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## IMPORTANT FACTS

- Many cardiac arrhythmia disorders are inherited.
- Incidence of inherited rhythm disorders in the population has been estimated to be as high as 1 in 500 live births.
- With proper medical assessment, many of these disorders are identifiable and treatable.
- Recognition of "The Warning Signs" and early medical intervention are the keys to preventing sudden cardiac death in children and young adults.

## YOU CAN HELP

If you become aware of a young person who has experienced any of "The Warning Signs" for a cardiac arrhythmia disorder please:

- Recommend that this individual be referred to a cardiologist or an electrophysiologist for a complete cardiac assessment. This assessment should include an analysis of the heart rhythm and, where indicated, cardiac imaging and exercise testing.
- Make our pamphlet available to the patient and his family and encourage these people to visit our website at [www.sads.ca](http://www.sads.ca) for additional information provided by accredited medical sources.



The Canadian SADS Foundation

For more information:

The Canadian SADS Foundation

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The Canadian SADS Foundation

## AN INFORMATION PAMPHLET FOR HEALTH CARE PROFESSIONALS

*Together...*

***We can prevent  
sudden cardiac death  
in the young!***



## SUDDEN CARDIAC DEATH IN THE YOUNG

Sudden cardiac death can happen anywhere, anytime, and to anyone including children and young adults.

When a sudden cardiac death (SCD) occurs in the young, it is particularly devastating. The reported incidence for the pediatric population has varied from 0.8 to 6.2 cases/100,000 population per year but, in actual fact, the true number of SCDs in children and young adults in Canada is not known.

Inherited cardiac rhythm disorders such as LQTS, ARVC, CPVT, and Brugada Syndrome, to name several, are now believed to be major causes for SCD in the young.




It is estimated that as many as 50% of young people who experienced SCD had symptoms (refer to “**The Warning Signs**”) prior to their event.

These symptoms may have been misdiagnosed or dismissed as insignificant.

## STRATEGIES FOR PREVENTION OF SUDDEN CARDIAC DEATH IN THE YOUNG

- Encourage syncope education in your own working environment. (see “**The Warning Signs**”)
- Taking the history: Be suspicious and ask the key questions!
  - *Did syncope occur during exertion, stress, or startle?*
  - *Is this an isolated incident or a repeated event?*
  - *Do other family members have similar syncopal experiences?*
- When in doubt, refer to a cardiologist who has experience with inherited cardiac conditions.
- Consider a complete family cardiac evaluation after an occurrence of SCD in a child or young adult in your practice.
- Promote CPR training in your community and encourage the installation of Automated External Defibrillators (AEDs) in all schools and public sports facilities.

## THE WARNING SIGNS

-  **Fainting (syncope) or seizure during physical activity.**
-  **Fainting (syncope) or seizure resulting from emotional excitement, emotional distress, or startle.**
-  **Family history of unexpected sudden death during physical activity or during a seizure, or any other unexplained sudden death of an otherwise healthy young person.**

These symptoms are not conclusive in and by themselves but the presentation of any one symptom requires an immediate cardiac evaluation.

## INHERITED CARDIAC DISORDERS CAUSING SCD IN THE YOUNG

- HCM
- LQTS
- ARVC
- CPVT
- Brugada Syndrome
- Short QT Syndrome

HCM: Hypertrophic Cardiomyopathy

CPVT: Catecholaminergic Polymorphic Ventricular Tachycardia

LQTS: Long QT Syndrome

ARVC: Arrhythmogenic Right Ventricular Cardiomyopathy

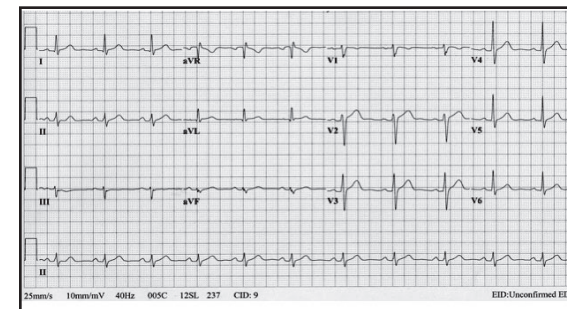
## MISSION STATEMENT

**To save the lives and support the families of children and young adults who are genetically predisposed to sudden death due to heart rhythm abnormalities.**

## HOW IMPORTANT IS PATIENT HISTORY?

### Example Case:

- 14 year old female patient reported a fainting episode (syncope) after horse play with her friends.
- Resting ECG appeared normal (see image #1).
- **BUT** – circumstances of syncopal episode were worrisome.



Example case image #1: Resting ECG

- Exercise ECG (image #2 below) from same patient.
- Observe the polymorphic ventricular ectopy.
- **OUTCOME:** patient has been genetically confirmed with catecholaminergic polymorphic ventricular tachycardia (CPVT).



Example case image #2: Exercise ECG

### NOTE:

This case has been presented to illustrate that **the circumstances of this fainting spell indicated a critical “Warning Sign”**. The patient required a cardiac assessment beyond a simple ECG in order to determine that he did indeed suffer from an inherited cardiac rhythm disorder.