

Event Monitoring

What Is Event Monitoring?

Event monitoring is a method of recording the heart rhythm during symptoms, or an "event."

You carry a recorder over a period of days or weeks, while you go about your usual daily activities. When you sense symptoms, you press a button and the device records and stores up to several minutes of your heart's electrical activity.

What Is It Used For?

If you've been having recurrent symptoms, such as palpitations, dizziness, or fainting spells, your doctor may want to determine whether these symptoms are caused by an arrhythmia.

An abnormal heart rhythm, or **arrhythmia**, is a change in either the speed or pattern of the heartbeat. During an arrhythmia, the heart may beat too rapidly, too slowly, or irregularly.

Doctors can diagnose an arrhythmia by obtaining an electrocardiogram, or ECG, a recording of the heart's electrical activity. During a standard ECG test, the heart's electrical impulses are recorded on a strip of moving paper.

Quite often, an arrhythmia will not occur during the brief period (less than a minute) of actual recording at the doctor's office. If your doctor suspects you have an arrhythmia, he or she will want to record the ECG over longer periods of time.

If your symptoms are frequent (several times a week), your doctor may obtain a 24-hour recording of your ECG, called a **Holter Monitor** test. The recorder, worn on a strap over the shoulder or around the waist, records the ECG *continuous*, whether or not you have symptoms.

If, however, your symptoms are *infrequent*, you may require monitoring for longer than 24 hours. In that case, your doctor may order an **event recorder**, which can be worn for days or weeks.

Types of Event Recorders

There are two basic types of event recorders, depending on whether or not they have a memory loop. Your doctor will decide which type is best for you.

Memory-Loop Recorder

The memory-loop recorder (also called a pre-event recorder) has a **memory loop** that allows the device to "remember" what it recorded for several seconds or minutes *before* and after an event.

The recorder, which is the size of a pager, may be clipped to your belt, placed in a shirt pocket, or suspended like a pendant from a cord around your neck. Other times, it resembles a wristwatch.

The memory-loop recorder is attached to two small sticky patches, called **leads** (or **electrodes**), placed on your chest or arms.

Worn day and night, the recorder continuously scans your heart's electrical activity. When you experience symptoms, you activate the recorder by pressing a button. The device records and stores several minutes of ECG data before, during, and after an event.

Later, at your convenience, you can transmit the stored data over the telephone to your doctor's office or to an ECG receiving center.

Post-Event Recorder

A post-event recorder does not have a memory loop, so the device cannot "remember" what happened before the button was pressed. It starts recording the heart rhythm only *after* it is activated.

This type of recorder is small, light, and pocket size. No leads are needed. Some newer devices are the size of a credit card or resemble a wristwatch.

You can carry the **credit-card style** recorder in a pocket or purse. When you feel symptoms, you hold the card against the skin of your chest and activate the device by pressing a button. It records and stores about 30 seconds of heart rhythm after the event.

The **wristwatch style** recorder is worn on your wrist. At the onset of symptoms, you press a button and rest the palm of your other hand on top of the face of the watch. The device records and stores about 30 seconds of heart rhythm.

Trans-Telephonic Transmission

You'll receive the event recorder at the doctor's office, test center, or hospital. A technician will show you how to use the device. You may also be given written instructions to take home with you.

You will use the recorder for several days or weeks, activating it whenever symptoms occur. Once you've recorded an event, you will be asked to either return the recorder or, more likely, to transmit the ECG over the telephone.

To transmit the data over the telephone, you call the receiving center. When you are instructed to do so, you press the "send" button on the recorder and place the mouthpiece of the telephone over the recorder. The stored ECG data are transmitted automatically to the receiving center.

If you experience distressing symptoms, such as severe palpitations or dizziness, you should record the event, then *immediately* call the doctor's office or receiving center to transmit it.

Keeping a Diary

You'll keep a diary during the period you carry the recorder. It enables nurses and doctors to correlate your symptoms with the ECG recordings.

The information you'll need to enter in the diary includes the following:

- the date and time of each entry.
- symptoms you experience (palpitations, dizziness, fainting spell, shortness of breath, etc.)
- What you were doing at the time (walking, sexual activity, emotional upset, etc.)

Your Test Results

Once the data have been transmitted to the receiving center, a nurse or doctor will analyze and interpret the recording. The information gained from the test helps your doctor make an accurate diagnosis and develop a treatment plan that's best for you.