

NCLEX 2026 • VISUAL STUDY LIBRARY • CARDIOVASCULAR / NEUROLOGICAL

Syncope — *the brief blackout*

Transient loss of consciousness from sudden, temporary reduction in cerebral blood flow — usually self-resolving, but a critical clue to underlying cardiac, neural, or volume disorders. High fall & injury risk.

SYSTEM: CARDIOVASCULAR / NEURO

ICD-10: R55

PRIORITY: ABCS + SAFETY

NCJMM: ALL 6 LAYERS

i Source transparency note: Syncope is not covered in Diane's uploaded personal notes. Content compiled from standard NCLEX references: **Saunders Comprehensive Review for the NCLEX-RN** (Silvestri, 9th ed.), **ATI RN Adult Medical-Surgical Nursing**, **Lippincott Manual of Nursing Practice**, and the **2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope**.



Definition & Overview

WHAT IT IS • WHY IT MATTERS

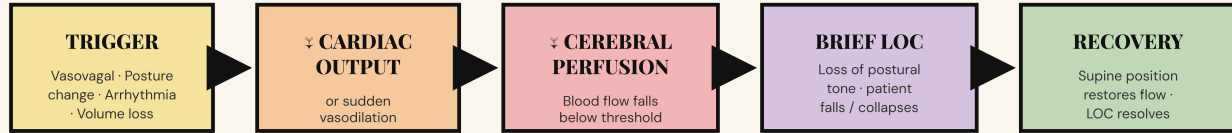
- **Syncope** = a sudden, brief, *transient loss of consciousness* (LOC) caused by a global reduction in cerebral perfusion, with rapid spontaneous recovery and return of orientation.
- **Pre-syncope (near-syncope)** = the warning symptoms (lightheadedness, dimming vision, diaphoresis) *without* full LOC.
- **Why it matters:** Syncope is a symptom — not a diagnosis. It can be benign (vasovagal) or signal a life-threatening cause (arrhythmia, structural heart disease, PE, hemorrhage). Falls during the event cause serious injury, especially in older adults.

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Pathophysiology — The Cascade

TRIGGER → HYPOPERFUSION → BLACKOUT → RECOVERY

THE SYNCOPE CASCADE — Seconds from trigger to recovery



Cerebral blood flow drops below ~50% of baseline → neurons fail → consciousness lost. Lying flat restores gravity-assisted perfusion → patient wakes.

If LOC lasts > ~20 seconds, suspect seizure or cardiac arrest — NOT simple syncope.

FIGURE 1 · MECHANISM CASCADE

Bottom line: Anything that drops cerebral perfusion fast enough — whether *pump failure* (cardiac), *tank empty* (volume), or *pipes wide open* (vasodilation) — can produce syncope.

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Classification — Four Big Buckets

KNOW WHICH IS DANGEROUS

TYPE	MECHANISM	CLASSIC TRIGGERS	DANGER LEVEL
Reflex / Vasovagal (<i>neurally mediated</i>)	Sudden parasympathetic surge → bradycardia + vasodilation	Pain, fear, blood draws, hot rooms, prolonged standing, urination, coughing, swallowing	● Usually benign
Orthostatic	Failure of compensatory vasoconstriction on standing → BP drop	Volume loss, dehydration, antihypertensives, diuretics, autonomic neuropathy (DM, Parkinson's)	● Treatable
Cardiac	Arrhythmia (brady/tachy) or structural disease → sudden ↓CO	Exertion, supine position, no warning, palpitations, hx of MI/HF/HCM	● LIFE-THREATENING
Cerebrovascular	Subclavian steal, vertebrobasilar insufficiency (rare)	Arm exercise, head turning	● Workup needed

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Signs & Symptoms

PRODROME → EVENT → RECOVERY

① PRODROME

(SECONDS BEFORE)

- Lightheadedness, dizziness
- **Pallor + diaphoresis** (cool, clammy)
- Nausea
- Tunnel vision / "graying out"
- Tinnitus or muffled hearing
- Yawning, warmth
- Weak, knees buckling

② EVENT

(TYPICALLY <20 SEC)

- **Brief LOC**
- Loss of postural tone → falls / slumps
- Pulse: weak, thready, or transiently absent
- BP markedly low
- Brief myoclonic jerks possible (*not* a true seizure)
- Eyes may be open or closed

③ RECOVERY

(RAPID, <30 SEC)

- **Rapid return of orientation**
- Patient knows who/where/when
- May feel tired, washed out
- Brief flushing as color returns
- **NO prolonged postictal state**
- No tongue biting, no incontinence (usually)



RED FLAGS

Features that point to **CARDIAC syncope** — escalate immediately

- Syncope during **EXERTION** (running, climbing stairs) — think HCM, aortic stenosis, arrhythmia
- Syncope while **SUPINE** — gravity isn't the cause; suspect arrhythmia
- **NO prodrome** — "the lights just went out" — classic arrhythmia pattern
- Palpitations or chest pain before the event
- Family history of sudden cardiac death < age 50 (Long QT, Brugada, HCM)
- Age > 60 with first episode
- Known heart disease (CAD, HF, prior MI, valvular)
- Abnormal ECG, focal neuro deficits, or prolonged LOC

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Priority Nursing Interventions

ABCS • SAFETY • THEN DIAGNOSE

AIRWAY

A

Position patient **supine with legs elevated** (modified Trendelenburg).
Turn head to side if vomiting.
Loosen restrictive clothing at neck/waist.

BREATHING

B

Assess respiratory rate & effort.
Apply **O₂** if hypoxic. Auscultate lungs (rule out crackles, wheezes, PE clues).

CIRCULATION

C

Check **pulse rate, rhythm, quality** & BP. **Continuous cardiac monitor**.
Establish IV access. Anticipate fluids if hypovolemic.

● Acute / In-the-moment

- **Stay with the patient** — do NOT leave; call for help
- Lower to floor or bed safely; protect head
- Supine with legs elevated 30–45° (unless contraindicated)
- Loosen tight clothing; ensure airway patency
- Vitals: HR, BP, RR, SpO₂, temperature
- Apply continuous telemetry / 12-lead ECG
- Bedside **blood glucose** (rule out hypoglycemia)
- Start large-bore IV; consider NS bolus if volume-depleted
- Notify provider; document time, duration, trigger, recovery

● Ongoing / Workup & Safety

- **Fall precautions:** bed low, side rails up, call light within reach, non-slip footwear
- **Orthostatic vital signs:** supine → sitting → standing (wait 1–3 min between; positive = SBP ↓ ≥20, DBP ↓ ≥10, or HR ↑ ≥20)
- Neuro checks (LOC, pupils, strength) — rule out stroke/seizure
- Assist with ambulation; never let patient walk alone post-event
- Prepare for diagnostics: ECG, echo, Holter, tilt-table, CT/MRI if neuro concern
- Review medication list for hypotensive agents
- Inspect for injury from fall (head, hip, wrist)
- Hold antihypertensives pending provider review

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Pharmacology

DRUGS THAT CAUSE IT • DRUGS THAT TREAT IT

⚠ Medications that commonly CAUSE syncope

DRUG / CLASS	MECHANISM	NURSING CONSIDERATIONS
Antihypertensives (ACE-I, ARBs, β -blockers, α -blockers, CCBs)	$\downarrow$ Peripheral resistance, $\downarrow$ HR, $\downarrow$ CO	Teach slow position changes; check orthostatics; first-dose effect with α -blockers (prazosin)
Diuretics (furosemide, HCTZ)	Volume depletion $\rightarrow$ orthostatic hypotension	Monitor I&O, daily weights, electrolytes (K^+); avoid morning + diuretic + standing
Nitrates (nitroglycerin, isosorbide)	Venous & arterial vasodilation $\rightarrow$ $\downarrow$ preload	SIT patient before sublingual NTG; never give if SBP < 90; check ED-drug interaction (sildenafil!)
Antiarrhythmics (amiodarone, sotalol, quinidine)	Can <i>cause</i> arrhythmias (proarrhythmic) $\rightarrow$ QT prolongation	Continuous telemetry; monitor QT interval; K^+ and Mg^{2+} within normal limits
Psychotropics (TCAs, antipsychotics, trazodone)	α -blockade, anticholinergic, QT prolongation	High fall risk in elderly; teach rise-slowly; monitor ECG with antipsychotics
Opioids & sedatives	Vasodilation, respiratory depression, $\downarrow$ HR	Fall precautions; reassess pain & sedation; have naloxone available

✅ Medications used to TREAT recurrent syncope

DRUG	INDICATION	MECHANISM	NURSING POINTS
Fludrocortisone	Chronic orthostatic hypotension	Mineralocorticoid $\rightarrow$ Na^+/H_2O retention $\rightarrow$ $\uparrow$ blood volume	Monitor K^+ (can drop), weight gain, edema, BP supine
Midodrine	Orthostatic hypotension	α_1 -agonist $\rightarrow$ vasoconstriction $\rightarrow$ $\uparrow$ BP	Last dose $\geq$ 4 hr before bed (supine HTN risk); hold if supine BP > 180
β-blockers / SSRIs	Selected vasovagal recurrence	Blunt the reflex sympathetic surge	Evidence mixed; monitor HR, mood, BP
Pacemaker (<i>device, not drug</i>)	Bradyarrhythmic / cardioinhibitory syncope	Maintains minimum HR	Post-implant teaching: no MRI without clearance, no contact sports for 4 wk, monitor incision

7 NCLEX Test Traps

WRONG-VS-RIGHT • MOST MISSED CONCEPTS

 TRAP

"Sit the patient up immediately to help them breathe."

 CORRECT

Keep patient **supine with legs elevated**. Sitting up *worsens* cerebral hypoperfusion. Only sit up once oriented, vitals stable, and gradually.

 TRAP

"It's just a fainting spell — vasovagal. Discharge after recovery."

 CORRECT

In an older adult, with *exertional* onset, *no prodrome*, or known heart disease — assume **cardiac syncope** until ruled out. Telemetry, ECG, and full workup required.

 TRAP

"Brief jerking movements during the event = seizure."

 CORRECT

Convulsive syncope (brief myoclonic jerks from cerebral hypoxia) is *common* and *not* epilepsy. Key differentiator: **rapid recovery, no postictal confusion, no tongue biting**.

 TRAP

"Take orthostatic vitals back-to-back as fast as possible."

 CORRECT

Wait **1–3 minutes** at each position (supine → sitting → standing). Rapid measurement misses the delayed BP drop. Positive: SBP ↓ ≥ 20, DBP ↓ ≥ 10, or HR ↑ ≥ 20.

 TRAP

"Give nitroglycerin to the patient with chest pain — they're already lying down."

 CORRECT

Check BP *first*. **Hold NTG if SBP < 90 mmHg** — it will cause syncope and worsen perfusion. Verify no PDE-5 inhibitor (sildenafil) in past 24–48 hr.

 TRAP

"Patient says they feel fine after — send them to ambulate."

 CORRECT

Assist with first ambulation post-syncope. Recheck orthostatics. The cause hasn't been identified yet — patient is still at fall risk.

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Patient & Family Education

PREVENTION • TRIGGERS • WHEN TO CALL



Prevent the next event

- **Rise slowly** from lying → sitting → standing; pause at each step
- **Hydrate:** 2–2.5 L water daily (unless restricted)
- **Increase dietary salt** (orthostatic only — confirm with provider; NOT for HF/HTN)
- Wear **compression stockings** (knee or thigh-high)
- Avoid prolonged standing, hot showers, large meals + alcohol
- Counter-pressure maneuvers at first warning: *cross legs and tense, squeeze a ball, clench fists*
- Sleep with HOB elevated 10–20° (chronic orthostatic)
- Eat smaller, frequent meals (avoid postprandial drop)



Safety & activity

- If warning symptoms occur: **sit or lie down immediately**
- Avoid driving until cleared by provider (state laws vary; usually 1–6 mo seizure-free for unexplained LOC)
- No swimming alone, no climbing ladders, no operating heavy machinery
- Carry a medical alert ID listing meds and cause
- Family/caregivers: learn CPR; know how to position (supine, legs up) and call 911
- Review every medication with provider at each visit
- Keep a **syncope diary:** time, trigger, prodrome, duration



CALL 911 / SEEK CARE

Teach the patient when symptoms require emergency evaluation

- Chest pain, palpitations, or shortness of breath with the episode
- Syncope during physical activity or exercise
- LOC lasting more than a minute, or trouble waking the person
- New focal weakness, slurred speech, facial droop, or vision loss
- Injury from the fall — head strike, bleeding, possible fracture
- Recurrent episodes (more than one in a short period)

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Memory Boosters & Mnemonics

QUICK ASSOCIATIONS · PATTERN RECOGNITION

"HAVE FUN" — Vasovagal triggers

- **H**eat / Hot environments
- **A**nxiety, pain, emotional stress
- **V**omiting, coughing, defecation
- **E**ating large meals (postprandial)
- **F**ear (needles, blood, dental)
- **U**rination (micturition syncope)
- **N**eedles & medical procedures

The 5 P's of Prodrome

- **P**allor — patient looks pale, washed out
- **P**erspiration — cool, clammy diaphoresis
- **P**alpitations — flutter or pounding
- **P**re-syncope feeling — lightheaded, dim vision
- **P**ostural drop — knees buckle, must sit/lie

"SYNCOPE" vs "SEIZURE"

- **S**udden, brief LOC (< 20 sec)
- **Y**ields quickly — fast recovery
- **N**o postictal confusion
- **C**erebral hypoperfusion (not electrical)
- **O**ften has a trigger / prodrome
- **P**ale & sweaty before; flushed after
- **E**pisodic — usually upright posture
- → *Seizure: tongue bite, incontinence, postictal confusion > 5 min*

Intervention rhyme

*"Lay them flat,
raise the feet,
and they'll be sweet."*

Then: ABCs · Vitals · Monitor · Glucose · IV · ECG ·
Identify the cause

Red-flag cardiac syncope — "EXERTION"

- **E**xertional onset (during activity)
- **X**tra abnormal ECG (long QT, Brugada, AV block)
- **E**lderly > 60 with first event
- **R**ecumbent (supine) when it happened
- **T**achy- or brady-arrhythmia hx
- **I**nherited cardiac disease / family sudden death
- **O**mit prodrome — "lights just went out"
- **N**otable chest pain or palpitations preceding

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NCJMM Clinical Judgment Scenario

ALL 6 LAYERS • NCLEX 2026 STANDARD

SCENARIO: A 72-year-old male is brought to the ED by his wife after losing consciousness while climbing the stairs at home. The wife reports he stated "I don't feel right," and collapsed about 5 seconds later, with no jerking. He was unresponsive for ~20 seconds, then woke knowing where he was. **History:** HTN, prior anterior MI 4 years ago, ejection fraction 35%. **Meds:** lisinopril 20 mg daily, metoprolol succinate 50 mg daily, atorvastatin, aspirin 81 mg. **On arrival:** A&Ox3, BP 96/58 supine, HR 52 and irregular, RR 18, SpO₂ 96% RA, temp 36.8 °C, pale, slightly diaphoretic, no focal neuro deficits, no head injury noted. Bedside glucose 102 mg/dL.

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RECOGNIZE CUES

Subjective: Brief LOC, *exertional onset*, minimal prodrome ("don't feel right"), age 72. **Objective:** BP 96/58 (low), HR 52 *and irregular*, pallor, diaphoresis, hx anterior MI, EF 35% (HFrEF), on β-blocker + ACE-I, glucose normal, no neuro deficit, no head trauma.

2

ANALYZE CUES

Concerning constellation: **exertional syncope + structural heart disease + irregular bradycardia + low BP + minimal prodrome**. This pattern fits cardiac syncope — likely arrhythmic (heart block? Vtach? sick sinus?) or outflow obstruction. β-blocker may be contributing to the bradycardia. Vasovagal is unlikely given exertion and no clear trigger. Glucose ruled out hypoglycemia.

3

PRIORITIZE HYPOTHESES

1. **Cardiac arrhythmic syncope** (highest priority — life-threatening): heart block, Vtach, brady from β-blocker, or in setting of low EF
2. **Structural/ischemic syncope**: recurrent ischemia, decompensated HF, aortic stenosis
3. Medication-induced orthostatic hypotension (lisinopril + metoprolol)
4. Pulmonary embolism (less likely but cannot exclude)

4

GENERATE SOLUTIONS

- Continuous cardiac telemetry & **STAT 12-lead ECG** (look for ischemia, block, long QT, prior MI)
- IV access × 2; obtain labs: troponin (× 3), BNP, BMP, Mg, CBC, type & screen
- CXR; consider TTE to assess EF, valves, wall motion
- **Hold β-blocker** pending HR/rhythm review; consult cardiology
- Hold lisinopril if SBP < 100
- Cautious IV NS bolus if euvolemic and HF stable
- Strict fall precautions; bed rest until cleared
- Prepare for possible pacemaker / ICD if indicated

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TAKE ACTION

- Apply continuous telemetry & defibrillator pads (high-risk patient)
- Obtain 12-lead ECG within 10 minutes of arrival
- Establish 2 large-bore IVs; draw labs
- Position supine with HOB low; legs may be elevated briefly
- Hold metoprolol & lisinopril; document and notify provider
- Activate fall-risk protocol; bed alarm, side rails up, no ambulation without 2-person assist
- Reassess vitals every 15 minutes × 1 hr, then per protocol
- Keep NPO pending workup; teach patient/wife reason for monitoring

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EVALUATE OUTCOMES

- **Expected:** Rhythm identified on telemetry; SBP > 100, HR 60–90 stable; troponin trending neutral or treated appropriately; no further syncope; patient remains injury-free; definitive cause established and treated (e.g., pacemaker placed if high-grade AV block, β -blocker adjusted, or ICD if EF < 35% with arrhythmia).
- **Worsening / Escalate:** Recurrent syncope, hypotension unresponsive to fluids, ST changes, sustained VT, complete heart block → call rapid response / cardiology emergency.
- **Discharge readiness:** Cause identified, medications reconciled, patient verbalizes triggers and red-flag symptoms, follows up with cardiology in 1 week, driving restrictions explained.