitor.

The Holter monitor does not automatically analyze the ECG data; a physician does so at a later date.

Event recorder: Event recorders are worn for up to 30 days and can detect infrequent rhythm disturbances. The recorder does not operate continuously but is activated by the patient when symptoms occur. A memory loop enables information to be stored for seconds or minutes before and after activation. The patient information is saved to SD card and the ECG data is processed by technician and then is read by a physician.

If patients have serious events (eg, syncope) at intervals of > 30 days, an event recorder may be placed subcutaneously; it can be activated by a small magnet.

Palpitations

Palpitations are a symptom, not a diagnosis. A palpitation is an unusual awareness of the heart beat. Most commonly, palpitations are associated with a heart arrhythmia.

Question - *I have worn a Holter monitor for 24 hours before. The results of this were, as I remember, inconclusive. I have these palpitations about 6 to 8 times a week, more commonly when I bend over. I am wondering if it is normal for an otherwise healthy person to begin experiencing these seemingly out of the blue. Are they dangerous?*

Whether or not the palpitations are worth worrying about, therefore, depends entirely on which heart arrhythmia is causing the palpitations. In 99% of the time in young healthy people such as yourself, the arrhythmias producing the palpitations are entirely benign - but nonetheless, it is important to prove that. A Holter monitor is a good way to document whether an arrhythmia is causing the palpitations, and which arrhythmia is the culprit. But to accomplish this during a Holter test, a) the patient must experience the palpitations during the test, and b) the Holter tape must be examined for the precise moment that the palpitations are perceived. If either of these things does not happen, the Holter is useless.

So you need to go back to your PCP and find out precisely what arrhythmia you have (if you have one at all.) He/she should be able to give you a definitive answer. Otherwise, the Holter was useless and needs to be repeated until the answer is found.

Often in this situation, a patient won't have palpitations frequently enough to guarantee that symptoms will occur during the 24 hours of the Holter test. In these cases, patients can be sent home with a 30-day event monitor. This is a device that records your heart rhythm on a continuous loop of tape. When you experience symptoms, you push a button to stop the recording right then, and transmit the recording of the heart rhythm during symptoms to the doctor by phone. The 30-day event monitor is an excellent way of correlating symptoms with the heart rhythm, and is effective more often than the Holter.

Once again, the odds you have an arrhythmia that will turn out to be a serious problem is very low.

Why was I recommended for this test by my doctor?

Your doctor uses ambulatory monitors to:

- assess your heart rhythm over time
- correlate your symptoms with your heart rhythm
- diagnose abnormal heart rhythms: what kind they are, how long they last, and what may cause them
- guide treatment for abnormal heart rhythms

To prepare:

- Avoid oily or greasy skin creams and lotions where the monitor is applied. They interfere with the electrode-skin contact.
- Wear a shirt that can be easily removed to place the electrodes on the chest.

Holter Monitor (Ambulatory ECG)

- A Holter monitor is a portable ECG recorder that you wear during your normal daily activities, including sleeping.
- It can be worn up to 14 days. You will learn how to take the device off during showers and baths. It is used for arrhythmias that occur less frequently.
- Electrodes (sticky patches) are placed on the skin of your chest. Wires are attached from the electrodes to a box about the size of a portable tape player and worn on a belt or shoulder strap. The electrical impulses are continuously recorded and stored in the Holter Monitor.
- While you are wearing the monitor, you will be asked to keep a diary of your activities and your symptoms, such as fluttering feelings in your chest (palpitations), rapid heartbeats, and any episodes of dizziness or faintness. It's important to keep track of the activities you were doing when your symptoms occurred, so your doctor can see what kinds of events are bringing them on.
- When the Holter monitor test is complete, you will return the Holter Monitor. A technician plays the tape on a special computer that analyzes the recording and looks for any abnormalities of the rhythm. The technician prepares a full report for the doctor, including a printout of abnormal heart rhythms.

Event Monitor (Event Recorder)

- This device, similar to a Holter monitor, is worn during normal daily activities including sleeping; it is worn for 48 hrs, 72 hrs, 14 days of time. You will learn how to take the device off during showers and baths. It is used for arrhythmias that occur less frequently.
- Small electrodes are attached to your chest. Wires are attached from the electrodes to a box about the size of a portable tape player and worn on a belt or shoulder strap.
- When you feel symptoms, you depress a button and the recorder is activated. The monitor records the event for the 60 seconds prior to your pushing the button and up to 40 seconds after the arrhythmia is over. The event monitor can store up to three events.
- The rhythm can be sent immediately or saved and transmitted later, over the phone line. The technician will give the recordings to your doctor for review. If the reading indicates an emergency, the technician will instruct you to go to the emergency room.