INFECTIOUS DISEASE · HEMATOLOGY · NGN NCLEX 2026

Infectious *Mononucleosis*

The "Kissing Disease" — Epstein-Barr Virus & the Vulnerable Spleen

CAUSATIVE AGENT: EBV (90%) · CMV (LESS COMMON) **PEAK AGE:** 15-24 YEARS **TRANSMISSION:** SALIVA

INCUBATION: 4-6 WEEKS

SOURCE TRANSPARENCY

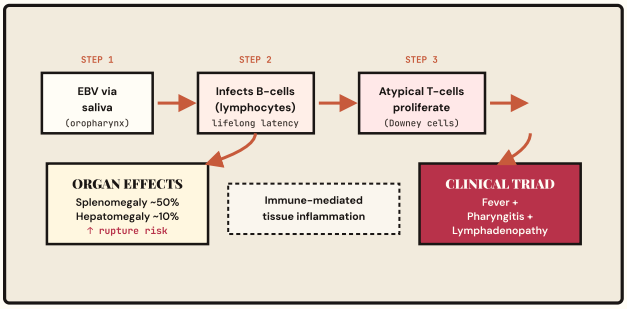
Infectious mononucleosis was not included in the uploaded personal notes for this library. Clinical content compiled from: *Saunders Comprehensive Review for the NCLEX-RN 2026, ATI Medical-Surgical Nursing, Lippincott Illustrated Reviews: Microbiology & Pharmacology, CDC Epstein-Barr Virus Guidelines, and AAP/AAFP clinical recommendations.*

1 OVERVIEW
Definition & Why It Matters

An acute, self-limiting viral illness caused most often by Epstein-Barr virus (a herpesvirus) — but the spleen is what makes it dangerous.

- **Primary cause:** Epstein-Barr Virus (EBV); ~10% caused by CMV, HHV-6, or acute HIV.
- **Transmission:** Saliva — kissing, shared drinks/utensils, toothbrushes, lip balm. Lifelong latency in B-lymphocytes after infection.
- **Clinical relevance:** Most cases are mild, but the *enlarged spleen can rupture* — a true emergency in adolescent and college-age athletes.

2 PATHOPHYSIOLOGY
How EBV Hijacks the Immune System



Key insight: The dramatic lymphocyte proliferation is what causes lymph nodes, tonsils, spleen, and liver to swell — not the virus itself directly.

CLINICAL PRESENTATION

3 Signs & Symptoms

EARLY / PRODROME (DAYS 1-5)

- Profound **fatigue & malaise** — the hallmark, often weeks to months
- Low-grade fever, headache, body aches
- Mild sore throat, decreased appetite
- Often mistaken for influenza or "just being run-down"

ACUTE / FULL SYNDROME (DAYS 5-14+)

- **Classic Triad:** high fever (101–104°F) + severe exudative pharyngitis + *posterior* cervical lymphadenopathy
- **Splenomegaly** ~50% of patients (LUQ tenderness)
- Hepatomegaly ~10–15%, mild jaundice possible
- Petechiae on soft palate; periorbital edema
- Diffuse maculopapular rash — especially after amoxicillin/ampicillin (~90%)

RED FLAG FINDINGS — ESCALATE IMMEDIATELY

- **Splenic rupture:** sudden LUQ pain, *left shoulder pain (Kehr's sign)*, hypotension, syncope, abdominal rigidity → surgical emergency
- **Airway obstruction:** "kissing tonsils," stridor, drooling, inability to swallow saliva → ENT consult; possible steroids
- **Severe dehydration:** unable to tolerate fluids due to pharyngitis
- **Neurologic:** altered LOC, seizures, severe headache → possible encephalitis
- **Hematologic:** bruising, bleeding, jaundice → thrombocytopenia or hemolytic anemia

4 ABC FRAMEWORK

Priority Nursing Interventions

1. **AIRWAY:** Assess for tonsillar swelling, stridor, drooling. Position upright. Have suction & emergency airway equipment available for severe pharyngitis.
2. **BREATHING:** Monitor respiratory rate, SpO_2, work of breathing. Notify provider for any signs of obstruction.
3. **CIRCULATION / SAFETY:** *Palpate abdomen gently* — never deep palpation of an enlarged spleen. Monitor for hypotension, tachycardia, LUQ pain → rupture.
4. **ACTIVITY RESTRICTION:** Strictly **no contact sports, heavy lifting, or vigorous exercise for at least 4 weeks** — longer if splenomegaly persists. HCP must clear before return.
5. **COMFORT:** Acetaminophen or ibuprofen for fever, headache, throat pain. Saltwater gargles, throat lozenges, cool fluids, popsicles, soft diet.
6. **HYDRATION & NUTRITION:** Encourage small frequent sips; IV fluids if PO intake inadequate.
7. **REST:** Sleep is therapeutic. Plan activities with rest periods; fatigue may persist 2–3 months.
8. **INFECTION CONTROL:** Standard precautions. No sharing utensils, drinks, lip products, toothbrushes. Hand hygiene.
9. **MONITORING:** Daily VS, intake/output, weight; serial labs (CBC, LFTs) per orders.

5 WORKUP

Key Diagnostics

- **Monospot** (heterophile antibody) — confirms EBV. May be *false-negative in week 1*; repeat in 7–10 days.
- **CBC w/ differential:** lymphocytosis with *>10% atypical lymphocytes*
- **EBV-specific antibodies:** VCA-IgM (acute), VCA-IgG (past or current), EBNA (months later)
- **LFTs:** AST & ALT often elevated (mild hepatitis)
- **Throat culture / rapid strep** — rule out concurrent group A strep
- **Abdominal ultrasound** — if splenomegaly is in question or before athletic clearance

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PHARMACOLOGY

Supportive Care — No Cure for EBV

Treatment is symptomatic. There is no antiviral or antibiotic that cures infectious mononucleosis.

DRUG / CLASS	MECHANISM & USE	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
Acetaminophen (Tylenol)	Antipyretic / analgesic for fever & throat pain	Hepatotoxicity with overdose	Monitor LFTs (mono affects liver); max 4 g/day; assess for alcohol use
Ibuprofen / NSAIDs	Anti-inflammatory, antipyretic, analgesic	GI upset, bleeding risk, renal	Take with food; caution if thrombocytopenia present
Corticosteroids (prednisone)	*Only* for severe complications: airway obstruction, severe thrombocytopenia, hemolytic anemia	Immunosuppression, hyperglycemia, mood changes	Not routine — risk-benefit must justify use; taper as ordered
⚠ AVOID Amoxicillin / Ampicillin	Beta-lactam antibiotic — sometimes mistakenly prescribed for presumed strep	Diffuse maculopapular rash in ~90% of mono patients	Rash is *not* a true penicillin allergy; document carefully & stop the drug
⚠ AVOID Aspirin (in children/teens)	Salicylate — antipyretic / analgesic	**Reye's syndrome** — acute encephalopathy & liver failure	Never give to anyone <18 with viral illness; use acetaminophen instead

NCLEX TEST TRAPS

7 Wrong vs. Right Thinking

✗ WRONG	✓ RIGHT
"Patient can return to football practice in 1 week."	**Minimum 4 weeks** off contact sports & heavy lifting due to splenic rupture risk. HCP must clear after spleen returns to normal size.
"Start amoxicillin for the sore throat."	Mono is **viral** — antibiotics don't work. Amoxicillin causes a diffuse rash in ~90% of mono patients. Treatment is supportive.
"Deep-palpate the spleen to assess size."	**Gentle palpation only.** Deep palpation can rupture an enlarged spleen. Use ultrasound if size must be measured.
"Give aspirin 325 mg for fever in a 14-year-old with mono."	**Never give aspirin to anyone under 18 with a viral illness** — risk of Reye's syndrome. Use acetaminophen or ibuprofen.
"Patient is no longer contagious once symptoms resolve."	EBV is shed in **saliva for months** after recovery; the virus stays latent for life. Teach no sharing of drinks/utensils long-term.
"Negative Monospot rules out mono."	Monospot can be **falsely negative in the first week**. If clinical suspicion is high, *repeat in 7–10 days* or order EBV-specific antibodies.

DISCHARGE TEACHING

8 Patient & Family Education

Rest is medicine
Fatigue is profound and may last 2–3 months. Listen to your body; don't push through it.

No contact sports × 4 weeks min.
Football, soccer, wrestling, weightlifting all off-limits. Spleen rupture is a real emergency.

Call 911 for splenic rupture signs
Sudden left upper belly pain, left shoulder pain, dizziness, or fainting → ER *immediately*.

Hydrate & soothe the throat
Cool fluids, popsicles, soft foods, saltwater gargles. Avoid spicy/acidic foods.

Don't share saliva
No kissing during acute illness. Don't share drinks, utensils, toothbrushes, or lip products.

Safe meds only
Acetaminophen or ibuprofen for fever/pain. **No aspirin if under 18.** No amoxicillin.

Hand hygiene
Wash hands frequently. The virus can be in saliva on objects for hours.

School/work return
Resume gradually when energy allows. PE/athletics require HCP clearance — not just feeling better.

MEMORY BOOSTERS

9 Mnemonics & Pattern Recognition

"SPLEEN" — Why It's the Priority

S	**Sports** avoided × 4 weeks minimum
P	**Palpate** gently only — never deep
L	**Left** shoulder pain = Kehr's sign
E	**Enlarged** organ in LUQ
E	**Emergency** if it ruptures
N	**No** heavy lifting either

The "3 A's" to AVOID in Mono

A	**Aspirin** — Reye's syndrome risk (under 18)
A	**Amoxicillin / Ampicillin** — causes diffuse rash
A	**Athletics** — splenic rupture risk × 4 weeks

If you can remember three A's, you've avoided three NCLEX traps.

"MONO" — Patient Teaching

M	**Minimize** activity — rest, rest, rest
O	**Oral** hygiene & cool fluids
N	**No** contact sports × 4+ weeks
O	**Observe** for LUQ / left shoulder pain

The Classic Triad — "FLP"

F	**Fever** (101–104°F)
L	**Lymphadenopathy** — posterior cervical chain
P	**Pharyngitis** — severe, exudative, looks like strep

If you see all three in a teen or young adult → think mono first.

NGN CLINICAL JUDGMENT

10 Six-Step NCJMM Scenario

CASE

A 19-year-old male college student presents to the ED with 7 days of severe fatigue, sore throat unresponsive to OTC remedies, fever of 101.8°F, and a "lump in his neck." He was treated 3 days ago with amoxicillin at an urgent care for presumed strep throat and now has a diffuse maculopapular rash on his trunk and arms. He is a varsity lacrosse player with a championship game in 3 days. He is asking the nurse, "Can I just play through it?"

STEP 1

Recognize Cues

- Classic triad: fever + pharyngitis + posterior cervical lymphadenopathy
- Age 19 — peak demographic
- Rash *after* amoxicillin — classic for mono
- Profound fatigue × 7 days
- Contact-sport athlete

STEP 2

Analyze Cues

- Amoxicillin-induced rash in mono is *not* a true penicillin allergy
- Posterior cervical nodes are more specific for mono than for strep
- Must rule out splenomegaly — gentle LUQ assessment
- Liver enzymes likely elevated; check LFTs

STEP 3

Prioritize Hypotheses

- **#1 Infectious mononucleosis (EBV)** — highest priority
- #2 Group A strep pharyngitis (less likely — posterior nodes, rash)
- #3 Acute HIV / CMV mono-like syndrome
- #4 Drug reaction (true allergy) — less likely given mono pattern

STEP 4

Generate Solutions

- Order: Monospot, CBC w/ diff, LFTs, throat culture
- Discontinue amoxicillin
- Acetaminophen or ibuprofen for fever/pain
- Hydration, soft cool diet, rest
- Activity-restriction counseling — **no game**
- Consider ultrasound to assess spleen size

STEP 5

Take Actions

- **Stop amoxicillin immediately**
- Educate: no lacrosse × 4 weeks minimum — splenic rupture is fatal
- Teach Kehr's sign: *LUQ + left shoulder pain → ED now*
- Administer acetaminophen 650 mg PO; saltwater gargles
- Document rash as drug-induced mono rash — *not* PCN allergy
- Notify coach & provide written restriction letter

STEP 6

Evaluate Outcomes

- Monospot positive → diagnosis confirmed
- Rash fades over 1–2 weeks without further intervention
- Splenomegaly resolves over 3–4 weeks
- Fatigue may persist 2–3 months
- Athletic clearance only after HCP confirms normal spleen size on exam & ultrasound
- Patient verbalizes red-flag symptoms & activity restrictions