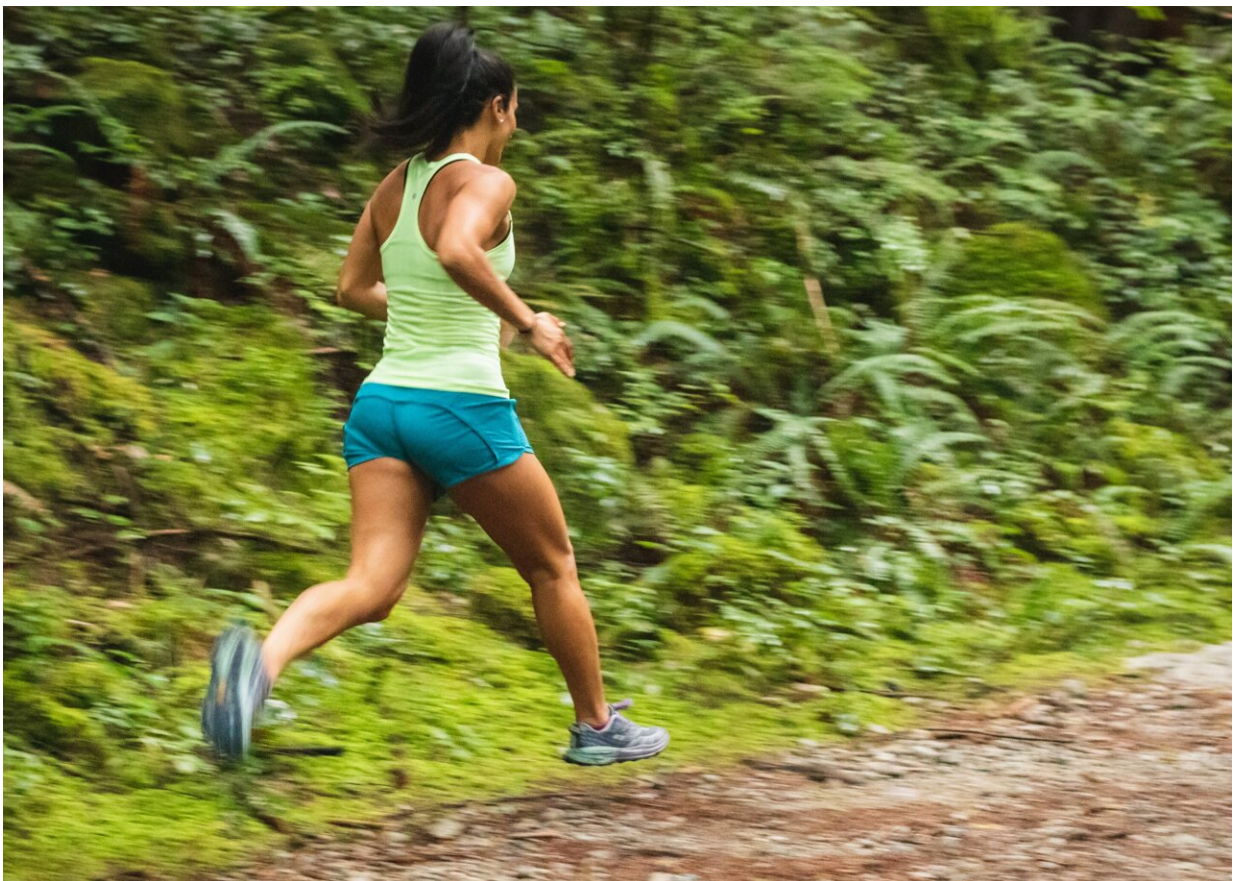


# Vigorous exercise has no link to increased risk of adverse cardiac events in long QT syndrome, according to study

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People who exercise vigorously and have long QT syndrome (LQTS), an

inherited disorder of the heart's electrical system that leads to chaotic heartbeats, do not have a higher risk of adverse cardiac events compared to those who exercise moderately or not at all, a National Institutes of Health (NIH)-supported study has found.

The study, [published](#) in *Circulation*, helps answer a longstanding question about whether [vigorous exercise](#) increases the risk for life-threatening abnormal heartbeats, called [ventricular arrhythmias](#), in individuals being treated for LQTS. The new data also help fill an evidence gap that often has led to recommended restrictions from exercise for those with the inherited disease.

The [observational study](#) enrolled 1,413 individuals with LQTS at 37 medical sites in five countries from May 2015 to February 2019. The study participants were aged 8–60 and either carried the gene that causes LQTS or were diagnosed based on an abnormal EKG reading.

Importantly, at the time of the study, all participants were being treated for their condition with medication or surgically fixed devices such as an implantable cardioverter-defibrillator (ICD), which can detect arrhythmias. Fifty-two percent of the study participants were already vigorous exercisers, such as runners, while the other 48% either participated in [moderate exercise](#), such as walking or yard work, or did not exercise.

The researchers then followed the groups for three years and looked at the occurrence of four main cardiovascular events during that period: sudden deaths, resuscitated sudden cardiac arrests, arrhythmias that were treated by an ICD, and the most dangerous type of fainting caused by arrhythmias, known as arrhythmic syncope.

Based on a unique study design called non-inferiority, which asks if one treatment is equal to another—which in this case is whether vigorous

exercise is equal to moderate exercise—the results were not statistically significant. The researchers found that in individuals with LQTS who exercised vigorously, the overall rate of adverse cardiac events was low, with 2.6% experiencing a likely LQTS-triggered cardiac event during the three-year follow-up period. Notably, the outcome was similar for those exercising moderately or not at all, with 2.7% having a cardiac event.

**More information:** Rachel Lampert et al, Vigorous Exercise in Patients With Congenital Long-QT Syndrome: Results of the Prospective, Observational, Multinational LIVE-LQTS Study, *Circulation* (2024). [DOI: 10.1161/CIRCULATIONAHA.123.067590](https://doi.org/10.1161/CIRCULATIONAHA.123.067590)

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