

Syncope (fainting)

Fainting (Syncope) (fainting) — find out if it is reflex (triggered by nerves), orthostatic (standing up too fast), or cardiac (heart problem). An electrocardiogram and the patient's story are your main tools.

THE ONE-LINE TRUTH

Fainting (Syncope) is a sudden, brief loss of consciousness caused by not enough blood reaching the brain, with full recovery once blood flow returns.

The chain — how it unfolds

1. Blood flow to the brain drops below the minimum needed to stay conscious. — why: The brain uses one-fifth of the body's oxygen every minute and has no reserve; even three to five seconds of zero flow causes you to black out like flipping a light switch.
2. In reflex fainting (syncope), you get five to thirty seconds of warning (sweating, nausea, pale skin, tunnel vision). — why: The vagus nerve is ramping up slowly, dropping heart rate and blood vessel tone step by step; you feel the pressure falling before you actually faint.
3. In orthostatic fainting (syncope), you feel dizzy within seconds of standing, then faint if you do not sit down. — why: Gravity instantly pulls blood into your legs; if your body cannot squeeze it back up, brain pressure drops the moment you stand — lying back down fixes it right away.
4. In cardiac fainting (syncope), you lose consciousness suddenly with no warning, often during activity or even while sitting. — why: The heart's electrical system misfires or a blockage stops the pump completely; there is no slow ramp-down, just an instant loss of output — this is the most dangerous type because it can kill you if the rhythm does not restart.
5. You fall down, which makes you horizontal. — why: Lying flat is the body's emergency reset — gravity stops working against you, blood flows back to the brain, and consciousness returns within ten to thirty seconds.
6. You wake up fully with no confusion (unless you hit your head). — why: True fainting (syncope) is brief (under one minute) and the brain gets oxygen back before any cells die; if you wake up confused or it takes minutes to recover, it was probably a seizure or stroke, not fainting.

7. The doctor traces backward from your story and EKG to find which system broke. — why: Reflex fainting (syncope) has triggers and warnings; orthostatic fainting happens only when standing and stops when lying; cardiac fainting has no pattern, no warning, and often an abnormal EKG or heart history — finding the cause tells you if it is safe or life-threatening.
8. Treatment fixes the broken step: more fluids and salt for orthostatic, avoid triggers and learn to lie down for reflex, pacemaker or defibrillator or valve surgery for cardiac. — why: Each cause has a different fix; treating the wrong cause does not help and can be dangerous — that is why accurate diagnosis with EKG, orthostatic vitals, and sometimes a heart monitor or echocardiogram is essential.

Spot it — what you see, and why

- Sudden loss of consciousness: Blood pressure drops too low or the heart beats irregularly, so not enough oxygen-rich blood reaches the brain. The brain needs a steady supply to stay awake; when it drops even for a few seconds, you black out.
- Feeling lightheaded or dizzy just before fainting: The brain is starting to run low on blood and oxygen but hasn't completely shut down yet. You feel woozy, floaty, or like the room is spinning because the brain's balance and awareness centers are getting less fuel.
- Pale, clammy skin: The body diverts blood away from the skin to protect the heart and brain, so your skin looks washed-out and feels cold and sweaty. This is the body's emergency mode trying to keep vital organs fed.
- Nausea or stomach upset before passing out: The vagus nerve (a big nerve that connects the brain to the gut and heart) fires too hard during certain kinds of fainting, slowing the heart and upsetting the stomach at the same time.
- Blurred or tunnel vision: The eyes need a constant flow of oxygenated blood to see clearly. When blood pressure drops, the edges of your vision go gray or black first because the outer parts of the retina (the light-sensing layer in the back of the eye) lose blood supply before the center does.
- Fast recovery after lying flat: Lying down lets gravity help blood flow back to the brain without the heart having to pump uphill. Most people wake up within seconds to a minute once blood and oxygen return to normal levels in the brain.

Red flags — act now

- Chest pain, trouble breathing, or a pounding or skipping heartbeat before or after fainting
- Fainting during hard exercise, while lying flat, or with no warning at all
- Family history of sudden death before age 50 or known dangerous heart conditions
- Older age (over 60) with new fainting spells, especially if you have heart disease or diabetes

- Fainting that happens over and over in a short time, or staying confused and weak long after waking up

Treat it — in this order

1. Sort the upstream break (reflex versus orthostatic versus heart-related) using history, physical exam, orthostatic vitals, and ECG → Identifying which system broke—the nervous system's reflex, the blood volume or blood-pressure-holding system, the heart's rhythm, or the heart's structure—tells you which treatment will actually work. Treating the wrong cause wastes time and can miss a life-threatening problem.
2. For reflex (vasovagal) fainting (syncope): reassure the patient, teach physical counter-pressure maneuvers (crossing legs, squeezing hands together, tensing arm and leg muscles), and increase salt and fluid intake → Counter-pressure maneuvers squeeze blood back toward the brain and heart when warning signs start, stopping the faint before it happens. Adding salt (3-10 grams per day) and fluids (2-3 liters per day) expands blood volume so there is more blood to squeeze. These stop the reflex trigger before it drops blood pressure.
3. For orthostatic fainting (syncope): stop or lower the dose of blood-pressure-lowering medicines, add compression stockings (waist-high, 15-20 mmHg or higher), increase salt and fluids, and consider fludrocortisone (0.1-0.2 mg daily) or midodrine (2.5-10 mg three times daily) if needed → Stopping offending drugs (like diuretics, alpha-blockers, or vasodilators) removes the brake on blood pressure. Compression stockings and salt restore blood volume and squeeze blood upward so standing does not drain blood from the brain. Fludrocortisone (a steroid that holds onto salt and water in the kidneys) and midodrine (a medicine that tightens blood vessels) rebuild the system that holds pressure upright.
4. For heart rhythm fainting (syncope): admit to the hospital, place on continuous heart monitoring (telemetry), treat a slow heart rate (bradycardia) (slow heart rate) with a pacemaker, treat a fast heart rate (tachycardia) (dangerous fast rhythms like ventricular a fast heart rate) with an implantable cardioverter-defibrillator (ICD) or medicines (like beta-blockers or amiodarone), and correct electrolyte imbalances (low potassium, low magnesium) → A pacemaker keeps the heart from pausing or slowing too much. An ICD shocks the heart out of life-threatening fast rhythms. Medicines stabilize the rhythm. Fixing electrolytes (potassium above 4.0 mEq/L, magnesium above 2.0 mg/dL) prevents rhythm triggers. All of these restore steady blood flow to the brain.

5. For structural heart fainting (syncope) (like aortic narrowing (stenosis) or hypertrophic cardiomyopathy): refer to cardiology, consider valve replacement (surgical or transcatheter aortic valve replacement, TAVR) for severe aortic narrowing, or septal reduction (surgery or alcohol ablation) for obstructive hypertrophic cardiomyopathy, and restrict vigorous exercise until treated → Replacing a tight valve or reducing thick heart muscle opens the path for blood to flow normally during exertion, preventing fainting (syncope) and sudden death. Exercise restriction prevents triggering fainting or a fatal rhythm before the defect is fixed.

Your top priorities at the bedside

1. Place patient on continuous cardiac monitor and obtain a 12-lead ECG within 10 minutes — why: Arrhythmias cause 15 percent of fainting (syncope) and carry highest mortality risk; immediate ECG detects prolonged QT (risk for torsades arrhythmia), heart blocks (electrical conduction failure), and signs of starved blood flow (ischemia) (low oxygen to heart muscle)
2. Measure orthostatic vital signs: blood pressure and heart rate lying flat, then immediately after standing at 1 and 3 minutes — why: Orthostatic low blood pressure (hypotension) is defined as systolic drop of 20 mmHg or diastolic drop of 10 mmHg within 3 minutes of standing; identifies 15 percent of fainting (syncope) causes and guides medication adjustment and volume repletion
3. Establish IV access and check capillary refill, skin temperature, and mucous membranes for dehydration — why: Hypovolemia (low blood volume) from dehydration reduces venous return (blood coming back to heart) and causes both orthostatic and reflex fainting (syncope); IV access allows rapid fluid resuscitation if patient is unstable