ELECTROCARDIOGRAMS FOR EARLY DETECTION OF CONDITIONS THAT CAN LEAD TO SCA IN YOUTH

What is Sudden Cardiac Arrest (SCA)?
- SCA is the condition in which the electrical system to the heart malfunctions, resulting in a disruption of the heart’s normal rhythm and the loss of its ability to deliver blood to the body. If untreated, this abrupt disruption results in sudden death.

What is an electrocardiogram (ECG)?
- An ECG is a simple, painless, non-invasive baseline test that measures the electrical activity of the heart.

Research Demonstrates Why ECGs are an Important Step in Detecting Risk for SCA:

Importance of ECGs in Early Detection:
- Early recognition of risk is important for all age ranges of the population because of estimates that 30% to 50% of all SCDs are first clinical events and up to 67% occur either as first events or among those with identified disease who are profiled to be at low risk.\(^2\)
- It is likely that the “fatal first event” probability is even higher for SCDs in the younger age groups.\(^1\)

Effectiveness of ECGs in Early Detection:
- Nonetheless, studies of the causes of sudden death in athletes and their relative frequencies suggest that at least 70% of those individuals at risk because of preexisting disorders (and up to 90% for certain conditions) can be identified or suspected by findings on a screening ECG.\(^1\)

Cost of ECG Screenings:
- It is likely that mass screening strategies can be negotiated at rates considerably lower... because the cost of ECGs done on a large scale is much less than the current cost of an ECG in an office or hospital setting. A negotiated cost of a screening ECG done on a large scale might be as low as $10 per ECG.\(^1\)
- In the screening study of Nevada high school athletes, ECG screening was estimated to be more cost-effective than history and physical examination alone.\(^3\)
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ECGs and False Positives:

- Between 5% and 10% of those screened would be referred for further testing. This should not be considered unnecessary testing any more than referring a child to a pediatric cardiologist for a murmur that is found to be innocent or an adult to a cardiologist for chest pain that is found to be secondary to gastro esophageal reflux is “unnecessary.” The referral of a young person for further evaluation will find those who are at risk for SCA.¹

In addition to ECG screenings, it is critical to:

Know the Warning Signs and Symptoms including fainting (syncope) or seizure during or after physical activity, or from emotional excitement, emotional distress or startle; chest pain or discomfort/racing heartbeat; unusual shortness of breath, fatigue/tiredness; dizziness/lightheadedness during or after physical activity.

Know Your Family History of unexpected sudden death during physical activity or during a seizure, or any other unexplained sudden death of an otherwise healthy family member under age 50.

Utilize the American Academy of Pediatrics Pre-participation Physical Evaluation Form and the Pediatric Sudden Cardiac Death Assessment Form


For more information, visit www.parentheartwatch.org or call 1-800-717-5828