Common Rashes in Primary Care

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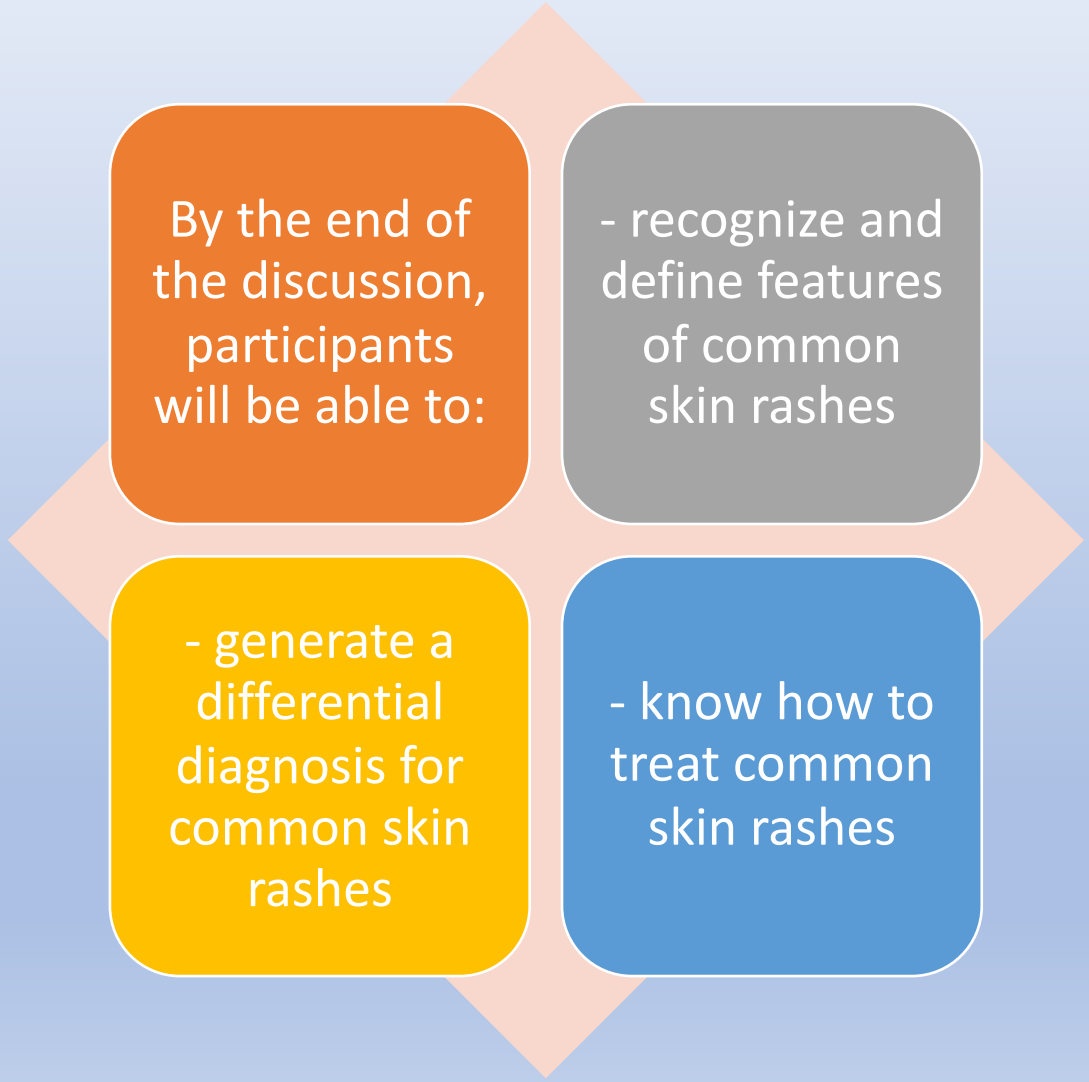
No disclosures to report

Objectives


By the end of the discussion, participants will be able to:
- recognize and define features of common skin rashes
- generate a differential diagnosis for common skin rashes
- know how to treat common skin rashes

Approach to clinical dermatologic diagnosis

The **initial approach** to the patient presenting with a skin problem:

- a detailed history of the current skin complaint
- skin examination – inspection and palpation; use of diagnostic tools
- Sometimes a patient's general medical history may be relevant

Key questions:

- time of onset
- duration
- location
- evolution, and symptoms of the rash or lesion

Note **morphology, arrangement, and distribution** of the lesions

Skin lesion descriptors

Macule – Nonpalpable, circumscribed lesion that is flat and ≤1 cm in diameter

Papule – Palpable lesion that is solid, elevated, and ≤5 mm in diameter

Maculopapular – Confluent, erythematous rash made up of both macular and papular lesions

Purpura – Papular or macular non-blanching lesions that are due to extravasation of red blood cells; 1 to 2 mm lesions are called petechiae

Nodule – Deep-seated, roundish lesion ≥5 mm in diameter that can involve the epidermal, dermal, and/or subcutaneous tissue

Plaque – A palpable elevated lesion ≥5 mm in diameter

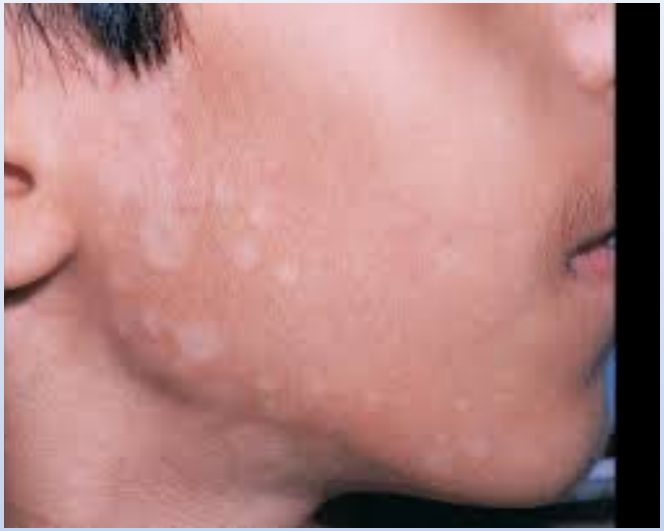
Vesicle – A distinct, elevated skin lesion that contains fluid and is <5 mm in diameter

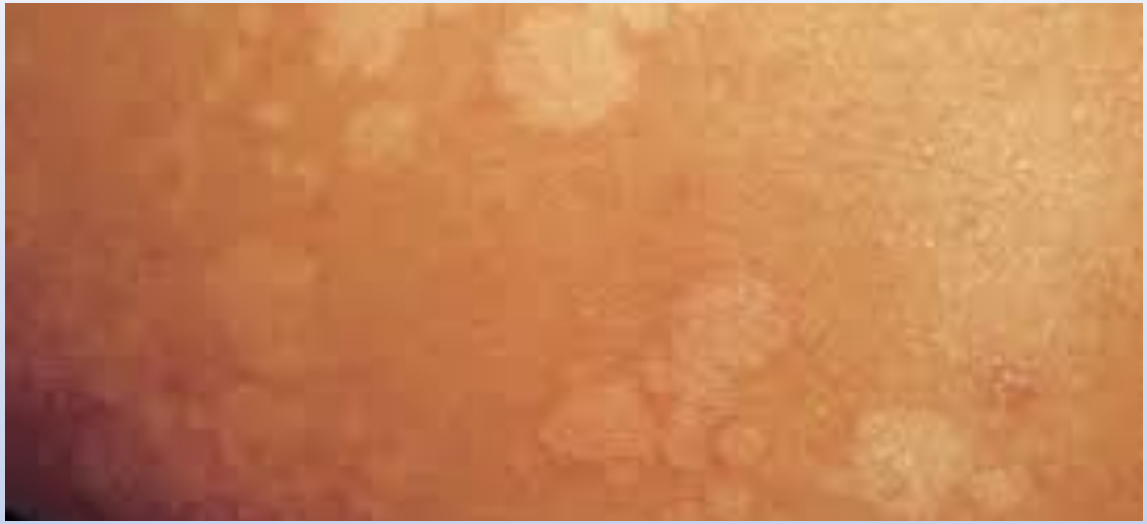
Bulla – A vesicle ≥5 mm in diameter

Pustule – A vesicle that contains pus

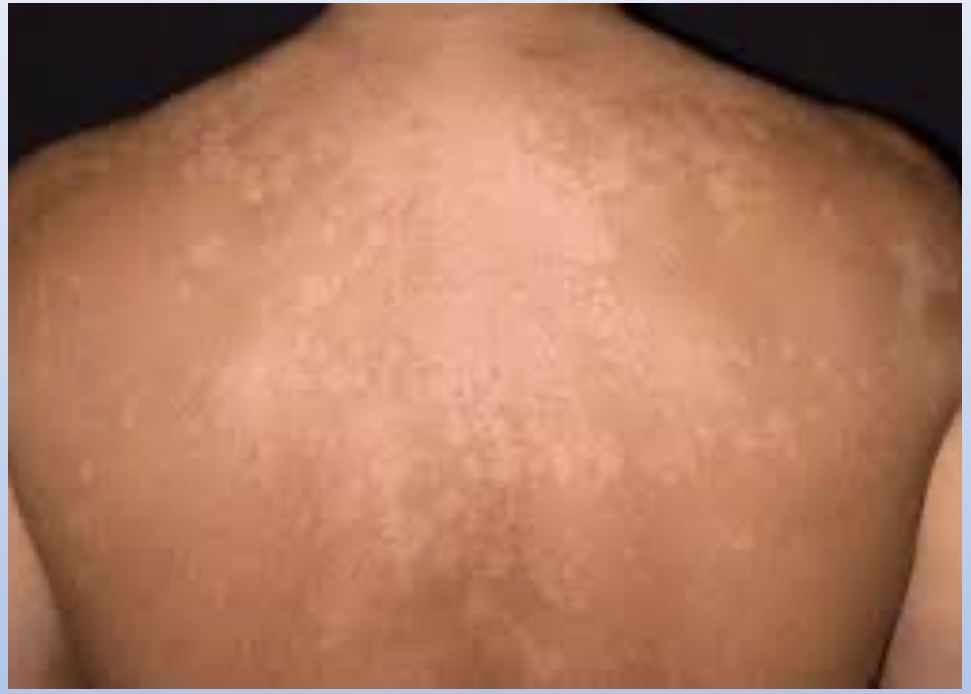
Ulcer – Loss of the epidermis and upper layer of the dermis, resulting in a depressed skin lesion

Eschar – Hard, black-colored adherent necrotic skin, often overlying an area of ulceration



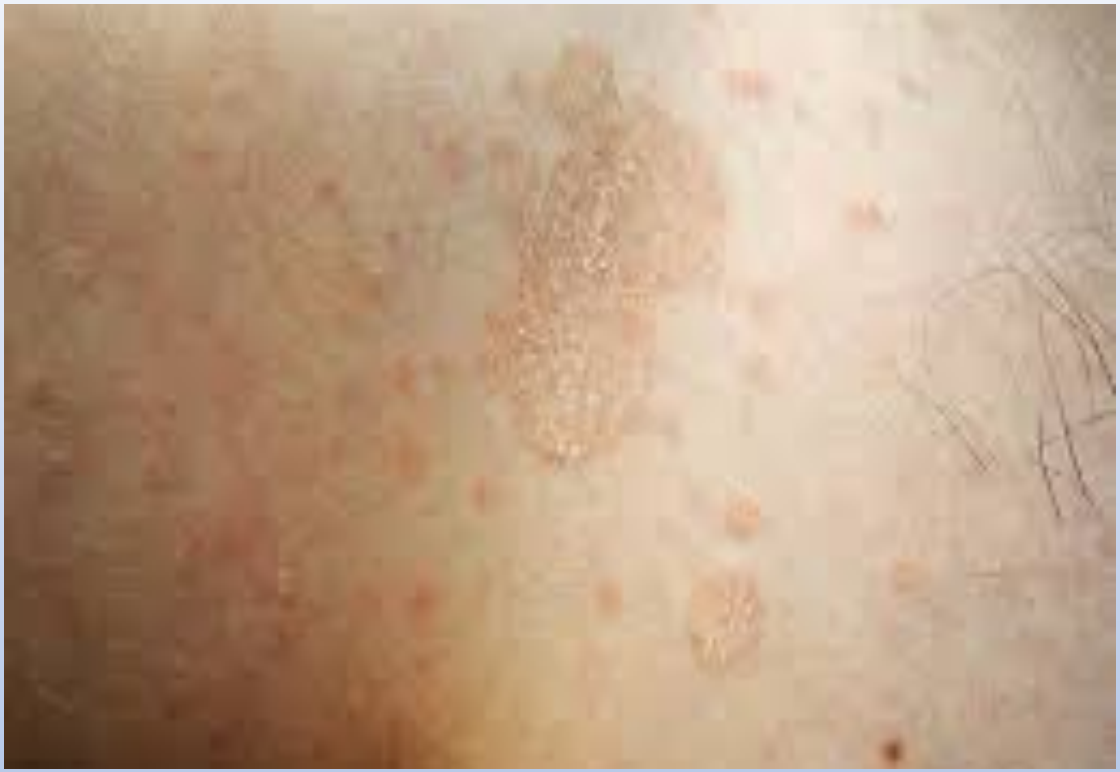


Tinea versicolor



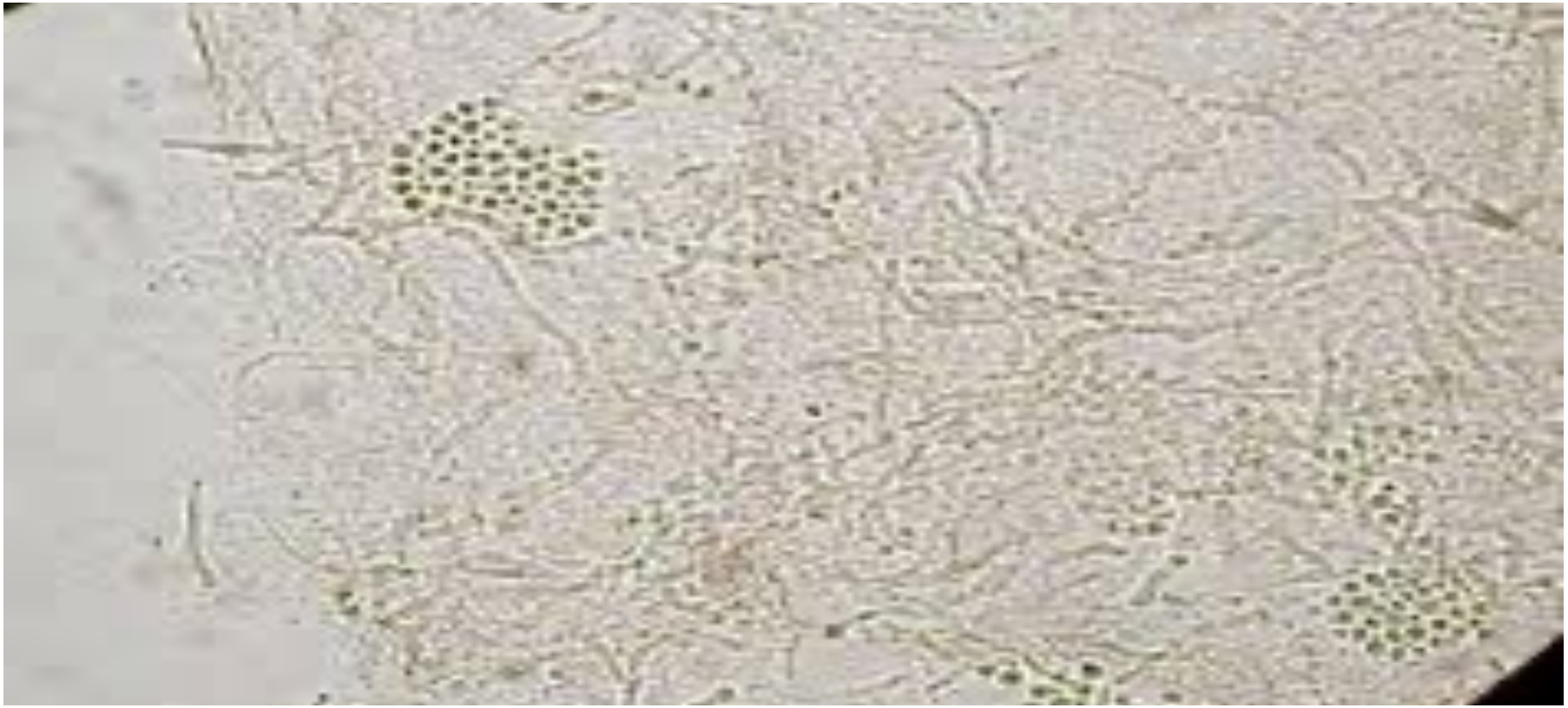
Tinea versicolor

- A fungal infection that leads to lighter or darker macules and patches on the skin.
- Caused by an overgrowth of yeast, *Malassezia* on the skin, which converts to a pathogen under certain conditions like moisture and warmth
- It most often affects teens and young adults.
- Sometimes itchy with fine scale
- involved areas: mostly upper trunk, proximal upper arms, face
- Not contagious.



Tinea versicolor

- Recurrences common
- Treatment: topical Rx unless extensive/ refractory
- Antifungal creams, lotions, or shampoos
- Oral antifungal diflucan if extensive
- Skin discoloration may last for weeks to months.



tinea versicolor – KOH
“spaghetti & meatballs”

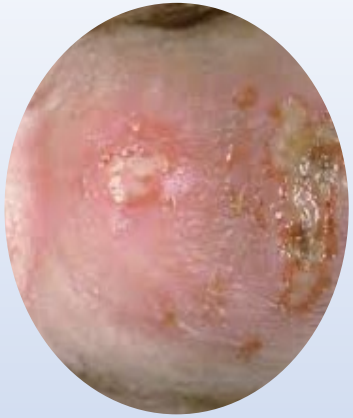
Herpes simplex infection

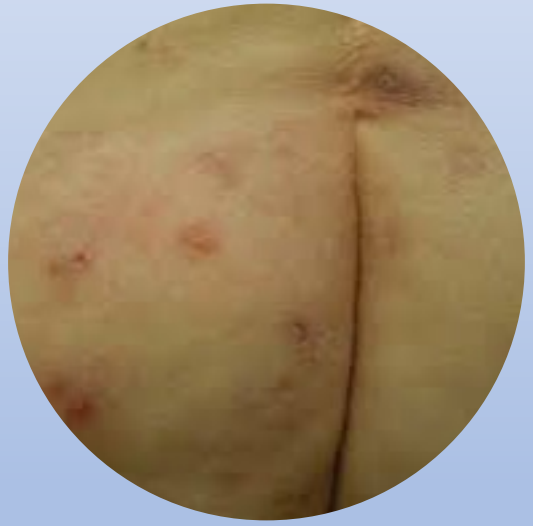
Caused by two types of the **herpes** simplex virus 1 and 2

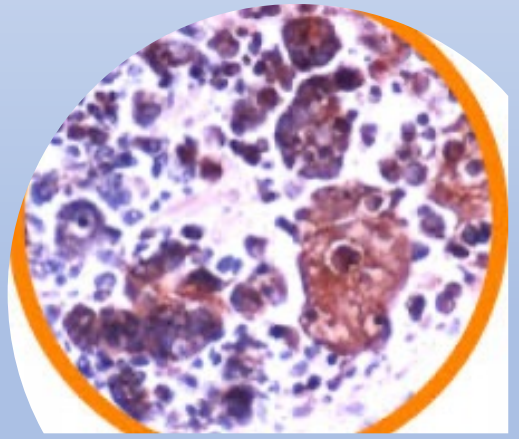
Herpes can appear in various parts of the body, most commonly on the genitals or mouth.

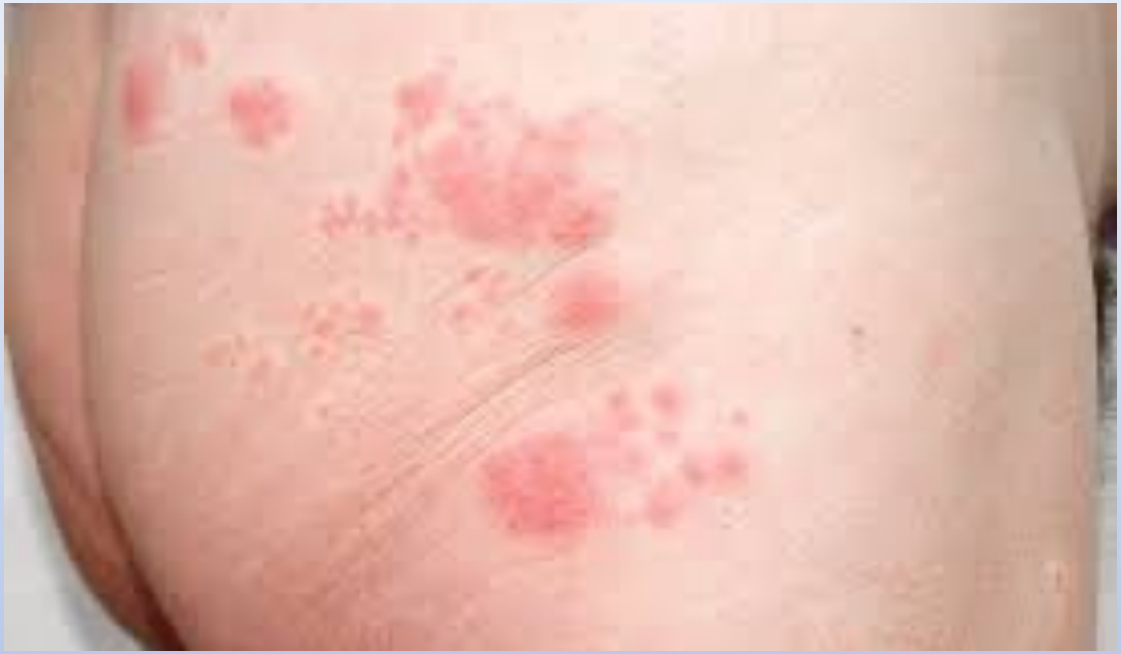
Treat early – within the first 1-2 days

Acyclovir prophylaxis if > 6 episodes/ year



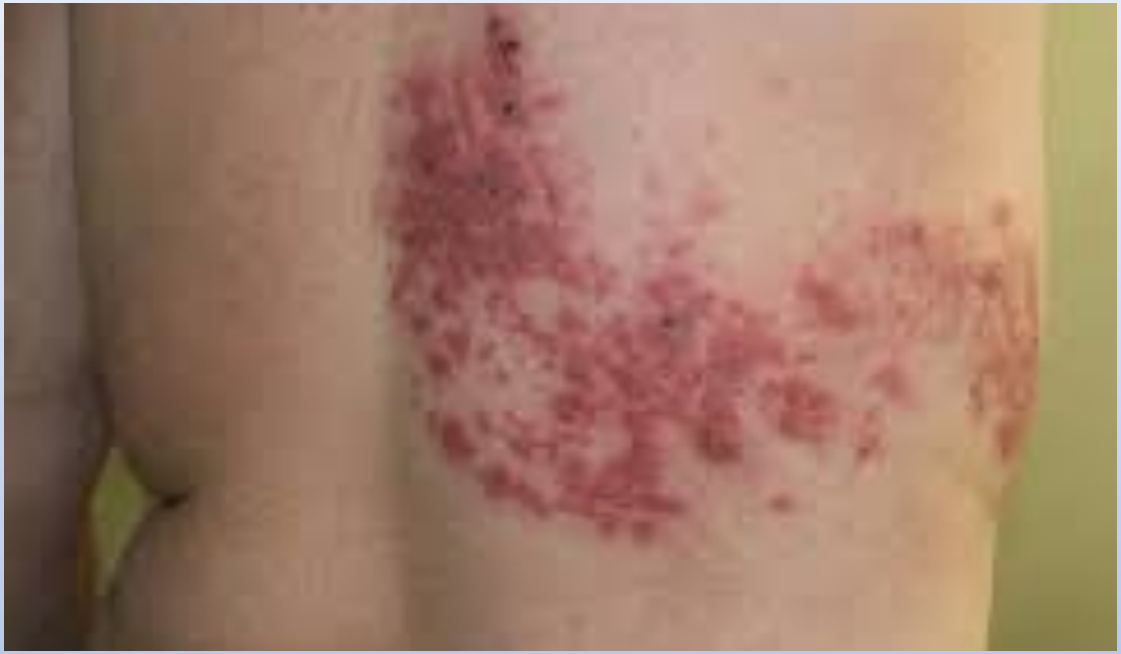






Herpes zoster (shingles)

- Anyone who has had chicken pox can get it; virus reawakened in ganglia
- People with herpes zoster can spread VZV to those who have not had chicken pox (varicella) and have never received the vaccine
- The lesions are considered infectious until they dry and crust over.
- Usually spontaneously resolves after 3 weeks
- Start treatment with acyclovir early – w/in days
- **Post-herpetic neuralgia** – especially if older



- A chickenpox vaccine in childhood or a shingles vaccine as an adult can minimize the risk of developing shingles.

Herpes zoster

Who should get the shingles vaccine?

- Two vaccines are licensed and recommended to prevent shingles in the U.S.
- Zoster vaccine live (Zostavax, ZVL) has been in use since 2006.
- Recombinant zoster vaccine (RZV, Shingrix), has been in use since 2017

- The CDC recommends that healthy adults ages 50 and older **get Shingrix**, which provides greater protection than **Zostavax**.
- The **vaccine** is given in two doses, 2 to 6 months apart.

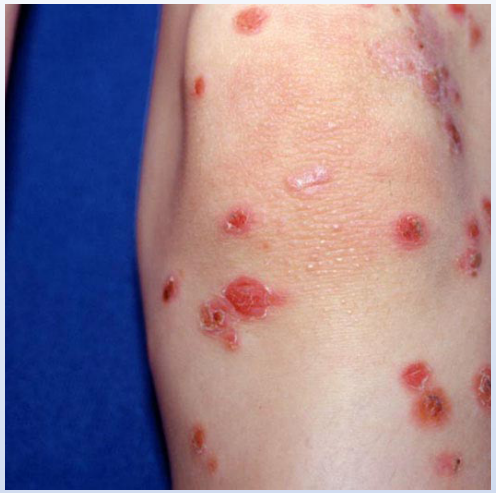
Impetigo

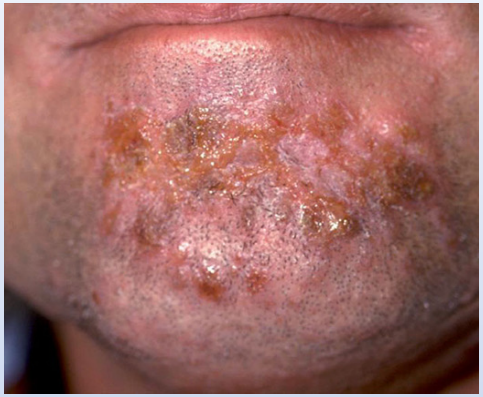
Non-bullous:

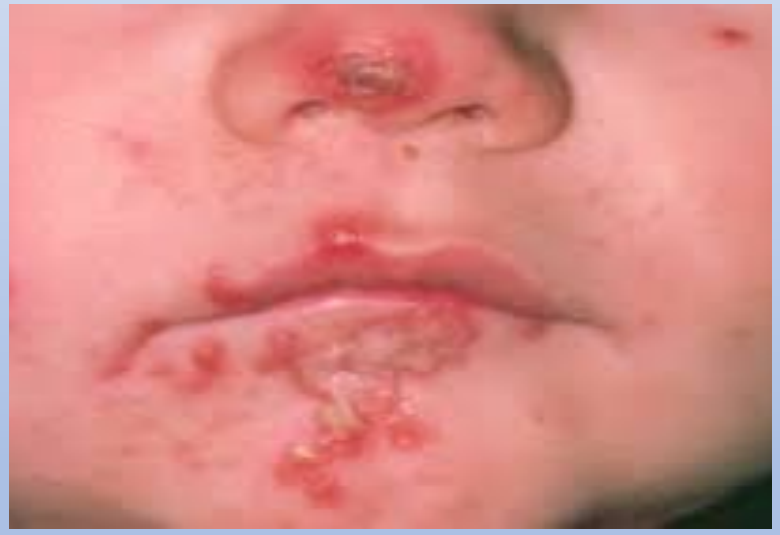
- the most common form of impetigo; **superficial**
- In one week: papules → pustules → thick golden adherent crusts
- Carriage of group A *Streptococcus* and *Staphylococcus aureus* predisposes
- Contact sports

Bullous:

- seen primarily in young children; vesicles enlarge →flaccid bullae with clear yellow then dark turbid fluid which rupture → brown crust

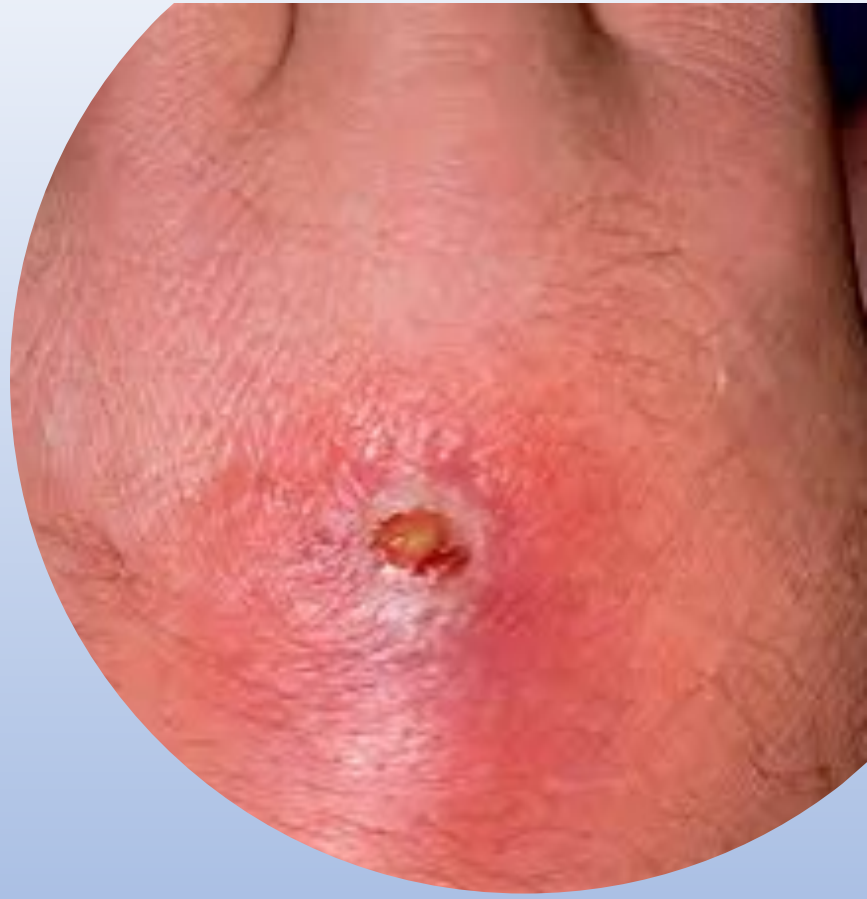






MRSA

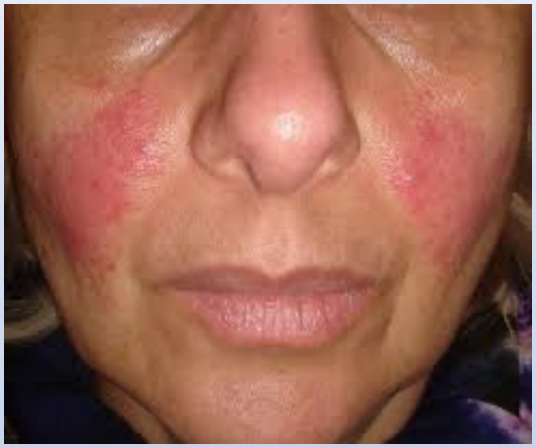
- Patients with skin and soft tissue infections known or suspected to be due to **methicillin-resistant *Staphylococcus aureus* (MRSA)** may present with cellulitis, abscess, or both.
- Patients with cellulitis should be managed with antibiotic therapy.
- Patients with abscess should undergo incision and drainage +/-antibiotic therapy

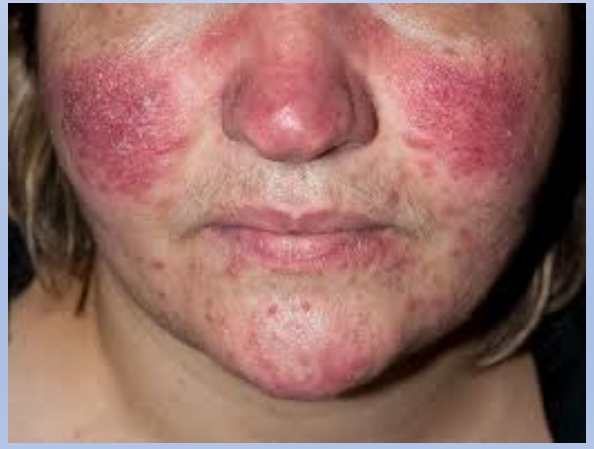


Melasma

- patchy hyperpigmentation on face
- brown, tan, or blue-gray
- most common in women 20-50 years of age.
- three location patterns (central face, cheekbone, and jawline).
- Risk factors: Female sex; pregnancy; HRT
- Treatments: Sunscreen; hydroquinone; azelaic acid; tretinoin; peels; laser
- Careful with skin of color

Rosacea





A common skin condition that causes redness and visible blood vessels on the face. It may also produce small, red, pus-filled bumps.

May flare up for weeks to months and then go away for a while

Treatments such as antibiotics or anti-acne medications can control and reduce symptoms. Left untreated, it tends to worsen over time

Can also affect eyes – blurring of vision

Acne

Acne is a skin condition that occurs when hair follicles become plugged with oil and dead skin cells.

Usually appears on the face, forehead, chest, upper back and shoulders.

Most common in teenagers, but affects people of all ages.

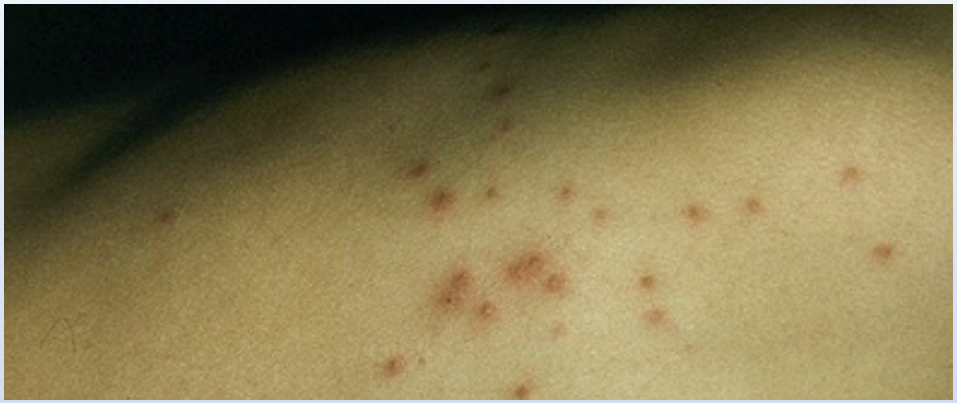
Inflammatory (papules, pustules, cysts, nodules)

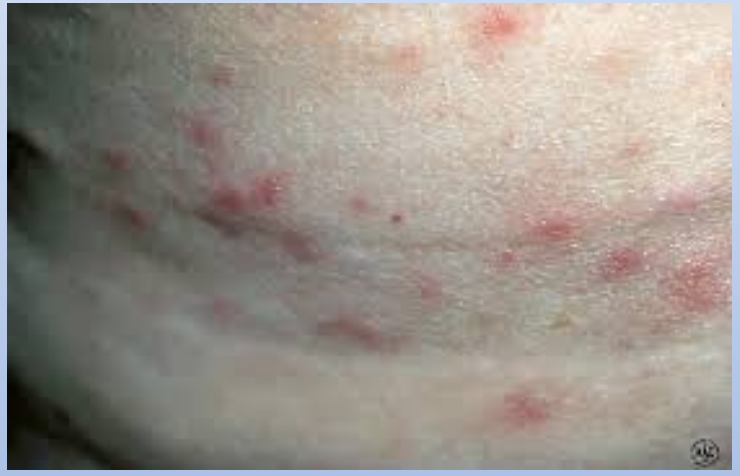
Non-inflammatory (comedones)

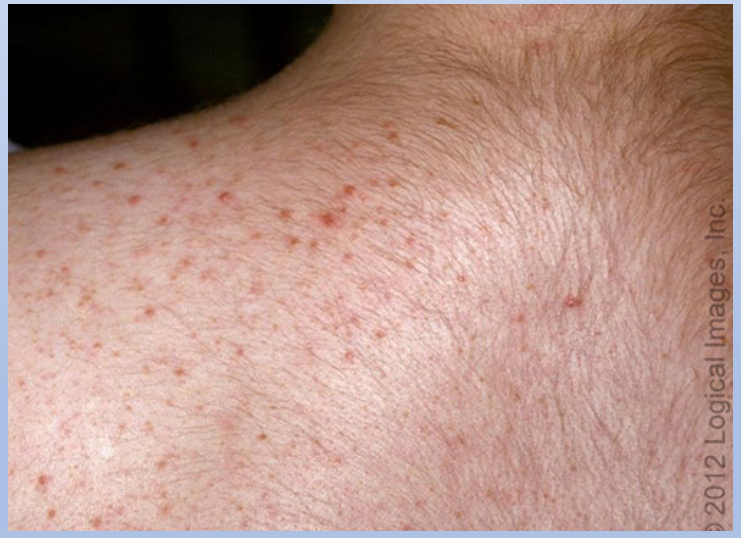
Tx: include topical antibiotics and retinoid medications; oral antibiotics, BCP, isotretinoin, spironolactone; laser

Remember acne cosmetica

Folliculitis







Folliculitis

- most common pathogen in infectious folliculitis: ***Staphylococcus aureus***

. Local or systemic tx; 3 weeks

Other common pathogens:

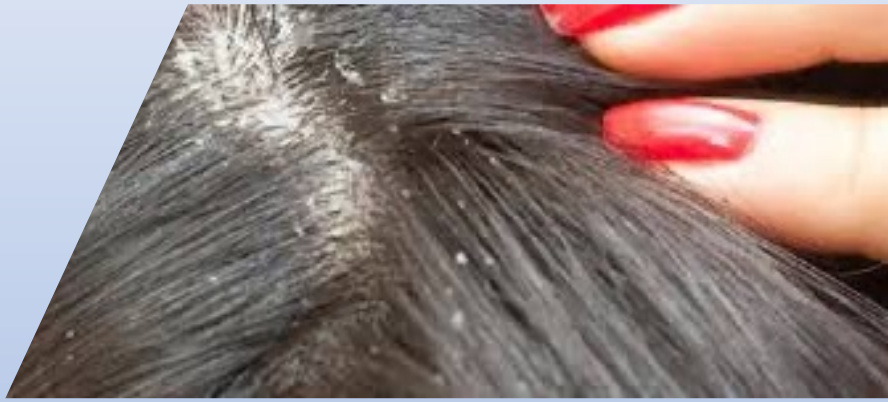
Pseudomonas aeruginosa, *Malassezia (pityrosporum)*, *Demodex* mites.

Pseudomonas aeruginosa (hot-tub) folliculitis

- self-limited; tender, pruritic papules, pustules, or nodules
- typically 8 to 48 hours after exposure to contaminated water
- most patients have malaise and some have low grade fever.

Seborrheic dermatitis

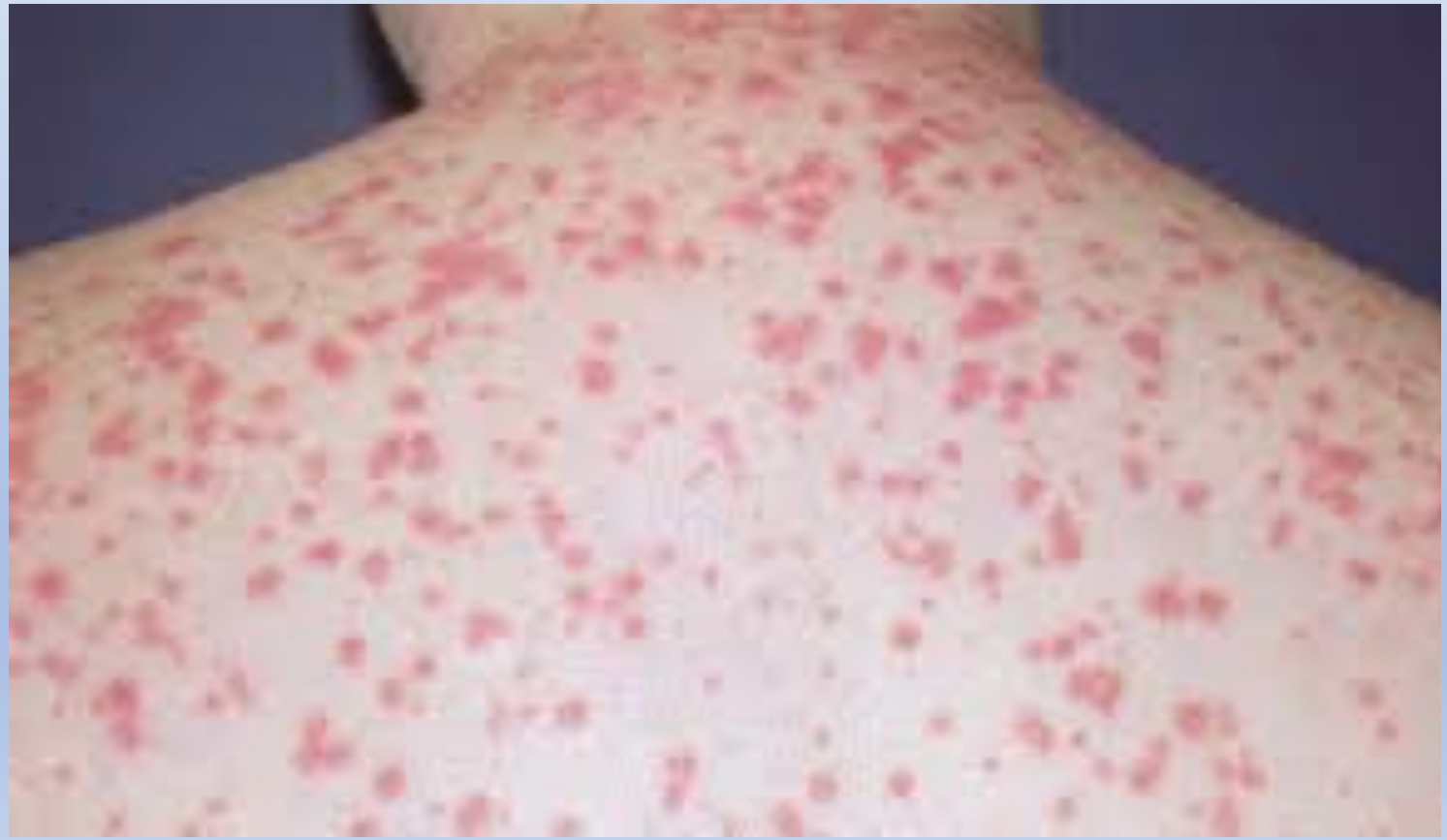
- A skin condition that causes scaly patches & red skin, mainly scalp.
- Can also occur on oily areas of the body: face, upper chest, and back.
- Flaky skin “stubborn dandruff.”
- Tx: medicated shampoos, topical creams, lotions, solutions



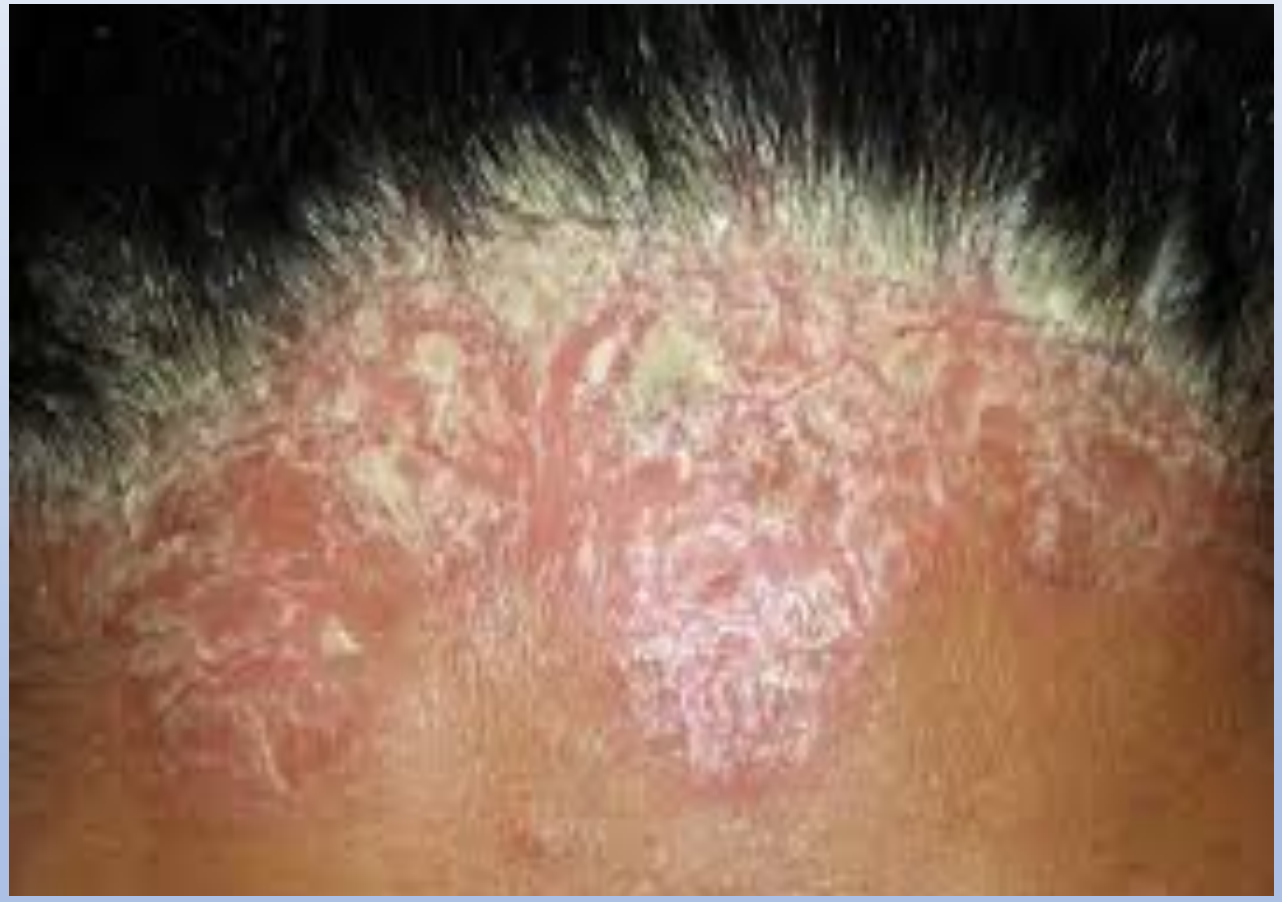
Psoriasis

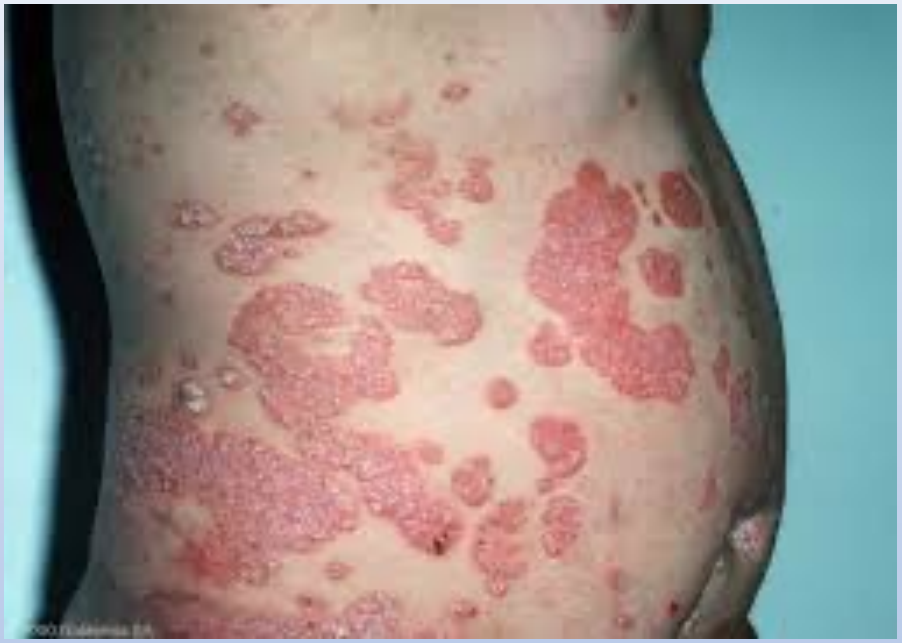
- Very common > 3 million cases in the US yearly
- Skin cells build up forming scales and itchy, dry plaques.
- Thought to be an immune system problem.
- Triggers include infections, stress, and cold.
- Most commonly involves skin; sometimes involves nails or joints.
- Treatment aims to remove scales and slow the turnover of skin cells
- Topical ointments, light therapy, oral and injectable medications
- Weight loss

Guttate psoriasis



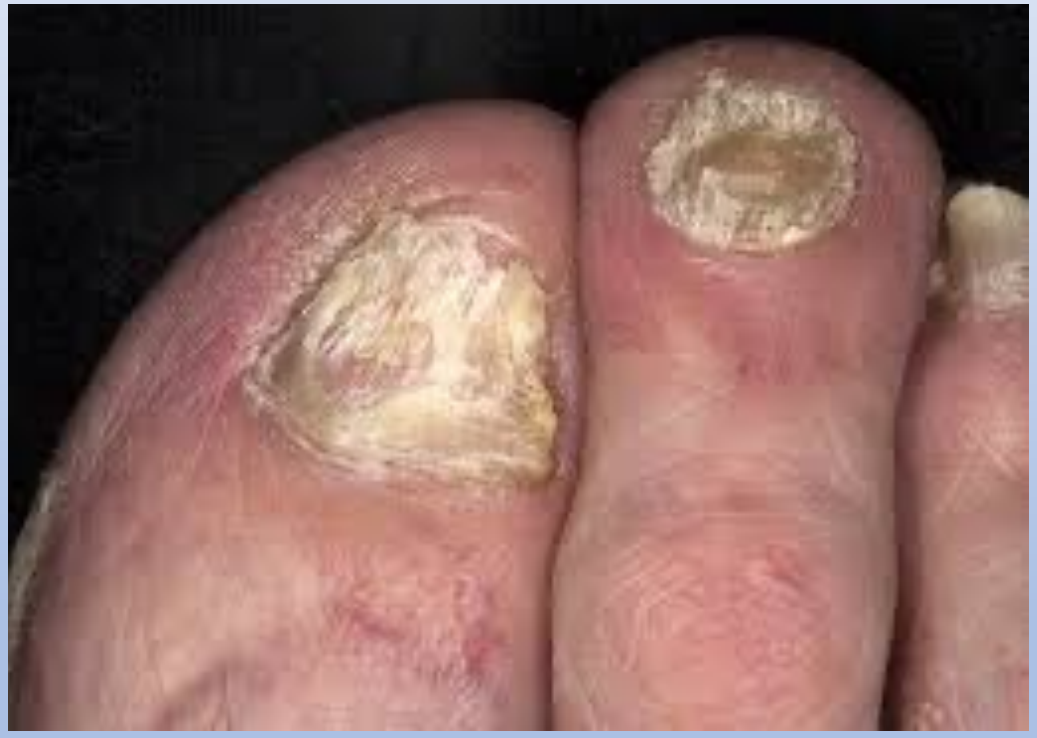
Scalp psoriasis



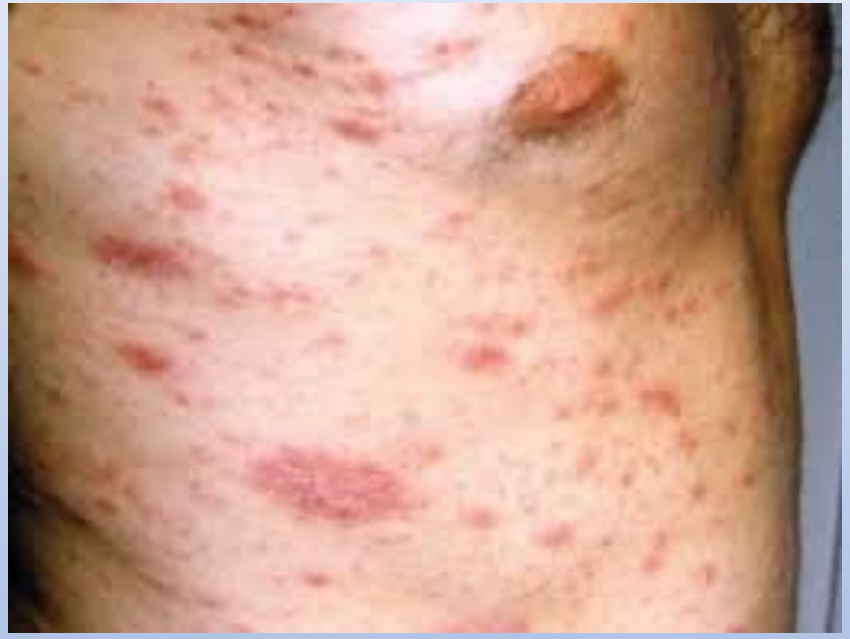


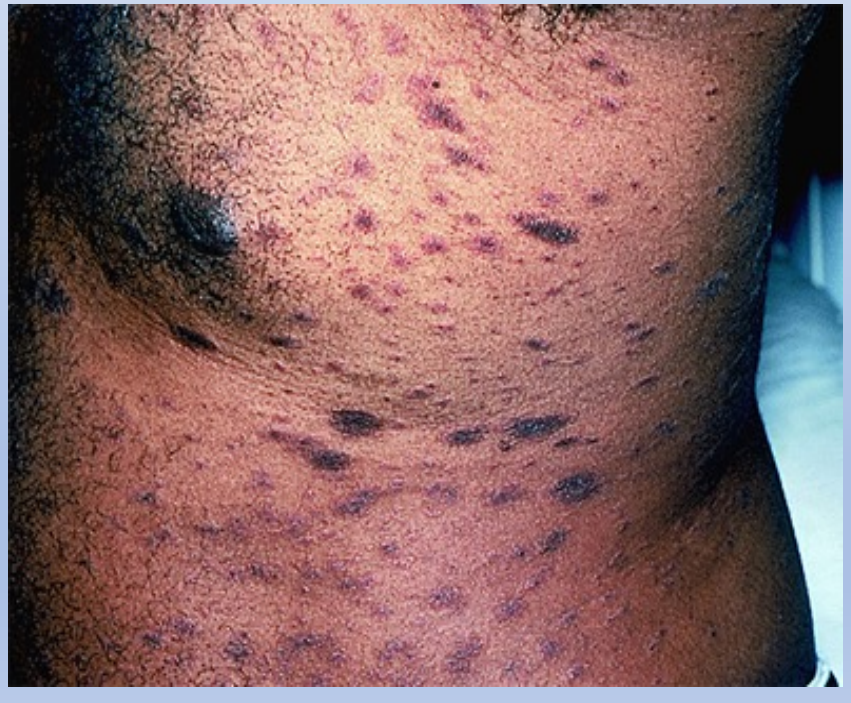
Plaque psoriasis

Nail psoriasis



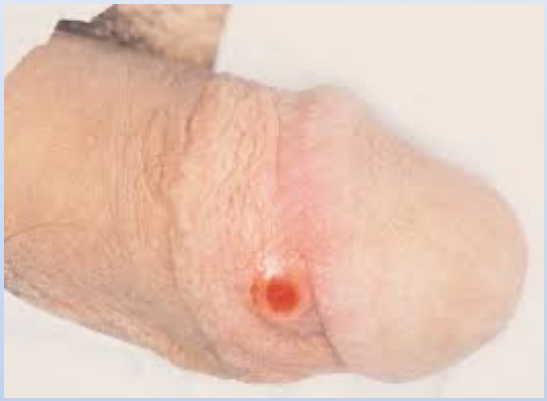
pityriasis rosea

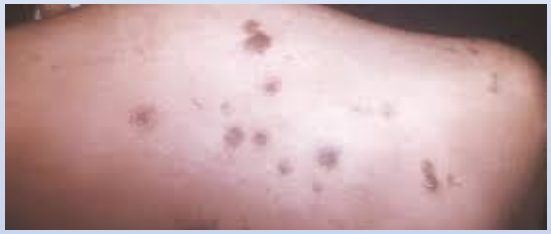


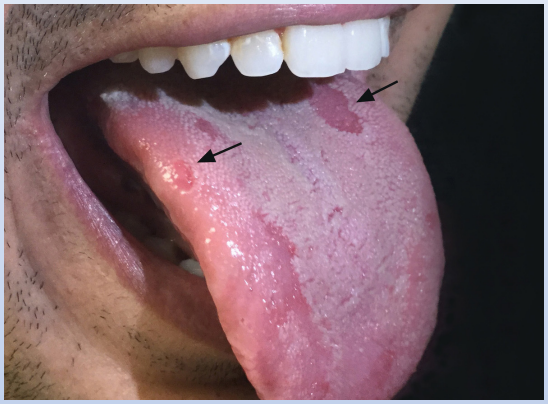


pityriasis rosea

- Acute, self-limited, most likely **viral**
- Begins with **"herald"** or "mother" patch, a single lesion - chest, neck, or back, 2 to 5 cm in diameter.
- A few days or a week or two later, crops of smaller oval lesions - trunk and proximal extremities
- The long axes of the lesions oriented along skin cleavage lines
- Can itch; usually asymptomatic
- May be atypical – few lesions, papular
- Lasts →3 months
- Dx: clinical but get **RPR** to r/o syphilis





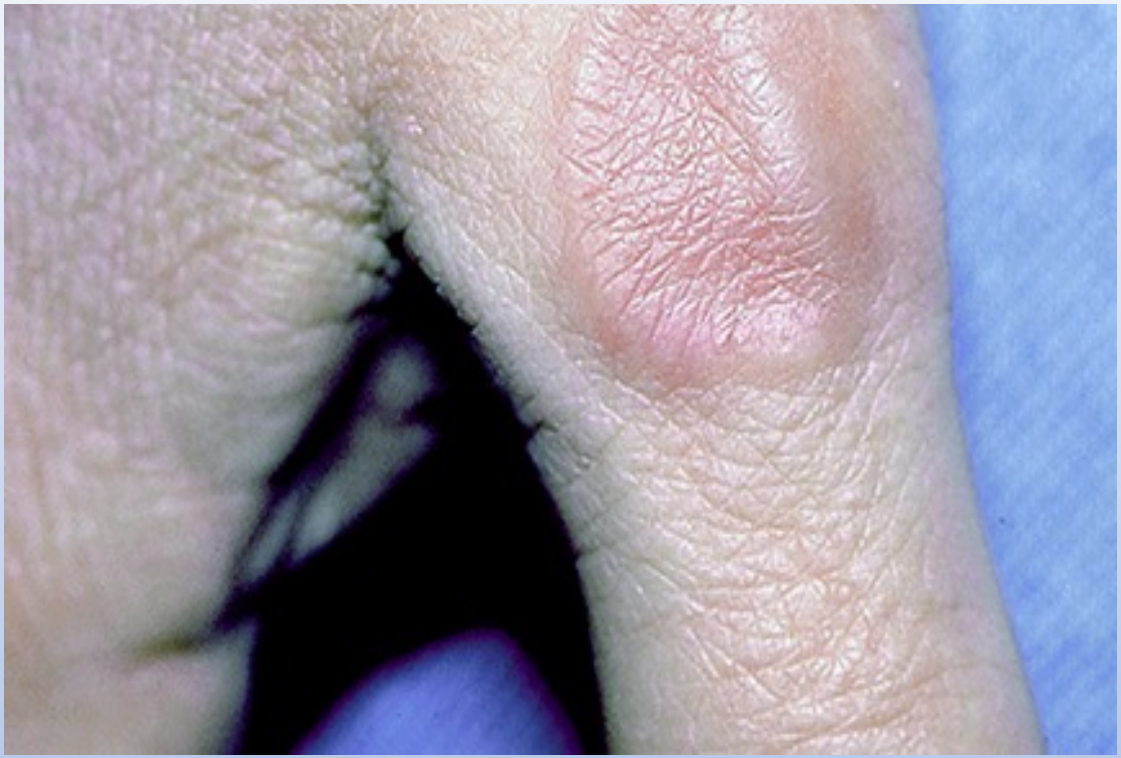


syphilis

Syphilis

- sexually transmitted; **spirochete *Treponema pallidum***.
- primary infection **(chancre),** secondary infection **(diffuse rash),** or tertiary infection (symptoms of aortic insufficiency).
- **Diagnostic testing for syphilis (RPR)** should be performed on patients with:
  - signs and symptoms of infection.
  - A high risk for having acquired disease or
  - for transmitting disease to others (pregnancy).

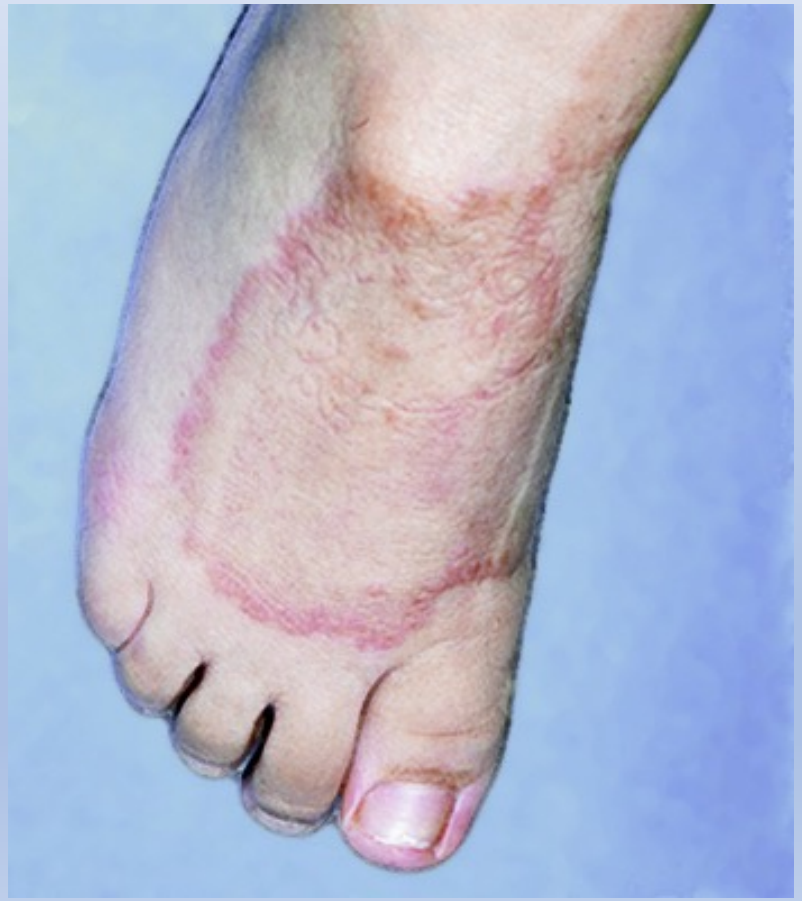
  Treatment:
  - All persons who are diagnosed with a new syphilis infection should be treated - penicillin
  - In addition, they should be offered **HIV testing**, as well as **screening for other sexually transmitted infections.**



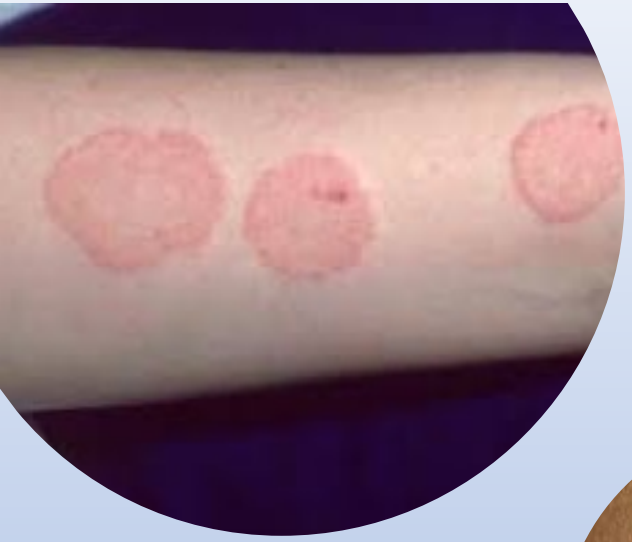
Granuloma annulare

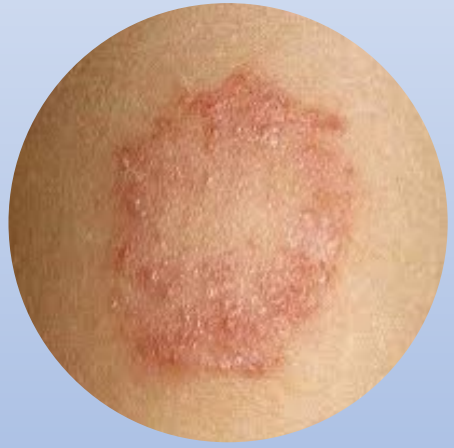
- benign disorder; **unknown cause**
- **Localized** – non-scaly, annular inflammatory plaque; distal extremity; usually no symptoms
- **Generalized** - widely distributed papules and plaques; **may itch**
- d/dx: tinea corporis, but **scale is always absent**.

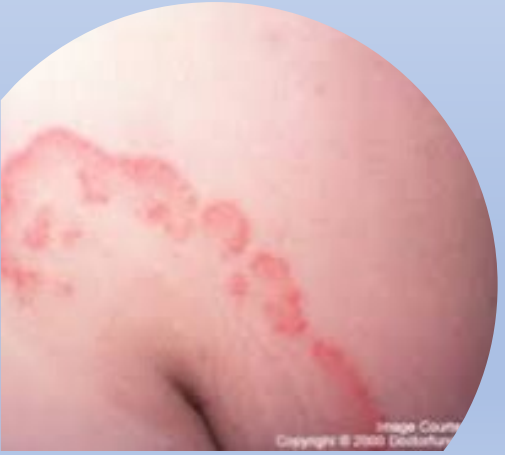
Granuloma annulare



- **Skin biopsies** – useful if atypical GA
- Often **spontaneous resolution** within a few years; can persist > 10 years
- Treatment: if needed -topical or intralesional steroids, tacrolimus, cryoRx; photoRx



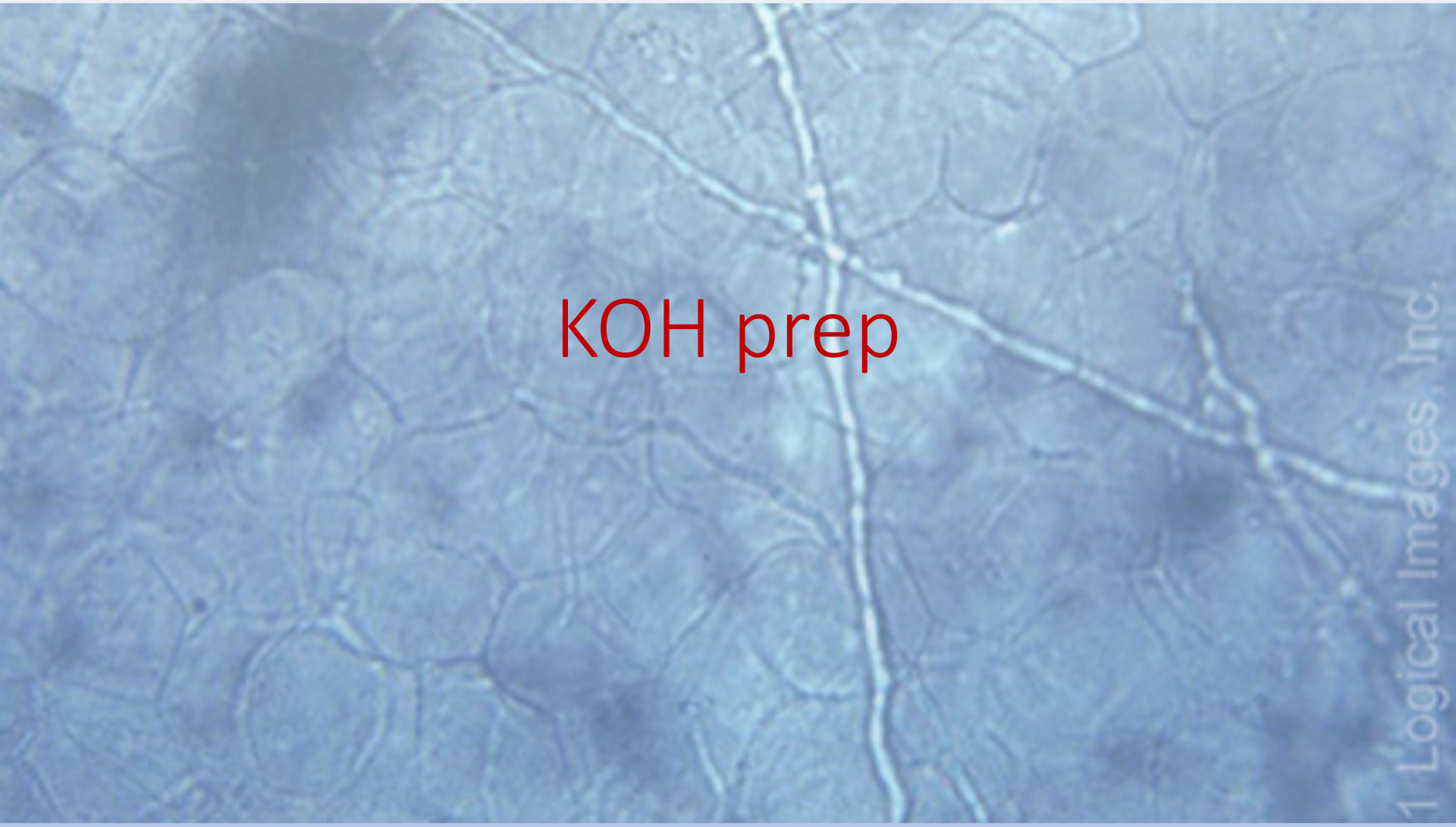




Tinea corporis

Tinea corporis is a dermatophyte infection of the face, trunk, and extremities

It causes pink-to-red annular plaques with raised scaly borders that expand peripherally and tend to clear centrally.


KOH prep
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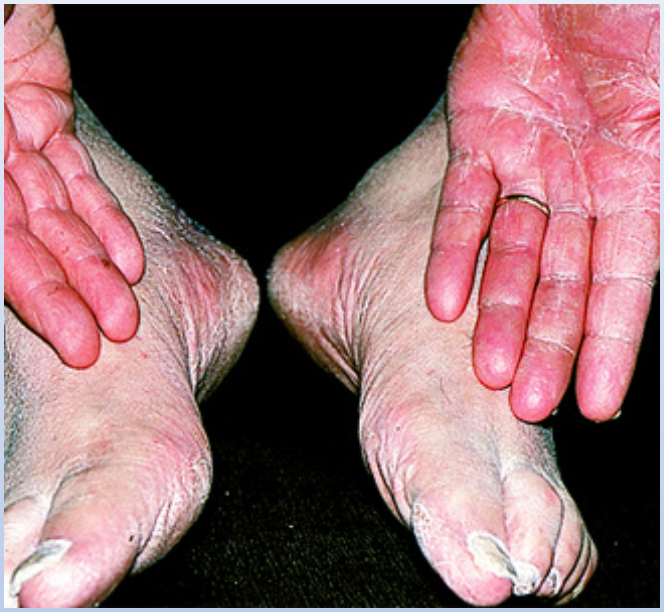
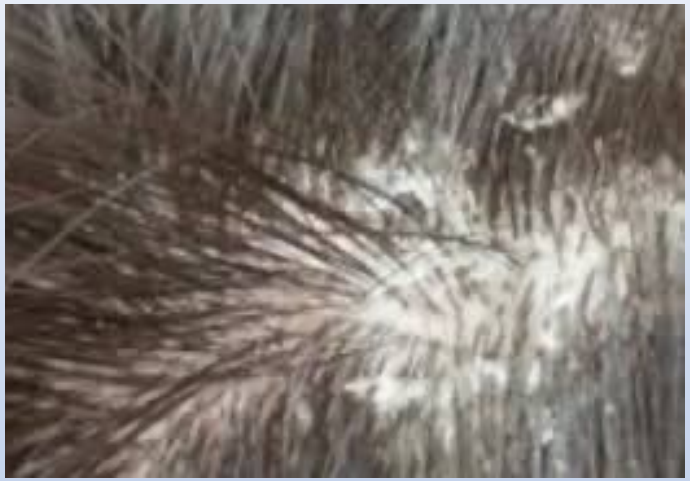
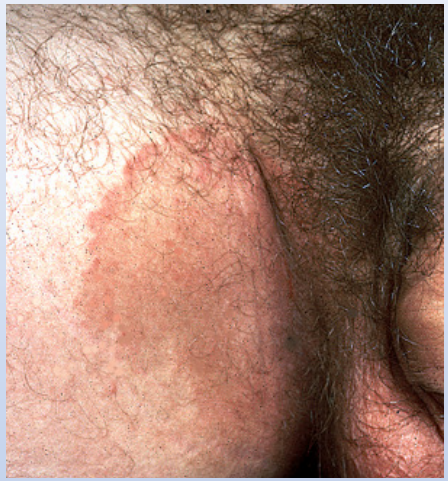
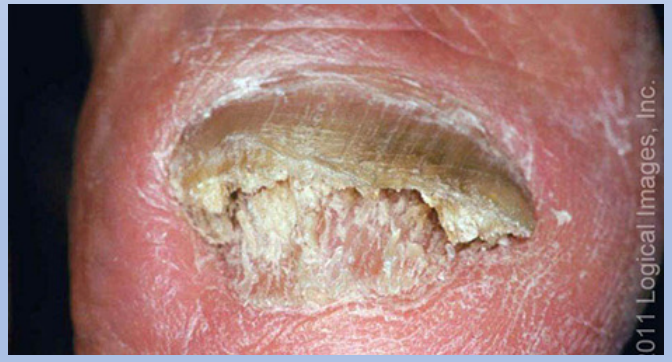




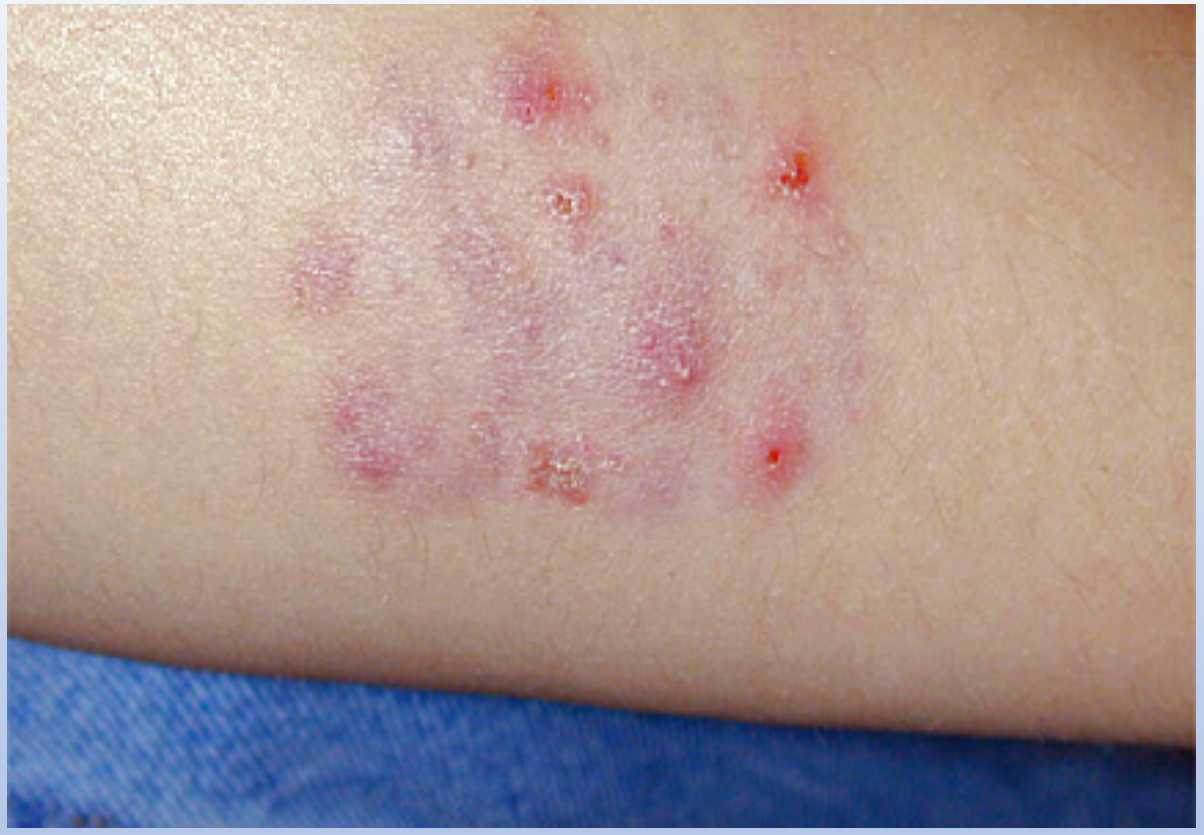




Other dermatophyte infections

Dermatophyte infections

- A potassium hydroxide **(KOH) preparation +/_ fungal culture** should be used to confirm a clinical diagnosis
- Misdiagnosis may lead to inappropriate treatment with topical corticosteroids.
- Most dermatophyte infections can be managed with **topical** treatments.
- **Oral antifungal therapy** is used for extensive or refractory infections, scalp and nail infections.
- Nystatin is not effective for dermatophyte infections.
- **Recurrences** of tinea pedis and tinea cruris are common.



Majocchi’s granuloma

- By dermatophyte invasion into the dermal/subcutaneous tissue via penetration of hair follicles.
- Inflammatory perifollicular papules, small nodules, or pustules are typically seen.
- KOH prep - may be negative.
- **Oral antifungal therapy**

Eczema – 7 types

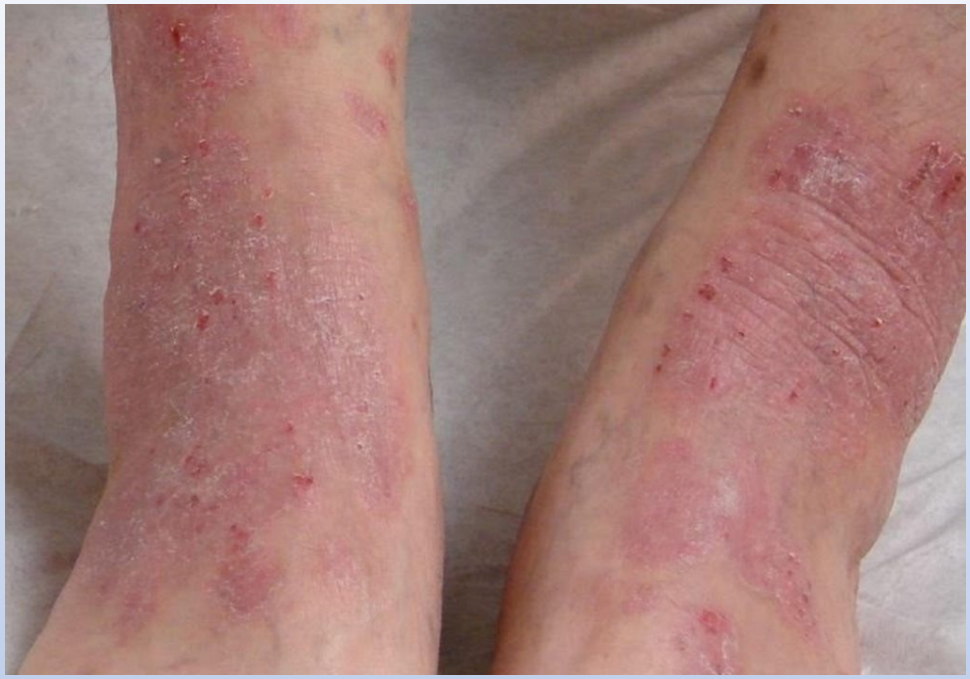
- Atopic
- Contact
- Dyshidrotic
- Hand
- Neurodermatitis
- Nummular
- Stasis

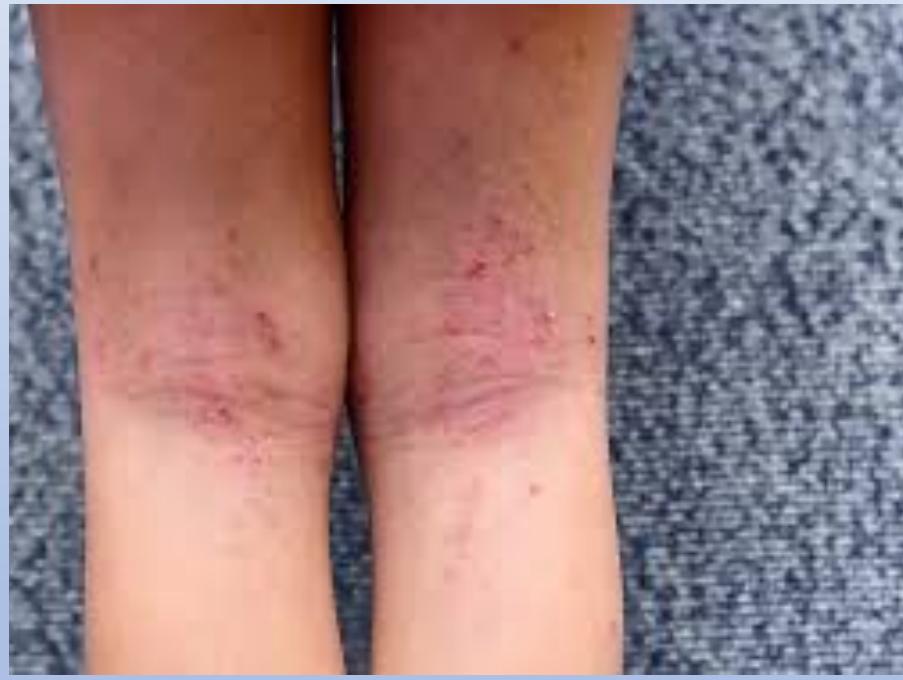
Typical presentation:

- dry, scaly skin
- redness
- Itching

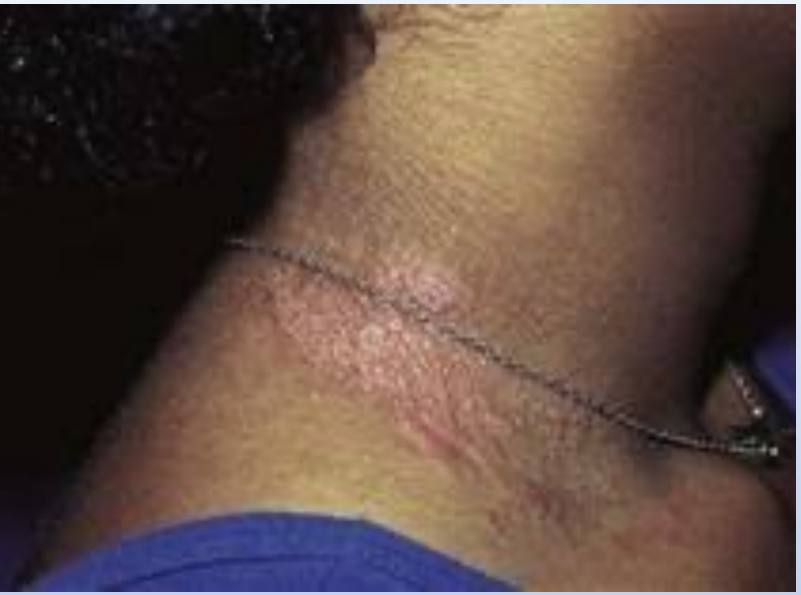
Treatment:

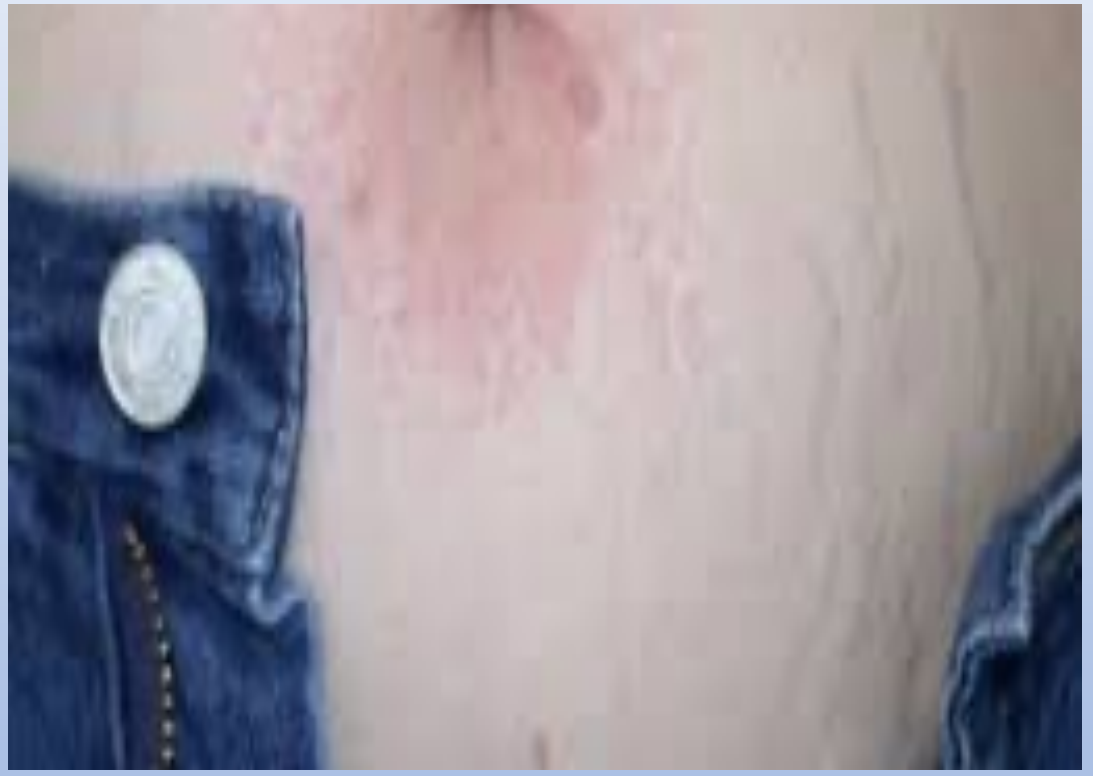
- Moisturizers, steroids, dressings, light rx, immunosuppressives





Atopic dermatitis





Contact dermatitis

Poison Oak / Ivy/ Sumac contact dermatitis

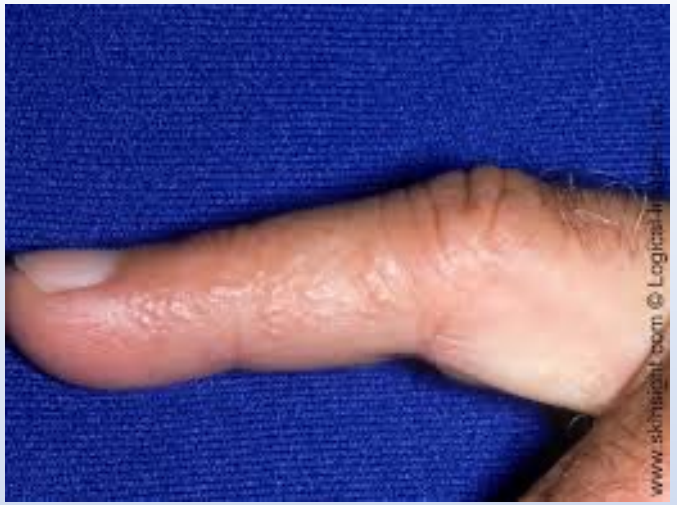
- Allergen urushiol – oily resin
- This resin is very sticky, so it easily attaches to skin, clothing, tools, equipment and pet's fur.
- **Rash** appears where the contact with the oil occurred
- Starts as itching and mild irritation; gradually worsens developing in to a red **rash** that gets more itchy.
- Bumps will form, which can turn into blisters
- The **rash** gradually resolves over a period of 3-4 weeks
- Tx: topical +/- systemic steroids

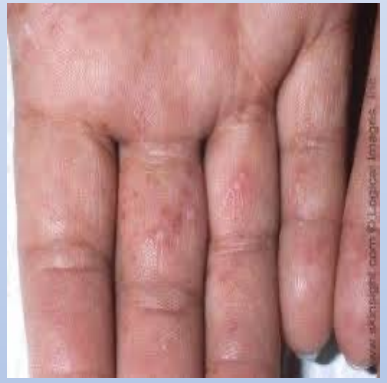
Dyshidrotic eczema

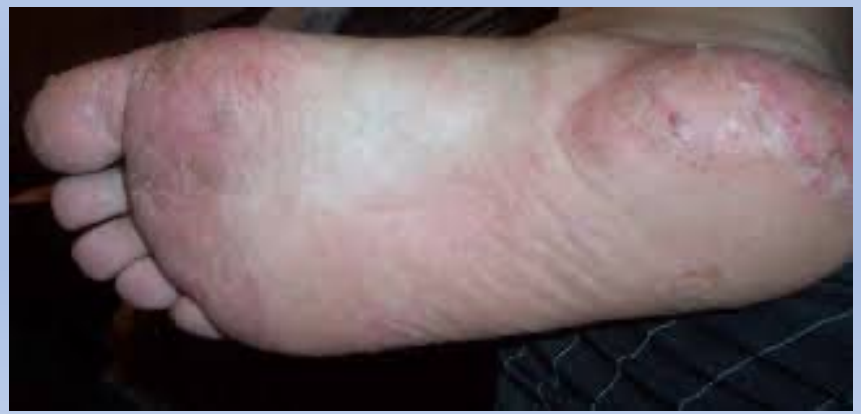
dyshidrosis- a skin condition in which blisters develop on the soles of the feet and/or the palms of the hands.

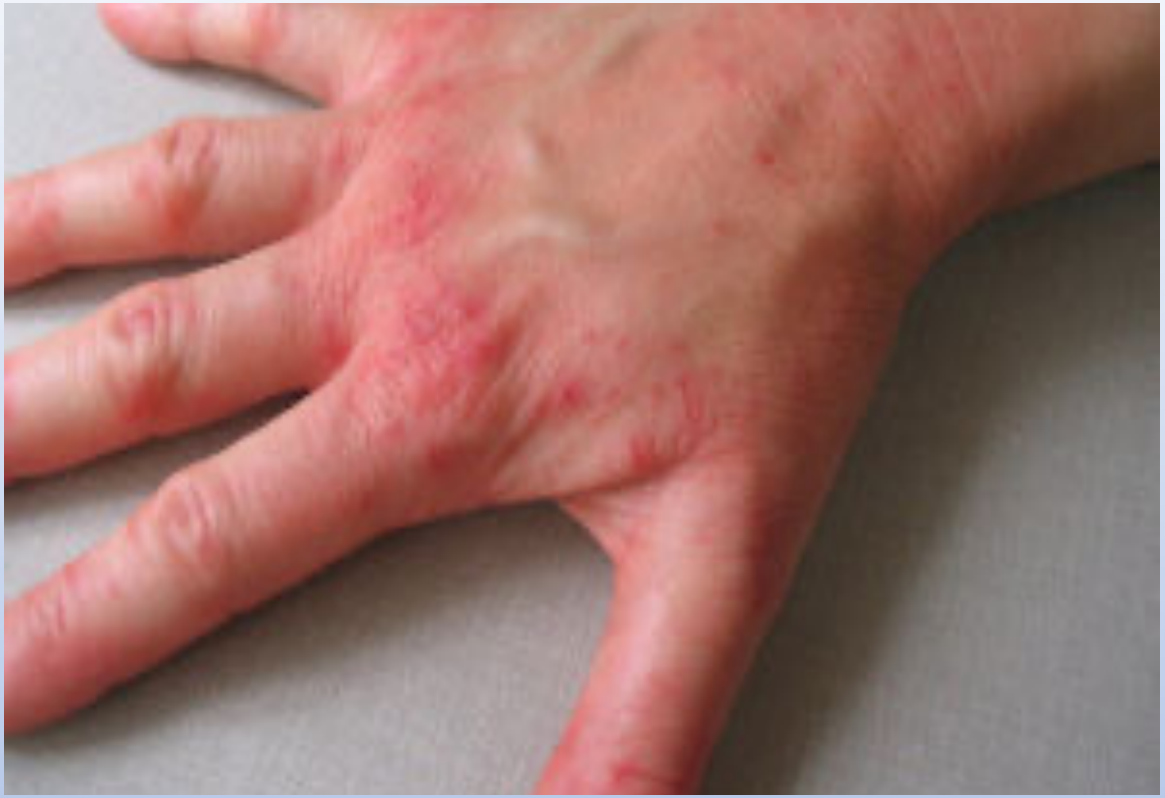
The blisters are usually itchy

They normally last for about two to four weeks and may be related to seasonal allergies, contactants, stress









Hand eczema

Hand eczema/ dermatitis is a common condition that affects about 10% of the U.S. population.

Both genetics and contact allergens and irritant substances play a role in "triggering" hand eczema

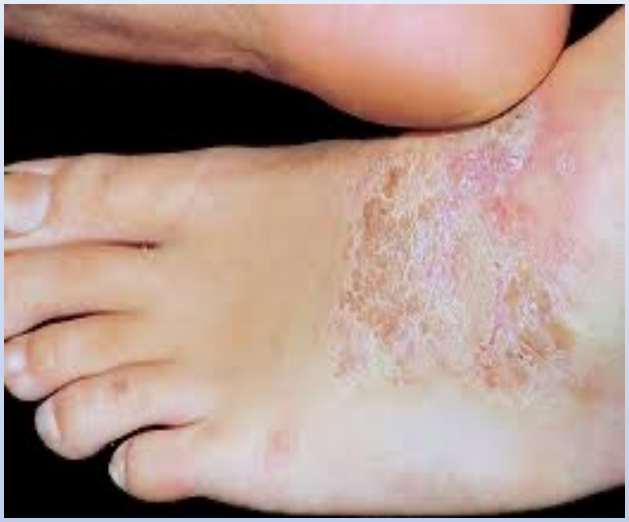
Tx: Moisturizers; steroids

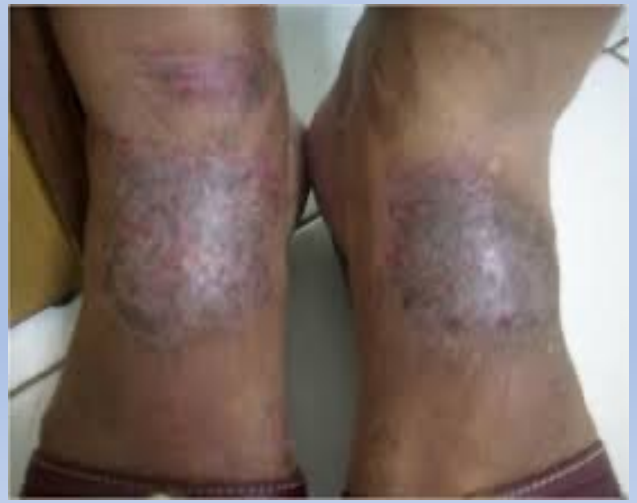
"gloves in a bottle"

"working hands" – O'Keefe's

Gloves if dishes etc.

lichen simplex chronicus (neurodermatitis)

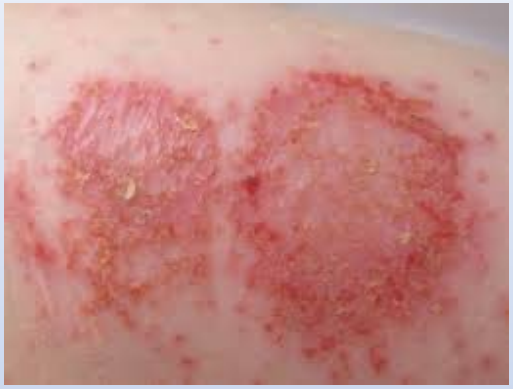


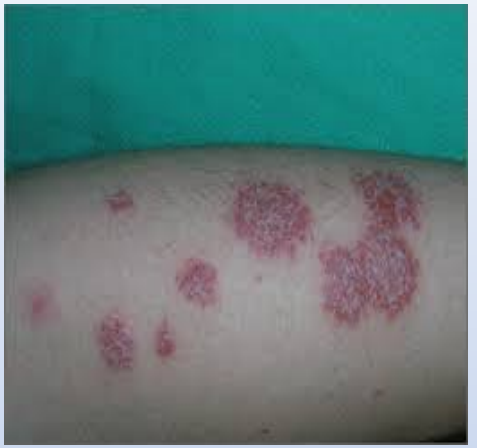


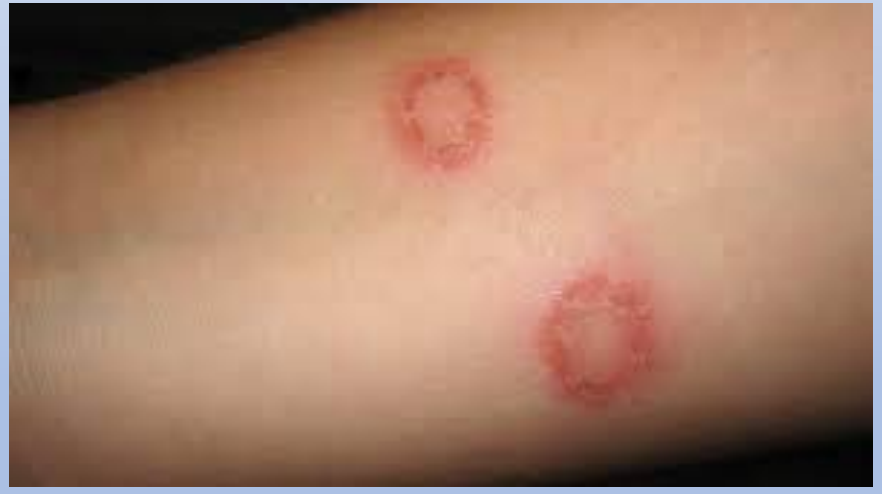
- Lichen simplex chronicus is also known as neurodermatitis because it is considered to be a neurological skin disorder fueled by the itch-scratch cycle.
- It appears in plaques on the neck, scalp, shoulders, feet, ankles, wrists and hands.
- The affected skin becomes thick, leathery and even itchier the more it is rubbed or scratched as a result of irritated nerve endings in the skin.

Nummular eczema

- **Nummular eczema**, also known as **nummular dermatitis** or discoid **eczema**, is a chronic condition that causes coin-shaped plaques to develop on the skin.
- These plaques are often itchy and well-defined and may ooze clear fluid or become dry and crusty
- Frequently accompanied by xerosis which results in a leaky epidermal lipid barrier allowing environmental allergens to penetrate the skin and induce an allergic or irritant response
- Triggers: dryness, medications

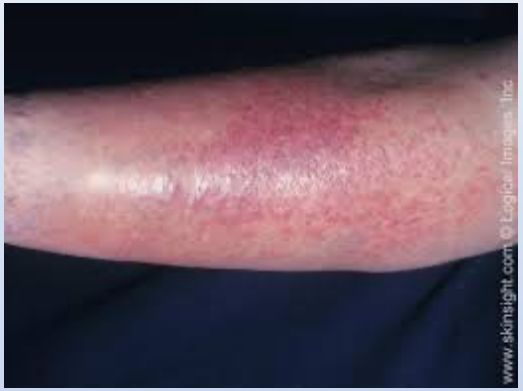


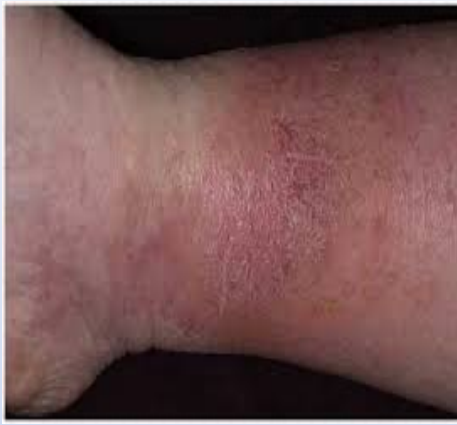


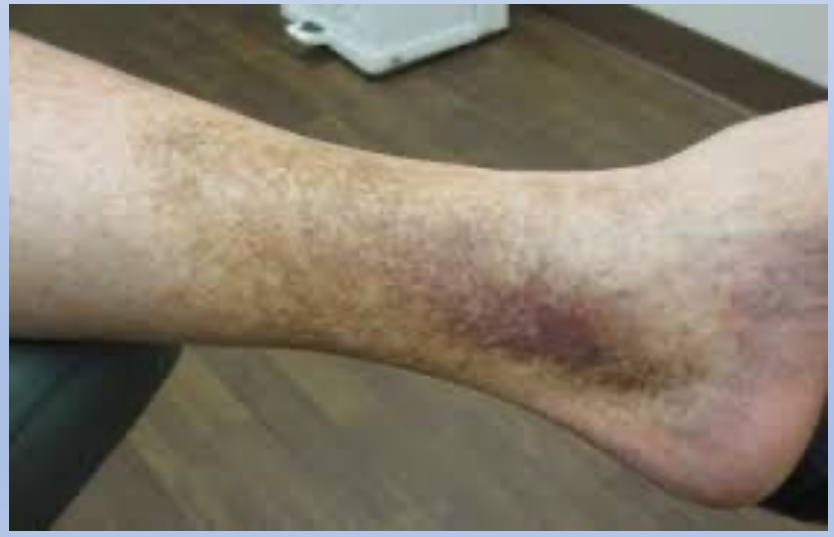


Stasis dermatitis

- Skin inflammation in the lower legs caused by fluid buildup.
- Stasis dermatitis is caused by fluid buildup due to varicose veins, circulation issues, or heart disease.
- Presentation: skin discoloration of the ankles or shins, itching, thickened skin, and ulcers
- Treatment: may include leg elevation, compression stockings, mild topical steroids, and treatment of the underlying condition.

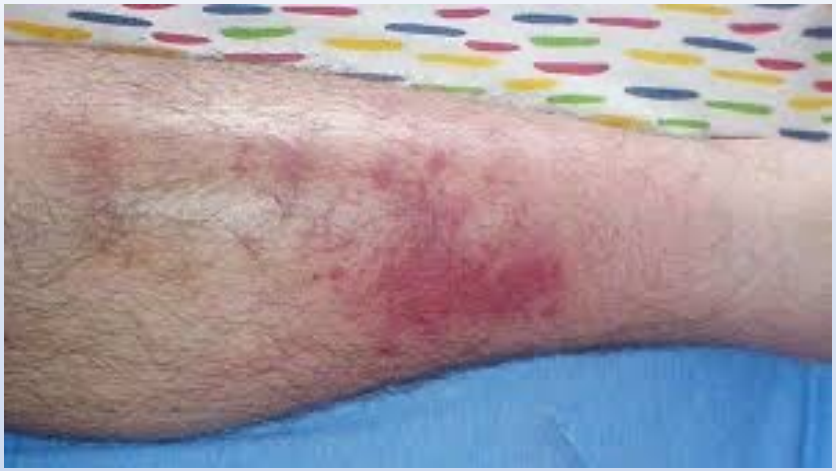


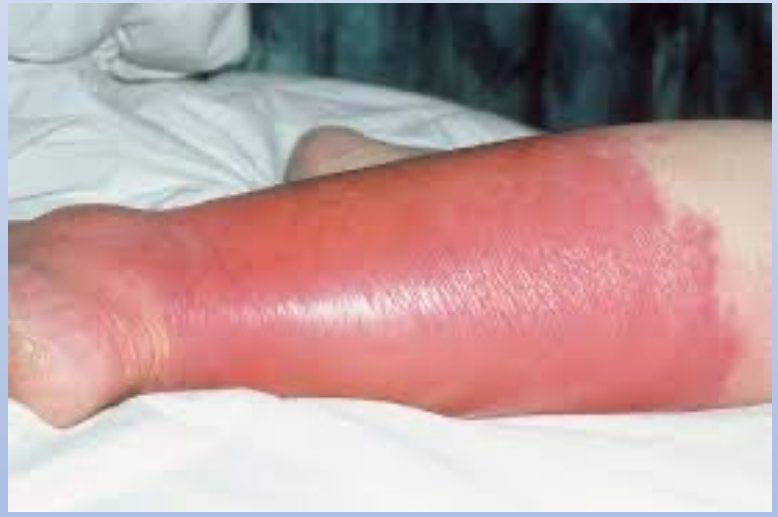


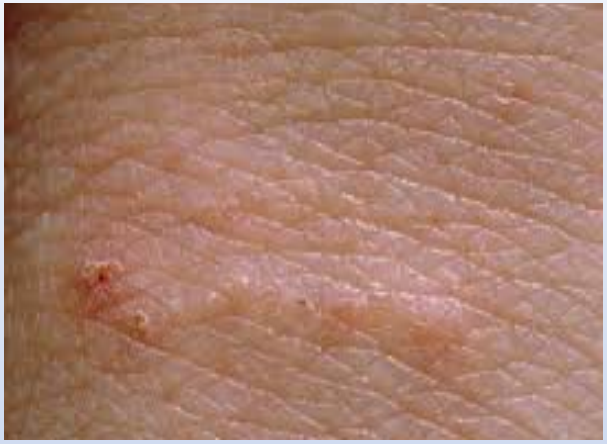


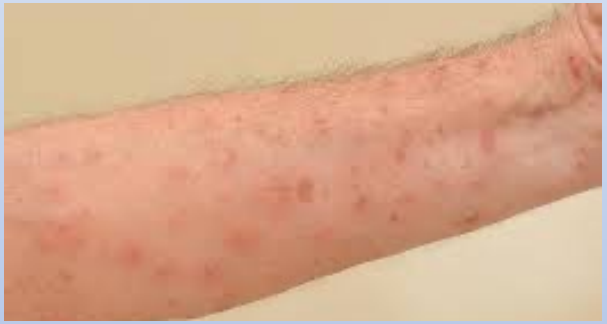
Cellulitis

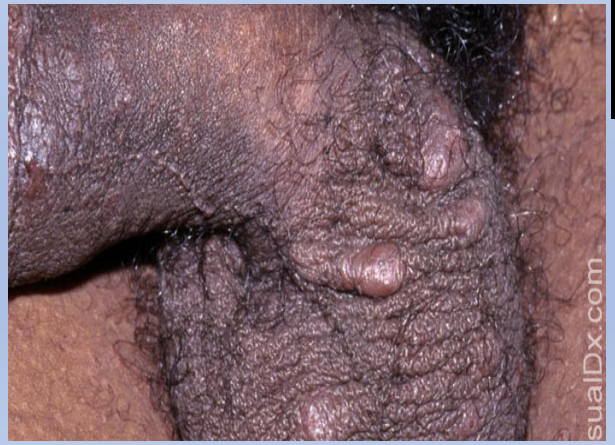
- **Cellulitis** is a common, potentially serious bacterial skin infection. The affected skin appears swollen and red and is typically painful and warm to the touch.
- **It** usually affects the skin on the lower legs, but it can occur in the face, arms and other areas
- Treatment: antibiotics

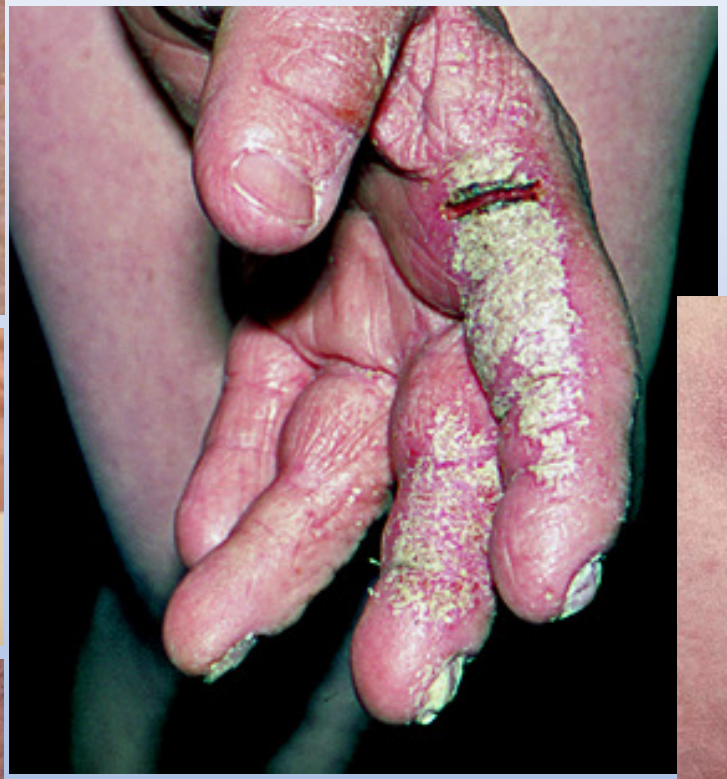


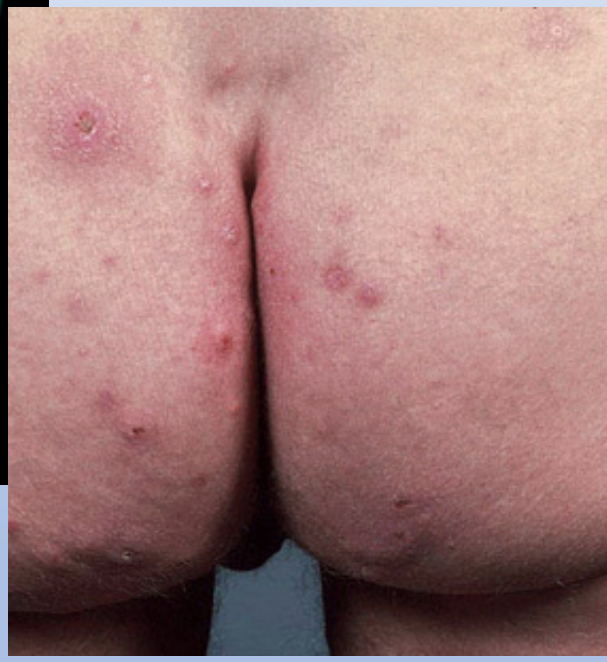












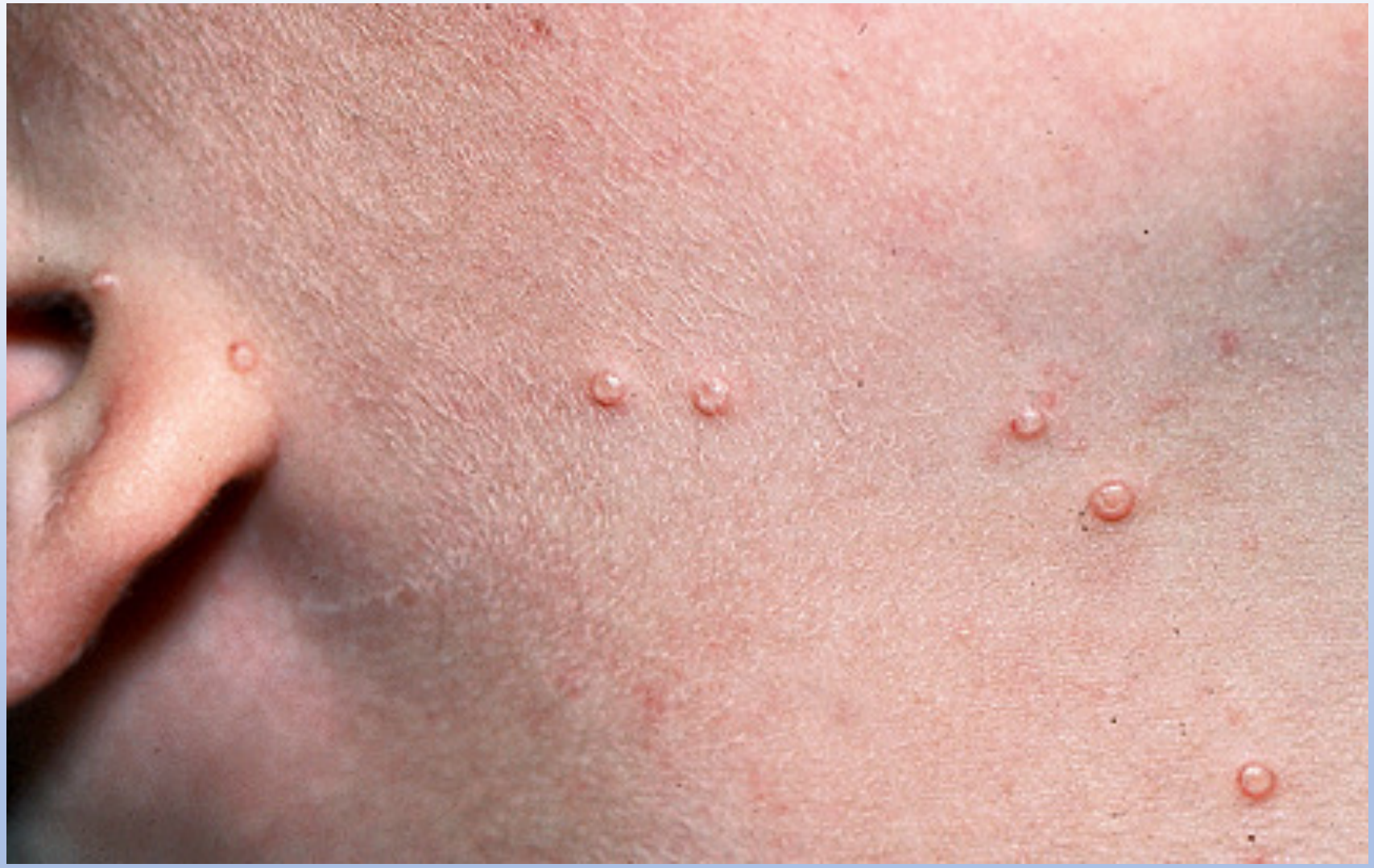
Scabies

Sarcoptes scabiei mite

- **classic**: low mite burden; direct, prolonged skin-to-skin contact; **burrows**; **itchy** excoriated papules; fingers, wrists, elbows, axillae, areolae, periumbilical skin, waist, male genitalia, knees, buttocks, and feet; **treat contacts ; permethrin x 2; ivermectin if refractory**
- **crusted**: teeming with mites; **very contagious**; erythematous plaques; prominent scale, crusts, fissures. **Nail dystrophy Itching- minimal /absent**. Immunocompromised/ old **Ivermectin x 2**

Bedbugs

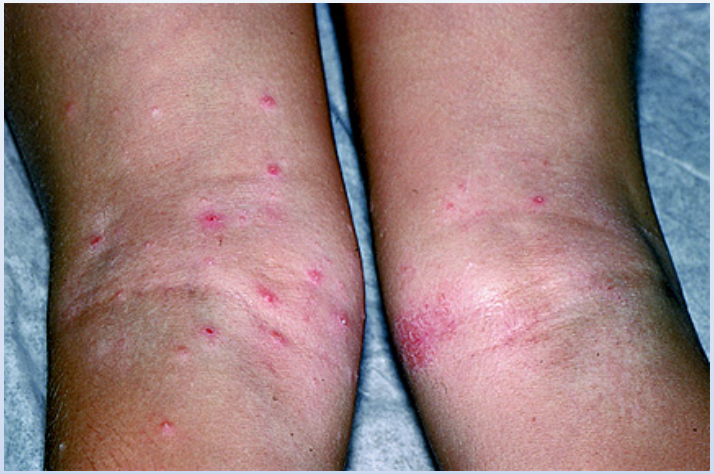
- Bedbugs are reddish brown and roughly the size of an apple seed. They infest homes, hotels, and hospitals.
- More than 200,000 cases in the US per year
- Bites are often itchy, red, and in a line.
- Usually disappear with time.
- Steroid creams and antihistamines may speed recovery.
- Exterminate

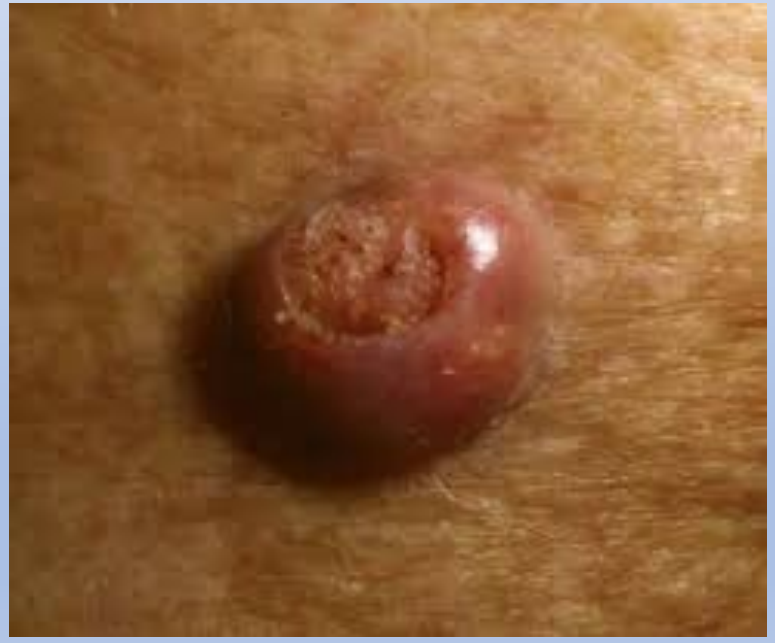


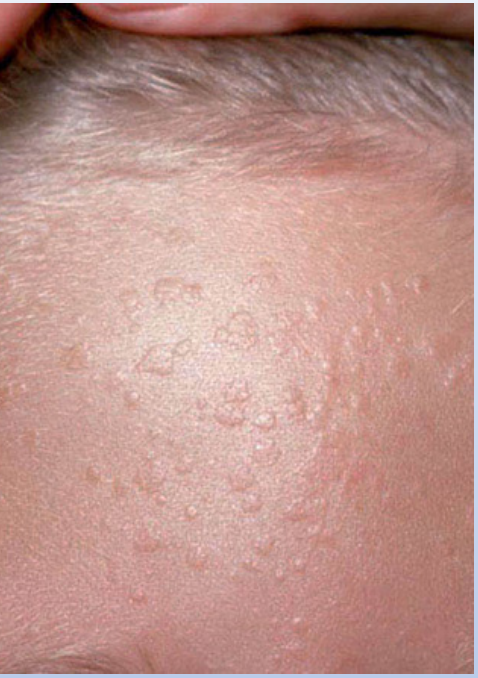
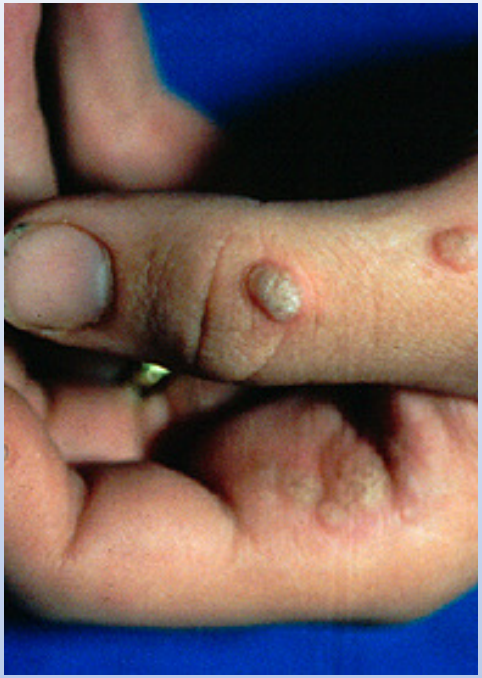
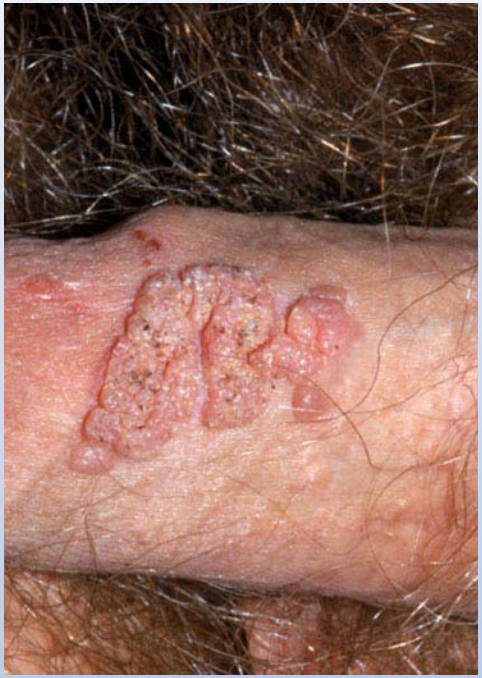
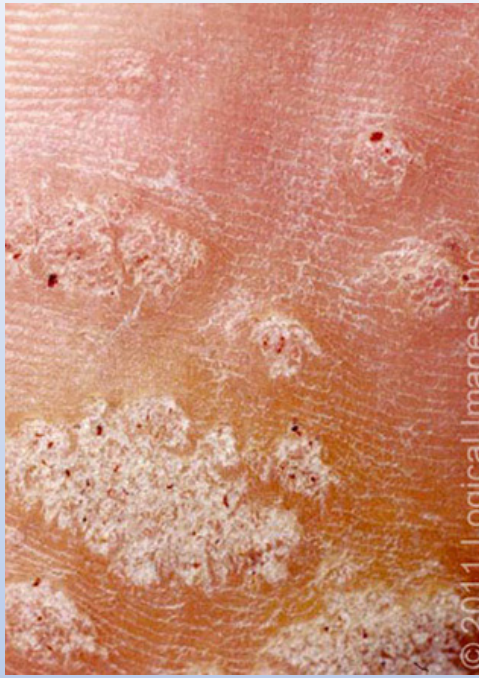
Molluscum contagiosum

molluscum contagiosum

- Usually self-limiting but can last a couple of years
- Tx: similar to warts
- Let kids go to school if areas are covered
- Immunosuppression





Warts – flat, common, genital, plantar

Warts

Types:

Flat warts

Common warts

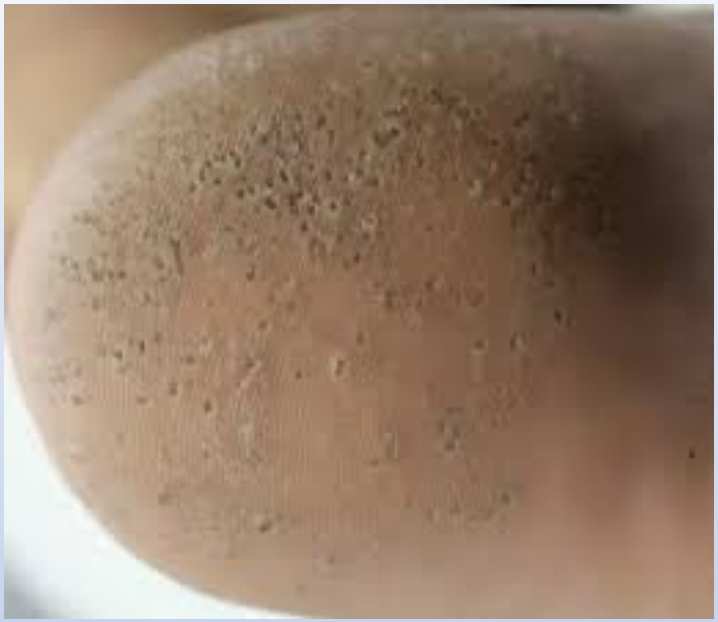
Plantar warts

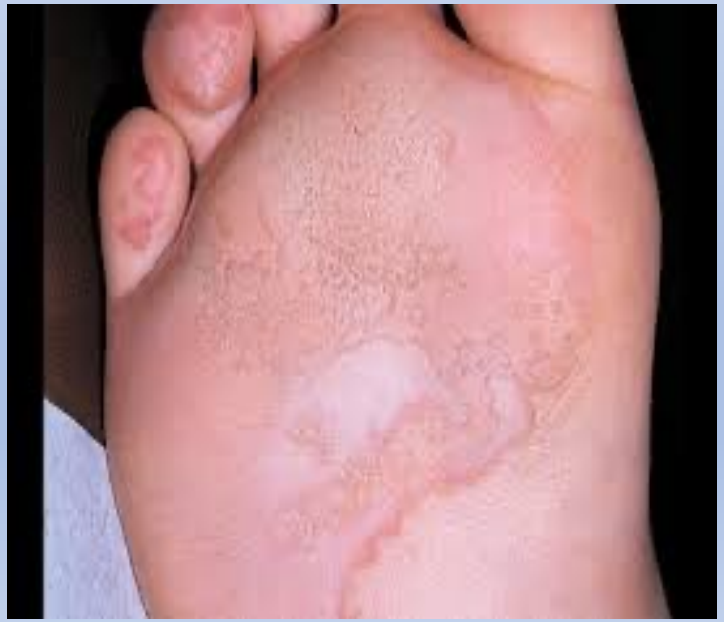
Genital warts

Treatments:

- LN2; retin-A
- Salicylic acid; duct tape

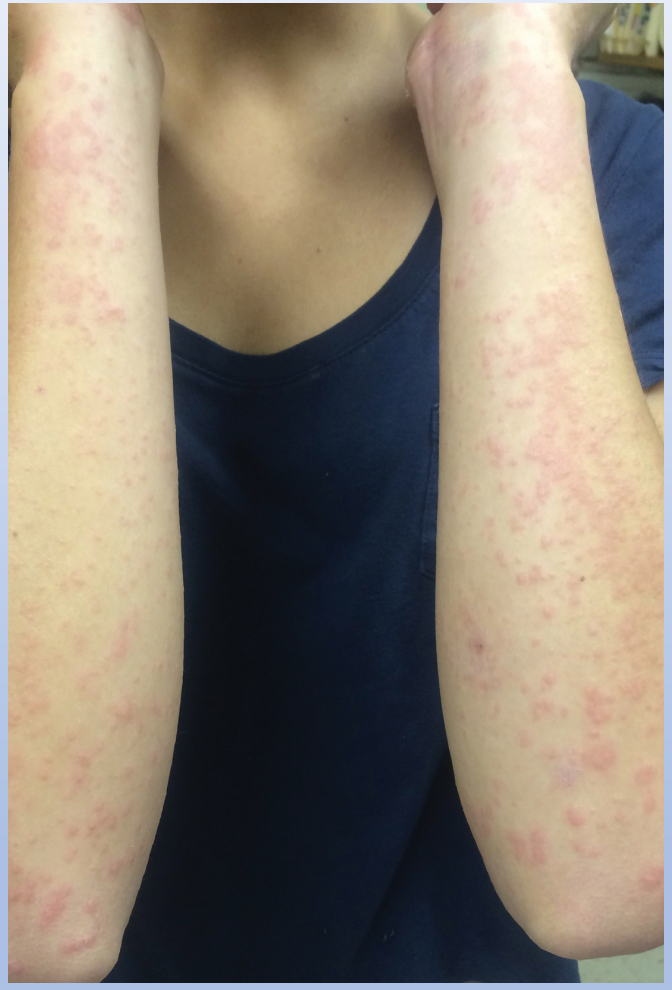
- Aldara
- Condylox
- Laser





Pitted keratolysis

- a malodorous bacterial (Corynebacterium) skin infection that can affect both the soles of the feet and the palms of the hands. More common in men
- Characterized by small depressions or pits in the top layer of skin and areas of white skin.
- **Treatment**: application of antibiotics to the skin such as benzoyl peroxide, clindamycin, erythromycin, or mupirocin.
- **Prevention**: efforts aim to keep the feet dry by using moisture-wicking shoes and socks as well as antiperspirants.



Idiosyncratic “id” reaction

"id" reaction

Id reaction, or **autoeczematization**:

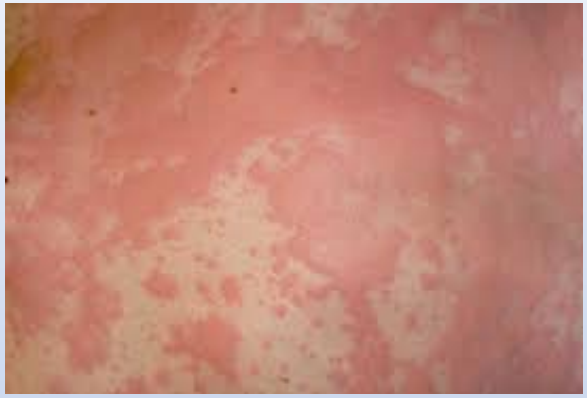
- an acute secondary immunologic cutaneous **reaction** to a variety of stimuli, including infectious (e.g., fungal) and other inflammatory skin conditions

Management involves **treatment of the associated infection.**

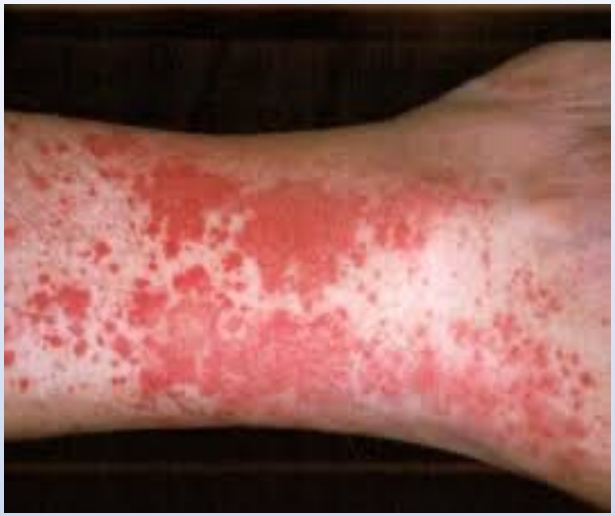
Topical corticosteroids and antipruritic agents may be beneficial for symptom relief.

Urticaria and Vasculitis

Urticaria



Vasculitis



- triggered by many things including certain foods, medications, stress.

- itchy, raised, red, or skin-colored welts on the skin's surface.

- Hives usually go away without treatment, but antihistamine medications are often helpful in improving symptoms

- An inflammation of the blood vessels that
- Makes them leaky leading to extravasation of RBC.
- Therefore, rash is non-blanching.

Common dermatologic office-based diagnostic testing

- The **Wood's lamp** is a device that emits ultraviolet (UV) light in the 320 to 400 nm region of the UV spectrum. Examination under the Wood light may assist in the diagnosis of several skin diseases, including vitiligo and tinea versicolor
- **Diascopy**
- The **KOH preparation** is the simplest method to microscopically identify fungi or yeasts from epidermal skin scrapings, hair roots, or nail clippings
- **Fungal cultures** are especially useful in hair or nail infections to identify the fungal species or differentiate fungal from yeast or mold infections. Results – 4-6 weeks
- **Tzanck smear** is used for infectious and noninfectious skin diseases presenting with vesiculopustular or bullous lesions.
- **scabies preparation**
- **Skin biopsy**

In conclusion…

- We have described morphology of skin lesions
- Discussed features of common skin rashes and office tests to aid in diagnosis
- Considered differential diagnoses
- Described the course of common rashes in primary care and necessary treatment

thank you…
questions???