NGN NCLEX 2026 · RENAL / URINARY SYSTEM

# Pyelonephritis Flashcards

20 high-yield, exam-ready cards. Focused on NCLEX priorities, pharmacology, and the traps that catch students. Cover the answer box, quiz yourself, then reveal.

Upper UTI | E. coli #1 | Sepsis Risk | IV Antibiotics | Priority Care

**How to use:** Read each question and answer it out loud or on paper. Then read the tinted **Answer** box to check yourself. Print double-sided or study on screen. Best paired with the interactive flip-card version.

01 OVERVIEW

### What structures does pyelonephritis infect, and what type of UTI is it?

ANSWER

The **renal pelvis, tubules, and interstitial tissue (kidney parenchyma)** — the kidney itself. It is an **upper UTI** with systemic symptoms, unlike cystitis (lower UTI).

02 ETIOLOGY

### What is the #1 causative organism, and how does it reach the kidney?

ANSWER

**E. coli** — ascends from the perineum up the urethra → bladder → ureter → kidney.

03 CUES

### What is the classic triad of pyelonephritis?

ANSWER

**1) Fever & chills** (often 101–104°F) · **2) Flank pain** (unilateral) · **3) CVA tenderness** on percussion. See all three → think pyelonephritis first.

04 DIAGNOSTICS

### Which urinalysis finding is pathognomonic for pyelonephritis?

ANSWER

**WBC casts.** Also expect bacteria, pyuria, positive nitrites, positive leukocyte esterase, and possible RBCs.

05 COMPLICATION

### What is the most common life-threatening complication?

ANSWER

**Urosepsis** — bacteria seed the bloodstream. Can progress to septic shock, AKI, and multi-organ failure if missed.

06 PRIORITY

### Both a urine culture order and an antibiotic order are present. What do you do first?

ANSWER

**Obtain cultures FIRST** (urine ± blood), THEN give antibiotics. Antibiotics first ruin the culture and delay targeted therapy. Classic NCLEX priority.

07 DIAGNOSTICS

### What urine culture colony count confirms infection?

ANSWER

**≥ 100,000 CFU/mL.** Culture & sensitivity identifies the organism and guides antibiotic choice — obtain before starting antibiotics.

08 PHARMACOLOGY

### What is the first-line IV antibiotic for inpatient pyelonephritis?

ANSWER

**Ceftriaxone (Rocephin)**, a 3rd-gen cephalosporin. Others: ciprofloxacin, gentamicin. Ask about penicillin allergy (cross-sensitivity).

09 PHARMACOLOGY

### What are gentamicin's two hallmark NCLEX side effects?

ANSWER

**Nephrotoxicity & ototoxicity.** Monitor peak/trough levels, BUN/creatinine, and hearing. Reserved for severe cases.

10 PHARMACOLOGY

### Why choose acetaminophen over NSAIDs for fever/pain here?

ANSWER

**NSAIDs are nephrotoxic** and worsen renal injury. Acetaminophen is preferred when kidneys are inflamed or injured (keep ≤ 4 g/day).

11 TEST TRAP

### What does phenazopyridine (Pyridium) do — and what does it NOT do?

ANSWER

A **urinary analgesic that relieves dysuria only**. It does **NOT treat the infection** — must be given with an antibiotic. Orange-red urine is **expected and harmless**.

12 PHARMACOLOGY

### Key teaching points for ciprofloxacin?

ANSWER

Avoid **dairy & antacids** (chelate the drug). Use **sun protection** (photosensitivity). Watch for **tendon rupture** and **QT prolongation**.

13 DIFFERENTIATE

### What single feature best separates pyelonephritis from cystitis?

ANSWER

**Systemic symptoms.** High fever + chills, flank/CVA pain, N/V, WBC casts, high sepsis risk = pyelonephritis. Cystitis = local bladder symptoms (suprapubic burning) only.

14 RED FLAG

### In an elderly patient, what may be the ONLY sign of urosepsis?

ANSWER

**Confusion / altered mental status.** Older adults may not mount a fever — new confusion, hypotension, or falls can be the only clue. Don't overlook it.

15 RED FLAG

### Name the red flags that require immediate escalation.

ANSWER

**Hypotension + tachycardia** (sepsis) · altered mental status · **urine output < 30 mL/hr** · temp > 103°F unresponsive to antipyretics · **any pregnant patient with UTI symptoms.**

16 INTERVENTION

### What is the oral fluid teaching, and the key exception?

ANSWER

Encourage **3–4 L/day** once tolerated to flush bacteria — **unless contraindicated** by heart failure or renal failure.

17 TEST TRAP

**Why must patients finish the entire antibiotic course?**

ANSWER

Stopping early → **recurrence, resistance, and chronic pyelonephritis → renal scarring → CKD**. Always teach completion of the full course.

18 SPECIAL POP.

**How do you handle a pregnant patient with ANY UTI symptom?**

ANSWER

Treat **aggressively.** Untreated pyelonephritis in pregnancy can cause **preterm labor and sepsis**. Never dismiss it as 'just a UTI.'

19 DIFFERENTIATE

**How does treatment differ between cystitis and pyelonephritis?**

ANSWER

**Cystitis:** oral antibiotics, 3–7 days. **Pyelonephritis:** IV antibiotics transitioning to oral, 10–14 days.

20 MNEMONIC

**Recall the FACTS mnemonic for pyelonephritis presentation.**

ANSWER

**F**ever & chills · **A**ching flank pain · **C**VA tenderness · **T**achycardia/tachypnea · **S**epsis risk (monitor!).

**Diane's NGN NCLEX 2026 Study Library · Pyelonephritis**

Structured to the NCJMM · High-Yield Visual Review · Exam-Ready Reference