



PACIFIC COAST CARDIOLOGY & RESEARCH

PATIENT PRE-TEST INSTRUCTIONS:

Ambulatory Electrocardiogram/Holter/Event Monitor

No Prep needed for this test.

*****YOU SHOULD NOT STOP ANY MEDICATIONS WITHOUT CONTACTING YOUR PRESCRIBING DOCTOR. USE THE FOLLOWING LIST IN ORDER TO SPEAK WITH YOUR DOCTOR:**

Commonly Used Beta Blockers: Blocadren (timolol), Coreg (carvedilol), Inderal (propranolol), Lopressor (metoprolol), Tenormin (atenolol), Toprol –XL (metoprolol), Trandate (labetalol), Viskin (pindolol), Bystolic.

Caffeinated Food and Beverages: Coffee including “decaffeinated”, teas, cocoa and any food containing cocoa (chocolate), and soft drinks.

Ambulatory Electrocardiogram (Holter/Event Recorder)

An ambulatory electrocardiogram (EKG or ECG) records the electrical activity of your heart while you do your usual activities. Ambulatory monitors are referred to by several names, including ambulatory electrocardiogram, ambulatory EKG, Holter monitoring, 24-hour EKG, or cardiac event monitoring.

Many heart problems become noticeable only during activity, such as exercise, eating, sex, stress, bowel movements, or even sleeping. A continuous 24-hour recording is more likely to detect any abnormal heartbeats that occur during these activities.

Many people have irregular heartbeats (arrhythmias) from time to time. The importance of irregular heartbeats depends on the type of pattern they produce, how often they occur, how long they last, and whether they occur at the same time you have symptoms. Because arrhythmias can occur off and on, it may be difficult to record an arrhythmia while you are in the doctor's office.

There are several different types of ambulatory monitors.

Continuous recorders

The most common type is the continuous recorder (such as the Holter monitor). It provides a 24- to 72-hour record of the electrical signals from your heart. A standard EKG monitors only 40 to 50 heartbeats during the brief period you are attached to the machine. A continuous recorder monitors about 100,000 heartbeats in 24 hours and is likely to find any heart problems that happen with activity.

Another type of continuous recorder can be implanted under the skin of the chest. This recorder can be kept in your chest for more than a year to record the electrical signals from your heart.

Intermittent recorders

Another kind of ambulatory EKG monitoring is the intermittent recorder, which is used when symptoms of an abnormal heart rhythm do not occur very often. An intermittent recorder can be used for a longer time than a continuous recorder. The information collected by an intermittent recorder can often be sent over the phone to a doctor's office, clinic, or hospital.

Two types of intermittent recorders are available:

Loop recorders. A loop recorder constantly records your heartbeats. When you have symptoms, you press a button on the monitor to record your heart rhythm. Loop recorders also save a small amount of information about how your heart was beating when you pressed the recording button (presymptom recording). This feature is especially useful for people who lose consciousness when their heart problems occur and can press the button only after they wake up.

Event monitor. This small device is used only when symptoms of the heart problem occur. You are not attached to the machine. One type is worn on the wrist like a watch. When symptoms occur, you press a button to start the EKG recording. The other type is a device that you carry where you can reach it easily, such as in your purse or pocket. When symptoms occur, you press the back of the device against your chest and then press a button to start the recording. The back of the device has small metal discs that work like electrodes. These handheld monitors can be very small (some are about the size and shape of a credit card).

Why It Is Done

Ambulatory EKG monitoring is done to:

Look for and record irregular heartbeats that occur intermittently or during certain activities.

Find out what is causing chest pain, dizziness, or fainting. These are symptoms of possible heart problems.

Look for poor blood flow to your heart muscle (ischemia).

Check to see if treatment for an irregular heartbeat is working.

How To Prepare

Many medicines may change the results of this test. Be sure to tell your doctor about all the nonprescription and prescription medicines you take.

Since an EKG is often used to monitor a preexisting heart condition, such as an irregular heartbeat (arrhythmia), make sure that your doctor has copies of any previous EKG results.

Take a shower or bath before the discs are put on. You will not be able to get the discs wet during the test. Wear a loose blouse or shirt. Do not wear jewelry or clothes with metal buttons or buckles, because these can interfere with the recording. Women should not wear an underwire bra for the same reason.

Talk to your doctor about any concerns you have regarding the need for the test, its risks, how it will be done, or what the results will indicate.

How It Is Done

Continuous recorders

For this test, you wear a lightweight, battery-operated tape recorder (monitor) on a strap over your shoulder or around your waist. The recorder is connected by wires to small metal discs (electrodes) taped to your chest. The electrodes detect the electrical signals from your heart. A clock is connected to the recorder so you can note what time it is when you have any symptoms.

You will be fitted with the recorder and electrodes by a technician in a doctor's office or hospital room.

Several areas on your chest may be shaved and cleaned, and then a small amount of electrode paste or gel will be applied to those areas.

The electrode pads will then be attached to the skin of your chest, with thin wires connecting the electrodes to the monitor.

You may be hooked up briefly to a standard EKG machine to ensure that the electrodes are working properly.

While wearing the continuous recorder, you will also be asked to keep a diary of all your activities and symptoms, including the type of activity you were doing and the time your symptoms started. In the diary, write down the exact times when you exercise, climb stairs, eat, urinate, have a bowel movement, have sex, sleep, get emotionally upset, take medicine, or perform other activities. If you have any symptoms of heart problems, such as dizziness, fainting, chest pain, or palpitations, push the event-marker button on the recorder to mark it and write down the exact time and how long the symptom lasts. For example, you might write: "12:30 p.m. Ate lunch. 1:00 p.m. Argument with boss, had chest tightness for several minutes."

When you sleep, try to stay on your back with the recorder carefully positioned at your side so that the electrodes are not pulled off. If one of the electrodes or lead wires comes loose, a light on the monitor will flash. Press on the center of each electrode to see if you can restore the contact. Call your doctor if one of the electrodes comes off and you can't get it to stay on.

While you are wearing a monitor, try to stay away from magnets, metal detectors, high-voltage areas, garage door openers, microwave ovens, and electric blankets. Do not use an electric toothbrush or shaver. Signals from these types of electronic equipment can sometimes interfere with the recording.

At the end of the recording period (usually 24 hours), you will return to the doctor's office or hospital to have the electrodes removed, or you may be able to remove the electrodes yourself. The recorded tape will be read by computer to provide information about your heart rate, the frequency of your heartbeats, and any irregularities.

After the monitoring period, your doctor will compare the timing of your activities and symptoms with the recorded heart pattern. The accuracy and usefulness of this test depend on how carefully you record your activities and symptoms and the times they occurred.

Intermittent recorders

The procedure for intermittent recording depends on the type of monitor used.

Loop recorder. Electrodes will be attached to your chest in the same way as a continuous recorder, and you will start the recorder when you have symptoms of a heart problem. If you pass out, you should start the recorder as soon as you wake up. Also, be sure a friend or family member knows how to start the recorder if you pass out.

Event monitor. You will carry the small recording device where you can reach it quickly, such as in your pocket or purse. When you have symptoms of a heart problem, press the small metal discs on the back of the monitor (electrodes) against your chest.

You may be instructed to call your doctor, clinic, or hospital while you are having symptoms or soon after you record your heart rhythm so that the information on the monitor can be analyzed right away.

How It Feels

The electrode sites may itch slightly during the ambulatory EKG recording, and the skin on your chest may look or feel irritated when the electrodes are removed. The recording unit is very lightweight, so carrying it usually is not uncomfortable.

Risks

There is no risk from ambulatory EKG monitoring. The electrodes placed on your skin detect only the electrical signals from your heart. No electricity is sent through your body, and there is no possibility of receiving an electric shock.

Results

An ambulatory electrocardiogram (EKG or ECG) is a test that records the electrical signals that control your heartbeat while you do your everyday activities. The results are generally available in a few days.