

NGN NCLEX 2026 · GERONTOLOGICAL NURSING

Normal Aging **vs** Pathological Changes

A system-by-system comparison for clinical judgment. Knowing what is expected with aging — and what is *not* — is the foundation of safe geriatric care and a high-yield NCLEX skill.

Population: Adults ≥ 65 years**NCLEX Focus:** Recognize Cues · Take Action**Series:** Diane's NGN NCLEX 2026 Study Library

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Definition & Overview

THE BIG IDEA

Normal Aging

The **gradual, predictable, universal** physiologic decline that occurs in every body system over time. It is **NOT a disease** — it is the baseline against which pathology is measured.

Pathological Aging

An **abnormal change** caused by disease, injury, or environment. Findings are typically **sudden, severe, or functionally limiting** — and require nursing intervention.

Why this matters: Confusing normal aging with disease leads to under-treatment ("she's just old"). Confusing disease with normal aging leads to *missed* assessments. NCLEX 2026 tests this judgment directly through Recognize Cues and Take Action item types.

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The Core Concept

PATTERN RECOGNITION FOR THE EXAM

Normal & Expected

- **Gradual** onset over years
- **Bilateral & symmetric**
- Affects performance but **not safety**
- Person remains **independent in ADLs**
- Vital signs stay within adjusted range
- Mental status is **clear & oriented**

SA

Pathological 🚨

- **Sudden** onset (hours to weeks)
- **Asymmetric** or focal
- Causes **injury, infection, fall, or fear**
- **Loss of independence** or function
- Abnormal vitals, fever, hypotension
- **Acute confusion = NEVER normal**



System-by-System Comparison

THE HIGH-YIELD CORE OF THIS TOPIC



Cardiovascular

NORMAL AGING

- ↓ Cardiac output and ↓ max heart rate ($220 - \text{age}$)
- Arterial **stiffening** → mild ↑ systolic BP
- ↓ Baroreceptor response → mild **orthostatic dizziness**
- S4 heart sound may be present
- Slower recovery after exertion

PATHOLOGICAL 🚨

- Chest pain, dyspnea at rest, S3 gallop **HF**
- BP $\geq 130/80$ sustained **HTN**
- Syncope, falls from postural drop
- Irregular pulse, palpitations **A-FIB**
- Edema, JVD, crackles



Respiratory

NORMAL AGING

- ↓ Lung elasticity & ↓ vital capacity
- ↑ Residual volume (chest wall stiffer)
- Weaker cough, ↓ ciliary action
- Slight ↓ in PaO₂ (still ≥ 90% SpO₂)
- Mild dyspnea on exertion only

PATHOLOGICAL 🚨

- Dyspnea **at rest**, accessory muscle use
- SpO₂ < 92% (or < 90% in COPD)
- New productive cough, fever **PNA**
- Tripoding, pursed-lip breathing **COPD**
- **Restlessness** = early hypoxia



Neurological

NORMAL AGING

- Slower reaction & processing time
- Mild **short-term recall** changes
- ↓ Deep tendon reflexes (still present)
- Smaller pupils, ↓ pupillary response
- Lighter, more fragmented sleep

PATHOLOGICAL 🚨

- **Acute confusion / delirium** **SEPSIS · UTI · ↓O₂**
- Loss of long-term memory, getting lost **DEMENTIA**
- Facial droop, slurred speech, one-sided weakness **STROKE**
- Resting tremor, shuffling gait **PARKINSON**
- New severe headache, ↓ LOC



Musculoskeletal

NORMAL AGING

- **Sarcopenia** — gradual ↓ in muscle mass & strength
- ↓ Bone density (osteopenia in many)
- **Loss of height** (1–2 inches) from disc compression
- Joint stiffness, especially AM
- Slower gait speed

PATHOLOGICAL 🚨

- T-score ≤ -2.5 → **OSTEOPOROSIS**
- Fragility fracture from minor fall
- Severe joint deformity, swelling, warmth **RA**
- Painful weight-bearing, crepitus **OA**
- **Fall + hip pain + shortened, externally rotated leg** = hip fx



Gastrointestinal

NORMAL AGING

- ↓ Saliva production → dry mouth
- ↓ Peristalsis → mild constipation tendency
- ↓ Gastric acid & ↓ B12 absorption
- Slower gastric emptying
- Mild ↓ in appetite

PATHOLOGICAL 🚨

- **Dysphagia** with choking, weight loss **ASPIRATION**
- Hematemesis, melena **GI BLEED**
- Fecal impaction, obstipation
- Heartburn unrelieved by antacids **GERD/PUD**
- Unintentional weight loss > 5% in 6 mo



Genitourinary & Renal

NORMAL AGING

- ↓ GFR & ↓ creatinine clearance (creatinine may stay normal due to ↓ muscle)
- ↓ Bladder capacity → **nocturia** 1–2x
- BPH in men → weaker stream
- Mild stress incontinence (women)
- ↓ Vaginal lubrication, atrophy

PATHOLOGICAL 🚨

- Acute confusion + **any** ↓ in function = suspect **UTI**
- Oliguria < 30 mL/hr **AKI**
- Urinary retention, distended bladder
- Fecal/urinary **incontinence not controlled**
- Hematuria, fever, flank pain



Integumentary

NORMAL AGING

- ↓ Subcutaneous fat & ↓ skin turgor (check sternum/forehead instead)
- Dry skin, ↓ sebum
- Lentigines (age spots), wrinkles
- Thinner, fragile skin → easy bruising
- **Slower wound healing**

PATHOLOGICAL 🚨

- Stage 1+ **pressure injury** over bony prominence
- Non-healing or asymmetric mole **CA**
- Cellulitis: red, warm, swollen, fever
- Tenting on sternum = **dehydration**
- Severe pruritus or jaundice



Sensory (Vision · Hearing · Taste · Touch)

NORMAL AGING

- **Presbyopia** — needs reading glasses
- **Presbycusis** — high-frequency hearing loss
- ↓ Taste buds & ↓ smell → bland food
- ↓ Thirst sensation → **dehydration risk**
- Slower dark adaptation, glare sensitivity

PATHOLOGICAL 🚨

- Cloudy lens, halos around lights **CATARACT**
- ↑ IOP, tunnel vision **GLAUCOMA**
- Central vision loss **MAC. DEGEN.**
- Sudden vision loss, "curtain" **RETINAL DETACH**
- Complete hearing loss; ear pain/drainage



Endocrine

NORMAL AGING

- ↓ Glucose tolerance (slower insulin response)
- Slight ↓ in basal metabolic rate
- ↓ Estrogen/testosterone
- Mild ↓ in thyroid function (TSH may rise slightly)

PATHOLOGICAL 🚨

- Fasting glucose > 126 / A1c ≥ 6.5% **DM**
- Cold intolerance, weight gain, bradycardia **HYPO-T**
- **Atypical DM presentation** — confusion, falls, incontinence
- Hypoglycemia mistaken for delirium



Immune & Hematologic

NORMAL AGING

- ↓ T-cell function → ↓ immune response
- **Blunted fever response** — even severe infection may show only low-grade fever
- Slight ↓ in RBCs & hemoglobin
- Slower wound & infection recovery

PATHOLOGICAL 🚨

- **Acute confusion may be the ONLY sign of sepsis** 🚨
- Hypothermia ($T < 36^{\circ}\text{C}$) — severe infection
- Hgb < 12 (M) / < 11 (F) **ANEMIA**
- Pancytopenia, frequent infections

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Priority Nursing Interventions

ABCS · SAFETY · NCLEX PRIORITIZATION

A

Airway

Assess for **dysphagia**; HOB elevated for meals; thickened liquids if ordered.

B

Breathing

SpO₂, lung sounds, cough effort. **Restlessness** = **hypoxia** until proven otherwise.

C

Circulation

Orthostatic VS before ambulation; assess for fall risk and bleeding (thinner skin, anticoagulants).

S

Safety

Fall prevention is the #1 geriatric priority — bed low, call light, non-skid socks, glasses & hearing aids in.

Top NCLEX Priorities for the Older Adult

1. **Recognize acute confusion as a red flag** — investigate (UTI, sepsis, hypoxia, hypoglycemia, meds) before assuming dementia.
2. **Prevent falls** — leading cause of injury death in older adults. Reorient, hourly rounding, bed/chair alarms.
3. **Assess skin every shift** — turn q2h, off-load bony prominences, no massage of reddened areas.
4. **Monitor hydration** — offer fluids q1–2h; thirst sensation is unreliable.
5. **Reconcile medications** at every transition — polypharmacy is the #1 modifiable cause of geriatric harm.
6. **Assess pain** with appropriate scales (PAINAD if cognitively impaired) — older adults under-report.
7. **Promote function** — early mobilization; deconditioning happens within days.

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Pharmacology

AGING CHANGES DRUG HANDLING

PROCESS	AGING CHANGE	CLINICAL EFFECT
Absorption	↓ Gastric acid, ↓ motility, ↓ blood flow	Slightly slower onset for oral meds
Distribution	↑ Body fat, ↓ total body water, ↓ albumin	Fat-soluble drugs (diazepam) accumulate ; ↑ free-drug levels of warfarin, phenytoin
Metabolism	↓ Hepatic blood flow & ↓ liver mass	Slower breakdown → drugs last longer
Excretion	↓ GFR (creatinine clearance is the best estimate, <i>not</i> serum creatinine)	Renal dose all medications ; risk of toxicity ↑ (digoxin, lithium, gentamicin)

Beers Criteria — High-Risk Drugs to Avoid in Older Adults

- ⚠ **Benzodiazepines** (diazepam, lorazepam) → falls, sedation, delirium
- ⚠ **First-gen antihistamines** (diphenhydramine / Benadryl) → anticholinergic delirium, urinary retention
- ⚠ **NSAIDs** long-term → GI bleed, AKI, ↑ BP
- ⚠ **Anticholinergics** (TCAs, oxybutynin) → confusion, dry mouth, retention
- ⚠ **Sliding-scale insulin alone** → hypoglycemia, no real benefit
- ⚠ **Muscle relaxants** (cyclobenzaprine) → sedation, fractures

Memory cue: "Start low, go slow" — start at the lowest possible dose, titrate slowly, and reconcile meds at every encounter.

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NCLEX Test Traps

WHERE STUDENTS LOSE POINTS

⚠️ TRAP

"She's just confused because she's old."

Acute confusion is *never* normal aging. It is a cue to **recognize**

— assess for UTI, sepsis, hypoxia, hypoglycemia, electrolyte imbalance, or new medication.

✓ RIGHT

Investigate every change in mentation.

Check vitals, glucose, urine, recent med changes, and last bowel movement before labeling a patient as "demented."

⚠️ TRAP

"Temperature is 98.0 °F — patient has no infection."

Older adults have a

blunted fever response

. A "normal" temp does not rule out infection or sepsis.

✓ RIGHT

Trust the cluster of cues.

Tachycardia, ↑ RR, low BP, confusion, or ↓ urine output may signal sepsis even with a normal temp. Hypothermia is a late, ominous sign.

⚠️ TRAP

Checking skin turgor on the back of the hand.

Aged skin has ↓ elasticity at baseline — false-positive for dehydration.

✓ RIGHT

Check turgor over the sternum or forehead

, and combine with mucous membranes, urine output, and orthostatic VS.

⚠ TRAP

"Serum creatinine is 1.0 — kidney function is fine."

Older adults have ↓ muscle mass, so creatinine looks normal even with significant ↓ GFR.

✓ RIGHT

Use creatinine clearance / eGFR to dose medications

, especially digoxin, gentamicin, vancomycin, and metformin.

⚠ TRAP

Giving Benadryl PRN for sleep

in an older adult. Anticholinergic effects → delirium, urinary retention, falls. Beers Criteria flags this.

✓ RIGHT

Use non-pharmacologic sleep measures first

— quiet environment, dim light, regular routine, restrict caffeine and naps.

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Patient & Family Education

PROMOTING SAFETY AND INDEPENDENCE

Fall Prevention

- ✓ Remove throw rugs & cords
- ✓ Grab bars in bath, raised toilet seat
- ✓ Night lights in halls
- ✓ Wear non-skid shoes
- ✓ Stand slowly to avoid orthostasis

Hydration & Nutrition

- ✓ Drink fluids on a schedule (don't wait for thirst)
- ✓ Use herbs/spices instead of salt for flavor
- ✓ Smaller, more frequent meals
- ✓ Calcium + Vit D for bones
- ✓ Fiber + fluids for constipation

Medication Safety

- ✓ Bring all meds to every visit (brown-bag review)
- ✓ One pharmacy when possible
- ✓ Pill organizer for adherence
- ✓ Avoid OTC sleep aids & PM products
- ✓ Ask before any new supplement

Sensory Adaptations

- ✓ Annual vision & hearing exams
- ✓ Wear hearing aids during waking hours
- ✓ Bright, glare-free lighting
- ✓ Large-print materials
- ✓ Face the person when speaking

Activity & Cognition

- ✓ 30 min movement most days (walking, tai chi)
- ✓ Strength training 2x/week to fight sarcopenia
- ✓ Stay socially engaged
- ✓ Mental challenges (puzzles, reading)
- ✓ Adequate sleep — 7–8 hours

When to Call the HCP

- ✓ Sudden confusion or behavior change
- ✓ New chest pain or SOB
- ✓ Unintentional weight loss > 5%
- ✓ Falls or near-falls
- ✓ Any new bleeding or bruising

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Memory Boosters

MNEMONICS & PATTERN ANCHORS

SPICES

GERIATRIC ASSESSMENT TOOL

- S**leep disorders
- P**roblems with eating/feeding
- I**ncontinence
- C**onfusion
- E**vidence of falls
- S**kin breakdown

DELIRIUM

REVERSIBLE CAUSES OF ACUTE CONFUSION

- D**rugs (new med, opioid, anticholinergic)
- E**lectrolyte imbalance
- L**ack of sleep / sensory deprivation
- I**nfection (UTI, pneumonia, sepsis)
- R**etention of urine or stool
- I**schemia / hypoxia
- U**nderhydration / undernutrition
- M**etabolic (glucose, thyroid)

START LOW, GO SLOW

GERIATRIC PHARMACOLOGY RULE

- Lowest effective dose first
- Titrate up gradually
- Renal dose every drug
- Reassess with each change
- Deprescribe whenever possible

NORMAL = "GRADUAL"

PATTERN TEST FOR THE NCLEX

- G** radual onset (years)
- R** egular & symmetric
- A** DLs preserved
- D** oesn't cause harm
- U** niversal across older adults
- A** lert & oriented baseline
- L** ittle change in vital signs

★ **The One-Line Rule:** *"If it is sudden, severe, or steals function — it is NOT normal aging."*

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NCJMM Clinical Judgment Scenario

APPLY THE 6-STEP MODEL



Scenario

An **82-year-old female** is admitted from a long-term care facility. The daughter reports the patient was "fine yesterday" but is now "not herself." Vital signs: T 99.0 °F (37.2 °C), HR 108, BP 102/60, RR 22, SpO₂ 93% on room air. The patient is oriented to person only, picking at her gown, and has not voided since the prior shift. Her usual baseline is alert & oriented x4, fully ambulatory.

1 Recognize Cues

Relevant: Acute confusion (baseline change), HR 108, BP 102/60, RR 22, SpO₂ 93%, low-grade temp, no urine output, restlessness. "*Fine yesterday*" = sudden onset.

2 Analyze Cues

Sudden mental status change + tachycardia + ↓ BP + ↓ SpO₂ + low UOP in an older adult = **cluster suggests early sepsis or UTI-induced delirium**, NOT dementia. Blunted fever response is expected.

3 Prioritize Hypotheses

#1 Sepsis / urosepsis (life threat) → #2 Hypoxia / pneumonia → #3 Hypoglycemia → #4 Dehydration / AKI. Delirium is the *symptom*; the cause is the priority.

4 Generate Solutions

Start O₂ to keep SpO₂ ≥ 95%, obtain urinalysis & blood cultures, place IV & begin fluids per protocol, fingerstick glucose, prepare to administer antibiotics within 1 hr, fall precautions, frequent reorientation.

5 Take Action

Apply O₂ via NC, draw labs, insert IV, initiate **sepsis bundle**, notify HCP using SBAR, implement bed-low, hourly rounding, gather collateral history of medications and last bowel movement.

6 Evaluate Outcomes

Reassess mental status, VS, SpO₂, UOP, lactate q1h. **Improved orientation, HR < 100, MAP > 65, UOP > 30 mL/hr** = effective. No improvement → escalate care.

Diane's NGN NCLEX 2026 Study Series · Normal Aging vs Pathological Changes · For self-study; verify against current institutional protocols and the 2026 NCLEX–RN Test Plan.