

NGN NCLEX 2026 · HIGH-YIELD REVIEW

Pancreatitis

Acute and chronic inflammation of the pancreas with autodigestion of pancreatic tissue — a life-threatening GI/endocrine emergency requiring rapid recognition, pain control, and pancreatic rest.

System: GI / Endocrine

Acute & Chronic

 Priority: ABCs + Pain + NPO

NCJMM Integrated

SECTION 01



Definition & Overview

What it is

- ▶ Inflammation of the pancreas caused by **autodigestion** — pancreatic enzymes activate *inside* the pancreas instead of the duodenum.
- ▶ **Acute:** sudden onset, often reversible if treated early.
- ▶ **Chronic:** progressive, irreversible destruction → fibrosis, endocrine/exocrine failure.

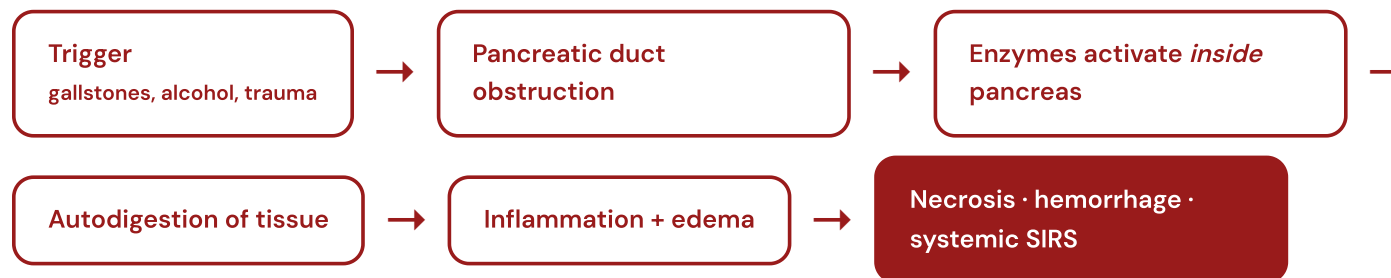
Why it matters

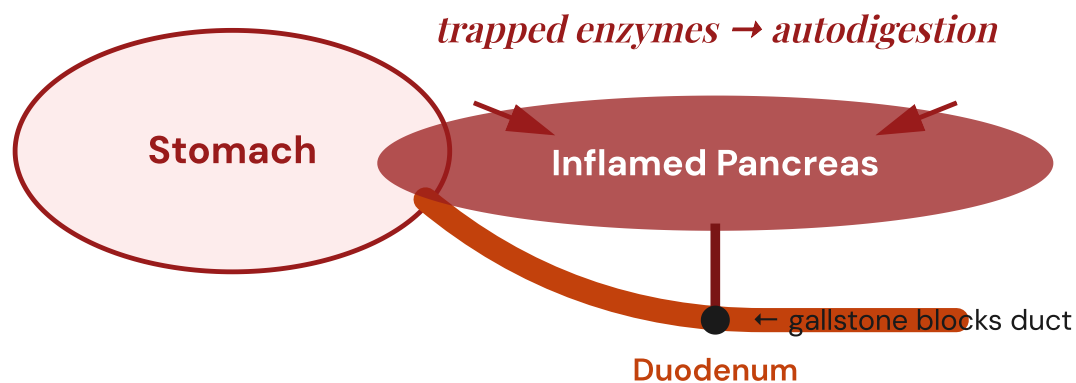
- ▶ Can progress to **hemorrhagic/necrotizing pancreatitis**, shock, ARDS, DIC.
- ▶ Loss of beta cells → **Type 1 diabetes**; loss of acinar cells → **malabsorption**.
- ▶ Mortality rises quickly if recognition is delayed — ABCs come first.



SECTION 02

Pathophysiology — Simplified





Systemic fallout → $\downarrow\text{Ca}^{2+}$ (fat necrosis) · $\uparrow$ Glucose (β -cell injury) · ARDS · DIC · Shock

Trapped pancreatic enzymes digest the gland itself — the source of every sign, symptom, and complication.

Top Causes — "I GET SMASHED"

Idiopathic · Gallstones (#1 in US) · Ethanol/alcohol (#2) · Trauma · Steroids · Mumps · Autoimmune · Scorpion sting · Hyperlipidemia/Hypercalcemia · ERCP · Drugs (thiazides, sulfonamides, azathioprine)



SECTION 03

Signs & Symptoms



EARLY / MILD



LATE / SEVERE

- ▶ **Severe epigastric / LUQ pain** — boring, radiates to the back
- ▶ Pain **worse lying flat**, better sitting up & leaning forward (knee-chest / fetal)
- ▶ Pain worsens 15–30 min after eating (especially fatty foods)
- ▶ Nausea and vomiting (unrelieved by emesis)
- ▶ Low-grade fever, tachycardia
- ▶ Abdominal distension, guarding

- ▶ **Hypotension & shock** (3rd-spacing of fluid)
- ▶ **Decreased / absent bowel sounds** → paralytic ileus
- ▶ Rigid, board-like abdomen
- ▶ **Dyspnea / crackles** → ARDS risk
- ▶ Tetany — Chvostek's / Trousseau's sign (hypocalcemia)
- ▶ Hyperglycemia, jaundice (if biliary)

RED FLAG Findings — Report Immediately

CULLEN'S SIGN

Bluish discoloration around the umbilicus → retroperitoneal bleeding

GREY TURNER'S SIGN

Bluish discoloration on the flanks → hemorrhagic pancreatitis

HYPOCALCEMIA + TETANY

$\text{Ca}^{2+} < 8.5$ — fat necrosis binds calcium; risk of seizures/laryngospasm

HEMODYNAMIC COLLAPSE

↓BP, ↑HR, ↓UO, altered LOC → hypovolemic shock

Key Lab Findings

Lab	Change	Clinical Meaning
Lipase	↑↑↑ (most specific)	Elevated 3× upper limit = diagnostic; stays elevated longer than amylase
Amylase	↑↑↑	Rises within hours; less specific than lipase

Calcium	↓ (<8.5 mg/dL)	Fat necrosis binds Ca^{2+} — watch for tetany
Glucose	↑ (>200 mg/dL)	β -cell damage → transient or permanent hyperglycemia
WBC	↑	Inflammation/infection
Triglycerides	↑ (often >1000)	Both cause and consequence
LDH, AST, Bilirubin	↑	Ranson's criteria — poor prognosis markers

SECTION 04



Priority Nursing Interventions

A-B-C **Airway & Breathing first.** Monitor SpO_2 , RR, breath sounds q1–2h — ARDS can develop within 48–72 hrs. Elevate HOB; give O_2 as ordered.

Circ **Aggressive IV fluid resuscitation** (LR preferred) — 3rd-spacing causes hypovolemia. Strict I&O; monitor for ↓BP, ↑HR, ↓UO (<30 mL/hr = red flag).

Rest **NPO — rest the pancreas.** No food, no fluids until lipase/amylase trending down and pain resolves. Provide NG suction if vomiting/ileus.

Pain **Administer analgesics** — current evidence supports hydromorphone (Dilaudid) or fentanyl. Morphine is now considered acceptable; older teaching about Oddi spasm has been largely disproven. Assess pain q1–2h.

Pos **Position for comfort** — knee-chest, side-lying with knees flexed, or sitting up leaning forward. **Never flat supine** (worsens pain).

Labs **Monitor glucose q4–6h** and calcium daily. Watch for Chvostek's / Trousseau's signs → hypocalcemic tetany.

Skin **Inspect flanks & umbilicus** every shift for Grey Turner's / Cullen's signs.

GI **NG tube to low intermittent suction** if distension, vomiting, or ileus. Verify placement before meds/feeds (pH <5, measure external length, auscultation).

Edu **Progress diet slowly** — clear liquids → low-fat, high-protein, small frequent meals when ordered. Zero alcohol. Zero caffeine.

Psych **Address alcohol use disorder** if etiology is ethanol — refer to rehab, AA, social work. This is the single most important long-term intervention.

SECTION 05



Pharmacology

Drug / Class	Mechanism	Key Side Effects	Nursing Considerations
Hydromorphone (Dilaudid) / Fentanyl <i>Opioid analgesics</i>	Bind μ -receptors; first-line for severe pancreatitis pain	Sedation, respiratory depression, constipation, hypotension	Monitor RR (>12), LOC, pain score. Have naloxone available.

Ondansetron (Zofran) <i>5-HT₃ antagonist</i>	Blocks serotonin receptors; controls nausea/vomiting	Headache, constipation, QT prolongation	Obtain baseline ECG in cardiac patients. Monitor K ⁺ and Mg ²⁺ .
Pantoprazole / Famotidine <i>PPI / H₂ blocker</i>	Suppress gastric acid → less pancreatic stimulation	Headache, diarrhea, long- term: ↓Mg ²⁺ , C. diff risk	Usually IV in acute phase; oral once tolerating PO.
Pancrelipase / Pancreatin <i>Pancreatic enzyme replacement</i>	Replaces lipase/protease/amylase for chronic pancreatitis	Nausea, cramping, hyperuricemia, stool changes	Give with EVERY meal and snack. Do not crush enteric-coated tabs. Monitor stool for steatorrhea.
Insulin (Regular / Lispro) <i>Antihyperglycemic</i>	Drives glucose into cells when β- cells are damaged	Hypoglycemia, hypokalemia	Check glucose q4–6h. Regular insulin 30 min AC; Lispro 15 min AC or with meals.
Calcium Gluconate IV <i>Electrolyte replacement</i>	Replaces calcium bound by fat necrosis	Bradycardia, hypotension, tissue necrosis if extravasated	Give slowly via central line if possible. Monitor ECG. Check Chvostek's / Trousseau's.
Imipenem / Meropenem <i>Carbapenem antibiotics</i>	Used only for <i>necrotizing</i> or infected pancreatitis	Seizures (rare), C. diff, rash	Not routine — reserved for confirmed infection/necrosis. Monitor cultures.
Thiamine + Folate <i>Vitamin supplements</i>	Prevents Wernicke's in alcohol- related pancreatitis	Generally well tolerated	Give BEFORE glucose/dextrose in suspected alcohol use disorder.

SECTION 06



NCLEX Test Traps

Trap 1: Position for pain relief



The wrong answer is "supine / flat" — that *worsens* pancreatic pain. Correct answer =

knee-chest, side-lying with knees flexed, or sitting up leaning forward

.



Trap 2: Lipase vs. Amylase

If asked for the *most specific* lab → pick

lipase

. Amylase rises first but is not pancreas-specific (also from salivary glands).



Trap 3: Cullen's vs. Grey Turner's

Cullen's = umbilical (belly button)

.

Grey Turner's = flanks (sides)

. Memory trick: "C" for Center, "T" for T-shirt sides. Both = hemorrhagic pancreatitis — NOTIFY PROVIDER.



Trap 4: Calcium pitfall

Patient develops muscle twitching, tingling around the mouth, or positive Chvostek's → think

hypocalcemia from fat necrosis

, NOT anxiety. Prepare IV calcium gluconate.



Trap 5: Pancreatic enzyme timing

Pancrelipase is given

with every meal and snack

— NOT on an empty stomach. Don't confuse with sucralfate or bisphosphonates.



Trap 6: "Treat the alcohol withdrawal first"

In alcohol-induced pancreatitis, remember CIWA protocol +

thiamine BEFORE glucose

to prevent Wernicke's encephalopathy.



Trap 7: NPO forever?

NPO is acute phase only. Once pain and lipase are improving, advance to **clear liquids → low-fat, high-protein, small frequent meals**. Prolonged NPO worsens outcomes.



Trap 8: Pancreatitis vs. Cholecystitis pain

Pancreatitis = **epigastric/LUQ radiating to BACK**, worse supine. Cholecystitis = **RUQ radiating to right shoulder** (Murphy's sign), worse after fatty meals.

SECTION 07



Patient Education



Zero Alcohol — for life

Even small amounts can trigger recurrence. Refer to AA, rehab, counseling.



Stop smoking

Nicotine accelerates pancreatic damage and cancer risk.



Low-fat, high-protein diet

Avoid fried foods, butter, gravies, fatty meats, whole milk. Small, frequent meals.



Take enzymes with every meal

Pancrelipase/pancreatin must go **WITH** food & snacks — never before or after on empty stomach.



Avoid caffeine & spicy foods

Stimulate pancreatic secretion — delay healing.



Stay hydrated

At least 2–3 L/day unless contraindicated.



Monitor blood glucose

If β -cells damaged, may develop diabetes — daily finger-sticks and report highs/lows.



Return-to-ED signs

Worsening abdominal pain, bloody stools, vomiting, fever, bruising on abdomen/flanks.



Weigh yourself weekly

Unexplained weight loss or steatorrhea (fatty, floating stools) = enzyme dose adjustment.



Keep all follow-ups

Ranson's criteria + imaging are tracked over weeks to months.



SECTION 08

NCJMM Clinical Judgment Framework

1. Recognize Cues

Severe epigastric pain radiating to back · nausea/vomiting · Cullen's or Grey Turner's signs · $\uparrow$ lipase/amylase · $\downarrow$ Ca²⁺ · $\uparrow$ glucose.

2. Analyze Cues

Cluster findings: autodigestion → fluid shifts + hypocalcemia + hyperglycemia. Identify shock risk, ARDS, tetany.

3. Prioritize Hypotheses

#1 Hypovolemic shock · #2 Respiratory compromise (ARDS) · #3 Hypocalcemic tetany · #4 Sepsis from necrosis.

4. Generate Solutions

NPO + IV fluids + pain control + position of comfort + monitor electrolytes + prep for possible ICU/ERCP.

5. Take Action

Start 2 large-bore IVs, infuse LR, give opioid analgesic, insert NG to suction if vomiting, draw labs, notify HCP of red flags.

6. Evaluate Outcomes

Pain decreasing, BP/HR stabilizing, UO >30 mL/hr, lipase/amylase trending down, Ca²⁺ normalizing, bowel sounds returning.

SECTION 09



Memory Boosters & Mnemonics



"I GET SMASHED" — Causes of Pancreatitis

- I** **Idiopathic** — no identified cause
- G** **Gallstones** — #1 cause in the US
- E** **Ethanol** — alcohol, #2 cause
- T** **Trauma** — blunt abdominal injury, post-op
- S** **Steroids** — long-term corticosteroid use
- M** **Mumps** and other viral infections
- A** **Autoimmune** — SLE, IgG4 disease
- S** **Scorpion sting** (classic NCLEX trivia)
- H** **Hyperlipidemia / Hypercalcemia**
- E** **ERCP** — post-procedure complication
- D** **Drugs** — thiazides, sulfonamides, azathioprine, valproate



"PANCREAS" — Classic Clinical Features

- P** Pain — epigastric, radiates to back
- A** Abdominal rigidity / distension
- N** Nausea & vomiting
- C** Cullen's sign + Grey Turner's sign
- R** Rise in enzymes — lipase, amylase
- E** Elevated glucose (β -cell damage)
- A** Absent bowel sounds (ileus)
- S** Serum calcium drops (tetany risk)

Cullen's vs. Grey Turner's — Quick Visual

- C** Cullen's = **C**enter of belly (umbilicus)
- T** Grey Turner's = **T**-shirt sides (flanks)
- !** Both = hemorrhagic pancreatitis → **notify HCP immediately**

Nursing Priorities — "NO FOOD"

- N** NPO — rest the pancreas

- O** Opioids for pain (Dilaudid / fentanyl)
- F** Fluids — aggressive IV LR resuscitation
- O** Oxygen & airway monitoring (ARDS risk)
- O** Observe labs — Ca^{2+} , glucose, lipase
- D** Decompress — NG to suction if vomiting

NGN NCLEX 2026 Study Series · Pancreatitis · Light-background design for high-contrast review

Pair with: TPN · Medications & Mealtimes · Drug Toxicities · Blood Transfusion review cards