NEUROLOGICAL SYSTEM · AUTOIMMUNE

Guillain-Barré Syndrome

Acute Inflammatory Demyelinating Polyneuropathy (AIDP)

NCLEX 2026 · HIGH-YIELD

1. Definition / Overview

WHAT IT IS & WHY IT MATTERS

- **Autoimmune disorder** where the body's immune system attacks the **myelin sheath** of peripheral nerves, disrupting nerve signal transmission.
- Characterized by **rapid, symmetrical, ASCENDING muscle weakness** that starts in the feet/legs and moves upward toward the head.
- Typically follows a **viral or bacterial infection** by 1–3 weeks (e.g., *Campylobacter jejuni*, influenza, CMV, EBV, or recent vaccination).
- A **medical emergency** — ascending paralysis can reach the diaphragm, causing respiratory failure.

2. Pathophysiology (Simplified)

HOW THE DISEASE UNFOLDS

1. **Trigger:** Recent viral/bacterial infection (often GI or respiratory) 1–3 weeks prior

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2. **Autoimmune attack:** Antibodies mistakenly target the myelin sheath of peripheral nerves

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3 **Demyelination:** Loss of myelin disrupts nerve impulse conduction

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4 **Ascending paralysis:** Symmetrical weakness begins in lower extremities & moves UP

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5 **Critical stage:** Paralysis reaches diaphragm → respiratory failure 🚨

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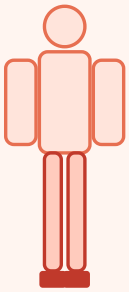
6 **Recovery phase:** Remyelination occurs in *reverse order* — descending recovery over weeks to months



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Paralysis climbs from **feet → legs → trunk → arms → face → diaphragm**

ASCENDING

🔍 3. Signs & Symptoms

EARLY VS LATE — WATCH FOR RED FLAGS

EARLY FINDINGS

- **Paresthesias** — tingling/numbness in hands & feet
- **Symmetrical muscle weakness** starting in legs
- **Diminished or absent DTRs** (deep tendon reflexes)
- Muscle pain, cramping, back pain
- Unsteady gait, difficulty climbing stairs

🚨 RED FLAGS

LATE / SEVERE

- **Respiratory failure** — dyspnea, ↓ vital capacity, inability to cough
- **Autonomic dysfunction** — BP swings, arrhythmias, tachy/bradycardia
- **Dysphagia** → aspiration risk
- Bilateral facial weakness/droop
- Complete flaccid paralysis

- Recent history of viral illness (1–3 wks prior)

- Ileus, urinary retention

🚨 **PRIORITY RED FLAG:** Declining **vital capacity < 15 mL/kg** or **NIF worsening** → prepare for intubation/mechanical ventilation.

4. Priority Nursing Interventions

FOLLOW ABCS · SAFETY · PRIORITIZATION

✈️ AIRWAY & BREATHING (FIRST!)

- **Monitor respiratory status continuously** — RR, depth, SpO_2, ABGs
- Measure **vital capacity & NIF** (negative inspiratory force) q2–4h
- **Intubation equipment at bedside** — ready for mechanical ventilation
- Assess cough, gag, swallow reflexes before any PO intake
- Suction available at all times

💓 CIRCULATION / AUTONOMIC

- Continuous cardiac monitoring — watch for arrhythmias
- Monitor BP closely — orthostatic swings common
- Assess for autonomic dysreflexia signs
- **DVT prophylaxis** — SCDs, anticoagulants, ROM exercises

🛏️ SAFETY & MOBILITY

- **Reposition q2h** to prevent pressure injuries
- Passive ROM exercises to prevent contractures
- Fall precautions during early weakness
- Eye care (artificial tears, patching if facial weakness)
- Bowel/bladder regimen (often catheter + stool softener)

🍽️ NUTRITION & COMMUNICATION

- Aspiration precautions — may need NG feeds or TPN
- Thickened liquids if swallow is weak but intact
- Provide **communication board** if intubated/paralyzed
- Psychological support — anxiety + fear of paralysis is huge
- Pain management (often neuropathic)

5. Pharmacology

PRIMARY TREATMENTS & SUPPORT MEDS

DRUG / THERAPY	MECHANISM	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
IVIG (IV Immunoglobulin)	Modulates immune response; neutralizes harmful antibodies	Anaphylaxis, headache, aseptic meningitis, **renal dysfunction**, fluid overload	**Hydrate before & during**; monitor renal function & urine output; infuse slowly; have epinephrine available
Plasmapheresis (Plasma Exchange)	Removes circulating autoantibodies from plasma	Hypotension, hypocalcemia, bleeding, infection, electrolyte imbalance	Monitor VS closely; watch for **citrate toxicity** (tingling, tetany); assess access site
Gabapentin / Pregabalin	Neuropathic pain relief	Sedation, dizziness, ataxia	Assess pain regularly; fall precautions
Opioids	Moderate–severe pain control	Respiratory depression ⚠️, constipation	**Caution** — already at risk for respiratory failure!
Heparin / Enoxaparin	DVT prophylaxis during immobility	Bleeding, thrombocytopenia (HIT)	Monitor platelets, bleeding; rotate injection sites
❌ **Corticosteroids**	**NOT recommended** in GBS	—	**TEST TRAP:** Steroids are NOT effective in GBS (unlike MS or MG)

⚠️ 6. NCLEX Test Traps

WHAT STUDENTS COMMONLY CONFUSE

❌ TRAP: "Administer corticosteroids as ordered"

Wrong! Steroids are NOT effective in GBS. Treatment is **IVIG or plasmapheresis**. Don't confuse with MS.

❌ TRAP: "Priority is physical therapy to prevent contractures"

Wrong priority! Airway always comes first — ascending paralysis can reach the diaphragm. PT is important, but not the priority intervention.

❌ TRAP: Confusing GBS with Myasthenia Gravis

GBS = ASCENDING paralysis (up from feet). **MG = DESCENDING** weakness (face first, worse with activity, better with rest).

❌ TRAP: "The patient feels better — let's transfer out of ICU"

Not so fast! Plateau phase can precede rapid deterioration. Autonomic instability persists. Continue close monitoring.

❌ TRAP: Missing autonomic dysfunction

Sudden BP swings, tachycardia, or bradycardia are **not anxiety** — they're **autonomic instability** and require immediate intervention.

❌ **TRAP: Giving PO meds/fluids during acute phase**

Assess **gag & swallow reflex first**. Dysphagia is common — aspiration risk is real.

🧠 Key Differentiation Table

FEATURE	GBS	MYASTHENIA GRAVIS	MULTIPLE SCLEROSIS
Direction	Ascending ⬆️	Descending ⬇️	Scattered/relapsing
Onset	Acute (days)	Gradual, fluctuates	Relapsing-remitting
Trigger	Post-infection	Autoimmune (AChR antibodies)	Unknown/autoimmune
Rest	No improvement	**Improves** with rest	Variable
Nervous system	Peripheral (PNS)	Neuromuscular junction	Central (CNS)
Treatment	IVIG / Plasmapheresis	Pyridostigmine, steroids	Steroids, immunomodulators

🎯 7. NCJMM Clinical Judgment Framework

NEXT GENERATION NCLEX · CLINICAL JUDGMENT MODEL

🔍 RECOGNIZE CUES

Ascending weakness, paresthesias, ↓ DTRs, recent viral illness, declining vital capacity, dysphagia.

🧠 ANALYZE CUES

Connect cues to demyelination → airway compromise imminent. Autonomic instability = life-threatening.

⭐ PRIORITIZE HYPOTHESES

Respiratory failure is #1 risk. Aspiration is #2. Autonomic instability is #3. DVT & skin integrity follow.

✅ EVALUATE OUTCOMES

Stable vital capacity, intact gag/cough, no autonomic swings, no aspiration events, preserved skin & mobility.

📣 8. Patient & Family Education

TEACH TO EMPOWER — RECOVERY IS POSSIBLE

RECOVERY & PROGNOSIS

- Recovery can take **weeks to 2 years**; most regain full or near-full function
- Recovery proceeds in **reverse** — from top down
- Some residual weakness/fatigue may persist
- Relapse is uncommon but possible (~5%)

SELF-CARE & LIFESTYLE

- Commit to **physical & occupational therapy**
- Pace activities — fatigue is common
- Nutrition: high-protein, high-calorie during recovery
- Emotional support — anxiety & depression are common
- Join GBS support groups (GBS/CIDP Foundation)

WARNING SIGNS — CALL PROVIDER

- Return of weakness or tingling
- Difficulty breathing or swallowing
- Fever, infection signs
- Changes in heart rate or blood pressure

PREVENTION CONSIDERATIONS

- Discuss future vaccinations with HCP (some have mild GBS association)
- Hand hygiene to prevent infections
- Early treatment of infections
- Educate family on signs of recurrence

🧠 9. Memory Boosters & Mnemonics

QUICK-RECALL TOOLS FOR EXAM DAY

"GBS = Get Breathing Support"

Airway is **ALWAYS** the priority in GBS. Don't get distracted by mobility or pain — breathe first.

"Ground → Brain = GBS"

Paralysis starts at the **ground (feet)** and climbs toward the **brain (head)**. *Think climbing stairs.*

G·P·R·O·S — The 5 Hallmarks of GBS

G P R O S

G — **Guillain-Barré** follows a recent infection (1–3 weeks)

P — **Paralysis** is ascending and symmetrical

R — **Respiratory** failure is the #1 killer (monitor VC & NIF)

O — **Onset** is acute (hours to days) with loss of DTRs

S — **Steroids don't work** — use IVIG or Plasmapheresis

"Up & Down"

UP: Paralysis ascends (feet → head)
DOWN: Recovery descends (head → feet)
REMEMBER: You fall DOWN but climb UP.

Treatment: "I Pray"

I VIG
P lasmapheresis
NO steroids!

💎 Quick-Recall Pattern

Recent infection + Ascending weakness + Absent reflexes = GBS.
Then ask: *"Is the diaphragm next?"* If yes → airway intervention NOW.