FIA
FOUNDATION FOR
Inherited Arrhythmias

Who Should Be Screened for Inherited Arrhythmia Conditions?

All children should be carefully screened, using the **Risk Assessment form** (available at fiacardiac.org), every few years at the following times: preschool, before/during middle school, before/during high school, and before participating in organized sports.

Long QT syndrome (LQTS), hypertrophic cardiomyopathy (HCM), CPVT, and arrhythmogenic cardiomyopathy (ACM, also known as ARVC) should be considered in any otherwise healthy child or young adult who:

- Experiences **loss of consciousness** (syncopal or near syncopal spells) during or immediately following exercise or emotional distress, particularly in cases where the events are repetitive.
- Has a **family history** of unexplained sudden death in otherwise healthy young persons (under age 40).
- Experiences **consistent or unusual chest pain** and/or shortness of breath during exercise.

The Screening Process

Family History: Using the Risk Assessment Form from FIA (fiacardiac.org), a parent and the child's physician can work together to determine the family risk of these conditions. This is extremely important and should include unexplained death during swimming, death during seizures, a family history of "seizure" disorders, and other sudden deaths or death before age 40 in the extended family. Remember, this history should be taken for both the mother's family & the father's family!

Resting Electrocardiogram: The ECG will detect some people who have long QT syndrome. However, sometimes the resting ECG is not able to diagnose LQTS. In this case, performing serial ECGs (more than 1 ECG on different days) or ECGs on other family members (parents, siblings) will help diagnose LQTS. An EKG may not detect other inherited arrhythmia conditions. Since these are genetic conditions, most likely a parent and siblings will have the syndrome as well.

Exercise (stress) Electrocardiogram: An exercise test, which allows the person to exercise for 10 to 15 minutes without achieving a heart rate more than 150-160 beats per minute (bpm) works best for this process. The standard treadmill test, which is used for detecting coronary artery disease, is *not as good* for LQTS as is the slower, longer test. This test is used to help diagnose CPVT.

Echocardiogram: This is a non-invasive sound wave imaging test that allows the physician to observe the heart as it is beating. It allows for the measurement of muscle thickness, degree of obstruction, chamber size, valve movement, and blood flow. It is also possible to determine pressures inside the heart chambers and major vessels.

Genetic Testing: There are several commercial CLIA-certified labs from which your physician can order your genetic test. As with any healthcare service, it is always a good idea to be a wise consumer and research each company to see which one might be the best choice for you. For a list of companies and other important information, go to https://fiacardiac.org