

NGN NCLEX 2026 · INTEGUMENTARY · HYPERSENSITIVITY · DRUG REACTIONS

Stevens-Johnson Syndrome & Toxic Epidermal Necrolysis

A life-threatening Type IV hypersensitivity reaction — almost always drug-induced — producing massive keratinocyte apoptosis, full-thickness skin sloughing, and mucosal erosion. A dermatologic emergency treated like a burn.

SJS · TEN

DERMATOLOGIC EMERGENCY

TYPE IV HYPERSENSITIVITY

DRUG-INDUCED 80–95%



Definition & Overview

WHAT IT IS · WHY IT MATTERS

SJS and TEN exist on a single disease spectrum, distinguished by the percentage of body surface area (BSA) with epidermal detachment. Mucous membranes are involved in **≥90%** of cases.

- ▶ **Severe, idiosyncratic mucocutaneous reaction** — most cases triggered by a drug taken 1–4 weeks prior.
- ▶ **Pathologic hallmark:** full-thickness epidermal necrosis with dermal-epidermal separation (positive Nikolsky sign).
- ▶ **Why it matters:** rapid skin/mucosal failure → fluid loss, sepsis, blindness, airway collapse. Mortality climbs sharply with BSA involvement.

SJS

< 10% BSA

Mortality 1–5%

SJS / TEN Overlap

10–30% BSA

Mortality 10–15%

TEN

> 30% BSA

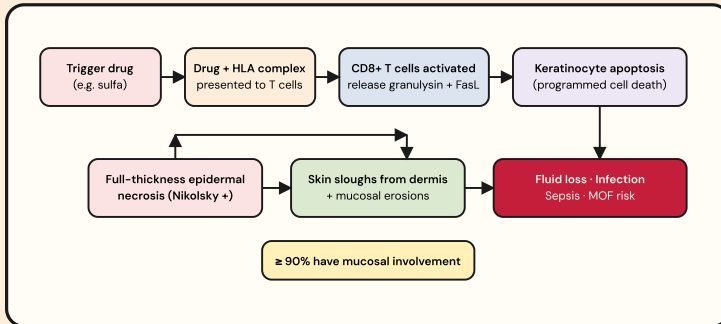
Mortality 25–35%

2

Pathophysiology

DRUG → T-CELL MEDIATED SKIN DEATH

A Type IV (delayed) hypersensitivity reaction. The trigger drug or its metabolite binds an HLA molecule, activating cytotoxic CD8+ T cells. These release **granulysin**, perforin, granzyme B, and soluble Fas ligand, driving massive keratinocyte apoptosis. The epidermis dies and separates from the dermis — the same way a burn does.



3

Triggers

HIGH-YIELD DRUG CLASSES ·
NCLEX FAVORITES

Onset typically **1–4 weeks** after starting the offending drug. Drugs cause 80–95% of cases.

Class	Examples
Sulfonamides	TMP-SMX (Bactrim), sulfasalazine
Anticonvulsants	Lamotrigine, carbamazepine, phenytoin, phenobarbital
Allopurinol	Esp. HLA-B*5801 (Asian)
NSAIDs	Oxicams (piroxicam, meloxicam)
Antibiotics	Penicillins, cephalosporins, fluoroquinolones
HIV drugs	Nevirapine
Infections	<i>Mycoplasma pneumoniae</i> , HSV, HIV

4

Signs & Symptoms

PRODROMAL → CUTANEOUS → MUCOSAL

Prodromal (1–3 days before rash)

- ▶ High fever > 102°F / 39°C
- ▶ Flu-like malaise, myalgia
- ▶ Sore throat, painful swallowing
- ▶ Burning eyes, photophobia
- ▶ Cough · rhinitis

Cutaneous (skin)

- ▶ Painful, dusky erythematous macules
- ▶ Atypical targetoid lesions
- ▶ Flaccid vesicles → bullae
- ▶ **Nikolsky sign POSITIVE** — skin shears with gentle lateral pressure 🚩
- ▶ Asboe-Hansen sign — bullae extend laterally
- ▶ Skin sloughing ("scalded" look)
- ▶ Starts face/trunk → spreads outward
- ▶ Skin pain disproportionate to appearance

Mucosal (≥ 2 sites in > 90%)

- ▶ Hemorrhagic crusting of lips
- ▶ Painful oral ulcers, drooling
- ▶ Severe conjunctivitis, corneal ulceration, photophobia
- ▶ Urogenital erosions, dysuria
- ▶ Esophageal & tracheobronchial involvement → dysphagia, stridor



RED FLAGS — Recognize Immediately

- ▶ New medication 1–4 weeks ago + fever + rash + mucosal involvement = SJS/TEN until proven otherwise
- ▶ Positive Nikolsky sign — pathognomonic; skin shears with light pressure
- ▶ Eye pain or vision changes → emergent ophthalmology (risk of blindness)
- ▶ Stridor, hoarseness, drooling → airway sloughing imminent
- ▶ Hypotension + tachycardia + tachypnea → distributive shock / sepsis physiology
- ▶ Rapid BSA progression beyond 30% → reclassify as TEN, mortality 25–35%

5 Priority Nursing Interventions

ABCS · SAFETY · BURN-STYLE CARE

#1 INTERVENTION → STOP THE OFFENDING DRUG IMMEDIATELY. Earlier discontinuation = lower mortality.

Airway · Breathing · Circulation

- ✓ **A:** Assess for stridor, hoarseness, drooling; have intubation/suction ready
- ✓ **B:** Continuous SpO₂; watch for tracheobronchial sloughing → ARDS
- ✓ **C:** Large-bore IV access; aggressive fluid resuscitation (treat as burn — Parkland-style)
- ✓ Strict I&O, daily weights, hourly urine output
- ✓ Monitor electrolytes (Na, K, Mg, phosphate) and renal function

Skin · Wound Care

- ✓ Transfer to **burn ICU** — gold standard of care
- ✓ Nonadherent dressings; sterile technique
- ✓ **Do NOT debride detached epidermis** — leave as biologic dressing
- ✓ Reverse (protective) isolation
- ✓ Warm room 86–90°F / 30–32°C — patient cannot thermoregulate
- ✓ Avoid adhesives, tape, BP cuffs on intact skin (Nikolsky)

Eyes · Mucosa

- ✓ **Ophthalmology consult ASAP** — prevent blindness, symblepharon
- ✓ Preservative-free lubricating drops, lid hygiene
- ✓ Saline mouth rinses; soft-tip oral care q1–2h
- ✓ Sweep oral adhesions, prevent synechiae
- ✓ Genital lubricants/dressings to prevent stenosis

Support · Safety

- ✓ SCORTEN mortality score at 24 h and 72 h
- ✓ Pain management — IV opioids (morphine, fentanyl)
- ✓ Nutrition — NG feeds or TPN (hypermetabolic)
- ✓ DVT & stress ulcer prophylaxis
- ✓ **AVOID prophylactic systemic antibiotics** — use only with confirmed infection

6 Pharmacology

STOP THE TRIGGER · TREAT WITH CAUTION

Agent	Role / Notes
Offending drug	STOP immediately. Document as severe allergy lifelong. Avoid same class + cross-reactive drugs.
IV fluids (LR)	Burn-style resuscitation. Titrate to UO ≥ 0.5 mL/kg/hr.
IV opioids	Morphine / fentanyl — pain is severe. PCA if alert.
Cyclosporine	Emerging first-line immunomodulator; reduces apoptosis.
IVIG	Blocks Fas-mediated apoptosis. Evidence mixed; institution-dependent.
Etanercept	TNF-α inhibitor; promising in TEN.
Corticosteroids	Controversial — short pulse only; may ↑ sepsis risk.
AVOID	Silver sulfadiazine (sulfa cross-reactivity), prophylactic antibiotics, NSAIDs.

✓ Document drug as severe allergy in chart & ID band

7

NCLEX Test Traps

WRONG-VS-RIGHT · THE DISTRACTORS STUDENTS FALL FOR

TRAP

"Apply silver sulfadiazine cream to denuded areas."

CORRECT

Avoid **all sulfa-containing** topicals — risk of cross-reaction. Use nonadherent dressings.

TRAP

"Confuse with Staph Scalded Skin Syndrome (SSSS)."

CORRECT

SSSS spares mucosa, is toxin-mediated, peds population. SJS/TEN = mucosa involved, drug-induced.

TRAP

"Debride the loose, sloughing skin."

CORRECT

Do not debride detached epidermis — it acts as a biologic dressing.

TRAP

"Negative Nikolsky rules out SJS."

CORRECT

Positive Nikolsky is pathognomonic, but a negative one early on **does not rule out** SJS.

TRAP

"Give diphenhydramine and restart the drug once the rash clears."

CORRECT

Lifetime avoidance of the drug AND its chemical relatives. Document allergy.

TRAP

"Apply ice packs and cool the patient down."

CORRECT

Keep the room warm (86–90°F) — patient cannot thermoregulate; hypothermia is a real risk.

TRAP

"Start IV vancomycin prophylactically to prevent sepsis."

CORRECT

Avoid prophylactic systemic antibiotics — they breed resistance. Treat infection only when cultured.

TRAP

"Place on a standard med-surg unit with droplet precautions."

CORRECT

Transfer to **burn ICU** with **reverse (protective) isolation**.

8

Patient & Family Education

LIFETIME AVOIDANCE · LONG-TERM SEQUELAE

- ✓ Carry a medical alert ID listing the offending drug AND its cross-reactive class — for life.
- ✓ Receive a printed list of all drugs to avoid (e.g., if sulfa-induced → all sulfonamides, sulfasalazine, certain diuretics).
- ✓ Notify **every** healthcare provider — dental, urgent care, pharmacy — of the reaction history.
- ✓ First-degree relatives of carbamazepine reactions (Asian descent) may benefit from **HLA-B*1502** screening; allopurinol → HLA-B*5801.
- ✓ Skin protection: SPF 30+, broad spectrum, sun avoidance — post-inflammatory hyperpigmentation lasts months to years.
- ✓ Follow-up: **ophthalmology** (chronic dry eye, corneal scarring), pulmonology (bronchiolitis obliterans), dermatology, mental health (PTSD common).
- ✓ Report any new rash + fever immediately — recurrence is possible with related drugs.
- ✓ Long-term complications: nail loss, alopecia, esophageal strictures, vaginal stenosis, depression.

9

Memory Boosters

MNEMONICS · QUICK ASSOCIATIONS

Recognize SJS —

SCALDED

- S** Sulfa & Seizure drugs (triggers)
- C** Conjunctivitis + Corneal ulcers
- A** Atypical targets + bullae
- L** Lips with hemorrhagic crust
- D** Detachment of skin (Nikolsky +)
- E** Erosions of mucosa (≥ 2 sites)
- D** Drug started 1–4 weeks ago

High-Risk Triggers —

SATAN

- S** Sulfonamides (Bactrim) — #1
- A** Allopurinol
- T** aTypical anticonvulsants (lamotrigine, carbamazepine)
- A** Antibiotics (penicillins, cephalosporins)
- N** NSAIDs (oxicams)

BSA Rule of Thumb

< 10% = SJS · 10–30% = overlap · > 30% = TEN

"Less than **ten** = SJS; more than **thirty** = TEN."

Care Bundle — 4 C's

- C** **Cease** the drug
- C** **Cover** skin (no debridement)
- C** **Climate** warm (86–90°F)
- C** **Consult** burn ICU + ophthalmology



NCJMM • Clinical Judgment Scenario

NEXT GENERATION CLINICAL JUDGMENT MEASUREMENT MODEL • 6 STEPS

SCENARIO: A 42-year-old female arrives in the ED on Day 14 of *lamotrigine* (started for newly diagnosed bipolar disorder). Two days ago she developed fever and a painful rash; today she cannot swallow water and her eyes are swollen shut.

Vitals: T 103.2°F (39.6°C) · HR 118 · RR 24 · BP 92/58 · SpO₂ 94% RA

STEP 1

Recognize Cues

- ▶ Fever 103.2°F · tachycardia · hypotension
- ▶ Painful rash on face, chest, palms
- ▶ Bilateral eye redness with discharge
- ▶ Painful oral ulcers, can't swallow
- ▶ Tense bullae on trunk
- ▶ Skin shears with BP cuff (+ Nikolsky)
- ▶ New drug started 14 days ago

STEP 2

Analyze Cues

- ▶ Drug + fever + mucosal sites + Nikolsky → SJS/TEN spectrum
- ▶ Hypotension + tachypnea = early distributive/septic shock
- ▶ Mucosal involvement + denuded skin = fluid/electrolyte loss + airway risk
- ▶ Lamotrigine = high-risk trigger, especially with rapid titration

STEP 3

Prioritize Hypotheses

- ▶ 1 SJS/TEN with impending airway compromise & shock
- ▶ 2 Acute fluid/electrolyte depletion via skin loss
- ▶ 3 Risk for corneal scarring / blindness
- ▶ 4 Risk for secondary sepsis

STEP 4

Generate Solutions

- ▶ 🚫 Hold lamotrigine; document severe allergy
- ▶ Activate rapid response; notify HCP
- ▶ Two large-bore IVs; LR bolus per burn-style protocol
- ▶ Continuous cardiac + SpO₂ monitoring
- ▶ Arrange burn ICU transfer
- ▶ STAT ophthalmology + dermatology consults
- ▶ SCORTEN score; pain plan with IV opioids
- ▶ Prepare for possible intubation

STEP 5

Take Action

- ▶ Discontinue lamotrigine immediately
- ▶ Bolus 1L LR over 30 min; reassess
- ▶ Apply nonadherent dressings — NO debridement
- ▶ HOB elevated; NPO until airway evaluated
- ▶ Reverse isolation; warm room 86–90°F
- ▶ Foley for strict UO; pain reassess q1h
- ▶ Update chart, ID band, allergy alert

STEP 6

Evaluate Outcomes

- ▶ **Effective:** HR < 100, MAP > 65, UO ≥ 0.5 mL/kg/hr
- ▶ SpO₂ > 94% on minimal support
- ▶ No new bullae; pain ≤ 4/10
- ▶ Mucosa healing; vision preserved
- ▶ **Escalate if:** BSA > 10% (→ TEN), stridor/desat → intubation, hypotension despite fluids → vasopressors + burn ICU