

Are You Itching For Answers?

How to make rash decisions

A practical guide for primary care clinicians: navigating dermatologic diagnoses with confidence

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A Practical Approach to Evaluating Rashes

01

Pattern Recognition

Master the visual clues that guide diagnosis

02

Differential Narrowing

Use systematic approaches to exclude possibilities

03

Common Conditions

Drug reactions, infections, inflammatory diseases

04

Practical Management

When to treat, when to refer, when to watch

The Clinical Challenge

What You See

- countless variations
- same condition appear differently
- patient, age, skin type

What You Need

- systematic approach
- rapidly narrows possibilities
- use pattern recognition
- key clinical features.

Time pressure

- quick decisions
- no immediate specialty backup

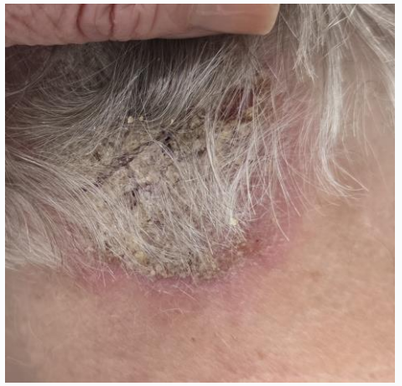
Goal:

- confident diagnosis
- appropriate treatment
- timely referral









Photos courtesy of Fayette Area Dermatology Laura Bush PA-C

The Diagnostic Framework



Photos courtesy of Fayette Area Dermatology Laura Bush PA-C

These five elements form your diagnostic foundation.

Approach every rash systematically:

1. patient history
2. timing
3. distribution
4. morphology
5. associated symptoms

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Patient History

Listen to the story- When, where, what.

Onset and Progression

Determine when the rash appeared.

Changed over time?

Acute or chronic causes?

Associated Symptoms

Symptoms such as itching, pain, fever, or systemic signs.

Relevant Exposures

Recent exposures, medications, allergies, travel?

Similar episodes to refine the possible diagnosis.

Evaluating Rashes:

Primary Vs. Secondary Lesions

- **Primary skin lesions** suggest underlying disorder: erythema, edema, vesiculation/bullae, scaling, atrophy

- **Secondary lesions** from scratching and skin manipulation (excoriations, lichenification)

Patient History: Did the itch precede the rash or vice versa?

- Rash before/simultaneous with itch → primary dermatologic condition (e.g., atopic dermatitis, psoriasis)
- Itch preceding rash by weeks/months → systemic or neuropathic cause

Five Essential Questions

Distribution Pattern

Localized, generalized, symmetric, sun-exposed areas, dermatomal?

Primary Lesion

Macule, papule, plaque, vesicle, pustule, or nodule?

Timeline

Acute (hours/days), subacute (weeks), or chronic (months)?

Associated Symptoms

Pruritus, pain, fever, systemic illness?

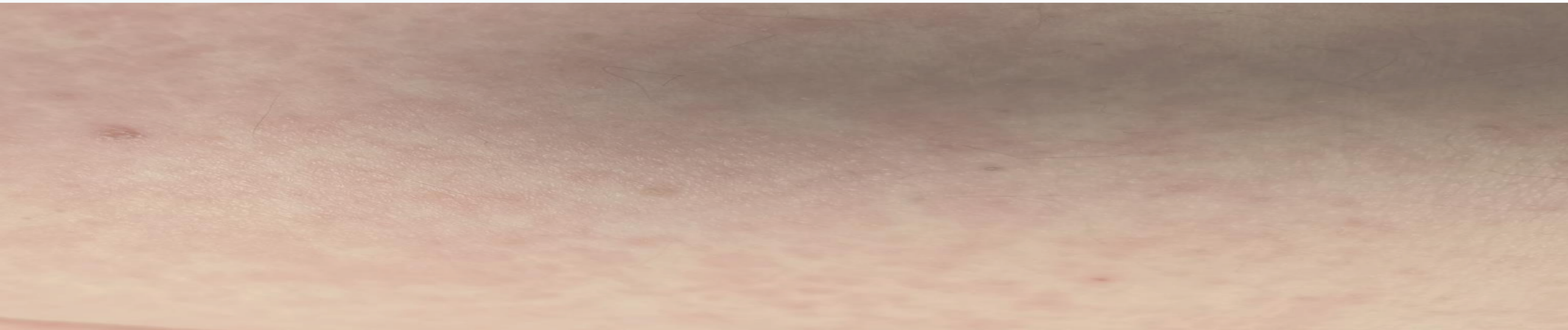
Context Clues

New medications, exposures, travel, immune status?



Drug Eruptions

Drug reactions account for up to 20% of rashes in hospitalized patients and represent a critical diagnostic consideration in any new eruption.



Classic Drug Eruption Patterns

Morbilliform (Most Common)

Diffuse erythematous macules and papules, typically starting on trunk then spreading peripherally. Onset 7-14 days after drug initiation.



https://dermnetnz.org/imagedetail/8432-morbilliform-drug-eruption

Urticarial

Raised, pruritic wheals that blanch with pressure. Can within minutes to hours. Consider immediate hypersensitivity.



Fixed Drug Eruption

Well-demarcated, round erythematous plaques that recur in same location with re-exposure. Often on lips, genitals, or extremities.



https://dermnetnz.org/imagedetail/13571-fixed-drug-eruption

Photos courtesy of Fayette Area Dermatology Laura Bush PA-C

High-Risk Drug Reactions

RED FLAGS: Facial edema, mucosal involvement, skin pain, fever, lymphadenopathy, or rapid progression require immediate evaluation for severe cutaneous adverse reactions (SCARs).

Stevens-Johnson Syndrome

- Mucosal erosions (2+ sites)
- Skin detachment <10% BSA
- Target-like lesions possible
- **Emergency referral**

DRESS Syndrome

- Facial edema prominent
- Eosinophilia, lymphadenopathy
- Internal organ involvement
- Onset 2-8 weeks post-drug

Acute Generalized Pustulosis

- Numerous sterile pustules
- High fever common
- Rapid onset (1-2 days)
- Often antibiotics trigger

DRESS= Drug Reaction with Eosinophilia and Systemic Symptoms

Common Culprit Medications

Antibiotics

Beta-lactams, sulfonamides, fluoroquinolones top the list. Penicillins and cephalosporins most frequently implicated.

Anticonvulsants

Phenytoin, carbamazepine, lamotrigine carry higher risk of serious reactions including DRESS and SJS/TEN.

Allopurinol

Significant risk for severe reactions, especially in patients with renal impairment

NSAIDs

Can cause urticaria, fixed eruptions, or photosensitivity. Cross-reactivity common among COX-1 inhibitors.

Kridin K, Brüggen M, Chua S, et al. Assessment of Treatment Approaches and Outcomes in Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis: Insights From a Pan-European Multicenter Study. JAMA Dermatol. 2021;157(10):1182–1190. doi:10.1001/jamadermatol.2021.3154

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From: **Assessment of Treatment Approaches and Outcomes in Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis: Insights From a Pan-European Multicenter Study**

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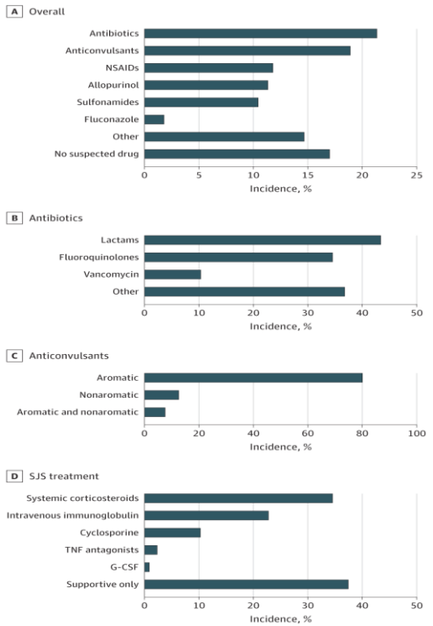


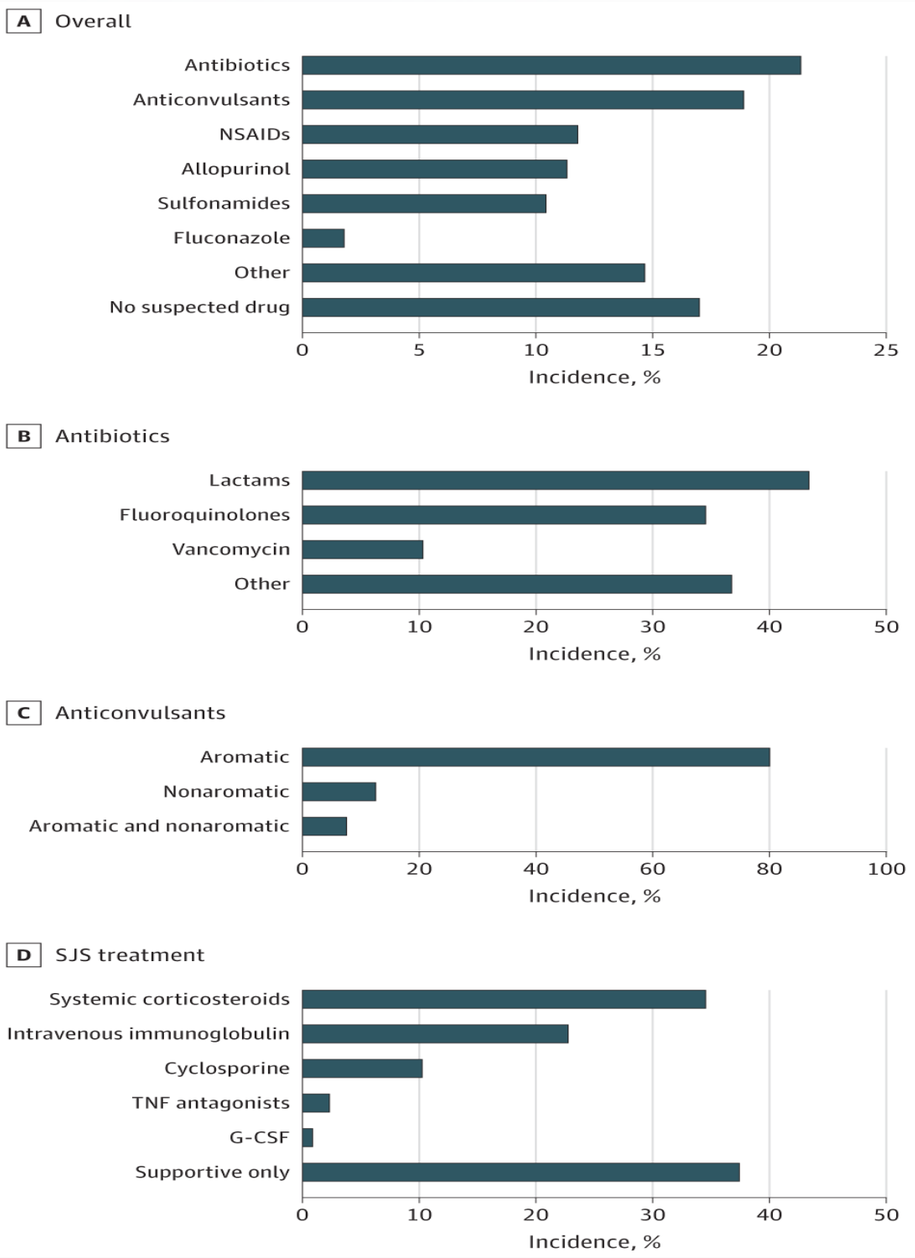
Figure Legend:

Distribution of General Culprit Drugs, Culprit Antibiotics, Culprit Anticonvulsants, and Treatment ModalitiesG-CSF indicates granulocyte-colony stimulating factor; NSAIDs, nonsteroidal anti-inflammatory drugs; SJS, Stevens-Johnson syndrome; TNF, tumor necrosis factor.

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Practical Drug Eruption Tips

Timing is critical

Most drug eruptions occur 7-14 days after initiation, but can appear after months of use. Always review ALL medications including over-the-counter and supplements.

Stop the suspect drug immediately

For mild-moderate eruptions without systemic symptoms, discontinue likely offending agent. Document allergy clearly in chart with reaction type.

Supportive care first line

Topical corticosteroids and antihistamines for symptomatic relief. Most resolve within 1-2 weeks after drug cessation.

When to Refer Immediately

Mucosal Involvement

Oral erosions, conjunctival injection, or genital lesions suggest SJS/TEN

Systemic Symptoms

Fever >38.5°C, lymphadenopathy, or signs of organ involvement

Facial Swelling

Significant edema may indicate DRESS or angioedema requiring urgent care

Skin Pain

Tender skin with positive Nikolsky sign indicates epidermal detachment

Nikolsky Sign

- Occurs when slight pressure on the skin leads to the upper layer peeling off, indicating skin fragility.
- This sign is commonly observed in serious skin disorders such as pemphigus vulgaris and toxic epidermal necrolysis



https://dermnetnz.org/imagedetail/16832-severe-cutaneous-drug-eruption



Infectious Causes

Benign viral exanthems to life-threatening conditions.

Bacterial Skin Infections

Cellulitis



https://dermnetnz.org/imagedetail/8061-cellulitis

- Warm, tender, erythematous plaque with poorly defined borders
- Unilateral lower extremity most common
- Look for portal of entry
- Systemic symptoms-concerning if present

Treatment: Oral cephalexin or dicloxacillin for uncomplicated cases. Add MRSA coverage if risk factors present.

Erysipelas



https://dermnetnz.org/imagedetail/7994-erysipelas

- Bright red, indurated plaque with sharply demarcated borders
- More superficial than cellulitis, often facial
- Fever and systemic symptoms common
- Group A Streptococcus etiology

Treatment: Penicillin or amoxicillin preferred. Most respond rapidly to appropriate antibiotics.

https://dermnetnz.org/topics/erysipelas

Fungal Infections: Recognition

Tinea Corporis



https://dermnetnz.org/topics/tinea-corporis-images

- annular plaques
- raised scaly borders central clearing
- "Ring" appearance
- KOH prep shows hyphae
- Treat with topical azoles for 2-4 weeks.

Tinea Pedis



https://dermnetnz.org/topics/tinea-pedis

- Interdigital maceration
- scaling on plantar surfaces
- inflammatory vesicular pattern
- Portal bacterial cellulitis
- Topical therapy usually sufficient.

Tinea Capitis



https://dermnetnz.org/imagedetail/16331-tinea-capitis

- Scaly patches with alopecia, particularly in children.
- Black dots from broken hairs
- Requires systemic antifungals (topicals ineffective)
- Consider kerion if severe inflammation.

Viral Exanthems: Key Patterns

Varicella (Chickenpox)

Pruritic vesicles on erythematous base. "Dewdrop on rose petal." Multiple stages present simultaneously.

Measles (Rubeola)

Maculopapular rash starting at hairline, spreading downward. Koplik spots precede rash. High fever, cough, conjunctivitis.

1 2 3 4

Herpes Zoster (Shingles)

Painful grouped vesicles in dermatomal distribution. Prodrome of common. Doesn't cross midline.

Parvovirus B19

"Slapped cheek" appearance on face followed by lacy reticular rash on extremities. Often in school-age children.





Photos courtesy of Fayette Area Dermatology Laura Bush PA-C



Photos courtesy of Fayette Area Dermatology Laura Bush PA-C

Shingles

Viral Reactivation

Shingles results from the reactivation of the varicella-zoster virus, which also causes chickenpox.

Typical Risk Groups

Older adults or individuals with weakened immune systems are at higher risk of developing shingles.

Painful Symptoms

Tingling, burning pain, and blistering skin eruptions on one side of the body.

Treatment

Valcyclovir, Acyclovir, Famcyclovir

Eye

Refer

Viral vs Bacterial: Decision Points

1

Pattern & Distribution

Dermatomal = viral.

Localized with warmth = bacterial.

Generalized = often viral.

2

Lesion Morphology

Vesicles suggest viral. Purulent = bacterial.

Mixed stages = viral exanthem.

3

Systemic Features

Rapid onset fever with localized warmth = bacterial.

Prodrome then rash = viral.



Practical Infection Management

1

Confirm Diagnosis

Use tools: KOH prep for fungi, Tzanck smear for HSV/VZV, bacterial culture if purulent. Don't guess when testing available.

2

Assess Severity

Check vital signs, extent of involvement, immunocompromised status. These factors determine outpatient vs inpatient management.

3

Targeted Treatment

Match therapy to organism.
Antivirals within 72 hours for zoster.
Appropriate antibiotic spectrum for bacterial infections.

4

Patient Education

Contagion period, expected course, warning signs for worsening. Clear w/ return precautions prevent complications.

Infestations

Scabies and other ectoparasites cause significant pruritus and are easily transmitted.

Recognition and treatment of contacts are crucial

HX is key.



Scabies: The Great Imitator

Classic Presentation

- **Intense pruritus** worse at night—hallmark symptom
- Linear burrows in web spaces, wrists, waistline, genitals
- Spares head/neck in adults (infants may have facial involvement)
- Family members or close contacts often symptomatic

Atypical Presentations

Crusted (Norwegian) scabies in immunocompromised: widespread thick scales, minimal pruritus, highly contagious with thousands of mites.

Diagnosis

Clinical diagnosis often sufficient. Dermoscopy or mineral oil prep can identify mites, eggs, or fecal pellets





Treatment Pearl

Treat all household contacts simultaneously, even if asymptomatic. Pruritus may persist 2-4 weeks post-treatment due to hypersensitivity.

https://dermnetnz.org/assets/collection/Scabies/scabies-0002.jpg

Scabies Treatment Protocol



01

First-Line: Permethrin 5%

Apply from neck down, leave overnight (8-14 hours), repeat in 7-10 days. Safe in pregnancy, infants >2 months.

02

Alternative: Ivermectin

200 mcg/kg PO, repeat in 7-14 days. Useful for treatment failures, crusted scabies, or institutional outbreaks.

03

Environmental Measures

Wash bedding/clothing in hot water, seal non-washables in plastic for 72 hours. Mites don't survive off human skin beyond 2-3 days.

04

Symptomatic Relief

Antihistamines for pruritus. Topical steroids for inflammation. Counsel that itching persists weeks after cure.

https://dermnetnz.org/assets/collection/Scabies/scabies-0002.jpg

Pediculosis (Lice)



Head Lice

Nits (eggs) on hair shafts close to scalp. Intense scalp pruritus. School-age children most affected. Treat with permethrin or malathion. Nit combing essential.

Body Lice

Associated with poor hygiene, homelessness. Excoriations on trunk. Lice live in clothing seams, not on body. Laundering clothes curative.

Pubic Lice

Genital pruritus. "Crab" lice visible on coarse hair. Screen for other STIs. Permethrin treatment effective. Treat sexual partners.

https://www.cdc.gov/lice/treatment/index.html



Bedbugs: Rising Problem

Clinical Presentation

Pruritic papules often in linear grouping ("breakfast, lunch, dinner" pattern). Favor exposed areas during sleep: arms, shoulders, legs.

Management Approach

Topical steroids and antihistamines for symptomatic relief. Treat secondary infection if present from scratching.

Reassure: bedbugs transmit no diseases.



Photos courtesy of Fayette Area Dermatology Laura Bush PA-C

Infestation Red Flags

Multiple Affected Individuals

Family clusters suggest contagious etiology like scabies or lice

Nocturnal Pruritus

Worse itching at night strongly suggests scabies

Treatment Failures

Persistent symptoms may indicate resistance, reinfection, or incorrect diagnosis

Immunocompromised Host

Consider crusted scabies with atypical presentation

Allergic Reactions

Contact dermatitis and urticaria are common but frequently mismanaged.

Pattern recognition guides both diagnosis and allergen identification.



Photos courtesy of Fayette Area Dermatology Laura Bush PA-C

Contact Dermatitis: Two Types

Irritant Contact Dermatitis

More common (80% of cases)

- Direct chemical injury to skin barrier
- Dose-dependent response
- Can occur on first exposure
- Common irritants: soaps, detergents, solvents
- Erythema, dryness, fissuring

Key: Not immunologic- anyone with sufficient exposure will react.



Photos courtesy of Fayette Area Dermatology Laura Bush PA-C

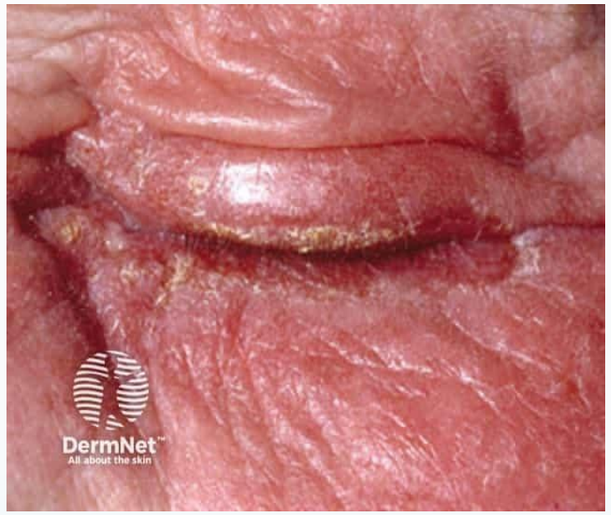
Allergic Contact Dermatitis

Type IV hypersensitivity

- Requires prior sensitization
- Delayed reaction (24-72 hours)
- Can occur from minimal exposure
- Common allergens: nickel, fragrances, preservatives, plants (poison ivy)
- Pruritic vesicles, oozing, crusting

Key: Immunologic- affects only sensitized individuals.

Contact Dermatitis by Location



https://dermnetnz.org/assets/Uploads/dermatitis/acd-face/2419.jpg

Eyelids

Nail polish (rubbing eyes), eye makeup, contact lens solution, airborne allergens. Thin skin makes eyelids highly susceptible.



https://dermnetnz.org/assets/Uploads/dermatitis/acd-hands/020612122803-38.jpg

Hands

Most common site. Occupational exposures, gloves (latex or accelerators), rings (nickel), hand soaps. Distinguish from dyshidrotic eczema.



https://dermnetnz.org/assets/collection/Allergic-contact-dermatitis/allergic-contact-dermatitis-0009.jpg

Feet

Shoe materials (rubber accelerators, leather dyes), adhesives. Pattern matches shoe contact. Spares interdigital spaces unlike tinea.



Poison Ivy & Plant Dermatitis

Exposure & Recognition

1

Urushiol oil from poison ivy, oak, sumac causes reaction. "Leaves of three, let it be." Linear where plant brushed skin are classic.

Delayed Reaction

2

Pruritic vesicles appear 24-72 hours post-exposure.
New lesions may appear over days as different areas reach reaction threshold-not from spreading fluid.

Treatment Approach

3

Mild: topical steroids. Moderate-severe: oral prednisone taper (14-21 days-shorter courses lead rebound).
Cool compresses, antihistamines for symptom relief.

Urticaria (Hives): Overview

Characteristic Features

- Transient wheals that blanch with pressure
- Individual lesions resolve within 24 hours (new ones may appear)

- Central clearing common (annular pattern)
- Intense pruritus predominates
- Dermographism often present—scratch produces wheal

Duration Classification

Acute: <6 weeks. Often identifiable trigger (medication, food, infection).

Chronic: >6 weeks. Usually no identifiable cause (idiopathic). Autoimmune association possible.

Associated Angioedema

Deeper swelling affecting subcutaneous/submucosal tissues. Non-pitting, non-pruritic.

Locations: Lips, tongue, periorbital, genitals, extremities.

Concern: Laryngeal involvement causes airway compromise-requires emergency management.

Urticaria Management

Identify & Remove Trigger

Detailed history for medications (especially NSAIDs, antibiotics), foods, infections. Viral infections common in children. Remove suspect agent.

First-Line: Antihistamines

Non-sedating H1-blockers (cetirizine, loratadine, fexofenadine) preferred. May increase up to 4x standard dose if needed. Add H2-blocker for refractory cases.

Short Course Steroids

For severe acute urticaria: prednisone 40-60mg daily for 3-5 days. Not for chronic urticaria due to side effect profile.

Chronic Urticaria Referral

If persists >6 weeks or frequent recurrence despite antihistamines. May need omalizumab or immunomodulators, CSU- new BTK Brutons Kinase Inhibitor

When Urticaria is an Emergency

ANAPHYLAXIS CRITERIA: Acute onset with skin/mucosal involvement PLUS respiratory compromise or hypotension. Epinephrine IM immediately, then emergency transport.

Airway Symptoms

Stridor, tongue swelling, throat tightness, difficulty breathing

Cardiovascular Changes

Hypotension, tachycardia, dizziness, syncope

Rapid Progression

Symptoms developing over minutes rather than hours

Inflammatory Dermatoses

Eczema, psoriasis, and related conditions are chronic and relapsing. Management focuses on symptom control, patient education, and quality of life improvement.



Atopic Dermatitis: The Itch-Scratch Cycle

Clinical Hallmarks

- **Intense pruritus**—defining feature, often worse at night
- Chronic relapsing course with flares and remissions
- Age-dependent distribution patterns
- Personal or family history of atopy (asthma, allergic rhinitis, food allergies)
- Dry, sensitive skin baseline

Age-Specific Patterns

Infants: Face, scalp, extensor surfaces

Children: Flexural areas (antecubital, popliteal fossae)

Adults: Hands, eyelids, flexures; may be more localized

Physical Findings

- Erythematous patches and plaques
- Excoriations from scratching
- Lichenification (thickened skin) in chronic areas
- Weeping, crusting during acute flares
- Secondary infection common (impetiginization)

Complications to Monitor

Bacterial superinfection (S. aureus), eczema (widespread HSV), sleep disturbance, psychosocial impact in children and adolescents.

Atopic Dermatitis: Step-Up Therapy

1

Foundation: Skin Barrier Repair

Gentle cleansers (no soap), frequent emollients (thick creams/ointments), avoid triggers and irritants. This is essential regardless of disease severity.

2

Mild Disease: Topical Steroids

Low-potency steroids (hydrocortisone 1-2.5%) for face/intertriginous areas. Mid-potency (triamcinolone) for body. Short courses to control flares.

3

Moderate Disease: Steroid-Sparing Agents

Topical calcineurin inhibitors (tacrolimus, pimecrolimus) for face face and sensitive areas. Non-steroidal option reduces steroid exposure risks.

4

Severe/Refractory: Systemic Therapy

Refer to derm for tx- dupilumab (IL-4/13 inh),tralokinumab, lebrikizumab(IL-13 inh) JAK inhibitors, or phototherapy.

Atopic Dermatitis: Practical Pearls

Bathing Guidance

Short lukewarm baths or showers. Pat dry, apply emollient within 3 minutes while skin damp ("soak and seal"). Avoid harsh soaps and bubble baths.

Infection Recognition

Honey-colored crusting, increased weeping, fever, or sudden worsening suggests bacterial infection. Culture and treat with anti-staphylococcal antibiotics.

Nighttime Control

Antihistamines at bedtime more for sedation than antipruritic effect. Keep fingernails short. Cotton gloves/mittens for children to limit scratching.

Proactive Management

Apply topical anti-inflammatories 2x/week to previously affected areas even when clear to prevent prevent flares. Reduce recurrence.

Psoriasis:

Chronic autoimmune condition affecting ~3% of population. Characterized by well-demarcated erythematous plaques with silvery scale.





Photos courtesy of Fayette Area Dermatology Laura Bush PA-C

Psoriasis:

Clues: Look For Common Sites







Photos courtesy of Laura Bush DMSc. PA-C
Fayette Area Dermatology
Fayetteville, Ga.

Psoriasis Variants

Plaque Psoriasis (90%)

Thick, well-demarcated plaques with silvery scale on extensor surfaces (elbows, knees), scalp, sacrum. Auspitz sign (pinpoint bleeding when scale removed).

Guttate Psoriasis

Acute onset of small droplet-like lesions, often post-streptococcal infection. Common in children/young adults. May resolve or progress to plaque type.

Inverse Psoriasis

Smooth erythematous plaques in intertriginous areas (axillae, groin, under breasts). Lacks typical scale due due to moisture. Easily mistaken for fungal infection.

Pustular Psoriasis

Sterile pustules on erythematous base. Can be localized (palms/soles) or generalized with systemic symptoms. Latter requires urgent care.

Plaque Psoriasis

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Thick, well-demarcated plaques

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Auspitz sign (pinpoint bleeding when scale removed





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https://dermnetnz.org/imagedetail/1856-generalised-pustular-psoriasis

Psoriasis Comorbidities

CRITICAL: Psoriasis is not just skin deep—it's a systemic inflammatory disease requiring holistic management and screening for associated conditions.

Psoriatic Arthritis

Develops in 30% of psoriasis patients. Screen for joint pain, stiffness, swelling, nail pitting/dystrophy. Early referral to rheumatology prevents joint damage.

Metabolic Syndrome

Increased risk of obesity, diabetes, hypertension, dyslipidemia. lipids, glucose, blood pressure. Lifestyle modification counseling essential.

Cardiovascular Disease

Chronic inflammation elevates CV risk independent of traditional factors. Aggressive CV risk management warranted. Consider cardiology referral.

Also monitor for: depression/anxiety (common and underdiagnosed), inflammatory bowel disease, non-alcoholic fatty liver disease.

Psoriasis Treatment Framework

1

Mild (<5% BSA)

Topical therapies: corticosteroids, vitamin D analogs (calcipotriene), combination products. Focus on localized control.

2

Moderate (5-10% BSA)

Topicals plus phototherapy or targeted therapy. May need dermatology co-management for optimal results.

3

Severe (>10% BSA)

Or high Impact area

Systemic agents: biologics (TNF-α, IL-17, IL-23 inhibitors) or traditional immunosuppressants.
Dermatology referral essential.

Topical Psoriasis Management

High-Potency Steroids

Clobetasol 0.05% for thick plaques on body (not face). Short-term use (2-4 weeks) to minimize atrophy risk. Pulse therapy weekends only for maintenance.

Vitamin D Analogs

Calcipotriene-steroid-sparing option for maintenance. Apply daily. Irritation common initially. Good for scalp psoriasis. Avoid with hypercalcemia.

Combination Products

Calcipotriene/betamethasone combines benefits of both. More effective than either alone. Once daily application. Expensive but convenient.

Coal Tar

Older treatment still useful for scalp psoriasis. Anti-proliferative and anti-inflammatory. Messy, stains clothing. Use overnight with shower cap for scalp.

Seborrheic Dermatitis

Clinical Features

Chronic relapsing condition characterized by erythema and greasy yellow scale in sebaceous areas.

Common sites: Scalp, eyebrows, nasolabial folds, central chest, ears

"Cradle cap" in infants—self-limited

Adults: chronic course with flares

Increased severity with Parkinson's, HIV, stress

Malassezia yeast implicated—responds to antifungals.





https://dermnetnz.org/topics/seborrhoeic-dermatitis

Treatment Approach

Scalp:

Ketoconazole 2% shampoo 2-3x/week
New-Roflumilast qd

Alternative: zinc pyrithione, selenium sulfide, tar shampoos

Leave on 5 minutes before rinsing

Face/Body:

Ketoconazole 2% cream daily-BID
Roflumilast QD

Low-potency steroid for flares (limit face use)

Maintenance with antifungal 2-3x/week

Emphasize: chronic condition requiring ongoing management.

Pityriasis Rosea

1 — ## Herald Patch

Initial lesion: large oval pink plaque with collarette scale at periphery. Appears days to weeks before generalized eruption. Often on trunk.

2 — ## Generalized Eruption

Multiple smaller oval plaques following skin tension lines in "Christmas tree" distribution on back. Long axis parallel to ribs. Minimal facial involvement.

3 — ## Natural Resolution

Self-limited, resolves in 6-8 weeks without treatment. Mild pruritus common. Reassurance main intervention. Consider topical steroids/antihistamines if symptomatic.



https://dermnetnz.org/assets/collection/Pityriasis-rosea/pityriasis-rosea-0006.jpg

Pearl: Viral etiology suspected (HHV-6/7). Rule out secondary syphilis if atypical (palms/soles involved) or risk factors present—RPR/VDRL indicated.

Lichen Planus: Purple, Polygonal, Pruritic

Recognition

The 6 Ps of lichen planus:

- **Purple** violaceous color
- **Polygonal** shape
- **Planar** flat-topped papules
- **Pruritic** (often intensely)
- **Papules** and plaques
- **Wickham striae**—white lacy lines on surface

Distribution: Wrists, ankles, lower back, genitals.
Oral mucosa involvement in 50% (white lacy pattern).

Koebner phenomenon: new lesions at sites of trauma.



https://dermnetnz.org/assets/collection/Papular-lichen-planus/papular-lichen-planus-0006.jpg



https://dermnetnz.org/imagedetail/1520-papular-lichen-planus

Lichen Planus: Purple, Polygonal, Pruritic



https://dermnetnz.org/assets/collection/Papular-lichen-planus/papular-lichen-planus-0002.jpg

Management

Cutaneous:

- High-potency topical steroids first-line
- Intralesional steroids for thick lesions
- Oral steroids for severe/widespread disease
- Antihistamines for pruritus

Oral:

- Topical steroids (fluocinonide gel)
- Avoid irritants (spicy foods, tobacco)
- Monitor for malignant transformation (rare)

Typically resolves in 1-2 years but can be chronic. Post-inflammatory hyperpigmentation common.

Rosacea Subtypes

Erythematotelangiectatic

Persistent central facial erythema, flushing episodes, visible blood vessels. Triggers: heat, spicy foods, alcohol, stress.

Papulopustular

Inflammatory papules and pustules on erythematous background. No comedones. Resembles acne but different age, distribution, background.

Phymatous

Thickening and enlargement of nose (rhinophyma most common). More in men. Advanced stage. Surgical intervention may be needed.

Ocular

Eye irritation, dryness, foreign body sensation, blepharitis. May occur without skin findings. Refer to ophthalmology if severe.

Perioral Dermatitis



https://dermnetnz.org/assets/collection/Perioral-dermatitis/perioral-dermatitis-0008.jpg



https://dermnetnz.org/assets/Uploads/acne/pod4.jpg

Clinical Picture

Small erythematous papules and pustules around mouth, nose, sometimes eyes. Clear zone spared directly around vermillion border—diagnostic clue.

Predominantly affects women of childbearing age. Burning or tingling sensation common. Cosmetics, topical steroids (iatrogenic), fluorinated toothpaste implicated.

Management Strategy

Step 1: Discontinue all topical steroids (may temporarily worsen—counsel patient).

Step 2: Simplify skincare—gentle cleanser, minimize products.

Step 3: Topical metronidazole or azelaic acid for 8-12 weeks.

Step 4: Oral doxycycline 50-100mg daily if topicals insufficient. Treat 6-12 weeks then taper.

Advise: switch to non-fluorinated toothpaste, avoid heavy moisturizers/sunscreens on affected area.

Folliculitis: Beyond Bacteria

Bacterial Folliculitis

Most common. S. aureus typical. Perifollicular pustules, tender. Hot tub association with Pseudomonas. Treat: topical mupirocin, or oral anti-staph antibiotics if extensive.



https://dermnetnz.org/imagedetail/11366-superficial-bacterial-folliculitis

Pityrosporum Folliculitis

Malassezia yeast. Pruritic monomorphic papules/pustules on upper back, chest, shoulders. KOH shows spores/hyphae. Treat: oral fluconazole or itraconazole (topicals inadequate).



https://dermnetnz.org/assets/Uploads/fungal/pitfol1.jpg

Pseudofolliculitis Barbae

Ingrown hairs from shaving in curly-haired individuals. Inflammatory papules in beard area. Not infectious. Manage: reduce shaving frequency, use clippers not razors, topical retinoids.



https://dermnetnz.org/assets/Uploads/pseudofolliculitis-8.jpg

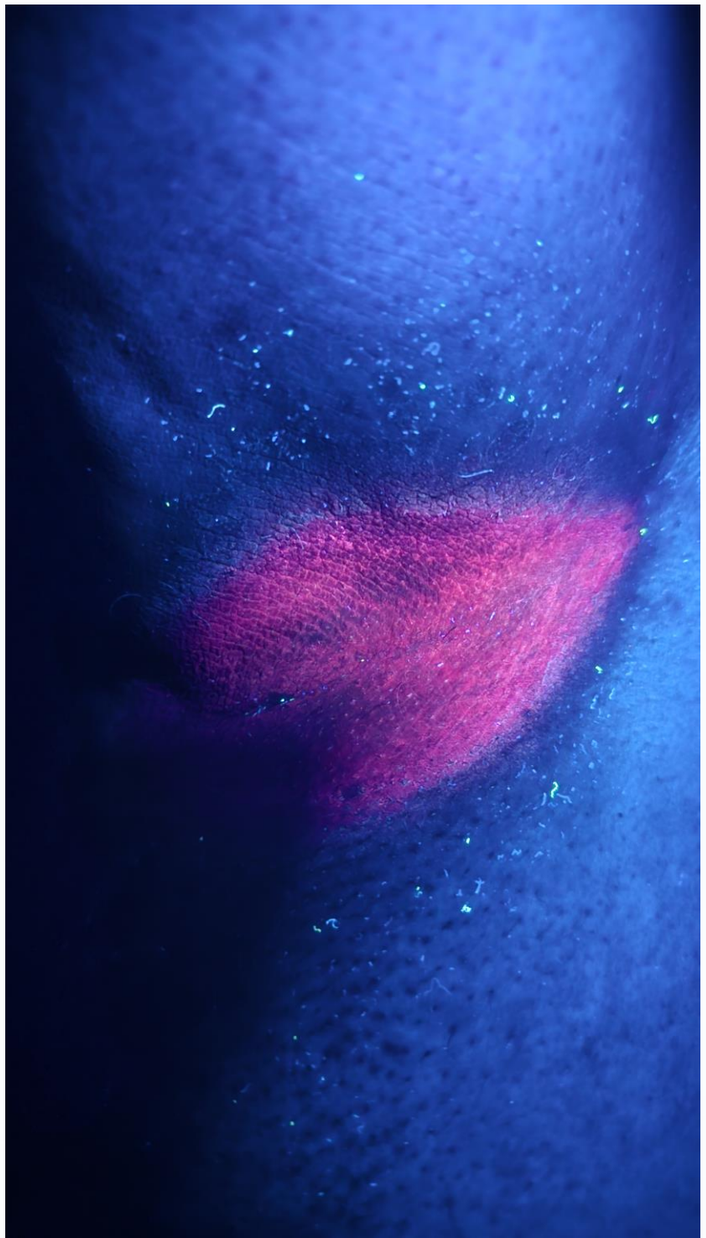




Photos courtesy of Fayette Area Dermatology Laura Bush PA-C

Erythrasma





Wood's lamp
reveals a characteristic
coral-pink fluorescence.

Photos courtesy of Fayette Area Dermatology Laura Bush PA-C



Diagnostic Tools

KOH Preparation: Fungal Diagnosis

Technique

1. Choose actively spreading edge of lesion (highest yield)
2. Gently scrape scale onto glass slide with #15 blade
3. Add 1-2 drops of 10-20% KOH solution
4. Apply coverslip, gently heat
5. Examine under low power (10x objective)
6. Look for branching hyphae or spores

Interpretation

Dermatophyte: Long branching septate hyphae

Candida: Pseudohyphae and budding yeasts

Pityrosporum: "Spaghetti and meatballs" (short hyphae and round spores)

Tzanck Smear: Herpes Diagnosis

01

Sample Collection

Choose intact fresh vesicle (highest yield). Unroof blister with sterile needle or blade. Gently scrape base of lesion with blade-want cells, not fluid.

02

Slide Preparation

Smear scraped material thinly on glass slide. Air dry completely. Fix with flame or alcohol. Stain with Giemsa or Wright stain per protocol.

03

Microscopic Exam

Examine under oil immersion (100x). Look for multinucleated cells - indicate herpes simplex or varicella-zoster. Cannot distinguish HSV from VZV.

04

Clinical Correlation

Positive result confirms herpetic infection. Negative doesn't exclude. Consider PCR or viral culture if high suspicion despite negative Tzanck.

Skin Biopsy: When & How

Indications

- Diagnosis uncertain after clinical exam
- Rule out malignancy (any suspicious lesion)
- Confirm inflammatory condition for systemic therapy
- Non-healing ulcer or persistent lesion
- Medicolegal documentation

Biopsy Types

Punch: 4mm ideal for inflammatory conditions. Include dermis. Choose active lesion

Shave: For raised lesions suspected benign. Deep shave for pigmented lesions.

Excisional: For suspected melanoma-complete removal with margin.

Site Selection

Active lesion: Not the oldest, largest, or most treated—choose representative early lesion.

Avoid: Lower legs (slow healing), over joints (wound stress), very thick plaques (difficult processing).

Processing Instructions

Standard formalin fixation for most. Special requests (immunofluorescence for bullous disease requires Michel's medium-coordinate with pathology).

Clinical information crucial-describe appearance, duration, treatments tried, differential diagnosis
****
garbage in garbage out

Wood's Lamp Examination

Technique

Ultraviolet light (365nm wavelength) in darkened room. Hold lamp 4-5 inches from skin. Allow eyes to dark-adapt first for better visualization.

Erythrasma Detection

Coral-red fluorescence-caused by porphyrins from Corynebacterium. Intertrigo-like rash in intertriginous areas (groin, axillae, toe webs).

Tinea Capitis Screening

Some dermatophytes fluoresce Many don't fluoresce-negative exam doesn't exclude tinea

Vitiligo Assessment

Enhances contrast of depigmented patches-helps identify subtle areas and assess extent. Useful for monitoring treatment response over time.



Building Pattern Recogniti

Systematic approach every time

Distribution, morphology, configuration, color, scale, arrangement. Consistent evaluation method trains your eye to see patterns faster.

Photograph everything (with consent)

Build your personal teaching file. Review cases with outcomes known. Pattern recognition improves dramatically with deliberate practice and repetition.

Use reference resources liberally

DermNet, VisualDx, UpToDate. No one memorizes everything. Quick reference during or after visit reinforces learning and improves accuracy.

When to Refer to Dermatology

Urgent (Within Days)

- Suspected Stevens-Johnson syndrome/TEN
- Rapidly progressive pustular eruption with fever
- Painful rash with mucosal involvement
- Suspected pemphigus/bullous disease

Soon (2-4 Weeks)

- Suspected melanoma or suspicious pigmented lesion
- Biopsy-proven malignancy
- Extensive psoriasis requiring systemic therapy
- Severe atopic dermatitis uncontrolled with topicals

Routine Referral

- Diagnosis uncertain after workup
- Treatment failures with standard therapy
- Chronic urticaria (>6 weeks) despite antihistamines
- Complex cases requiring systemic immunosuppression

Co-Management

- Moderate-severe acne considering isotretinoin
- Psoriasis with joint symptoms (with rheumatology)
- Hidradenitis suppurativa
- Hair loss with uncertain etiology

Key Takeaways

Systematic Approach Wi

Distribution + morphology + timing + context narrows differentials efficiently. Pattern recognition develops with deliberate practice.

Use Available Tools

KOH, Tzanck smear, biopsy when indicated. Simple tests dramatically improve diagnostic accuracy and confidence.

Know Red Flags

Mucosal involvement, systemic symptoms, rapid progression, or skin pain warrant urgent evaluation. When in doubt, get help.

Chronic Conditions Need Plans

Atopic dermatitis, psoriasis, rosacea require maintenance strategies, not just acute treatment. Patient education drives long-term success.

Refer Appropriately

Recognize your limits. Timely referral for complex cases, treatment failures, or suspected malignancy ensures best patient outcomes.


The End