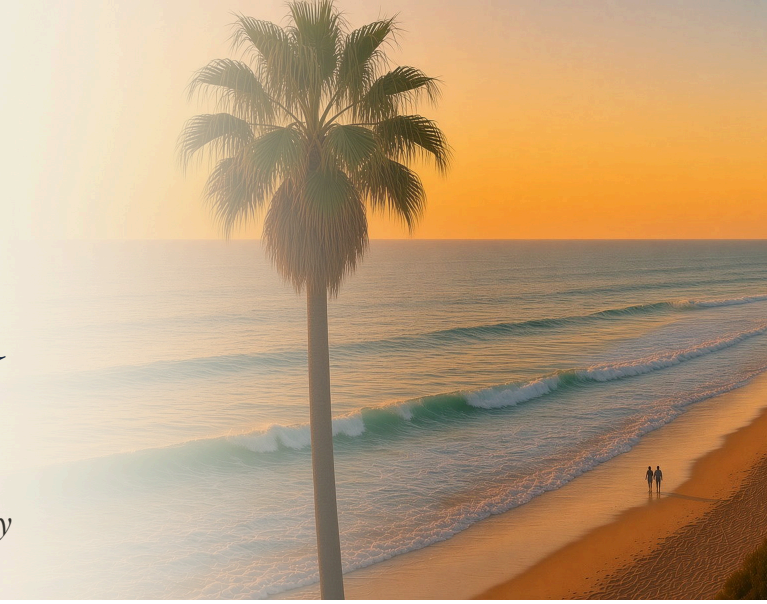
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Long QT, Brugada and CPVT

Inherited rhythm disorders in hearts that look normal on every scan. What sets them off and why your family needs an EKG.

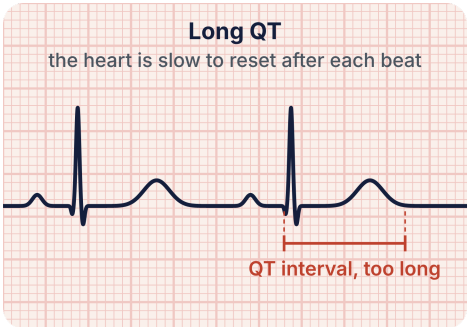
1 in 2,000
is about how many people have long QT, the most common one

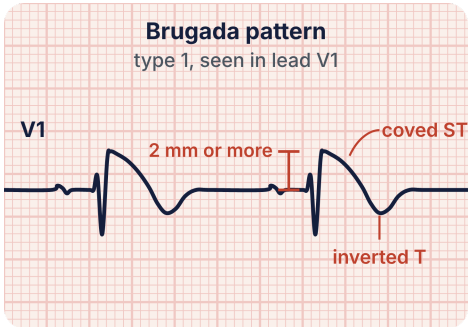
50%
chance each child inherits the gene in the usual (dominant) pattern

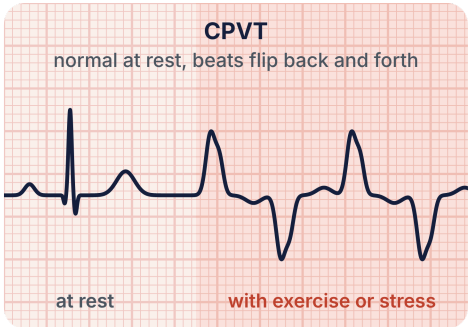
3 or 4
relatives are often found and protected after one family member is diagnosed

WHAT'S HAPPENING

A normal-looking heart with faulty wiring







A faulty gene changes the tiny protein channels that move charged particles in and out of heart cells with each beat. Imaging looks normal, but under specific triggers the heart can slip into a dangerous rhythm that can lead to sudden death. The strips are teaching drawings, not real tracings.

KNOW YOUR TRIGGERS

What sets each one off, and what helps

Long QT
LQT1 events come with exercise, especially swimming. LQT2 follows emotion, a sudden noise like an alarm clock, or the postpartum period. LQT3 tends to strike at rest or in sleep.

Brugada
Fever raises the risk, so take a fever reducer right away. Get an urgent EKG or ER care if a high fever won't come down. Some medicines, binge drinking, cannabis and big carb-heavy meals can set it off.

CPVT
Exercise or emotional stress brings on a dangerous fast rhythm, often first as fainting during exertion in a child or teen. Competitive sports are a shared decision with an expert.

In long QT and CPVT, beta-blockers (nadolol in particular) are the foundation. Take yours every day, because missing doses substantially reduces protection. With LQT1, swim only with a partner who knows your diagnosis.

Bring your family in

Every parent, sibling and child of someone diagnosed should be screened. Finding affected relatives before their first event is the most effective thing we can do for these conditions.

WHEN TO CALL 911, MEDICINES TO AVOID AND FAMILY SCREENING ARE ON THE BACK

STAYING SAFE

When to call, what to avoid, who to screen

CALL 911

don't wait to see if it passes

Cardiac arrest	Any witnessed cardiac arrest, or struggling, gasping breathing that someone sees.
Fainting	Prolonged loss of consciousness, or fainting episodes that keep coming back.
Chest pain or racing heart	New chest pain, or sustained palpitations, with lightheadedness or fainting.
ICD shock	A shock with chest pain, breathlessness, fainting or feeling unwell, or several shocks close together. If you have one shock and feel fine, call your cardiologist promptly.
Brugada	Fainting, a seizure, or gasping breathing at night.

CALL THE OFFICE THE SAME DAY

New symptoms	Any new fainting or near-fainting episode, or new or worsening symptoms despite your current treatment.
Missed doses	Missed beta-blocker doses with breakthrough symptoms.
A new medicine	One that may interact. Call before taking the next dose if possible.

MEDICINES TO AVOID

check before any new one, including over the counter

Long QT	Everything on the CredibleMeds.org known risk list. That includes some antibiotics (azithromycin, levofloxacin, moxifloxacin), the antifungal fluconazole, the antipsychotics haloperidol and ziprasidone, citalopram at higher doses and ondansetron for nausea.
Brugada	Everything on the BrugadaDrugs.org list, including tricyclic antidepressants, some antipsychotics and class IC rhythm drugs such as flecainide.
CPVT	Stimulants, including some ADHD medicines, cocaine and other substances that release adrenaline-type chemicals.

FAMILY SCREENING

Who	Parents, siblings and children first. If one of them is positive, that person's own parents, siblings and children are next.
The visit	A family history review and an EKG that measures the QT and checks for a Brugada pattern. Genetic testing when the gene change in your family is known, an echocardiogram if there's concern for structural disease, and sometimes an exercise test or Holter monitor.
Results	A relative who tests negative for the family's known gene change can usually be reassured, and their children won't be at risk from it. A relative who tests positive starts a plan, often a beta-blocker and lifestyle precautions.

CARRY YOUR DIAGNOSIS

Carry a card or medical alert bracelet with your diagnosis, your medicines (especially nadolol) and your cardiologist's number. Show it to anyone treating you, and tell the anesthesiologist before surgery. It's reasonable for your household to learn CPR and keep an AED at hand.

READ THE FULL ARTICLE

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channelopathies-long-qt-brugada-cpvt

For education only, and not a substitute for advice from your own physician. Sources include Schwartz on long QT (2012), the 2015 ESC ventricular arrhythmia guidelines, Brugada on Brugada syndrome (2018) and Priori on CPVT (Circulation 2002).

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