

NEUROLOGICAL • CARDIOVASCULAR

Syncope



Transient loss of consciousness from global cerebral hypoperfusion — rapid onset, short duration, complete spontaneous recovery. High-yield because the nurse must rapidly distinguish benign vasovagal from life-threatening cardiac causes.

Source note: Topic not present in uploaded reference notes. Content drawn from standard NGN NCLEX 2026 references — Saunders Comprehensive Review, ATI Adult Medical-Surgical, Lippincott Q&A, and AHA/ACC/HRS Syncope Guidelines.

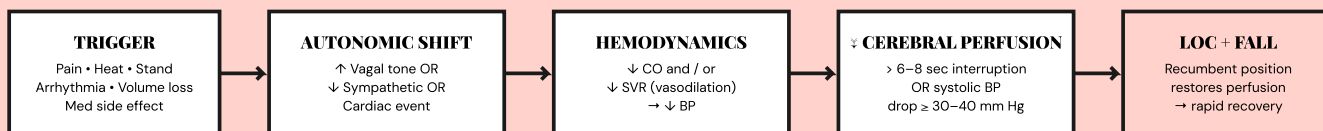
1 Definition & Overview

- **Syncope** = sudden, transient loss of consciousness (TLOC) due to **global cerebral hypoperfusion**, with rapid onset, short duration, and complete spontaneous recovery.
- **Pre-syncope** = lightheadedness / "almost fainting" without full LOC — same red flags apply.
- Brain tolerates only **6–8 seconds** of zero cerebral blood flow before LOC; even a **30–40 mm Hg drop** in systolic BP can trigger it.
- NCLEX priority: the nurse's job is to **identify cardiac causes early** — they carry the highest mortality risk.

2 3 Categories of Syncope

TYPE	CAUSE	RISK
Reflex (Neurally-mediated)	Vasovagal, situational (cough, micturition, defecation), carotid sinus	Low — usually benign
Orthostatic	Volume depletion, antihypertensives, autonomic failure (DM, Parkinson's, elderly)	Moderate — fall injury
Cardiac	Dysrhythmia (V-tach, bradycardia, long QT), structural (aortic stenosis, HOCM, PE, MI)	HIGH — sudden death risk

3 Pathophysiology — The Cascade to LOC



Gravity removed → blood returns to brain → consciousness returns within seconds

4

Signs & Symptoms — Phase by Phase

⌚ Prodrome (seconds-min before)

- Lightheadedness, dizziness
- **Pallor** + cool, clammy skin
- Diaphoresis
- Nausea
- Blurred or tunnel vision
- Tinnitus / "ringing"
- Yawning, sense of warmth

⚡ Event (brief)

- LOC, typically < **20 sec**
- Loss of postural tone → falls
- Pulse weak or absent transiently
- BP unmeasurable / very low
- Pupils may dilate briefly
- Possible brief myoclonic jerks (NOT seizure)

🔄 Post-Event

- **Rapid full recovery** when supine
- Minimal / no confusion (key vs seizure)
- Fatigue may persist
- Patient often recalls the prodrome
- No incontinence (usually)
- No tongue biting (usually)

🚨 RED FLAGS — Suspect CARDIAC syncope, escalate immediately

- 🚨 **Syncope during exertion** — classic for aortic stenosis, HOCM, arrhythmia
- 🚨 **No prodrome / sudden LOC while supine or sitting** — likely arrhythmia
- 🚨 **Chest pain, palpitations, or dyspnea** preceding the event
- 🚨 **Family history of sudden cardiac death** or known structural heart disease
- 🚨 **Age > 65, abnormal ECG, low hematocrit, SBP < 90** (San Francisco Syncope Rule criteria)
- 🚨 **Injury from fall** — head strike, hip fracture, lacerations

5 Priority Nursing Interventions (ABC)

● If patient is actively syncopal / just fainted

- **A — Airway:** Position supine, head turned to side; ensure airway patent.
- **B — Breathing:** Assess rate, depth, oxygen saturation; apply O₂ if hypoxic.
- **C — Circulation:** Palpate carotid pulse; if absent → CPR + call code.
- **Elevate legs 30–45°** (modified Trendelenburg) to ↑ venous return to the brain.
- **Loosen restrictive clothing** at the neck and waist.
- Obtain **orthostatic vital signs:** supine → sit → stand at 1 and 3 min. Positive = ↓ SBP ≥ 20 or ↓ DBP ≥ 10 mm Hg, or HR ↑ ≥ 20 bpm.
- Obtain **STAT 12-lead ECG** — rule out arrhythmia, prolonged QT, ischemia.
- Check **fingerstick glucose** — hypoglycemia mimics syncope.
- Establish **IV access;** draw CBC, electrolytes, BNP, troponin if cardiac suspected.
- Place on **continuous cardiac monitoring** if cardiac etiology suspected.
- **Initiate fall precautions;** do NOT allow ambulation until cleared.
- Keep patient supine **at least 15–30 minutes** before slow re-positioning.
- Document: triggers, prodrome, witness account, duration of LOC, recovery time, post-event mentation.

6 Key Diagnostics

- **12-Lead ECG** — FIRST and mandatory for every syncope patient.
- **Orthostatic VS** — bedside, no cost, high yield.
- **BMP, CBC, glucose, troponin, BNP, β-hCG** (if applicable).
- **Echocardiogram** — structural heart disease.
- **Tilt-table test** — confirms reflex syncope.
- **Holter / event monitor / loop recorder** — for intermittent arrhythmia.
- **EEG / CT head** — only if seizure or focal neuro signs suspected.

7 Pharmacology — Treat & Avoid

DRUG / CLASS	MECHANISM	INDICATION	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
Midodrine (alpha-1 agonist)	Vasoconstriction → ↑ BP	Orthostatic / neurogenic syncope	Supine HTN, piloerection, urinary retention	Give during waking hours; last dose ≥ 4 hrs before bed to avoid supine HTN. Monitor BP supine + standing.
Fludrocortisone (mineralocorticoid)	↑ Na/H ₂ O retention → ↑ volume	Refractory orthostatic syncope	Hypokalemia, edema, HTN, weight gain	Monitor K ⁺ , daily weight, BP. Encourage K ⁺ -rich foods.
Beta-blockers (metoprolol, propranolol)	↓ HR, ↓ contractility	Long QT syndrome, some cardiac syncope	Bradycardia, hypotension, fatigue, bronchospasm	Hold if HR < 60 or SBP < 90. Do NOT abruptly stop. Use cautiously in asthma/COPD.
SSRIs (paroxetine, sertraline)	Modulate autonomic reflex	Recurrent vasovagal syncope	Nausea, sexual dysfunction, ↑ suicidality (young adults)	Full effect takes 4–6 weeks. Educate on adherence.
⚠ Drugs that CAUSE / WORSEN syncope — review and consider reducing/holding: antihypertensives (esp. alpha-blockers — doxazosin, tamsulosin), diuretics, nitrates, vasodilators, TCAs, antipsychotics, anticholinergics, opioids, alcohol, diabetes meds (hypoglycemia), QT-prolonging drugs (amiodarone, haloperidol, ondansetron, fluoroquinolones, macrolides).				

8 NCLEX Test Traps ⚠️

TRAP #1 — SYNCOPES ≠ SEIZURES

Syncope = rapid recovery, no postictal confusion, minimal jerks. Seizure = prolonged postictal state, tongue biting, incontinence, focal aura. **Don't pick "obtain EEG" first** — get the ECG first.

TRAP #2 — SIT THEM UP "TO HELP BREATHING"

WRONG. Keep the patient **supine with legs elevated**. Sitting up reduces cerebral perfusion and risks re-syncope.

TRAP #3 — "IT'S JUST VASOVAGAL"

Exertional syncope is **never** benign vasovagal — it's cardiac until proven otherwise (aortic stenosis, HOCM).

TRAP #4 — STOP THE OFFENDING DRUG INDEPENDENTLY

Nurse does NOT D/C meds. Document, hold next dose if VS unsafe per protocol, and **notify provider**.

TRAP #5 — ORTHOSTATIC VS DONE WRONG

Must check at **supine, then 1 min standing, then 3 min standing**. A single reading does not rule out orthostasis.

9 Patient & Family Education

- ✓ **Rise slowly:** dangle legs 1–2 min, sit, then stand. "Dangle, sit, stand" three-step rule.
- ✓ **Recognize the prodrome** (warmth, nausea, blurred vision) — immediately **sit or lie down, elevate legs**.
- ✓ **Counter-pressure maneuvers** for prodrome: leg crossing + tensing, hand-grip, arm tensing — abort the faint.
- ✓ **Hydrate well** (2–2.5 L/day if not contraindicated) and **increase salt intake** for orthostatic patients (only per provider).
- ✓ Wear **knee/thigh-high compression stockings** daily; remove at night.
- ✓ Avoid known triggers: hot showers, prolonged standing, large carb-heavy meals, alcohol, dehydration.
- ✓ Eat **small, frequent meals** to prevent postprandial syncope.
- ✓ **Driving:** follow state/provider restrictions — typically no driving until cleared (often 6 mo seizure-free or after cause identified).
- ✓ Bring a **complete medication list** to every appointment — many drugs lower BP.
- ✗ DO NOT drive, climb ladders, swim alone, or operate heavy machinery until cleared.
- ✗ DO NOT ignore palpitations, chest pain, or syncope on exertion — **call 911**.

10 Memory Boosters — Mnemonics & Patterns

5 P's

Causes of Syncope

Pressure ↓ — orthostatic / volume loss
 Pump — cardiac (arrhythmia, structural)
 Pipes — vasodilation / reflex
 Psychogenic — anxiety, hyperventilation
 Pharmacology — drug-induced

A B C D E

Nursing Priorities on Collapse

Airway — supine, head to side
 Breathing + O₂
 Circulation — pulse, BP, ECG
 Dextrose — check glucose
 Elevate legs 30–45°

P A S S

Prodrome Warning Signs

Pallor
 Anxiety / "off" feeling
 Sweating (diaphoresis)
 Sight blurred / tunnel vision

Pattern Recognition

- Syncope **on exertion** → Aortic stenosis / HOCM
- Syncope + **chest pain** → MI / PE
- Syncope **after standing** → Orthostatic
- Syncope **seeing blood / pain** → Vasovagal
- Syncope **during cough / void** → Situational
- Syncope **turning head / tight collar** → Carotid sinus

11

NCJMM Clinical Judgment Scenario

SCENARIO

A 72-year-old male presents to the ED after collapsing in church during the standing portion of the service. He reports brief chest tightness just before the event and a similar episode while climbing stairs last week. He denies prodrome. PMH: HTN, hyperlipidemia. Meds: lisinopril, atorvastatin. On arrival: A&O $\times 4$, HR 48 irregular, BP 92/58, RR 18, SpO₂ 96% RA, T 98.4°F. Skin pale and diaphoretic. Reports feeling "wiped out."

Step 1

Recognize Cues

- **Relevant cues:** Age 72, syncope **on exertion**, chest tightness prodrome, prior exertional episode, HR 48 + irregular, BP 92/58 (hypotension), pallor + diaphoresis.
- **Irrelevant:** Temperature, SpO₂ — within normal limits.

Step 2

Analyze Cues

The combination of **exertional syncope + bradycardia + hypotension + prior episode** in a 72-year-old strongly suggests **cardiac syncope** — most likely a bradyarrhythmia (e.g., complete heart block, sick sinus) or structural disease (aortic stenosis). This is high-mortality and time-sensitive. Lisinopril may be exacerbating hypotension.

Step 3

Prioritize Hypotheses

- **Priority #1 (highest mortality):** Cardiac arrhythmia → impending arrest.
- **#2:** Structural cardiac (aortic stenosis with reduced CO).
- **#3:** Drug-induced hypotension from lisinopril.
- Lower priority: Orthostatic, vasovagal — unlikely given exertional pattern + no prodrome.

Step 4

Generate Solutions

- Place patient on **continuous cardiac monitor** and obtain **STAT 12-lead ECG**.
- Establish **2 large-bore IVs**; initiate **NS 0.9% bolus** for hypotension per protocol.
- Draw labs: **troponin, BNP, CBC, BMP, magnesium**.
- **Hold lisinopril** and notify provider (do not D/C independently).
- Prepare for possible **transcutaneous pacing** if symptomatic bradycardia worsens.
- Anticipate echocardiogram and cardiology consult; possible admission to telemetry/CCU.
- Initiate fall precautions; keep NPO pending workup.

Step 5

Take Action

- Patient placed on telemetry → reveals **3rd-degree (complete) heart block**, ventricular rate 42.
- 12-lead ECG confirms AV dissociation. Troponin pending.
- Nurse applies **transcutaneous pacer pads**; provider initiates pacing at 70 bpm at capture threshold +10%.
- **Atropine 1 mg IV** given as bridge per ACLS bradycardia algorithm.
- Cardiology consulted for **emergent transvenous / permanent pacemaker** placement.
- Patient repositioned supine, legs elevated; continuous monitoring of HR, BP, LOC.
- Family updated; informed consent for pacemaker obtained.

Step 6

Evaluate Outcomes

- ✓ **Effective:** HR now 70 with pacing capture, BP 118/72, patient alert, denies chest pain, skin warm/dry. No further syncope.
- ✓ **Effective:** Pre-op labs WNL; patient transferred to cath lab for permanent pacemaker.
- ✗ **Reassess if:** Loss of pacer capture, recurrent bradycardia < 50, hypotension, chest pain, altered LOC → escalate immediately.
- ✓ **Discharge teaching:** Pacemaker precautions, rise slowly, follow-up in 1 week, no driving until cleared, signs of infection/lead displacement, MRI restrictions per device.