NEUROLOGICAL / COGNITIVE

Alzheimer's Disease

NGN NCLEX 2026

Progressive, irreversible degenerative brain disorder — the most common cause of dementia. Priority focus: safety, communication, caregiver support.

SECTION 01

Definition & Overview

What It Is

Most common form of dementia — a chronic, progressive loss of memory, cognition, and function.

Course

Irreversible and terminal. Progresses over 4–20 years through mild → moderate → severe stages.

Who's at Risk

Age >65, family history, Down syndrome, head trauma, cardiovascular disease, female sex.

SECTION 02

Pathophysiology (Simplified)

1. **Beta-amyloid plaques** accumulate between neurons, blocking cell-to-cell communication.

↓

2. **Neurofibrillary tangles** (abnormal tau protein) twist inside neurons → cell death.

3 **Acetylcholine levels drop** — the neurotransmitter critical for memory and learning.

4 **Cortical atrophy** — hippocampus shrinks first (memory), then widespread brain shrinkage with ventricular enlargement.

5 **Progressive cognitive & functional decline** → memory, language, judgment, self-care, and eventually basic bodily functions.

SECTION 03

Signs & Symptoms by Stage

STAGE 1
Early / Mild

- Short-term memory loss
- Word-finding difficulty
- Misplacing items
- Mood & personality changes
- Difficulty with complex tasks (finances, planning)
- Mild disorientation
- Withdrawal from hobbies

STAGE 2
Middle / Moderate

- Confusion about time & place
- Wandering SAFETY
- Sundowning (↑ confusion PM)
- Fails to recognize family
- Needs help with ADLs
- Aggression, agitation, suspicion
- Hallucinations / delusions

STAGE 3
Late / Severe

- Near-total memory loss
- Loss of speech / mute
- Incontinence
- Dysphagia ASPIRATION
- Immobility / bedbound
- Complete ADL dependence
- Vulnerable to infection

The 4 A's of Alzheimer's

A	A	A	A
Amnesia (memory loss)	Aphasia (language loss)	Apraxia (can't do tasks)	Agnosia (can't recognize)

SECTION 04

Priority Nursing Interventions

Safety First PRIORITY

- ✓ Assess fall risk; use bed/chair alarms
- ✓ Secure environment; ID bracelet for wandering
- ✓ Lock cabinets, remove sharps, lower bed
- ✓ Monitor dysphagia; aspiration precautions
- ✓ Supervise smoking, cooking, meds
- ✓ Screen for elder abuse / neglect

Cognitive & Communication

- ✓ Reality orientation early; validation late
- ✓ Don't argue with delusions — redirect
- ✓ Simple one-step commands
- ✓ Face client, maintain eye contact
- ✓ Calm, quiet, low-stimulus environment
- ✓ Reminiscence & music therapy

Daily Living & Routine

- ✓ Consistent daily routine & caregivers
- ✓ Label rooms, drawers, bathroom
- ✓ Lay out clothing in order to dress
- ✓ Monitor nutrition, hydration, weight
- ✓ Toileting schedule (q2h) for incontinence
- ✓ Skin integrity & mobility checks

SECTION 05

Pharmacology

Drug	Mechanism	Key Side Effects	Nursing Considerations
Cholinesterase Inhibitor **Donepezil** Aricept	Blocks breakdown of acetylcholine → more Ach available for memory & cognition (mild–moderate stages)	N/V, diarrhea, anorexia, **bradycardia**, syncope, insomnia, weight loss	Give at **bedtime**. Check **apical HR** before dose — hold if <60. Slows decline; does not cure.

Drug	Mechanism	Key Side Effects	Nursing Considerations
Cholinesterase Inhibitor **Rivastigmine** Exelon	Same as above — boosts acetylcholine levels	Severe GI upset, weight loss, dizziness, bradycardia	Available as transdermal patch (rotate sites; remove old patch first). Take with meals if oral.
Cholinesterase Inhibitor **Galantamine** Razadyne	Same Ach-boosting mechanism	GI upset, bradycardia, dizziness, weight loss	Give with food. Monitor for bradycardia & syncope. Caution in asthma/COPD, PUD.
NMDA Receptor Antagonist **Memantine** Namenda	Blocks glutamate excitotoxicity → protects neurons (moderate–severe stages)	Dizziness, headache, confusion, constipation, hypertension	May be combined with donepezil. Renal dose adjustment. Does NOT cause bradycardia.

SECTION 06

NCLEX Test Traps

🔀 **Delirium ≠ Dementia.** Delirium is acute, reversible, and often infection/med-induced. Alzheimer's is chronic, progressive, and irreversible. Sudden confusion change? Think delirium FIRST.

🚶 **Wandering = Safety priority.** The answer is never "restrain" — use ID bracelets, alarms, secure units, and redirection. Restraints are a last resort.

💬 **Don't argue with delusions or hallucinations.** Redirect and validate feelings. In late-stage, reality orientation increases agitation — use validation therapy instead.

❤️ **Check apical HR before donepezil.** Cholinesterase inhibitors cause bradycardia. Hold the dose if HR <60 and notify HCP.

👴 **Alzheimer's is NOT normal aging.** Mild forgetfulness with age is expected. Getting lost in familiar places, repeating questions, and ADL decline are NOT normal.

🍽️ **Aspiration is late-stage priority.** Dysphagia, pocketing food, coughing with meals → thickened liquids, upright positioning, small bites, supervise eating.

🌅 **Sundowning is real.** Increase lighting in late afternoon, reduce stimuli, maintain routine. Don't medicate first — environmental changes come first.

📋 **Legal planning goes EARLY.** POA, advance directives, and finances must be addressed while the client still has capacity — ideally at diagnosis.

SECTION 07

🎓 Patient & Caregiver Education

1. **Maintain a consistent daily routine** — predictability reduces anxiety and agitation.
2. **Label rooms, drawers, and objects** to support orientation and independence.
3. **Safety-proof the home:** remove throw rugs, lock cabinets, install grab bars, disable stove.
4. **Complete legal planning EARLY** — advance directives, POA, financial planning at diagnosis.
5. **Provide ID bracelet** and enroll in safe-return program for wandering risk.
6. **Medication adherence:** use pill organizers, set alarms, supervise administration.
7. **Recognize caregiver burnout** — fatigue, depression, social isolation. Encourage respite care.
8. **Connect with resources:** Alzheimer's Association, support groups, adult day care programs.

SECTION 08

💡 Memory Boosters & Mnemonics

🧠 The 4 A's of Alzheimer's

Amnesia | Aphasia | Apraxia | Agnosia

Memory loss, language loss, can't perform tasks, can't recognize people/objects.

🧪 "Plaques & Tangles"

Pathology cue — if you see beta-amyloid plaques + neurofibrillary tangles, the diagnosis is **Alzheimer's**.

🌙 "Aricept at Sunset"

Give **Donepezil (Aricept)** at **bedtime**. Check apical pulse first — hold if HR <60.

⚡ "Delirium = Dramatic & Quick"

Delirium: acute, reversible (hours–days). **Dementia:** chronic, irreversible (months–years). Sudden change = work up for infection/meds.

🌇 "Sundown = Slow Down"

When the sun goes down, agitation goes up. ↑ lighting + ↓ stimuli + routine before meds.

✅ "Don't Argue — Validate & Redirect"

Never correct delusions in late-stage Alzheimer's. **Validation** preserves dignity; redirection preserves safety.

🎯 NCJMM Clinical Judgment Framework

NEXT GEN NCLEX 2026 — CLINICAL JUDGMENT MEASUREMENT MODEL

1 Recognize Cues
Memory loss, wandering, sundowning, agitation, dysphagia, caregiver stress, HR <60 on cholinesterase inhibitor.

2 Analyze Cues
Is this dementia or delirium? Acute vs chronic? Med side effect? Infection? Stage of Alzheimer's determines plan.

3 Prioritize Hypotheses
SAFETY first — falls, wandering, aspiration. Then cognition, nutrition, skin integrity, caregiver support.

4 Generate & Evaluate
Implement environmental, behavioral, pharmacologic interventions; monitor response; adjust as disease progresses.