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

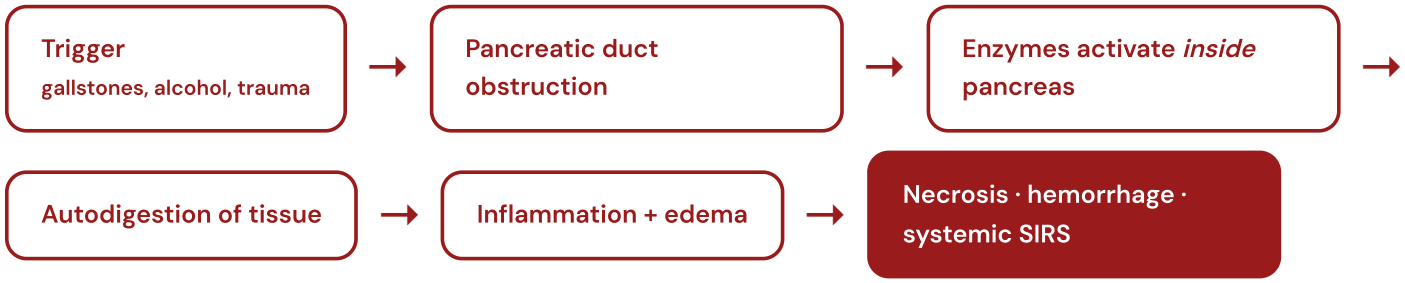
- Inflammation of the pancreas caused by **autodigestion** — pancreatic enzymes activate *inside* the pancreas instead of the duodenum.
- **Acute:** sudden onset, often reversible if treated early.
- **Chronic:** progressive, irreversible destruction → fibrosis, endocrine/exocrine failure.

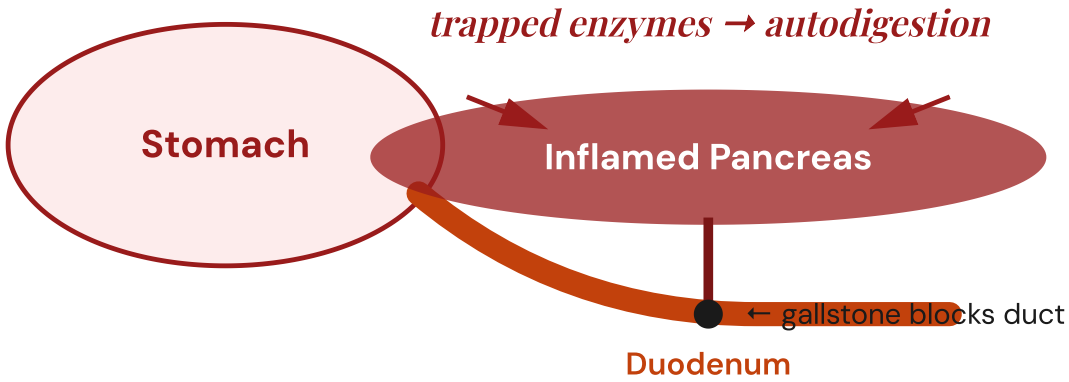
Why it matters

- 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 → ↓Ca^{2+} (fat necrosis) · ↑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 · **G**allstones (#1 in US) · **E**thanol/alcohol (#2) · **T**rauma · **S**teroids · **M**umps · **A**utoimmune · **S**corpion sting · **H**yperlipidemia/Hypercalcemia · **E**RCP · **D**rugs (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
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 *Opioid analgesics*	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) *5-HT_3 antagonist*	Blocks serotonin receptors; controls nausea/vomiting	Headache, constipation, QT prolongation	Obtain baseline ECG in cardiac patients. Monitor K^+ and Mg^{2+}.
Pantoprazole / Famotidine *PPI / H_2 blocker*	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 *Pancreatic enzyme replacement*	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) *Antihyperglycemic*	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 *Electrolyte replacement*	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 *Carbapenem antibiotics*	Used only for *necrotizing* or infected pancreatitis	Seizures (rare), C. diff, rash	Not routine — reserved for confirmed infection/necrosis. Monitor cultures.
Thiamine + Folate *Vitamin supplements*	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 · ↑lipase/amylase · ↓Ca^{2+} · ↑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, Ca^{2+} 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	**P**ain — epigastric, radiates to back
A	**A**bdominal rigidity / distension
N	**N**ausea & vomiting
C	**C**ullen's sign + Grey Turner's sign
R	**R**ise in enzymes — lipase, amylase
E	**E**levated glucose (β-cell damage)
A	**A**bsent bowel sounds (ileus)
S	**S**erum calcium drops (tetany risk)

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

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

🎯 Nursing Priorities — "NO FOOD"

N	**N**PO — rest the pancreas

O **O**pioids for pain (Dilaudid / fentanyl)

F **F**luids — aggressive IV LR resuscitation

O **O**xygen & airway monitoring (ARDS risk)

O **O**bserve labs — Ca^{2+}, glucose, lipase

D **D**ecompress — NG to suction if vomiting

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

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