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New Study Questions Sports Restrictions for Children with Long QT Syndrome

A wider range of activities may be safe

Conventional guidelines discourage children and adolescents with congenital long QT syndrome (LQTS) from participating in most competitive sports. Due to risk of life-threatening cardiac arrhythmias, youths with LQTS have been restricted to six low-intensity sports: billiards, bowling, cricket, curling, golf and riflery.

But now a new <u>study (http://electrophysiology.onlinejacc.org/article.aspx?articleID=2277233)</u> in the debut issue of *JACC: Clinical Electrophysiology* reveals that pediatric patients with LQTS may be able to tolerate a wider range of competitive and recreational activities.

"Re-examining participation rules is important because the physiologic benefits of exercise at all ages have been emphasized repeatedly and promoted as a national public health priority," says Peter Aziz, MD (http://my.clevelandclinic.org/staff_directory/staff_display?doctorid=15150), lead author of the study and director of Clinic Children's Inherited Arrhythmia Clinic

(http://consultqd.clevelandclinic.org/2014/10/multidisciplinary-clinics-address-pediatric-and-adult-hyperlipidemia-arrhythmias/). "The enhanced self-confidence, sense of psychological, physical and social well-being, and improved overall quality of life that sports participation brings to children and adolescents is equally important."

Outcomes of 103 young athletes

In the retrospective study, Dr. Aziz and a team of researchers examined the prevalence and outcomes of sports participation by patients with LQTS. They reviewed records of 212 patients, ages four to 21, referred to Children's Hospital of Philadelphia's Pediatric Arrhythmia Clinic between 1998 and 2013.

(Dr. Aziz completed pediatric cardiology and electrophysiology fellowships at Children's Hospital of Philadelphia before joining Cleveland Clinic Children's in 2011. While there, he began studying pediatric patients with LQTS under funding from a National Institutes of Health grant.)

Of the cohort, 103 patients participated in sports -26 competitively and 77 recreationally. All were treated with daily beta blockers - standard therapy for preventing LQTS symptoms - although two patients did not consistently comply with the therapy.

No cardiac events over 755 patient-years of follow-up

The researchers followed patients for an average of seven years, for a total of 755 patient-years of follow-up. During that time, treatment-compliant patients recorded no cardiac events (e.g., syncope, documented arrhythmia, cardiac arrest) and no deaths while participating in sports. Two patients recorded appropriate implantable cardioverter defibrillator (ICD) shocks, but they were not related to sports participation.

"Given the changing diagnostic trends, it may be clinically beneficial to re-examine sports recommendations that were made based on data from an earlier era," Dr. Aziz concludes in light of these results.

At the same time, he notes that the study has several limitations, including:

- Most patients were asymptomatic even before joining the study and therefore may be considered lower risk.
- Only patients from one institution were included and only those actively participating in sports. Results may not be representative of all patients with LQTS.
- Most patients participated in recreational sports. Since the level of exercise may vary considerably in nonorganized sports, the lack of adverse events may simply reflect a lower level of exertion. Similarly, most competitive athletes in the study participated in less physically demanding (class IB, IC and IIC) sports rather than more-demanding (class IIIC)

sports, such as rowing, triathlon and speed skating.

Bottom line: Avoiding sports isn't the only way to curb risk

The authors note that physical activity is not without risk for patients with LQTS. But limiting or avoiding activity is not the only way to minimize risk, Dr. Aziz points out. Other safeguards include:

- Taking a beta blocker regularly
- Communicating openly with doctors
- Having access to an automated external defibrillator— preferably a personal one for patients who do not have an ICD



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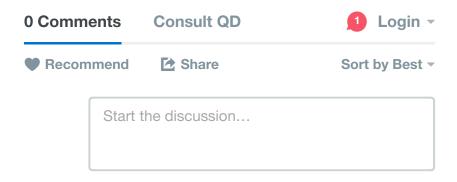


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