LQTS: Long QT Syndrome

Inherited Heart Disease Clinic
What is LQTS?
Long QT Syndrome (LQTS) is a rare heart rhythm disorder. It can cause a change in the electrical signal that makes your heart beat. LQTS happens in about 1 in 10,000 people.

In a normal heartbeat, an electrical signal travels through the heart cells and makes it contract (beat). The electrical signal must ‘jump’ from cell to cell in order to flow properly. For this to happen, each cell has special channels (doors) that open and close to let the signal enter. In LQTS, the electrical signal may not pass through because the channels don’t work properly. This may lead to an abnormal heart rhythm.

What causes LQTS?
LQTS is usually an inherited disorder (genes passed from one generation to the next). If someone in your family has LQTS, you have a 50% chance of inheriting it.

LQTS is caused by a problem in one of the genes that produce the channels that control the entry of potassium or sodium into the heart’s cells. If your LQTS is inherited, your doctor may suggest genetic counselling for you and your family. Certain medications may also cause the disorder.
Symptoms
People with LQTS may have different symptoms. You may have a history of fainting spells, ‘seizures’, palpitations, chest pain and/or blackout spells. You may have lost a family member suddenly when they were young.

If you or any of your family members have any of these symptoms or history, talk with your health care provider.

Diagnosis
The 2 main tests that help to determine if you have LQTS are:

- **Electrocardiogram (ECG):** An electrical tracing of your heartbeat is used to show your heart’s electrical activity as lines on paper.

- **Exercise Stress Test (EST):** You will be asked to walk on a treadmill while your blood pressure, heart rate and ECG (see above) are recorded.

Your cardiologist (heart doctor) may suggest other tests and will talk with you about how they may help.

- **Genetic testing:** This may be offered to some people with LQTS. Your doctor or genetic counsellor will talk about this with you.
Treatment
If your LQTS is inherited, there is no cure. Some treatments may make you feel better. Your treatment will depend on your medical and family history and how you are feeling.

Your doctor will review your test results and together you will decide on the best treatment.

Treatments include:
› medication (called a beta-blocker)
› a pacemaker (to help control your heart rate)
› an internal cardioverter defibrillator (ICD) (to detect and treat dangerous heart rhythms)

It is also important to avoid medications that may make LQTS worse. See the back cover for websites you can check for this information.

What are your questions?
Please ask. We are here to help you.
Activity
Your doctor will talk with you about what activities are safe and what activities you should avoid. Below are some general guidelines. Please note that these may vary from person to person.

• **AVOID** strenuous (hard) exercise, as this can trigger blackouts.

• **DO NOT** take part in competitive sports.

• **NEVER** swim alone. Swimming can bring on a blackout and may lead to drowning.

• **BE AWARE** that sudden events (for example, a startling noise from an alarm clock or telephone when sleeping) may trigger a possibly deadly rhythm. It is recommended that these items not be used or the volume be turned off or down when sleeping or napping.

• **KNOW** the medications that can make LQTS worse. Some of these are over-the-counter medications. Find an updated list at www.crediblemeds.org

• **Make sure your family and friends know about your condition** and what to do if you have symptoms.