

Heart Screenings & Diagnosis

If your doctor suspects that you have long QT syndrome, you may need to have several tests to confirm the diagnosis. These include:

An electrocardiogram (ECG). In this noninvasive test, small probes are taped to your chest to monitor the waves of electrical impulses in your heart. The probes transmit the waves to a computer screen or printout for your doctor to see. You may have this test while at rest or while exercising by running on a treadmill or pedaling a stationary bike.

Ambulatory ECG monitoring. This test, also called Holter monitoring, is used to monitor your heart for rhythm irregularities during normal activity for an uninterrupted 24-hour period. During the test, electrodes attached to your chest are connected to a portable recorder that attaches to your belt or is carried by a shoulder strap. The recorded information can then be analyzed to check for heart rhythm irregularities, such as prolonged Q-T intervals.

Event ECG recording. This is similar to the ambulatory ECG except that you may need to wear a portable ECG recorder for days or weeks as it records your heart rhythms.

While some people with suspected long QT syndrome have a visibly lengthened Q-T interval on an ECG, others don't, making the condition more difficult to diagnose. Other testing may then be necessary:

A nonexercise (medication) stress test. This ECG test is performed while you're given a medication that stimulates your heart in a way similar to exercise. The medication is given through a vein in your arm and may include epinephrine (adrenaline).

Adrenaline is a substance that your body releases in response to stress. In this stress test, doctors monitor the effects of the adrenaline on the way your heart recharges. This test can unmask in some people what's known as concealed long QT syndrome, which is a normal Q-T interval (recharging time) at rest. In some people with long

QT syndrome, fainting spells are triggered by sudden bursts of adrenaline in the body, such as are experienced during intense exercise or emotional upset.

An electroencephalogram (EEG). This test looks for neurological causes of fainting, such as a seizure disorder. The procedure measures the waves of electrical activity the brain produces. Small electrodes attached to your head pick up the electrical impulses from your brain and send them to the EEG machine, which records brain waves.

Genetic testing. A genetic test for long QT syndrome is available and increasingly covered by private and governmental insurance plans. Current genetic tests for long QT syndrome are capable of finding the genetic cause for about 3 out of every 4 cases of long QT syndrome. Therefore, it's possible to test negative with the genetic test, but still have long QT syndrome. If your genetic cause of long QT syndrome is discovered through a positive genetic test, then family members can be tested to prove definitively whether they inherited the same genetic mutation.

A second opinion. You may want to seek a second opinion if your doctor diagnoses you with long QT syndrome. Treatments for long QT syndrome can be life altering, such as avoiding strenuous exercise, taking powerful medications or having surgery. In addition, evidence suggests that misdiagnoses related to this condition are not uncommon – including diagnosing long QT syndrome when it's not actually present, and overlooking the condition when it is present.



For more information about our free Community Heart Screenings for youth, visit us online at www.OliviasHeartProject.org