MENTAL HEALTH PHARMACOLOGY · NCLEX 2026

TCAs

Tricyclic Antidepressants

CLASS · ANTIDEPRESSANT
ONSET · 2–4 WEEKS
RISK · HIGH

Second-line antidepressants with a narrow therapeutic index. Highly effective — but **LETHAL in overdose**. Cardiotoxicity, seizures, and anticholinergic effects dominate the nursing picture.

SECTION 01

1 Definition & Overview

WHY IT MATTERS

WHAT IT IS
Older class of antidepressants that boost norepinephrine (NE) & serotonin (5-HT) in the synapse.

USED FOR
Major depression, neuropathic pain, chronic pain, migraine prophylaxis, OCD, enuresis.

WHY 2ND-LINE
SSRIs are safer. TCAs = anticholinergic burden + **fatal overdose risk** + cardiotoxicity.

SECTION 02

2 Pathophysiology — How TCAs Work

MECHANISM FLOW

1. **BLOCK** — Presynaptic reuptake of **NE + 5-HT** blocked
2. **ACCUMULATE** — More NE & 5-HT stay in **synaptic cleft**
3. **SIGNAL** — Postsynaptic receptors **over-stimulated** → mood lifts
4. **OFF-TARGET** — Also blocks **M, H_1, α_1** receptors → side effects
5. **EFFECT** — Takes **2–4 weeks** for full therapeutic action

Key concept: The therapeutic effect comes from NE/5-HT reuptake blockade. The *side effects* come from blocking everything else — muscarinic (anticholinergic), histamine-1 (sedation/weight gain), and alpha-1 (orthostatic hypotension). This is why TCAs have such a broad side-effect profile.

SECTION 03

3 Signs, Symptoms & Side Effects

COMMON VS SEVERE

Common / Early — EXPECTED

- ANTICHOLINERGIC Dry mouth, blurred vision, constipation, urinary retention
- CNS Sedation, drowsiness, dizziness, fatigue
- CARDIOVASCULAR Orthostatic hypotension, mild tachycardia
- METABOLIC Weight gain, increased appetite
- SEXUAL Decreased libido, erectile dysfunction
- THRESHOLD Lowered seizure threshold

Severe / Red Flags — CALL HCP

- CARDIOTOXICITY — widened QRS, QT prolongation, dysrhythmias
- SEIZURES — tonic-clonic, especially in overdose
- SUICIDAL IDEATION — especially in patients < 25 y/o (Black Box)
- OVERDOSE — lethal in as few as 7–10 days' supply
- SEROTONIN SYNDROME — if combined with SSRIs / MAOIs
- ANTICHOLINERGIC TOXICITY — confusion, hyperthermia, coma

SECTION 04

4 Priority Nursing Interventions

ABC · SAFETY · PRIORITIZATION

AIRWAY BREATHING CIRCULATION → CARDIAC & SUICIDE RISK ARE TOP PRIORITY

- **ASSESS** **Suicide risk at every visit** — risk ↑ as energy returns before mood lifts (weeks 1–2).
- **MONITOR** **ECG baseline & periodic** — especially in older adults and pre-existing cardiac disease.
- **MONITOR** **BP lying, sitting, standing** — orthostatic hypotension = fall risk.
- **LIMIT** **Dispense only 1-week supply** at a time early in therapy (overdose is lethal).
- **ADMINISTER** Give at **bedtime** to use sedation therapeutically & improve adherence.
- **SCREEN** For **serotonin syndrome** if on SSRI/MAOI — hyperthermia, clonus, agitation.
- **PROTECT** **Fall precautions** — bed low, call light, assist with ambulation (sedation + orthostasis).
- **EDUCATE** **Do NOT stop abruptly** — taper to prevent cholinergic rebound & withdrawal.
- **EVALUATE** Reassess mood, sleep, appetite, and **SI** at weeks 2, 4, 6 — effect is delayed.
- **PREPARE** Overdose antidote: **sodium bicarbonate** IV for QRS widening > 100 ms.

SECTION 05

5 Pharmacology — Know Your Drugs

GENERIC · BRAND · USE

Amitriptyline
Elavil

CLINICAL PEARL
MOST sedating & MOST anticholinergic. Classic for neuropathic pain, migraines, insomnia. Avoid in elderly.

Nortriptyline
Pamelor

CLINICAL PEARL
LEAST sedating TCA. Preferred choice in older adults. Fewer anticholinergic effects.

Imipramine
Tofranil

CLINICAL PEARL
The **enuresis** drug — FDA-approved for childhood bed-wetting. Also panic disorder.

Clomipramine
Anafranil

CLINICAL PEARL
Strongest 5-HT reuptake blockade → first-line TCA for **OCD**.

Desipramine
Norpramin

CLINICAL PEARL
More activating, less sedating. Used when fatigue is prominent.

Doxepin
Sinequan / Silenor

CLINICAL PEARL
Low-dose form used for **chronic insomnia**. Very sedating.

MECHANISM (SIMPLE)
Block reuptake of NE + 5-HT into presynaptic neuron → more neurotransmitter at the synapse → mood elevation over 2–4 weeks.

KEY INTERACTIONS
MAOIs — hypertensive crisis (14-day washout). **SSRIs** — serotonin syndrome. **Alcohol & CNS depressants** — ↑↑ sedation. **Anticholinergics** — additive.

NURSING CONSIDERATIONS
Baseline ECG. Avoid in recent MI. Caution in BPH (urinary retention) & glaucoma. Limit quantity if suicide risk. Taper on discontinuation.

SECTION 06

6 NCLEX Test Traps ⚠

DON'T GET FOOLED

⚠ **"Patient feels better after 3 days"**
~~Med is working~~ → **Likely placebo effect — TCAs need 2–4 weeks.** NCLEX loves this distractor.

⚠ **Suicide risk — WHEN is it highest?**
~~Week 0 (baseline)~~ → **Weeks 1–3**. Energy returns before mood lifts → patient now has the drive to act on ideation.

⚠ **First-line for depression?**
~~TCA~~ → **SSRI**. TCAs are reserved for refractory cases, chronic pain, or comorbid conditions.

⚠ **Combining with MAOI?**
~~Safe with dose adjustment~~ → **NEVER. 14-day washout required.** Risk = serotonin syndrome + hypertensive crisis.

⚠️ **Elderly client — which TCA?**

~~Amitriptyline~~ → Nortriptyline. Amitriptyline is on the Beers List — too anticholinergic.

⚠️ **Overdose priority action?**

~~Activated charcoal~~ → ABCs + continuous cardiac monitoring. Cardiotoxicity kills before anything else.

SECTION 07

7 Patient Education

TEACH-BACK TOPICS

🌙 **Bedtime Dosing**
Take at night to sleep through sedation & reduce dizziness.

📅 **Be Patient**
2–4 weeks for full effect. Don't stop if you feel no change.

🚫 **Never Abrupt Stop**
Taper slowly — abrupt D/C causes nausea, headache, flu-like rebound.

🍷 **No Alcohol**
Additive CNS depression → sedation & respiratory risk.

🧍 **Rise Slowly**
Sit → stand in stages to prevent orthostatic falls.

💧 **Dry Mouth**
Sugar-free gum, ice chips, sips of water, good oral care.

🥬 **Constipation**
↑ fiber, ↑ fluids, daily walk, stool softener PRN.

📞 **Call HCP**
Chest pain, palpitations, seizures, thoughts of self-harm.

☀️ **Sun Protection**
Can cause photosensitivity — use sunscreen & cover up.

🔒 **Safe Storage**
Lock away from children — overdose is fatal in small amounts.

🚗 **No Driving**
Avoid until you know how the drug affects you.

🥗 **Normal Diet**
No tyramine restriction (that's MAOIs) — eat normally.

SECTION 08

8 Memory Boosters 🧠

MNEMONICS THAT STICK

MNEMONIC · ANTICHOLINERGIC SIDE EFFECTS

"Can't see, can't pee, can't spit, *can't &$%#!*"

- → **Can't see** → blurred vision (cycloplegia)
- → **Can't pee** → urinary retention
- → **Can't spit** → dry mouth (xerostomia)
- → **Can't &$%#!** → constipation + sexual dysfunction

TCA OVERDOSE TRIAD

The 3 C's of TCA Toxicity

- **C** — **Cardiotoxicity** — widened QRS, arrhythmias, hypotension
- **C** — **Convulsions** — seizures from lowered threshold
- **C** — **Coma** — CNS depression, altered LOC

PATTERN · DRUG NAME ENDINGS

If the generic name ends in **–triptyline** or **–ipramine** → it's a TCA. (Amitrip**tyline**, Nortrip**tyline**, Imi**pramine**, Clomi**pramine**, Desi**pramine**)

QUICK ASSOCIATION · "TRI"

TRI = 3 → **3 weeks** to work · **3 C's** of toxicity · **3 receptors** blocked off-target (M, H_1, α_1)

*"If the patient is on a TCA and suddenly has energy — **assess for suicide, not recovery**. The danger zone is when depression lifts just enough to plan, but not enough to heal."*

NCLEX · Mental Health
HIGH-YIELD INFOGRAPHIC · 2026 TEST PLAN