

NGN NCLEX 2026 · CRITICAL CARE / CARDIOVASCULAR

Distributive Shock

Massive Vasodilation → Relative Hypovolemia → Poor Tissue Perfusion

HIGH-YIELD

PRIORITIZATION

NCJMM ALIGNED

SEPTIC · ANAPHYLACTIC · NEUROGENIC

01 Definition & Overview



Distributive shock is a state of **widespread vasodilation** where blood volume is *normal* but the vascular space becomes too large — creating **relative hypovolemia**. The "tank" is fine, but the "pipes" are too wide. This drops systemic vascular resistance ($\downarrow$ SVR), causing tissue hypoperfusion.

TRIGGER: INFECTION

Septic Shock

Sepsis + persistent hypotension despite fluids. Most common type. Leading cause of ICU death.

TRIGGER: ALLERGEN

Anaphylactic Shock

IgE-mediated histamine release from bee stings, foods, latex, meds (PCN, contrast dye).

TRIGGER: SCI $\geq$ T6

Neurogenic Shock

Loss of sympathetic tone from spinal cord injury above T6, spinal anesthesia, or brain injury.

02 Pathophysiology



1

Trigger: infection, allergen, or loss of sympathetic tone



2

Chemical mediators released (histamine, cytokines, bradykinin) OR loss of vasomotor control



3

Massive vasodilation → ↓ SVR + ↑ capillary permeability → fluid shifts to interstitial space



4

Relative hypovolemia → ↓ venous return → ↓ preload → ↓ cardiac output → ↓ MAP



5

Tissue hypoperfusion → anaerobic metabolism → lactic acidosis → cellular death → MODS

03 Signs & Symptoms



Early (Warm/Hyperdynamic)

- **Warm, flushed, dry skin** (key distinguisher!)
- Bounding peripheral pulses
- Wide pulse pressure
- Tachycardia (EXCEPT neurogenic)
- Tachypnea, restlessness, anxiety



Late (Cold/Hypodynamic)

- ▲ Cool, clammy, mottled skin
- ▲ Weak, thready pulses
- ▲ Narrowed pulse pressure
- ▲ Hypotension unresponsive to fluids
- ▲ Altered LOC → coma

- Fever > 38°C or < 36°C (septic)
- Lactate > 2 mmol/L

- ▲ Oliguria (< 0.5 mL/kg/hr) → anuria
- ▲ Lactate > 4 mmol/L, metabolic acidosis

Compare the Three Types

FINDING	SEPTIC	ANAPHYLACTIC	NEUROGENIC
Heart Rate	↑ Tachycardia	↑ Tachycardia	↓ BRADYCARDIA
Skin	Warm → cold; flushed	Hives, angioedema, flushed	Warm, dry below injury
Airway	Usually patent	Stridor, bronchospasm	At risk if C-spine injury
Key Lab	↑ Lactate, ↑ WBC, + cultures	↑ Tryptase, ↑ IgE	Normal labs; diagnosis clinical
Temperature	Fever or hypothermia	Usually normal	Poikilothermic (takes room temp)

RED FLAGS — Escalate Immediately

-  **Lactate > 4 mmol/L** — severe tissue hypoperfusion
-  **MAP < 65 mmHg** despite 30 mL/kg fluid bolus → needs vasopressors
-  **Stridor, hoarseness, tongue swelling** → impending airway obstruction (anaphylaxis)
-  **Bradycardia + hypotension + recent SCI** → neurogenic shock
-  **Urine output < 0.5 mL/kg/hr** → acute kidney injury developing

04 Priority Nursing Interventions



A

B

C

D

AIRWAY

AIRWAY

Assess for stridor, swelling; prepare for intubation (anaphylaxis = highest airway risk)

IV ACCESS

Two large-bore (16–18 g) peripheral IVs immediately

VASOPRESSORS

Start if MAP < 65 mmHg after fluids; norepinephrine is first-line

POSITIONING

Modified Trendelenburg (legs elevated 30°) or supine; avoid full Trendelenburg

REMOVE TRIGGER

Stop causative agent (IV med, contrast, blood product) in anaphylaxis

BREATHING

BREATHING

High-flow O₂ via non-rebreather to keep SpO₂ ≥ 94%; monitor RR and work of breathing

FLUID BOLUS

30 mL/kg isotonic crystalloid (NS or LR) within 3 hours for septic shock

LABS

Draw lactate, blood cultures ×2 (BEFORE antibiotics), CBC, lytes, ABG

MONITOR

Continuous ECG, BP q5–15 min, SpO₂, urine output hourly (Foley), mental status

WARMING

Passive warming for neurogenic (they lose thermoregulation below injury)

DRUGS/DX



Surviving Sepsis Hour-1 Bundle

All five actions must be initiated within **ONE hour** of sepsis recognition:

1

Measure lactate

2

Blood cultures BEFORE antibiotics

3

Broad-spectrum antibiotics

4

30 mL/kg crystalloid if hypotensive

5

Vasopressors if MAP < 65

05 Pharmacology



Norepinephrine
LEVOPHED · A/B AGONIST

First-line vasopressor for septic and neurogenic shock. Potent vasoconstrictor. Titrate to MAP $\geq$ 65 mmHg. **Give via central line** — extravasation causes tissue necrosis (antidote: phentolamine).

Epinephrine
ADRENALIN · A/B AGONIST

#1 drug in anaphylaxis — give IM 0.3–0.5 mg (lateral thigh) FIRST, before Benadryl or steroids. Causes vasoconstriction + bronchodilation. Repeat q5–15 min PRN.

Vasopressin
ADH ANALOG

Second-line add-on for septic shock when norepinephrine alone isn't enough. Fixed dose (not titrated). Watch for bowel/digit ischemia.

Atropine
ANTICHOLINERGIC

For **neurogenic shock bradycardia**. 0.5–1 mg IV push. Blocks vagal tone. Transcutaneous pacing if atropine fails.

Diphenhydramine
BENADRYL · H1 BLOCKER

Anaphylaxis adjunct — given **AFTER epinephrine**. Blocks histamine-driven hives/itching. 25–50 mg IV/IM.

Methylprednisolone
SOLU-MEDROL · CORTICOSTEROID

Anaphylaxis — prevents **biphasic reaction** (rebound 4–24 hrs later). Also used in refractory septic shock (hydrocortisone).

Broad-Spectrum Antibiotics
E.G., PIPERACILLIN-TAZOBACTAM, VANCOMYCIN

Septic shock — administer **within 1 hour** of recognition. Always **draw cultures first** (but don't delay abx waiting).

06 NCLEX Test Traps



✗ "All shock = cold, clammy skin"

✗ "Give Benadryl first in anaphylaxis"

✓ Distributive shock starts WARM, flushed, and dry (vasodilation). Only becomes cold in late stage.

✓ EPINEPHRINE is always first. Benadryl never treats airway/hemodynamic collapse.

✗ "Neurogenic shock = tachycardia"

✓ Neurogenic = BRADYCARDIA from loss of sympathetic tone — the ONE shock without tachycardia.

✗ "Start antibiotics first, then draw cultures"

✓ Cultures BEFORE antibiotics (antibiotics kill pathogens before lab can grow them).

✗ "Place patient in full Trendelenburg"

✓ No longer recommended — it impairs breathing. Use modified (legs up 30°) or supine.

✗ "Give vasopressors before fluids"

✓ Fluids first (30 mL/kg), THEN pressors if MAP still < 65. Vasopressors without volume = empty squeeze.

✗ "Norepinephrine can run peripherally"

✓ Must go through a CENTRAL line. Extravasation causes severe tissue necrosis.

✗ "Anaphylaxis is over once symptoms stop"

✓ Biphasic reaction can occur 4–24 hours later. Observe and give steroids to prevent.

07 Patient Education



Anaphylaxis

- ▶ Carry EpiPen at all times (2 doses)
- ▶ Inject into lateral thigh through clothing
- ▶ Call 911 even after using EpiPen
- ▶ Wear medical alert bracelet
- ▶ Read food/med labels carefully
- ▶ Report biphasic symptoms within 24 hrs

Sepsis Prevention

- ▶ Hand hygiene — #1 prevention
- ▶ Stay current on vaccines (flu, pneumo)
- ▶ Clean wounds promptly
- ▶ Know early signs: fever, confusion, ↑HR, ↑RR
- ▶ Call HCP early — "It's just a cold" can kill
- ▶ Complete full antibiotic courses

Post-SCI / Neurogenic

- ▶ Change positions slowly (orthostatic risk)
- ▶ Monitor for autonomic dysreflexia
- ▶ Dress warmly — impaired thermoregulation
- ▶ Bowel/bladder program adherence
- ▶ Skin inspection daily (no sensation below injury)
- ▶ Report any signs of infection immediately

o8 Memory Boosters



SHOCK — Priority Actions

Stop the trigger

High-flow oxygen

Obtain IV access ×2

Crystalloids (fluids)

Keep MAP ≥ 65
(pressors)

The 3 Types — "SAN" (Distributive Shock Trio)

Septic (infection)

Anaphylactic (allergy)

Neurogenic (nerves/SCI)

Quick Pattern Recognition

Warm + Fast HR + Fever → think SEPTIC

Hives + Stridor + Recent exposure → think
ANAPHYLACTIC

Slow HR + Warm dry skin + SCI → think
NEUROGENIC

"Empty Tank vs. Big Pipes"

In **hypovolemic** shock, the tank is empty (blood loss) — give fluids.

In **distributive** shock, the tank is full but the pipes are too big (vasodilation) — give fluids AND squeeze the pipes with vasopressors.



09 NCJMM Clinical Judgment Framework

RECOGNIZE CUES

Warm flushed skin + hypotension + tachycardia (septic/anaphylactic); OR bradycardia + warm dry skin + recent SCI (neurogenic); altered LOC; ↓ UOP; lactate > 2.

ANALYZE CUES

Cluster: vasodilation + ↓ SVR + relative hypovolemia → distributive category. Identify subtype from trigger, HR pattern, and skin/airway findings.

PRIORITIZE HYPOTHESES

ABC always first. Anaphylaxis = airway priority. Septic = perfusion + infection source. Neurogenic = hemodynamics + prevent further SCI damage.

GENERATE SOLUTIONS

O₂, two large-bore IVs, 30 mL/kg crystalloid bolus, vasopressors if MAP < 65, hour-1 bundle for sepsis, epinephrine IM for anaphylaxis, atropine for neurogenic bradycardia.

TAKE ACTION

Implement in order: Airway → Oxygen → IV × 2 → Fluids → Labs/Cultures → Antibiotics/Epi → Vasopressors → Foley → Continuous monitoring.

EVALUATE OUTCOMES

MAP ≥ 65, HR normalizing, UOP ≥ 0.5 mL/kg/hr, lactate trending down, mentation improving, skin warming (or cooling from warm-stage), SpO₂ ≥ 94%.

NGN NCLEX 2026 Study Library · Distributive Shock

Aligned with NCSBN 2026 Test Plan & Clinical Judgment Measurement Model