

NGN NCLEX · 2026 TEST PLAN · RESPIRATORY SYSTEM

Oxygen Therapy

High-Yield Clinical Judgment Review · Nursing Pharmacology & Safety

Respiratory

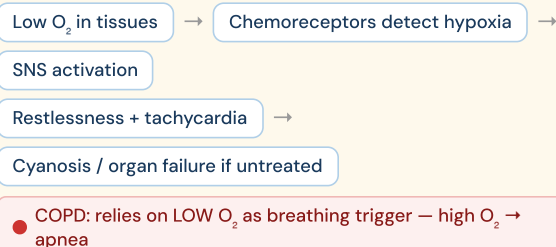
Priority Safety

COPD Special Pop.

1 · DEFINITION & OVERVIEW

- Supplemental O₂ delivered to **maintain adequate tissue oxygenation** via nasal cannula, mask, or other delivery device
- O₂ is **NOT explosive** — it **supports combustion**; fire safety is non-negotiable
- All administered O₂ must be **humidified** to prevent mucous membrane drying
- Flow rate must be checked **at least once per shift**

2 · PATHOPHYSIOLOGY (SIMPLIFIED)



3 · SIGNS & SYMPTOMS OF HYPOXIA

- Early (mild):** Restlessness, Tachycardia 🚩 — Act immediately
- Late (severe):** Cyanosis, confusion, altered LOC
- O₂ Toxicity:** Confusion + headache (excess O₂ exposure)
- Nasal cannula irritation → nares + behind/top of ears
- High flow via nasal cannula → dries mucous membranes

🚩 **Restlessness = the #1 EARLIEST sign — do not wait for cyanosis**

4 · PRIORITY NURSING INTERVENTIONS

- Assess** for restlessness & tachycardia first (hypoxia cues)
- Monitor** O₂ flow rate at least once per shift
- Inspect** nares AND behind/top of ears every **6–8 hours**
- Humidify** all O₂ delivery to protect membranes
- Limit** COPD to max **2.5 L/min** — high flow → apnea
- Remove** tank/device from room before any smoking (even when O₂ is off)
- Use mask** when higher O₂ concentration is needed (masks > nasal cannula)

O₂ FLOW RATE QUICK REFERENCE — ADULT

30–60 mL/hr

KVO ("Keep Vein Open")
Patent maintenance only

≤ 2.5 L/min

COPD maximum
Hypoxic drive protection

≤ 6 L/min

Nasal cannula max
Above = switch to mask

> 6 L/min

🚩 High flow via NC
Dries mucosa — use mask

5 · PHARMACOLOGY / DELIVERY DEVICES

Nasal Cannula (NC)

Low-moderate FiO₂ Max 6 L/min Dries mucosa at high flow
Check nares + ears q6–8h

Simple Face Mask

Higher FiO₂ than nasal cannula Must humidify O₂

Non-Rebreather Mask (NRB)

Highest O₂ delivery short-term Avoid in COPD
Emergency/acute hypoxia only

O₂ Toxicity Signs

Confusion Headache Reduce FiO₂, notify HCP

6 · NCLEX TEST TRAPS ⚠️

- Trap 1 — COPD High Flow:** Never give COPD patients high-flow O₂. They breathe based on LOW O₂ levels (hypoxic drive). High O₂ removes that stimulus → respiratory arrest. Max = 2.5 L/min.
- Trap 2 — Smoking Safety:** It is NOT safe to smoke even when O₂ is turned off. The O₂ device/tank must be physically removed from the room first.
- Trap 3 — Explosion Myth:** O₂ does NOT explode. It supports combustion. The NCLEX will test this distinction directly.
- Trap 4 — Skin Assessment Site:** Students assess only the nares. The NCLEX also expects you to assess *behind and on top of the ears* every 6–8 hours with nasal cannula use.

! **Trap 5 — Early Hypoxia:** Restlessness is the #1 earliest sign, NOT cyanosis. Cyanosis is a late, severe finding. Prioritize restlessness + tachycardia.

7 · CLINICAL JUDGMENT (NCJMM FRAMEWORK)

RECOGNIZE CUES

Restlessness, tachycardia, low SpO₂, cyanosis, confusion, skin irritation at nares/ears

ANALYZE CUES

Is patient hypoxic? COPD history? Current O₂ device appropriate? Rate correct? Signs of toxicity?

PRIORITY ACTION

Apply appropriate O₂ device; restrict COPD to 2.5 L/min; humidify; notify HCP if worsening

EXPECTED OUTCOME

SpO₂ ≥ 94%, resolution of restlessness and tachycardia, intact skin at cannula sites

8 · MEMORY BOOSTERS

HYPOXIA — FIRST TWO SIGNS

Restlessness + Tachycardia → **"RT before ICU"**

Think: call the Respiratory Therapist before it becomes a code

COPD RULE

"2.5 keeps COPD alive"

Above 2.5 L/min, the hypoxic drive is lost → apnea → emergency

O₂ SAFETY RULE

"Off ≠ Out"

Turning O₂ off is not enough — tank must physically leave the room

SKIN CHECK PATTERN

N-E-T: Nares · Ears (behind & on top) · every **6–8** hours

MASKS VS NASAL CANNULA

"More O₂? Mask it!"

Masks deliver higher FiO₂ concentrations than nasal cannula