

PHARMACOLOGY • MENTAL HEALTH • CNS

Antianxiety Medications

Anxiolytics across the lifespan — mechanisms, monitoring, and clinical judgment

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FRAMEWORK: NCJMM 6-STEP CLINICAL JUDGMENT

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SECTION ONE • FOUNDATION

Definition & Overview

- ▶ **Antianxiety (anxiolytic) medications** reduce the physiologic and psychological symptoms of anxiety, panic, and acute stress by modulating CNS neurotransmitters — primarily *GABA*, *serotonin*, and *norepinephrine*.
- ▶ They span **five classes**: benzodiazepines, non-benzodiazepine anxiolytics (buspirone), SSRIs/SNRIs (first-line for chronic anxiety), beta-blockers (situational/performance anxiety), and sedating antihistamines (hydroxyzine).
- ▶ **Goal of therapy:** lowest effective dose for the shortest duration that controls symptoms — especially with benzodiazepines, which carry high *dependence*, *tolerance*, and *abuse* potential.

Why this matters on the NCLEX

Antianxiety drugs appear in NGN items as **medication reconciliation**, **safety**, and **elderly fall-risk** scenarios. The exam consistently tests: *SSRIs as first-line for chronic anxiety*, *benzo overdose reversal with flumazenil*, *buspirone's delayed onset*, and *never abruptly stop a benzo*.

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SECTION TWO • MECHANISM

Pathophysiology of Anxiety & Drug Action

Anxiety arises when the brain's **excitatory drive (glutamate, norepinephrine)** overwhelms its **inhibitory brake (GABA, serotonin)**. The result: a hyperaroused limbic system — amygdala firing, sympathetic surge, cortisol release.

STEP 01

Trigger / Stressor

Perceived threat activates the amygdala and HPA axis.

STEP 02

↑ Excitatory Output

Glutamate and norepinephrine flood limbic circuits.

STEP 03

↓ GABA Inhibition

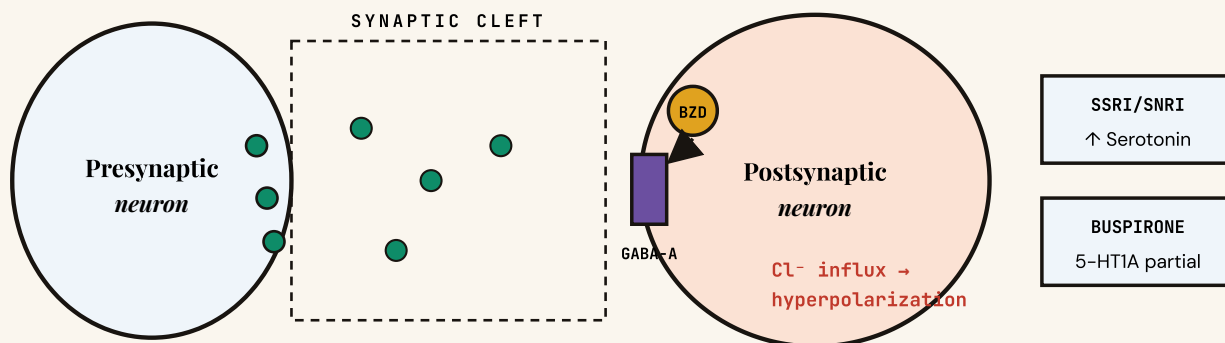
Insufficient GABA brake → runaway neuronal firing.

STEP 04

Symptoms Emerge

Tachycardia, tremor, dyspnea, dread, sleep loss.

SYNAPTIC VIEW • HOW ANXIOLYTICS INTERVENE



Benzodiazepines bind the GABA-A receptor at the BZD site → enhance chloride influx → neuronal hyperpolarization → CNS depression.
SSRIs/SNRIs and buspirone act on serotonin instead — explaining their delayed onset.

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SECTION THREE • ASSESSMENT

Anxiety Severity — Drug Selection Guide

MILD • +1

Heightened Awareness

- Restless, fidgety
- Mild ↑ HR & RR
- Learns and problem-solves
- **Rx:** usually no med — therapy

MODERATE • +2

Narrowed Focus

- Trembling, sweating, ↑ BP
- Selective attention
- Voice tremor
- **Rx:** SSRI / SNRI / buspirone

SEVERE • +3

Distorted Perception

- Headache, nausea, dizziness
- Hyperventilation
- Cannot redirect easily
- **Rx:** short-term benzo + SSRI

PANIC • +4 🚑

Dread & Terror

- Chest pain, depersonalization
- Inability to communicate
- Safety risk
- **Rx:** IV/IM benzo • stay with pt

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SECTION FOUR · DRUG CLASS

Benzodiazepines — Fast Acting, High Risk

CLASS CNS depressants · Schedule IV controlled substances · short-term use only (2–4 weeks ideally)

Alprazolam (*Xanax*)

SHORT-ACTING · PO

MECHANISM

Potentiates GABA at GABA-A receptor → ↑ Cl⁻ influx → CNS depression, anxiolysis, sedation.

SIDE / ADVERSE EFFECTS

- › Drowsiness, dizziness, ataxia
- › Anterograde amnesia, confusion
- › **Respiratory depression** 🚨
- › Paradoxical agitation (esp. elderly/peds)
- › Dependence, tolerance, withdrawal

ROUTE

PO (tablets, ODT, oral solution, XR).

CONTRAINDICATIONS

- › Pregnancy (Category D) & lactation
- › Narrow-angle glaucoma
- › Severe respiratory disease / sleep apnea
- › Concurrent opioids (boxed warning)
- › Hx of substance use disorder

ANTIDOTE: Flumazenil (Romazicon) — competitive GABA-A antagonist. Use cautiously; may precipitate seizures in chronic users.

Lorazepam (*Ativan*)

INTERMEDIATE · PO / IM / IV

MECHANISM

GABA-A potentiation. *Drug of choice for status epilepticus* and alcohol withdrawal because safe in hepatic impairment (no active metabolites).

SIDE / ADVERSE EFFECTS

- › Sedation, hypotension, bradycardia
- › Respiratory depression with IV push
- › Propylene glycol toxicity (high-dose IV)

ROUTE

PO, IM, IV push (slow — max 2 mg/min).

NURSING CARE

- › Have **flumazenil & resuscitation equipment** at bedside for IV use
- › Continuous pulse ox / VS during IV admin
- › Fall precautions; bed in low position

Diazepam (*Valium*)

LONG-ACTING · PO / IM / IV / PR

MECHANISM

GABA potentiation; long half-life (20–80 hr) with active metabolites — risk of accumulation, especially in elderly and hepatic disease.

SIDE / ADVERSE EFFECTS

- › Profound sedation, ataxia
- › Phlebitis / tissue necrosis if extravasates
- › Hepatic enzyme elevation

INDICATIONS

Anxiety · alcohol withdrawal · skeletal muscle spasm · preoperative sedation · status epilepticus (PR form for home).

NURSING CONSIDERATIONS

- › Do **not** mix IV diazepam with other drugs in same syringe
- › Inject into a large vein, slowly
- › Avoid in elderly (Beers criteria)

Midazolam (*Versed*)

ULTRA-SHORT • IV / IM / INTRANASAL

MECHANISM / USE

Rapid-onset GABA potentiator. Procedural sedation, anesthesia induction, severe agitation. Causes **anterograde amnesia** — desired effect for procedures.

NURSING CARE

- › Continuous SpO₂, capnography, ECG
- › Resuscitation equipment + flumazenil at bedside
- › Titrate per LOC (see *Titration Medication* deck)

ADVERSE EFFECTS

- ›  **Respiratory arrest** with rapid IV push
- › Profound hypotension
- › Hiccups, paradoxical excitement in peds

TEACHING

- › Will not remember the procedure — that's expected
- › No driving / decisions × 24 hr
- › Responsible adult must escort home

Clonazepam (*Klonopin*) • Chlordiazepoxide (*Librium*)

LONG-ACTING • PO

CLONAZEPAM

Panic disorder, seizures, restless legs. Long half-life smooths "between-dose" anxiety but ↑ accumulation risk in elderly.

SHARED ADVERSE EFFECTS

- › Drowsiness, ataxia, confusion
- › Dependence; rebound anxiety on stop
- › Withdrawal: seizures, tremor, delirium 

CHLORDIAZEPOXIDE

Classic agent for **alcohol withdrawal** (CIWA-Ar protocol). Long half-life provides smooth taper and reduces seizure risk.

NURSING CARE

- › **Never abruptly discontinue** — taper over weeks
- › Assess for suicidal ideation
- › Caution with CYP3A4 inhibitors (grapefruit, azole antifungals)

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SECTION FIVE • NON-BENZO

Buspirone (BuSpar) — The Patient Anxiolytic

Buspirone (*BuSpar*)

NON-BENZO • NOT CONTROLLED • PO

MECHANISM

Partial 5-HT_{1A} serotonin *agonist* + weak D₂ dopamine activity. **No GABA effect** → no sedation, no abuse potential, no withdrawal syndrome.

SIDE / ADVERSE EFFECTS

- › Dizziness, headache, nausea
- › Restlessness, lightheadedness
- › Serotonin syndrome (with SSRIs/MAOIs) 

ROUTE & ONSET

PO, fixed schedule (BID–TID). **Onset 2–4 weeks** — must take daily, not PRN.

CONTRAINDICATIONS / CAUTIONS

- › MAOI use (separate by 14 days)
- › Severe hepatic / renal impairment
- › Grapefruit juice — ↑ levels significantly

KEY TEACHING: BuSpar is *not* a "take it when I'm anxious" drug. It must be taken every day; it will not work in a crisis. Best for **chronic generalized anxiety** in patients with substance use history.

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SECTION SIX • FIRST-LINE CHRONIC

SSRIs & SNRIs — Long-Term Anxiety Control

SSRIs and SNRIs are the **first-line pharmacologic treatment** for chronic GAD, panic disorder, social anxiety, OCD, and PTSD. Benzodiazepines may bridge the 4–6 week onset window.

SSRIs — *sertraline (Zoloft)*, *paroxetine (Paxil)*, *escitalopram (Lexapro)*, *fluoxetine (Prozac)*

FIRST-LINE • PO

MECHANISM

Selectively block serotonin reuptake at presynaptic neuron → ↑ synaptic 5-HT → improved mood / anxiolysis over 4–6 weeks.

CONTRAINDICATIONS

- › MAOI within 14 days
- › Paroxetine in pregnancy (Cat D)
- › Concurrent linezolid, methylene blue, St. John's wort

SIDE / ADVERSE EFFECTS

- › *Early*: nausea, headache, insomnia, agitation
- › *Sexual dysfunction* (very common)
- › Weight gain (paroxetine), hyponatremia (SIADH)
- › **Serotonin syndrome** 🚫 — fever, clonus, agitation, autonomic instability
- › Boxed warning: ↑ **suicidal ideation** in patients < 25 yrs

NURSING & TEACHING

- › Effect in 4–6 wks; take daily even when feeling well
- › Do not stop abruptly → discontinuation syndrome (flu-like, dizziness, "brain zaps")
- › Monitor mood, especially first weeks
- › Report fever + agitation + tremor immediately

SNRIs — *venlafaxine (Effexor)*, *duloxetine (Cymbalta)*

FIRST-LINE • PO

MECHANISM

Block both serotonin and norepinephrine reuptake. Useful when anxiety coexists with chronic pain (duloxetine) or depression.

CONTRAINDICATIONS

- › MAOI use
- › Uncontrolled HTN, narrow-angle glaucoma
- › Hepatic disease, heavy alcohol use

ADVERSE EFFECTS

- › Nausea, dry mouth, dizziness
- › ↑ BP (venlafaxine — dose dependent)
- › Hepatotoxicity (duloxetine + alcohol)
- › Serotonin syndrome; discontinuation syndrome

NURSING CARE

- › Monitor BP at every visit (venlafaxine)
- › Assess LFTs (duloxetine)
- › Slow taper to discontinue

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SECTION SEVEN • ADJUNCTS

Hydroxyzine & Beta-Blockers

Hydroxyzine (*Vistaril / Atarax*)

ANTI-HISTAMINE • PO / IM

MECHANISM

H1 receptor antagonist with anticholinergic + sedative properties. **No dependence**, no abuse — safe in substance-use history.

ADVERSE EFFECTS

- › Dry mouth, blurred vision, urinary retention
- › Sedation, dizziness, hypotension
- › QT prolongation at high doses

USE & ROUTE

Short-term anxiety, preoperative sedation, pruritus. PO or **deep IM only** — never IV or SubQ (causes tissue necrosis).

CONTRAINDICATIONS

- › BPH, narrow-angle glaucoma
- › Early pregnancy
- › Prolonged QT interval

Propranolol (*Inderal*) — Beta-Blocker

PERFORMANCE ANXIETY • PO

MECHANISM

Non-selective beta-antagonist. Blocks **peripheral** sympathetic symptoms (tachycardia, tremor, sweating) — does not affect the cognitive experience of anxiety.

ADVERSE EFFECTS

- › Bradycardia, hypotension
- › **Bronchospasm** 🚫 — avoid in asthma/COPD
- › Masks hypoglycemia symptoms (caution in DM)
- › Fatigue, depression, sexual dysfunction

USE & ROUTE

Situational / performance anxiety (public speaking, exams). PO 30–60 min before event.

CONTRAINDICATIONS

- › Asthma, COPD, bronchospastic disease
- › Heart block, bradycardia, decompensated HF
- › Brittle diabetes

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SECTION EIGHT • QUICK COMPARE

Class Comparison Table

CLASS	ONSET	DEPENDENCE RISK	BEST FOR	KEY CAUTION	ANTIDOTE / REVERSAL
Benzodiazepines	Minutes (IV) – 1 hr (PO)	HIGH	Acute anxiety, panic, status epilepticus, alcohol withdrawal	Respiratory depression; never with opioids	Flumazenil
Buspirone	2–4 weeks	None	Chronic GAD; pts with SUD history	Avoid grapefruit; MAOI interaction	—
SSRIs	4–6 weeks	None (but discontinuation syndrome)	GAD, panic, OCD, PTSD, social anxiety	Suicide risk < 25 yrs; serotonin syndrome	Cyproheptadine (serotonin sx)
SNRIs	4–6 weeks	None (but discontinuation syndrome)	GAD with comorbid pain or depression	↑ BP, hepatotoxicity	Cyproheptadine (serotonin sx)
Hydroxyzine	15–30 min	None	Short-term anxiety, preop, pruritus	Deep IM only; anticholinergic load	—
Beta-blockers	30–60 min	None	Performance anxiety, somatic sx	Asthma; masks hypoglycemia	Glucagon / atropine

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SECTION NINE • ABCS & SAFETY

Priority Nursing Interventions

A

Airway / Breathing

- ✓ Monitor RR & SpO₂ continuously during IV benzos
- ✓ Capnography for procedural sedation
- ✓ Keep **flumazenil + ambu bag** at bedside
- ✓ Hold dose if RR < 12
- ✓ Assess for paradoxical agitation in elderly

B

Circulation / Behavior

- ✓ Monitor BP & HR (orthostatic checks)
- ✓ Assess LOC every 15 min during IV titration
- ✓ Suicide screen before & during SSRI/SNRI start (esp. < 25 yrs)
- ✓ Watch for serotonin syndrome triad: *mental status, autonomic, neuromuscular*

C

Safety / Comfort

- ✓ Fall precautions — bed low, call light, no bath without assist
- ✓ No driving until effect known
- ✓ Avoid alcohol & other CNS depressants
- ✓ Therapeutic communication: stay, calm tone, simple sentences
- ✓ Taper — **never** abrupt stop

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SECTION TEN • EXAM PITFALLS

NCLEX Test Traps ⚠️

✗ WRONG THINKING

"Buspirone works fast like Xanax — give it PRN when the patient feels anxious."

✓ NCLEX ANSWER

Buspirone takes **2–4 weeks** for full effect and must be taken on a **scheduled** basis. It will not relieve acute anxiety.

✗ WRONG THINKING

"My patient on lorazepam is doing well — let's discontinue it today."

✓ NCLEX ANSWER

Never abruptly stop a benzodiazepine. Withdrawal can cause seizures, delirium, and death. Taper slowly over weeks.

✗ WRONG THINKING

"This patient is on sertraline and feels great after one week — the SSRI is working."

✓ NCLEX ANSWER

Full SSRI effect takes **4–6 weeks**. Early "energy" can be dangerous — patients gain energy *before* mood lifts, raising suicide risk.

✗ WRONG THINKING

"Patient with COPD is anxious — give propranolol."

✓ NCLEX ANSWER

Non-selective beta-blockers cause **bronchospasm**. Contraindicated in asthma/COPD. Choose hydroxyzine or low-dose SSRI instead.

✗ WRONG THINKING

"Give hydroxyzine IV for fast anxiety relief."

✓ NCLEX ANSWER

Hydroxyzine is **deep IM only** (or PO). IV/SubQ administration causes tissue necrosis and hemolysis.

✗ WRONG THINKING

"Patient on SSRI started St. John's Wort — just monitor."

✓ NCLEX ANSWER

Combination risks **serotonin syndrome** — fever, agitation, clonus, hyperreflexia. Hold the SSRI and notify the provider immediately.

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SECTION ELEVEN • TEACH BACK

Patient & Family Education

For All Antianxiety Drugs

- ◆ Take exactly as prescribed; never share medication
- ◆ Avoid alcohol and other CNS depressants
- ◆ Do not drive or operate machinery until effects are known
- ◆ Rise slowly to prevent orthostatic hypotension
- ◆ Carry medication list & alert bracelet
- ◆ Never stop abruptly — contact provider for taper

Benzodiazepines Specifically

- ◆ Highly addictive — use only as ordered, for short periods
- ◆ Avoid grapefruit juice (raises drug levels)
- ◆ Report extreme drowsiness, slowed breathing, slurred speech
- ◆ Safe—store away from children & adolescents
- ◆ Tolerance can develop within weeks

SSRIs / SNRIs

- ◆ Takes 4–6 weeks for full effect — be patient
- ◆ Take in morning to reduce insomnia
- ◆ Report worsening mood or suicidal thoughts immediately
- ◆ Watch for fever + tremor + agitation = serotonin syndrome
- ◆ Sexual side effects are common — discuss, don't stop suddenly

Buspirone & Adjuncts

- ◆ BuSpar: take daily, not PRN; effect in 2–4 weeks
- ◆ BuSpar: avoid grapefruit juice
- ◆ Propranolol: monitor pulse; do not stop abruptly (rebound HTN)
- ◆ Hydroxyzine: expect drowsiness and dry mouth
- ◆ Lifestyle: sleep hygiene, caffeine reduction, therapy adjuncts

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SECTION TWELVE • MEMORY BOOSTERS

Mnemonics & Pattern Recognition

BENZO

- B** · Breathing depressed
- E** · Elderly falls 🚑
- N** · Never abrupt stop
- Z** · Zzz — sedation
- O** · Opioids = don't combine

BENZODIAZEPINE RED FLAGS

PAM

- -
If the drug name ends in **pam** or **lam** →
it's a **benzodiazepine**
diazepam, lorazepam, alprazolam, clonazepam

DRUG-NAME PATTERN

SAD

- S** · Sweating, shivering
- A** · Agitation, autonomic instability
- D** · Delirium, diarrhea

SEROTONIN SYNDROME CUES

CALM

- C** · CNS depressants — avoid mixing
- A** · Alcohol forbidden
- L** · LOC monitoring
- M** · Mouth dry / mood watch

ANTIANXIETY NURSING PRIORITIES

SLOW

- S** · SSRI = Slow (4–6 wks)
- L** · Lasting daily dosing
- O** · Off slowly — taper
- W** · Watch for suicide < 25

SSRI/SNRI RULES

BUSY

- B** · BuSpar / buspirone
- U** · Use daily, not PRN
- S** · Slow onset (2–4 wks)
- Y** · Yes to chronic GAD

BUSPIRONE ESSENTIALS

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SECTION THIRTEEN • NGN PRACTICE

NCJMM 6-Step Clinical Judgment Scenario

UNFOLDING CASE STUDY

A **72-year-old woman** with generalized anxiety disorder is admitted from a long-term care facility for "increasing confusion." Home medications include *alprazolam 1 mg PO TID* (started 6 weeks ago), *sertraline 100 mg daily*, and *tramadol 50 mg PRN* for arthritis. Vital signs: **BP 92/58, HR 56, RR 10, SpO₂ 89% on RA, T 99.2°F**. The patient is somnolent, arouses to voice but does not follow commands, and has horizontal nystagmus. The family reports she fell twice last week.

STEP 1 • RECOGNIZE CUES

What is relevant?

↓ BP, ↓ HR, ↓ RR, ↓ SpO₂; somnolence, nystagmus, falls; benzo + opioid + SSRI combination; elderly with new alprazolam; 6-week duration risks accumulation.

STEP 2 • ANALYZE CUES

What do the cues mean?

Pattern = **benzodiazepine over-sedation** in an elderly patient. Beers-criteria drug; potentiated by tramadol (opioid + serotonergic) and SSRI. Hypoventilation explains hypoxia; nystagmus & ataxia are classic benzo signs.

STEP 3 • PRIORITIZE HYPOTHESES

What is most urgent?

- 1 **Respiratory depression** from benzodiazepine toxicity.
- 2 Fall / injury risk from sedation.
- 3 Possible serotonin syndrome from tramadol+SSRI overlap.

STEP 4 • GENERATE SOLUTIONS

What should the nurse do?

Hold next alprazolam dose; apply O₂ via NC; raise HOB; obtain ABG; notify provider; anticipate **flumazenil** if RR < 8 or unresponsive; fall precautions; review med list for taper plan.

STEP 5 • TAKE ACTION

Implement priorities

Stop sedating PRN orders; place on continuous SpO₂ + cardiac monitor; obtain provider order to **taper** alprazolam over 2–4 weeks; discontinue tramadol; consider switch to buspirone or hydroxyzine for ongoing anxiety.

STEP 6 • EVALUATE OUTCOMES

Did it work?

Goal: RR ≥ 14, SpO₂ ≥ 94%, awake & alert, no falls. Reassess every 15 min × 1 hr, then q1h × 4. Teach family: never abruptly stop the alprazolam at home; coordinate taper schedule.