NGN NCLEX 2026 · GASTROINTESTINAL SYSTEM

Appendicitis

🔥 Acute Abdomen | 🏥 Surgical Emergency | ⚕ High-Yield GI Topic | 🧠 NCJMM Clinical Judgment

01 Definition / Overview

- **Appendicitis** = inflammation of the vermiform appendix (small finger-like pouch off the cecum in the RLQ).
- Most common cause of **acute abdominal surgery**; peak incidence ages 10–30.
- Without surgery, appendix may perforate within 24–72 hours → **peritonitis, sepsis, death**.

02 Pathophysiology (Simplified)

1. Appendix lumen obstructed (fecalith, lymphoid tissue, tumor, parasites)

↓

2. Mucus continues to be secreted → pressure rises inside appendix

↓

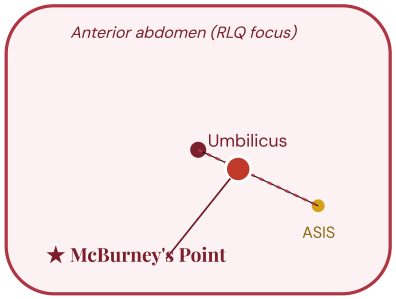
3 Venous drainage compromised → wall becomes edematous & ischemic

↓

4 Bacteria invade wall → inflammation, pus formation

↓

5 Arterial flow cut off → **gangrene & perforation** → peritonitis/sepsis



McBurney's Point = 1/3 of the distance from the ASIS to the umbilicus — classic RLQ tenderness location

03 Signs & Symptoms

EARLY (first 12–24 hrs)

- Vague **periumbilical pain** (around the navel)
- Anorexia (classic early sign)

LATE / CLASSIC (12–48 hrs)

- Pain **migrates to RLQ** — McBurney's point
- **Rebound tenderness** (pain worse when pressure released)

- Nausea, possible vomiting (after pain starts)
- Low-grade fever (99–100.5°F / 37.2–38°C)
- Mild leukocytosis (↑ WBC 10,000–18,000)

- **Rovsing's sign** — LLQ palpation causes RLQ pain
- **Psoas sign** — RLQ pain with right hip extension
- **Obturator sign** — RLQ pain with internal hip rotation
- Guarding, rigid abdomen, ↓ bowel sounds

RED FLAG — PERFORATION / PERITONITIS

- **SUDDEN relief of pain** followed by diffuse, severe abdominal pain (appendix ruptured!)
- High fever (>101°F / 38.3°C), chills, tachycardia, hypotension
- Board-like (rigid) abdomen, absent bowel sounds
- Pallor, diaphoresis, shallow rapid breathing — signs of sepsis/shock

NCLEX Pearl: Sudden pain relief is NOT improvement — it is the classic cue for perforation. Act immediately.

04 Priority Nursing Interventions

PRE-OPERATIVE

- **Keep NPO** (prep for surgery)
- **NO heat to abdomen** → causes rupture
- **NO enemas or laxatives** → causes rupture
- Start IV fluids (isotonic: 0.9% NS or LR)
- Position: **Semi-Fowler's or right side-lying with knees flexed** (comfort, localizes infection)
- Monitor vitals, pain, bowel sounds, abdominal girth

POST-OPERATIVE

- **ABC first** — monitor respiratory status
- Assess incision for redness, drainage, dehiscence
- Monitor for peritonitis: fever, rigid abdomen, ↑ HR
- Manage pain (opioids short-term → acetaminophen)
- **Early ambulation** (prevents ileus, DVT, pneumonia)
- Advance diet slowly: clear liquids → regular as tolerated
- Incentive spirometer; splint incision when coughing

- Administer prescribed antibiotics pre-op
- Obtain consent, prep for appendectomy (lap or open)

- If ruptured: maintain drains, IV antibiotics, NG tube

05 Pharmacology

Drug / Class	Action	Nursing Considerations
Broad-spectrum antibiotics (cefoxitin, piperacillin-tazobactam, metronidazole)	Prevent/treat infection, especially if perforated	Check allergies, monitor for C. diff, assess renal function
Opioid analgesics (morphine, hydromorphone)	Post-op pain relief	Monitor RR & sedation; naloxone on standby; prevent constipation
Non-opioid analgesics (acetaminophen, ketorolac)	Adjunct pain control; reduce opioid needs	Check liver function (acetaminophen); ketorolac max 5 days
Antiemetics (ondansetron, promethazine)	Control nausea/vomiting pre- and post-op	Monitor QT interval (ondansetron); caution with sedation
IV fluids (0.9% NS, Lactated Ringer's)	Hydration, electrolyte balance, perfusion	Monitor I&O, lung sounds, electrolytes

06 Complications & Management

Complication	Key Signs	Nursing Management
Perforation / Rupture	Sudden pain relief → diffuse pain, rigid abdomen	Emergency surgery; IV antibiotics; fluids; NPO

Complication	Key Signs	Nursing Management
Peritonitis	Board-like abdomen, fever, ↑ HR, ↓ BP, rebound tenderness	IV antibiotics, NG tube, fluid resuscitation, surgery
Abscess Formation	Persistent fever, localized RLQ mass, ↑ WBC	CT-guided drainage, IV antibiotics, delayed appendectomy
Sepsis / Septic Shock	Fever or hypothermia, tachycardia, hypotension, confusion	Sepsis bundle: cultures → antibiotics within 1 hr, fluids, vasopressors
Paralytic Ileus	Absent bowel sounds, distention, no flatus, N/V	NPO, NG decompression, ambulate, correct electrolytes
Wound Infection / Dehiscence	Redness, drainage, separation of incision edges	Sterile dressing, cover with saline gauze if evisceration, notify HCP

07 NCLEX Test Traps ⚠️

Trap #1: "Apply heat for comfort"

❌ WRONG — heat increases circulation and can cause the appendix to rupture. Use **ICE ONLY** if ordered. No heating pads, no warm compresses.

Trap #2: "Give a laxative or enema for constipation"

❌ WRONG — increases peristalsis and intra-abdominal pressure → rupture. Never give laxatives/enemas with suspected appendicitis.

Trap #3: "The pain suddenly went away — patient is better"

❌ WRONG — this is the **classic cue for perforation**. Assess immediately; notify HCP; prepare for emergency surgery.

Trap #4: "McBurney's pain is always the first symptom"

✗ WRONG — pain starts
periumbilical (vague)
and then migrates to RLQ. Anorexia is often the earliest symptom.

Trap #5: "Assess for rebound tenderness frequently"
✗ WRONG — repeated deep palpation can cause rupture. Assess once, carefully, by the provider or experienced nurse.

Trap #6: "Keep the client flat (supine) for comfort"
✗ WRONG —
Semi-Fowler's or right side-lying with knees flexed
decreases abdominal tension and localizes infection.

08 Patient Education

- ✓ Keep incision clean & dry; wash hands before touching
- ✓ Gradual return to activity; no strenuous exercise initially
- ✓ Report worsening or new abdominal pain
- ✓ Advance diet as tolerated; increase fiber & fluids to prevent constipation
- ✓ Splint incision with pillow when coughing/sneezing
- ✓ Avoid heavy lifting (>10 lbs) for 4–6 weeks
- ✓ Report fever >101°F, redness, drainage, or opening of incision
- ✓ Complete full course of antibiotics — do not stop early
- ✓ Use incentive spirometer & deep breathe to prevent pneumonia
- ✓ Follow up with surgeon as scheduled (usually 1–2 weeks)

09 NCJMM Clinical Judgment Framework

🔍 RECOGNIZE

Periumbilical pain → RLQ migration, anorexia, rebound tenderness, Rovsing's/Psoas signs, ↑ WBC, low-grade fever.

🧠 ANALYZE

Differentiate from ovarian cyst, ectopic pregnancy, diverticulitis. Identify perforation cues (sudden pain relief, rigid abdomen).

⚡ PRIORITIZE

NPO, no heat/laxatives, IV fluids/antibiotics, semi-Fowler's, prep for surgery. If ruptured → sepsis bundle first.

✅ EVALUATE

Pain controlled, afebrile, ambulating, bowel sounds return, tolerating diet, incision intact without infection.

10 Memory Boosters 🧠

PAINS

Classic Appendicitis Cues

P — Pain (RLQ, McBurney's)

A — Anorexia (hallmark early sign)

I — Inflammation (↑ WBC)

N — Nausea & vomiting

S — Signs: Rovsing's, Psoas, Obturator

NO-NO-NO

Never Do This!

NO heat to abdomen

NO laxatives or enemas

NO deep repeated palpation

All three = rupture risk!

RLQ

Pain Migration Pattern

R — Right

L — Lower

Q — Quadrant

Pain starts at umbilicus → migrates to RLQ (McBurney's point). 1/3 distance from ASIS to umbilicus.

SUDDEN

Red Flag: Perforation

S udden relief of pain

U nstable vitals

D iffuse abdominal pain

D istention / rigid abdomen

E levated temp & HR

N eeds emergency surgery