NCLEX-RN · 2026 TEST PLAN NGN · CLINICAL JUDGMENT MEASUREMENT MODEL PHARM · RESP/BEHAVIORAL

HIGH-YIELD PHARMACOLOGY BRIEF · DRUG CLASS

Smoking Cessation *Agents*

FIRST-LINE TRIO | NRT · BUPROPION · VARENICLINE | SYSTEM: BEHAVIORAL / RESP | HIGH-ALERT: NEUROPSYCHIATRIC

All three first-line agents reduce nicotine craving and withdrawal — but the priority risks are **not equal**. Bupropion lowers the seizure threshold, varenicline carries neuropsychiatric and cardiovascular warnings, and NRT can cause nicotine toxicity if the patient continues to smoke. Identify the agent. Identify the risk. Act first.

01 DRUG OVERVIEW

WHY WE GIVE IT · HIGH-YIELD CLINICAL USE

- **Indication:** Adjunct to behavioral counseling for tobacco/nicotine dependence in adults motivated to quit.
- **Goal:** Reduce craving + withdrawal, blunt smoking reward, increase 1-year abstinence rates.
- **First-line agents (USPSTF / Clinical Practice Guideline):**
  - **Nicotine Replacement Therapy (NRT):** patch, gum, lozenge, inhaler, nasal spray.
  - **Bupropion SR (Zyban):** sustained-release antidepressant; same molecule as Wellbutrin.
  - **Varenicline (Chantix):** partial nicotinic receptor agonist — most effective monotherapy.
- **Combination therapy** (long-acting patch + short-acting gum/lozenge) is more effective than either alone.
- **Behavioral counseling boosts success** — pharmacology alone is rarely the right NCLEX answer.

02

MECHANISM OF ACTION

SIMPLIFIED PHYSIOLOGY · BY AGENT

NRT (NICOTINE REPLACEMENT)

Delivers controlled nicotine → binds **nicotinic ACh receptors** → ↑ dopamine in nucleus accumbens → ↓ withdrawal & craving → **without tar, CO, or carcinogens.**

BUPROPION SR (ZYBAN)

Atypical antidepressant → blocks reuptake of **norepinephrine + dopamine (NDRI)** → ↑ synaptic NE/DA → ↓ craving & withdrawal → also weak nicotinic receptor antagonist → ↓ seizure threshold (adverse).

VARENICLINE (CHANTIX)

Partial agonist at α4β2 nicotinic ACh receptor → partial stimulation → ↓ withdrawal → simultaneously **blocks nicotine binding** → ↓ reward & reinforcement if patient slips and smokes.

03

THERAPEUTIC EFFECTS

WHAT SUCCESS LOOKS LIKE

- Reduced craving intensity and frequency within **1–2 weeks**.
- Decreased withdrawal symptoms: irritability, anxiety, restlessness, ↑ appetite, poor concentration, sleep disturbance.
- **Sustained tobacco abstinence at 12 weeks** (primary efficacy endpoint).
- Long-term physiologic recovery: ↓ BP & HR (within 24h), ↑ ciliary function, ↓ CO levels, ↓ MI & stroke risk.
- Improved exercise tolerance, taste, and smell — useful "feedback" cues to reinforce quitting.

04

SIDE EFFECTS & ADVERSE REACTIONS

COMMON VS. LIFE-THREATENING

COMMON (EXPECTED)

- **NRT:** local skin irritation (patch), mouth/throat irritation (gum, lozenge, inhaler), hiccups, headache, mild nausea.
- **NRT patch:** insomnia, vivid dreams (esp. with overnight wear).
- **Bupropion:** insomnia, dry mouth, headache, agitation, tremor, ↓ appetite.
- **Varenicline: nausea (~30% — most common)**, vivid/abnormal dreams, insomnia, constipation, headache.

SERIOUS / LIFE-THREATENING

- BUPROPION **Seizures** — dose-dependent; risk ↑ with eating disorders, alcohol withdrawal.
- BOTH Suicidal ideation, mood changes, depression, hostility, agitation.
- BUPROPION + MAOI Hypertensive crisis — separate by ≥14 days.
- VARENICLINE Cardiovascular events (small ↑ risk in CV disease); angioedema; serious skin reactions (SJS).
- BOTH Sleep disturbance with vivid/abnormal dreams (varenicline classic).
- NRT **Nicotine toxicity** if patient smokes while on patch: tachycardia, HTN, palpitations, dysrhythmias, vomiting, seizures.
- NRT Caution: recent MI (≤2 wks), serious arrhythmia, worsening/unstable angina.

05 PRIORITY NURSING CONSIDERATIONS

ASSESS · MONITOR · HOLD · NOTIFY

ASSESS & MONITOR

- **ASSESS** baseline mental health screen, suicide risk, history of depression / bipolar / psychosis.
- **ASSESS** **seizure history, eating disorder, alcohol use** before bupropion.
- **ASSESS** cardiac status (recent MI, unstable angina, arrhythmia) before NRT and varenicline.
- **MONITOR** mood, behavior change, sleep, vivid dreams — reassess at every visit.
- **MONITOR** BP and HR; renal function (varenicline).
- **NOTIFY** provider for new/worsening depression, suicidal thoughts, agitation, or seizure.

HOLD / CONTRAINDICATIONS / INTERACTIONS

- **HOLD** **bupropion** with seizure disorder, anorexia/bulimia, abrupt alcohol/benzo withdrawal, or MAOI within 14 days.
- **HOLD** **varenicline** for new suicidal ideation, mania, psychosis; severe renal impairment requires dose reduction.
- **HOLD** **NRT** for active MI ≤2 weeks, life-threatening arrhythmia, severe/worsening angina.
- **Drug interactions:** bupropion ↑ levels of many CYP2D6 substrates; lowers seizure threshold (additive with tramadol, theophylline, antipsychotics).
- **Smoking cessation itself** ↑ levels of CYP1A2 substrates (theophylline, clozapine, olanzapine, warfarin) — anticipate dose adjustment.
- Avoid alcohol — ↑ neuropsychiatric and seizure risk with both bupropion and varenicline.

06

LABS & DIAGNOSTICS

WHAT TO BASELINE · WHAT TO RECHECK

- **No therapeutic drug level** for any first-line cessation agent — monitor clinically.
- **Baseline:** mental health screen (e.g., PHQ-9), pregnancy test (when applicable), BP, HR.
- **Renal function (CrCl)** — required before varenicline; reduce dose if CrCl < 30 mL/min.
- **Hepatic panel** — bupropion is hepatically metabolized; reduce dose in cirrhosis.
- **Recheck CYP1A2 substrates** after quit date: theophylline, warfarin INR, clozapine/olanzapine levels — toxicity may emerge as smoking resolves.
- **Carbon monoxide breath test** can confirm abstinence (drops within 24h of quitting).

07

ADMINISTRATION & SAFETY

ROUTE · TIMING · HIGH-ALERT PRECAUTIONS

- **NRT Patch:** apply to clean, dry, hairless skin (upper arm/torso); **rotate sites daily** to prevent irritation. Remove old patch first. Wash hands after handling.
- **NRT Gum/Lozenge ("chew & park"):** chew until tingling, park between cheek and gum, repeat for ~30 minutes. **No food or acidic drinks (coffee, juice, soda) 15 min before/during** — they ↓ absorption.
- **Bupropion SR:** start **1–2 weeks BEFORE quit date**. Doses ≥8 hours apart; do not exceed 300 mg/day; **do not crush, split, or chew SR/XL tablets**.
- **Varenicline:** start **1 week BEFORE quit date** (or use flexible-quit approach). Titrate: 0.5 mg daily ×3 days → 0.5 mg BID ×4 days → 1 mg BID. Take with **full glass of water and food** to reduce nausea.
- **High-alert teaching:** no smoking while on the patch — risk of nicotine toxicity.
- **Bedtime patches** may worsen vivid dreams/insomnia — remove at bedtime if disruptive.
- Pregnancy: behavioral counseling first-line; pharmacotherapy individualized risk/benefit.

08 PATIENT EDUCATION

MUST-KNOW TEACHING · WHEN TO SEEK HELP

- **Set a quit date**; start the medication on the schedule prescribed (bupropion 1–2 wks early; varenicline 1 wk early).
- **Do NOT smoke while wearing a nicotine patch** — can cause toxicity (palpitations, chest pain, severe headache).
- **Rotate patch sites** and never apply to broken/irritated skin.
- Use **chew-and-park** for gum; avoid coffee, soda, juice 15 minutes before/during.
- Take varenicline **with food + a full glass of water** to reduce nausea.
- Avoid alcohol — ↑ seizure and neuropsychiatric risk.
- **Report immediately:** mood swings, depression, suicidal thoughts, agitation, hallucinations, seizure activity, chest pain, severe rash, or facial swelling.
- Expect cravings and withdrawal — they are **strongest in the first 1–2 weeks** and improve.
- Combine with counseling, support groups, or quit-line (1-800-QUIT-NOW) — the medication is one piece of the plan.
- Relapse is common; multiple attempts are normal — return to provider, do not self-discontinue.

09 NCLEX TEST TRAPS

WHAT STUDENTS CONFUSE · PRIORITY PITFALLS

T1 **Bupropion is contraindicated in BOTH seizure disorders AND eating disorders** — students remember the seizure rule but miss anorexia/bulimia. Either one is a hard stop.

T2 **Wellbutrin** VS **Zyban** — same drug (bupropion), different brand names. The NCLEX may swap them mid-question; do not assume "Wellbutrin = no smoking cessation."

T3 **"Smoke through the patch" trap** — patient continues to smoke while on NRT patch → **nicotine toxicity**, not "more cravings." Tachycardia, palpitations, vomiting, dizziness.

T4 **Most common adverse effect of varenicline is NAUSEA** — not depression, not nightmares. Distractors will dangle the dramatic ones; pick the boring high-frequency one.

T5 **Lead time matters:** bupropion 1–2 WKS before quit · varenicline 1 WK before quit · NRT ON QUIT DAY. Order-of-events questions are fair game.

T6 **Drug levels rise after quitting** — patients on theophylline, warfarin, clozapine, or olanzapine may develop toxicity once they stop smoking (CYP1A2 induction is gone). Anticipate dose ↓.

T7 **Don't pick "stop the med immediately" for vivid dreams alone** — patient education and timing of patch removal at bedtime is the priority intervention; the priority for *suicidal ideation* is to notify the provider/hold.

T8	**Gum technique:** "chew vigorously" is wrong. Correct = chew until tingle, then park. Acidic drinks (coffee, juice, soda) within 15 minutes ↓ absorption.

10 MEMORY BOOSTERS

MNEMONICS · RECALL PATTERNS

FIRST-LINE AGENTS

"BVN"

- **B** upropion SR (Zyban)
- **V** arenicline (Chantix)
- **N** icotine Replacement Therapy

BUPROPION CONTRAINDICATIONS

SEAM

- **S** eizure disorder
- **E** ating disorder (anorexia/bulimia)
- **A** lcohol/benzo withdrawal
- **M** AOI within 14 days

PATCH TEACHING

STAR

- **S** kin — clean, dry, hairless
- **T** oxicity — never smoke while wearing
- **A** pply once daily, remove old first
- **R** otate site to ↓ irritation

VARENICLINE CLASSIC SIDE EFFECTS

N-DREAM

- **N** ausea — most common (~30%)
- **D** reams (vivid, abnormal)
- **R** enal — dose-adjust if CrCl < 30
- **E** ating habits — take with food
- **A** ffect change → notify provider
- **M** ood / suicidal ideation

LEAD-TIME RULE

SMOKING CESSATION = DRUG LEVELS ↑

"2-1-0"

2 wks → start **B** upropion before quit date

1 wk → start **V** arenicline before quit date

0 days → start **NRT** on quit day

"TWCO"

T heophylline → toxicity

W arfarin → ↑ INR / bleeding

C lozapine → toxicity, seizures

O lanzapine → sedation, EPS

MOST-TESTED DRUGS IN THIS CLASS

SIDE-BY-SIDE · CHOOSE THE RIGHT AGENT

AGENT	MOA	START / ROUTE	KEY ADVERSE EFFECTS	HARD CONTRAINDICATIONS
Nicotine Replacement NRT · OTC + RX	Replaces nicotine without tar/CO; binds nicotinic ACh receptors.	Patch / gum / lozenge / inhaler / nasal spray. Start **on quit day**.	Skin irritation, mouth/throat irritation, vivid dreams (patch), hiccups. **Toxicity if patient smokes while on patch.**	Recent MI (≤2 wks), serious arrhythmia, severe/unstable angina (relative).
Bupropion SR ZYBAN / WELLBUTRIN	NDRI — ↑ NE & DA; weak nicotinic antagonist.	PO. Start **1–2 weeks before quit date**. Do not crush SR.	Insomnia, dry mouth, agitation, headache. BBW seizures, suicidality, neuropsychiatric.	**Seizure disorder · eating disorder · MAOI <14d · abrupt alcohol/benzo withdrawal.**
Varenicline CHANTIX	Partial agonist α4β2 nicotinic receptor — partial stimulation + blocks nicotine reward.	PO. Titrate over 1 wk; start **1 week before quit date**. With food + water.	**Nausea (~30%)**, vivid dreams, insomnia, headache, constipation. Neuropsychiatric & CV warnings.	Severe renal impairment (dose ↓); active suicidal ideation; serious skin reaction history.

MANDATORY · NGN PRIORITY REASONING

Clinical Judgment *Snapshot*

NCJMM · 2026 TEST PLAN ALIGNED

#1 PRIORITY RISK

Neuropsychiatric harm — depression, suicidal ideation, behavior change.

Applies to **bupropion AND varenicline**. With NRT, the parallel #1 risk is **nicotine toxicity** if the patient continues to smoke while wearing a patch — cardiac events can follow within hours.

WHAT HARMS FIRST

For bupropion → seizure (especially with undisclosed eating disorder or alcohol withdrawal).

For NRT → **cardiovascular event** in unstable cardiac patients or those still smoking. For varenicline → **acute mood / behavior change**; cardiac events and angioedema are rarer but life-threatening.

FIRST NURSING ACTION

Screen before you start. Ask before you administer.

Assess **seizure history, eating disorder, mental health, suicide risk, and current cardiac status**. If any new suicidal thoughts, mood change, seizure, or chest pain emerge mid-therapy → **HOLD the drug and notify the provider** before the next dose.

NCLEX-RN · PHARMACOLOGY BRIEF · SMOKING CESSATION AGENTS

Built for rapid review under 60 seconds. Color-coded for Canva. Aligned to 2026 NCLEX-RN Test Plan & Next Generation NCLEX clinical judgment standards.

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