NCLEX 2026 · MENTAL HEALTH · PSYCHIATRIC NURSING

Electroconvulsive *Therapy* — ECT

A controlled, brief electrical stimulation of the brain under general anesthesia, inducing a therapeutic generalized seizure for severe, treatment-resistant psychiatric illness.

PSYCHOSOCIAL INTEGRITY | PHARMACOLOGICAL THERAPIES | SAFETY & INFECTION CONTROL | PRIORITY SETTING

1 SECTION 01 Definition & Overview

- **What it is:** Brief electrical current applied to the brain under general anesthesia to induce a controlled generalized tonic-clonic seizure (15–60 seconds).
- **Why it matters:** Among the **fastest, most effective** treatments for severe, treatment-resistant depression — often life-saving for acutely suicidal patients when medications work too slowly.
- **Key indications:** Treatment-resistant MDD, acute suicidality, catatonia, severe mania, psychotic depression, schizophrenia with affective features, severe depression in pregnancy or older adults.

Quick Facts

Seizure duration	15–60 sec
Treatment course	6–12 sessions
Frequency	2–3× / week
Response rate (MDD)	70–90%
Anesthesia	General, short
NPO before	6–8 hours

2 SECTION 02 Mechanism & Pathophysiology

STEP 1 Electrodes placed (unilateral or bilateral) on scalp → **STEP 2** Brief electrical current delivered (0.5–8 sec) → **STEP 3** Generalized tonic-clonic seizure (15–60 sec) → **STEP 4** Surge of neurotransmitters & neurohormones → **STEP 5** Neuroplasticity & mood-circuit reset over weeks

↑ Serotonin	↑ Norepinephrine	↑ Dopamine	↑ GABA + BDNF
Mood regulation	Drive, energy	Reward, motivation	Hippocampal neurogenesis

SECTION 03

3 Expected Effects & Adverse Reactions

Immediate / Common (Expected)

- Brief post-ictal confusion (15–60 min)
- Short-term memory loss (most common cognitive effect)
- Headache & muscle soreness
- Nausea
- Drowsiness, fatigue
- Transient ↑ HR & BP during seizure
- Mood improvement begins after a few sessions

⚠ Delayed / Severe

- Retrograde amnesia (events before treatment)
- Anterograde amnesia (less common, usually transient)
- Prolonged confusion or disorientation
- Persistent memory gaps (rare)
- Cardiac arrhythmias, bradycardia, MI
- Prolonged seizure (>2 min) → status epilepticus
- Aspiration, dental or tongue injury

RED FLAG FINDINGS — CALL PROVIDER IMMEDIATELY

- Seizure lasting > 2 minutes
- Chest pain, dysrhythmia, hypotension
- Severe unrelenting headache
- Apnea or absent gag reflex past recovery
- Persistent confusion > 1 hour
- New or worsening suicidal ideation

SECTION 04

4 Priority Nursing Interventions

PRE-PROCEDURE

Before ECT

- ★ **Verify informed consent & capacity**
- ✓ Confirm NPO ≥ 6–8 hours
- ✓ Baseline VS, weight, ECG, labs
- ✓ Remove dentures, jewelry, hairpins, contacts
- ✓ Have patient void before procedure
- ✓ Establish IV access
- ✓ Hold lithium, benzos, anticonvulsants per order
- ✓ Verify pre-op H&P, anesthesia clearance

INTRA-PROCEDURE

During ECT

- ★ **Maintain airway — 100% O_2 via bag-mask**
- ✓ Anesthesia: methohexital or etomidate
- ✓ Succinylcholine for muscle paralysis
- ✓ Atropine/glycopyrrolate (↓ secretions, prevent bradycardia)
- ✓ Insert bite block
- ✓ Monitor ECG, SpO_2, EEG, VS
- ✓ Time the seizure (target 30–60 sec)

POST-PROCEDURE

Recovery

- ★ **Position LATERAL — prevent aspiration**
- ★ **ABCs — assess airway & gag reflex**
- ✓ VS q15 min until stable
- ✓ Reorient frequently — confusion is expected
- ✓ Implement fall & safety precautions
- ✓ NPO until gag reflex fully returns
- ✓ Stay with patient until awake & oriented
- ✓ Reassess suicidality on each visit

SECTION 05

5 Pharmacology of ECT

Methohexital (Brevital)

SHORT-ACTING BARBITURATE ANESTHETIC

USE	Induces brief general anesthesia (sleep)
ONSET	~30 sec · Duration 5–10 min
ADVERSE	Respiratory depression, hypotension
NURSING	Have airway/O_2 ready; monitor SpO_2 continuously

Succinylcholine (Anectine)

DEPOLARIZING NEUROMUSCULAR BLOCKER

USE	Paralyzes muscles → prevents fracture/injury during seizure
ONSET	~60 sec · Duration 5–10 min
ADVERSE	Apnea, ↑ K^+, malignant hyperthermia (rare)
NURSING	Patient cannot breathe → bag-mask ventilation required

Atropine / Glycopyrrolate

ANTICHOLINERGIC

USE	↓ oral secretions, prevent vagal bradycardia
ADVERSE	Tachycardia, dry mouth, urinary retention
NURSING	Watch HR — both bradycardia & tachycardia possible

Caffeine sodium benzoate

SEIZURE THRESHOLD MODIFIER (OPTIONAL)

USE	Lengthens inadequately short seizures
ADVERSE	Tachycardia, jitteriness
NURSING	Used only when seizure duration is too brief for benefit

⏸ HOLD Before ECT (Per Order) — These ↑ Seizure Threshold or Risk

- Lithium · delirium risk
- Benzodiazepines · blunt seizure
- Anticonvulsants · block seizure
- MAOIs · BP instability

SECTION 06

6 NCLEX Test Traps ⚠️

- ECT is **NOT a last resort.** It's first-line for severely suicidal or catatonic patients when speed matters.
- Memory loss is **usually TEMPORARY** — resolves over weeks to months. Don't pick "permanent" as the expected outcome.
- Confusion post-ECT is **EXPECTED, not an emergency.** Reorient — don't notify provider unless prolonged > 1 hr. ~~Call MD~~ Reorient
- Post-procedure position is **LATERAL,** not supine — prevent aspiration. ~~Supine~~ Side-lying
- Informed consent is **required.** If patient lacks capacity (severe psychosis/catatonia) → guardian or court order.
- Patient is **NPO** before ECT — general anesthesia. Don't pick "give breakfast first."
- First priority after ECT = **AIRWAY** (ABCs), then circulation, then orientation.
- Mood improves over **multiple sessions** — don't expect full response after one treatment.

SECTION 07

7 Patient & Family Education

📘 Before Treatment

- Treatment course: typically 6–12 sessions, 2–3× per week
- You'll be asleep under anesthesia — no pain during procedure
- NPO from midnight (or 6–8 hrs before)
- Remove jewelry, dentures, contact lenses, nail polish
- Arrange a ride home — **no driving** on treatment day
- Bring someone to stay with you afterward
- Modern ECT is safe — myths from old depictions are inaccurate

🏠 After Treatment & Maintenance

- Memory loss is usually short-term and improves over weeks
- Keep a written log/calendar to track appointments
- Light meal allowed once gag reflex returns
- Continue antidepressants as prescribed
- Mood improvement typically appears after several sessions
- Maintenance ECT (weekly→monthly) may be recommended
- Attend all follow-up therapy and med-management visits

📞 REPORT TO PROVIDER IMMEDIATELY

New suicidal thoughts | Severe headache | Chest pain | Prolonged confusion > 1 hr | Persistent nausea/vomiting | Memory loss not resolving in weeks

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SECTION 08

Memory Boosters & Mnemonics

SHOCK

CORE ECT CARE PRIORITIES

- **S** **Suicidal / Severe** depression → key indication
- **H** **Hold** lithium, benzos, anticonvulsants
- **O** **Oxygenate** — 100% O_2 during & after
- **C** **Confusion** & memory loss expected post-op
- **K** **Keep on side** — lateral position to prevent aspiration

PREPARE

PRE-ECT CHECKLIST

- **P** **Permission** — informed consent verified
- **R** **Remove** dentures, jewelry, contacts
- **E** **Empty** bladder & NPO 6–8 hrs
- **P** **Pre-meds** per anesthesia (atropine, etc.)
- **A** **Access** — IV established
- **R** **Run** baseline VS, ECG, labs
- **E** **Educate** & reduce anxiety

Lightning-Round Number Recall

6–8	15–60	2–3×	6–12
Hours NPO before ECT	Seconds of therapeutic seizure	Treatments per week	Sessions per course