INTEGUMENTARY · NGN NCLEX 2026

Contact *Dermatitis*

Inflammatory skin reaction triggered by direct contact with an **irritant** (chemical damage) or an **allergen** (Type IV hypersensitivity). Two clinical patterns, one principle: *remove the offender, restore the barrier.*

🌿 Poison ivy · Nickel · Latex

🧪 Soaps · Solvents · Detergents

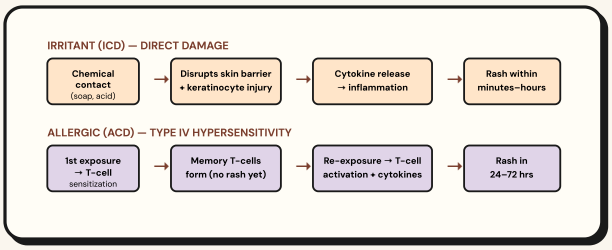
⚡ Type IV delayed reaction (ACD)

⏱ 24–72 hr onset (ACD)

1 Definition & Overview

- Localized inflammatory skin response to direct contact with an external substance.
- **Two main types**:
  - **Irritant (ICD)** — ~80% of cases. Non-immune chemical damage.
  - **Allergic (ACD)** — Type IV (delayed) hypersensitivity. Requires prior sensitization.
- Rash limited to area of contact (geometric/linear shapes = clue!).
- Common in healthcare workers, hairdressers, gardeners, mechanics.

2 Pathophysiology



Key distinction: ICD happens on *first contact*; ACD requires *prior sensitization* and shows up delayed.

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Irritant vs. Allergic — Side-by-Side

🔥 Irritant Contact Dermatitis (ICD)

- **Mechanism:** Non-immune. Direct chemical/physical damage.
- **Onset:** Minutes to hours after exposure.
- **Who:** Anyone exposed to enough irritant.
- **Sensation: Burning, stinging** > itch.
- **Borders:** Sharp, limited to contact area.
- **Common culprits:** Soaps, detergents, bleach, acids, alkalis, solvents, diapers (infants), saliva, urine, frequent handwashing.
- **Hands most often.**
- **Patch test:** Negative.

🌿 Allergic Contact Dermatitis (ACD)

- **Mechanism:** Type IV delayed hypersensitivity (T-cell mediated).
- **Onset:** 24–72 hours after re-exposure.
- **Who:** Only previously sensitized clients.
- **Sensation: Intense pruritus** > burning.
- **Borders:** Can spread beyond contact site; **linear streaks** (poison ivy) or geometric patterns.
- **Common culprits: Urushiol** (poison ivy/oak/sumac), **nickel** (jewelry, belt buckles), **latex**, fragrances, neomycin, hair dye (PPD), formaldehyde, rubber.
- **Patch test:** Positive — diagnostic gold standard.

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Signs & Symptoms

🟢 Acute

- **Erythema** (redness) — well-defined to contact area
- **Pruritus** (esp. ACD) or burning (esp. ICD)
- **Vesicles & bullae** — clear-fluid blisters
- Weeping, oozing, crusting
- Edema, warmth
- Linear streaks (poison ivy = pathognomonic)

🟠 Subacute / Chronic

- **Lichenification** (thickened, leathery skin from scratching)
- Scaling, fissuring, hyperpigmentation
- Dry, cracked skin
- Secondary bacterial infection (warm, purulent, yellow crust = impetiginization)

🚨 RED FLAGS — CALL HCP IMMEDIATELY

- Facial/eyelid/genital edema
- Airway involvement (wheeze, stridor, drooling) — possible anaphylaxis (esp. latex)
- Fever + purulent drainage = secondary infection
- Widespread (>20% BSA) → systemic steroids
- Stevens-Johnson features (mucosal involvement, skin sloughing)

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Priority Nursing Interventions

ABCS FIRST

- Assess for **airway compromise** if facial/oral involvement or latex exposure — anaphylaxis is the priority threat

IDENTIFY & REMOVE

- **Remove the offending substance immediately** — wash with mild soap & cool water within 10 min of poison ivy exposure
- Remove jewelry, contaminated clothing (bag separately)
- Wash under fingernails — urushiol persists for days

SYMPTOM RELIEF

- **Cool, wet compresses** (Burow's solution / aluminum acetate) — 15–30 min × 3–4×/day for weeping lesions
- Apply **topical corticosteroid** as prescribed (low-potency face/folds, mid-potency body)
- Administer **oral antihistamine** (diphenhydramine, hydroxyzine) for pruritus, esp. at night
- **Calamine lotion** for cooling, drying effect
- Trim nails short; mittens for children — prevent excoriation
- Tepid (not hot) oatmeal baths for widespread itch

MONITOR

- Signs of infection (warmth, pus, ↑pain, fever)
- Response to therapy

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Pharmacology

DRUG / CLASS	ACTION	INDICATION	NURSING CONSIDERATIONS
Topical Corticosteroids **Hydrocortisone 1% (low)** **Triamcinolone (mid)** **Clobetasol (high)**	↓Inflammation, suppress T-cell response	First-line for localized dermatitis	Face/folds = **low-potency only**. Apply thin layer 2×/day × ≤2 wks. Watch for skin atrophy, striae, telangiectasia, HPA suppression with prolonged use.
Oral Corticosteroids **Prednisone**	Systemic anti-inflammatory	Severe/widespread ACD (e.g., severe poison ivy >20% BSA)	**Taper over 2–3 wks** (no abrupt stop — rebound). Take with food. Monitor BG, BP, mood, infection.
Antihistamines **Diphenhydramine, Hydroxyzine (sedating)** **Cetirizine, Loratadine (non-sedating)**	H_1-blocker — ↓pruritus	Itch, sleep disruption	Sedating types — **fall risk in elderly**; no driving. Anticholinergic effects: dry mouth, urinary retention, constipation.
Calcineurin Inhibitors **Tacrolimus, Pimecrolimus**	T-cell inhibition — non-steroid	Face, eyelids, recurrent ACD; steroid-sparing	Apply thin layer 2×/day. Avoid sun (use sunscreen). Black-box warning: rare lymphoma risk.
Topical Antibiotics **Mupirocin**	Bactericidal	Secondary bacterial infection	Apply 3×/day. **Avoid neomycin** — common ACD trigger itself.
Calamine / Burow's solution	Soothing, astringent, drying	Weeping vesicular lesions	OTC. Cool compress 15–30 min × 3–4×/day.
Epinephrine (IM)	α/β adrenergic	Anaphylaxis (latex allergy emergency)	0.3 mg IM anterior thigh (adult). Repeat q5–15 min PRN. Call EMS.

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NCLEX Test Traps ⚠

✗ **Wrong:** Tell the poison-ivy client that the blister fluid is contagious to others.
✓ **Right:** Blister fluid is **NOT contagious**. The reaction comes from **urushiol oil** on skin, clothing, pet fur, tools. Wash these to stop spread.

✗ **Wrong:** Apply hot compresses to soothe itching.
✓ **Right:** Use **cool** compresses. Heat worsens vasodilation and pruritus.

✗ **Wrong:** Stop the prednisone taper once the rash clears.
✓ **Right:** Complete the **full taper** (typically 2–3 wks). Stopping early causes **rebound dermatitis** and HPA-axis effects.

✗ **Wrong:** Use neomycin ointment on irritated skin.
✓ **Right:** Neomycin is itself a **common ACD trigger**. Choose mupirocin or bacitracin if infection suspected.

✗ **Wrong:** Assume facial swelling from poison ivy needs only oral antihistamine.
✓ **Right:** Facial/airway involvement requires **HCP notification** and likely **oral steroids**. Airway = priority.

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Patient & Family Education

PREVENTION

- **Identify & avoid** the trigger — patch testing if unclear.
- **"Leaves of three, let it be"** — poison ivy. Long sleeves, gloves, barrier cream (bentoquatam) before exposure.
- Wash skin within **10 minutes** of suspected urushiol exposure to prevent absorption.
- Wash clothing, tools, pet fur — urushiol stays active for years on surfaces.
- Hypoallergenic nickel-free jewelry; avoid costume jewelry.
- Wear cotton gloves under rubber when needed (chronic hand dermatitis).

DAILY SKIN CARE

- Use **fragrance-free**, dye-free soaps & moisturizers.
- Pat dry — do not rub. Moisturize within 3 min of bathing.
- Lukewarm (not hot) showers.
- Trim fingernails short; don't scratch.

MEDICATION USE

- Apply topical steroid **thinly**; only to affected area.
- Never use high-potency steroid on face/genitals/folds.
- Complete oral steroid taper exactly as prescribed.

LATEX ALLERGY ALERT

- Wear **medical alert ID**.
- Notify all HCPs before procedures.
- Carry **EpiPen** if anaphylaxis risk.
- Avoid cross-reactive foods: **banana, avocado, kiwi, chestnut**.

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Memory Boosters

ITCHY

- Identify the trigger
- Topical steroid (low-potency on face)
- Cool compresses (Burow's)
- Histamine blockers (oral antihistamines)
- Yank the irritant (remove jewelry, wash skin)

LEAVES

Leaves of 3, let it be — poison ivy/oak/sumac. Urushiol = the oil. Wash within 10 minutes. Linear streak pattern is classic.

LATEX

Limit exposure · Alert bracelet · Tropical fruit cross-reactions (banana, avocado, kiwi, chestnut) · EpiPen on hand · Xtra caution in HCWs & spina bifida pts

🔁 ICD vs ACD Quick-Pattern

CLUE	ICD	ACD
Dominant feeling	**Burn**	**Itch**
Onset	Minutes	24–72 hr
First exposure rxn?	Yes	No (need sensitization)
Borders	Sharp at contact site	Can streak/spread
Classic trigger	Soap, bleach, diaper	Poison ivy, nickel, latex
Patch test	Negative	**Positive**

🎯 Pattern Recognition

- "Linear streaks of vesicles on arm after hiking" → **poison ivy ACD**
- "Itchy rash under watch / earrings / belt buckle" → **nickel ACD**
- "Red, cracked hands in a healthcare worker who washes hands frequently" → **ICD**
- "Diaper rash sparing skin folds" → **irritant diaper dermatitis**
- "Diaper rash IN skin folds with satellite lesions" → **candida** (not ICD!)
- "OR nurse with hand swelling & wheezing after gloves" → **latex anaphylaxis**

NCJMM CLINICAL JUDGMENT SCENARIO

Six-Step Clinical Judgment Model

Scenario: *A 28-year-old female hiker presents to the urgent care 36 hours after a weekend trail trip. She reports an intensely itchy, blistering rash in* ***linear streaks*** *on her right forearm and right calf. She also has mild swelling around both eyes. PMH: known seasonal allergies. She used hot showers and "scrubbed it with bleach wipes" to relieve itch. Vital signs: T 99.2°F, HR 88, BP 122/76, RR 18, SpO_2 98%. No wheezing.*

01

RECOGNIZE CUES

Linear streak pattern, vesicles, intense pruritus, periorbital edema, 36-hr delayed onset after outdoor exposure. Client used hot water and bleach wipes (irritant!). No airway compromise.

02

ANALYZE CUES

Linear streaks + delayed onset = classic **allergic contact dermatitis from urushiol** (poison ivy). Periorbital edema = face involvement = needs systemic therapy. Hot water + bleach wipes worsened ICD on top.

03

PRIORITIZE HYPOTHESES

#1 ACD (poison ivy) with periorbital edema — priority. #2 Compounding ICD from bleach. #3 Rule out anaphylaxis (currently stable airway — keep monitoring). #4 Secondary infection — none yet.

04

GENERATE SOLUTIONS

Anticipate **oral prednisone taper** (~2–3 wks) given facial involvement. Cool compresses, calamine lotion, oral antihistamine for itch. Topical steroid to body lesions (not face high-potency). Skin hygiene education.

05

TAKE ACTION

Administer first prednisone dose; teach taper. Apply cool compresses. Give diphenhydramine 25–50 mg PO. Teach to wash all clothing/gear separately. Stop hot showers and bleach wipes. Trim nails. Recheck airway every assessment.

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EVALUATE OUTCOMES

By day 3: ↓erythema, ↓vesicle formation, periorbital edema resolved, pruritus controlled, no airway issues, no new lesions, no infection. Client verbalizes trigger avoidance and "leaves of 3, let it be."