Rosacea

TABLE 4-7 Treatment of Rosacea by Subtype

ROSACEA SUBTYPE			
ERYTHROTELANGIECTATIC	**PAPULAR/PUSTULAR**	**PHYMATOUS**	**OCULAR**
Presents as red facial skin/telangiectasias flushing and blushing	Papules and pustules scattered on a background of central facial erythema	Papular fibrotic cobblestone appearing	Red-rimmed eyes; gritty; burning; itchy
Camouflage green-based makeup Topical alpha-2 agonist brimonidine (Mirvaso) daily Laser treatment Avoid vasodilatory medications. β -blockers may be utilized to avoid flushing.	Topical metronidazole cream/lotion/gel (MetroGel or Noritate) 1–2 × daily Topical azelaic acid (Finacea 15% or Azelex 20%) 1 to 2 × daily Topical sulfacetimide/sulfur (Ovace) Doxycycline 20–50 mg b.i.d.; Doxycycline, minocycline 100 mg b.i.d. Tetracycline 500 mg b.i.d. Erythromycin 500 mg b.i.d. if others contraindicated. OCPs may be helpful in those who report cyclical flares. Oral isotretinoin for severe disease. Referral to dermatologist if no improvement with 3 months of topical and oral antibiotic therapy.	If early in disease, oral isotretinoin may be helpful CO_2, pulse dye or ablative laser Loop cautery Referral to dermatology for all of the above	Eyelid hygiene essential Eyewash Oral antibiotics Doxycycline Tetracycline Referral to ophthalmologist if not improving

SKIN MEDICINALS

PRODUCT LIST

ANTI-INFLAMMATORY — 240G $65 / 60G, $24-35
(In Turmeric & Ceramide Base)*

Clobetasol 0.05%, Niacinamide 2% Cream, Ointment or Solution

Clobetasol 0.1%, Niacinamide 2% Cream, Ointment or Solution

Fluocinonide 0.05%, Niacinamide 2% Cream, Ointment or Solution

Triamcinolone Acetonide 0.1%, Niacinamide 2% Cream or Ointment

Desonide 0.05%, Niacinamide 2% Cream, Ointment or Lotion

ACNE — 60G, $65-$70 / 30G, $40-$45
(In Turmeric & Ceramide Base)*

Can be compounded with or without Hyaluronic Acid 0.25%

Tretinoin 0.025%, Niacinamide, 2%, Cream

Tretinoin 0.05%, Niacinamide 2% Cream

Tretinoin 0.1%, Niacinamide 2% Cream

Tretinoin 0.025%, Niacinamide 2%, Azelaic Acid 8% Cream

Tretinoin 0.05%, Niacinamide 2%, Azelaic Acid 8% Cream

Tretinoin 0.1%, Niacinamide 2%, Azelaic Acid 8% Cream

SULFACETAMIDE/ SULFUR WASH — 120ML, $40

Sodium Sulfacetamide 9%, Sulfur 3% foaming wash

*Skin Medicinals Proprietary Base includes Turmeric and Ceramides
** Skin Medicinals Proprietary Anti-Aging Base includes Vitamin C & E, Resveratrol, Turmeric, and Alpha Lipoic Acid

ANTI- AGING — 30G, $55-$60
(In Anti-Aging Base of Vitamin C & E, Resveratrol, Turmeric, Alpha Lipoic Acid)**

Can be compounded with or without Hyaluronic Acid 0.25%

Tretinoin 0.0125%, Niacinamide 2% Cream

Tretinoin 0.025%, Niacinamide 2% Cream

Tretinoin 0.05%, Niacinamide 2% Cream

ROSACEA — 60G, $65-70 / 30G, $40-$45
(In Turmeric & Ceramide Base)*

Azelaic Acid 15%, Niacinamide 2% Cream

Azelaic Acid 15%, Metronidazole 1%, Ivermectin 1% Cream

CHEMOTHERAPEUTIC — 60G, $75 / 30G, $45
(In Turmeric & Ceramide Base)*

5-Fluorouracil 5%, Calcipotriene 0.005% Cream

WARTS

5-Fluourouracil 5%, Salicylic Acid 70% Paste — 15G, $55

5-Fluourouracil 5%, Salicylic Acid 30% Solution — 15ML, $50

LIGHTENING CREAM — 60G, $75 / 30G, $45

Hydroquinone 8%, Tretinoin 0.1%, Kojic Acid 1%, Niacinamide4%, Fluocinolone 0.025% Cream

Hydroquinone 12%, Kojic Acid 6%, Vitamin C 1%, Niacinamide 4% Cream

Infections

1. Superficial fungal infections
    a. Tinea (capitus, corporis, cruris, facei, pedis, and versicolor)
    b. Intertrigo
2. Bacterial
    a. Impetigo
    b. Folliculitis
3. Viral
    a. Molluscum Contagiosum
    b. HPV/warts

Superficial Fungal Infections

- Dermatophyte and Candida
- Can mimic many other skin diseases
- Diagnostics
  - KOH - easiest and most cost effective. Identifies presence or absence of hyphae/spores, but not species
  - Fungal culture - GOLD STANDARD (can take 2-6 weeks)
  - Biopsy may be helpful if KOH and/or fungal culture negative or if if other dx considered
  - Wood's light exam

Superficial Fungal Infections - Topicals

TABLE 12-1 Comparing Effectiveness of Topical Antifungals on Types of Organisms

	PREGNANCY CATEGORY	DERMATOPHYTE	YEAST	GRAM + BACTERIA	GRAM – BACTERIA	ANTI-INFLAMMATORY	ADVANTAGES
POLYENES fungistatic							
Nystatin	CA (pastilles)	0	++++				
AZOLES fungistatic							
Miconazole 2%	C	+	+++				
Clotrimazole 1%	B	+	+++				
Ketoconazole 2%	C	+	+++	++		++	Anti-inflammatory effect in seb dermcomparable to hydrocortisone
Oxiconazole 1%	B	+	+++				Vehicle great for hyperkeratotic soles and interdigital infections
Econazole 1%	C	+	+++	+	+	+	
Sertaconazole 2%	C	+	+++	++			
ALLYLAMINES fungistatic and fungicidal							
Naftifine 1%	B	+	+			+++	
Terbinafine 1%	B	+++	+			+++	
BENZYLAMINE fungicidal							
Butenafine 1%	B	++++	++			+++	
OTHER AGENTS							
Ciclopirox 1%	B	++	++++ (*C. albicans*)	+++	+++	+++	Penetrates nail plate
Selenium sulfide 2.5%	C		+++(only *Pityrosporum*)				Effective in follicular epithelium

0, no effect or activity against specific organism; +, mildly effective activity; ++, moderately effective; +++, strongly effective; ++++, most effective.

Superficial Fungal Infections - Systemics

TABLE 12-2 Systemic Antifungal Agents for Treatment of Superficial Cutaneous Fungal Infections

DRUG	INDICATIONS	SIDE EFFECTS	INTERACTIONS & MONITORING	CONTRAINDICATION & CAUTION
Griseofulvin (pregnancy category C)	Adults: 500 mg daily (except tinea pedis & onychomycosis, 1 g daily)	Usually well tolerated but may have: rash, hives, headache, fatigue, GI upset, diarrhea, photosensitivity	CYP3A4 inducer (decrease levels): OCPs, warfarin, and cyclosporine increases alcohol levels	Pregnancy (or intent) Avoid: alcohol use
	Peds: Microsize: 10–15 mg/kg/day given daily or b.i.d. or 125–250 mg for 30 to 50 lb and 250–500 mg for >50 lb Ultramicrosize: 3–5 mg/kg/day given daily or b.i.d. or 125–187.5 mg for 35–60 lb and 187.5–375 for >60 lb Off-label use by experts: commonly use microsize at 20–25 mg/kg/day and ultramicrosize at 10–15 mg/kg/day Improved absorption with fatty meal Duration Capitis: 4–6 wk; corporis: 2–4 wk; pedis: 4–8 wk; cruris and barbae: till clear; fingernail: 4 mo; and toenails: 6 mo		Monitor: baseline CBC, BUN/Cr, LFTs Repeat 6 wk	Contraindicated in liver failure or porphyria
Terbinafine (pregnancy category B)	Adults: 250 mg daily Onychomycosis: fingernails for 6 wk and toenails for 12 wk Off-label use: tinea corporis, pedis, capitis, barbae, and candidiasis	Headache, GI upset, visual disturbance, rash, hives, elevated LFTs	Inhibits metabolism of drugs using CYP2D6	Caution with hepatic and renal disease
	Peds: Lamisil granules for capitis (>4 yr old): 125 mg/day for <25 kg; 187.5 mg/day for 25–35 kg; and 250 mg/day for >35 lb for 2–4 wk		Drug interactions: TCAs, antidepressants, SSRIs, b-blockers, warfarin, cyclosporine, rifampin, cimetidine, caffeine, theophylline	Avoid if history of lupus
			Monitor: baseline LFTs, CBC, BUN, Cr; repeat in 6 wk; more often if symptoms or immunosuppressed	
Fluconazole (pregnancy category C)	Adults: 150–200 mg Vulvovaginal candidiasis: 150 mg as a single dose only. If recurrent, 150 mg weekly Oropharyngeal candidiasis: 200 mg. Take 2 orally on the first day, then one daily for 2 wk	Headache, GI upset, abdominal pain, rash, diarrhea	Inhibits metabolism of drugs using CYP2C9	Caution if renal or hepatic disease QT prolongation Arrhythmic condition
	Peds: Oropharyngeal candidiasis (6 mo and older): 6 mg/kg/day orally on day one, followed by 3 mg/kg/day for 2 wk		Monitor: baseline LFTs Repeat in one month	Contraindicated in severe liver disease

Superficial Fungal Infections – Systemics

TABLE 12-2 Systemic Antifungal Agents for Treatment of Superficial Cutaneous Fungal Infections *(continued)*

DRUG	INDICATIONS	SIDE EFFECTS	INTERACTIONS & MONITORING	CONTRAINDICATION & CAUTION
Itraconazole (pregnancy category C)	Adults Onychomycosis: Toenails and/or fingernails—continuous 200 mg daily for 12 wk Fingernails only—*pulsed therapy*, take 200 mg b.i.d. for 1 wk, then off 3 wk. Repeat 1–2 times	GI upset, abdominal pain, diarrhea, constipation, decreased appetite, rash, pruritus, headache, dizziness, elevated LFTs	Inhibits metabolism of drugs using CYP3A4	Patients with ventricular dysfunction or congestive heart failure
	Peds: Off-label use only Improved absorption with food, especially acidic foods		Caution: use H_2 blockers and PPIs, calcium channel blockers, lovastatin, simvastatin, ergot alkaloids	Contraindicated in chronic renal failure
			Monitor: baseline LFTs. Repeat/month Less risk of elevated LFTs with pulse therapy	

Dermatophytes

- Trichophyton, Microsporum, and Epidermophyton
- Only survive in stratum corneum of skin, hair, and nails NOT mucosal surfaces (unlike Candida)
- Most tinea infections caused by T. rubrum, except tinea capitis (T. tonsurans in US and M. canis worldwide)
- Transmission by direct contact with 1-2 weeks incubation
- Can survive on moist surfaces for 12-15 months
- Tinea > adolescent and adult population except tinea capitis > 3-7yrs

Tinea Subtypes

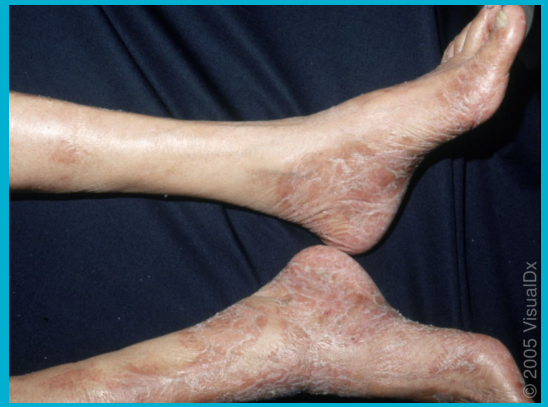
1. Tinea pedis
2. Tinea cruris
3. Tinea corporis
4. Tinea manuum
5. Tinea faciei
6. Tinea barbae
7. Tinea capitis

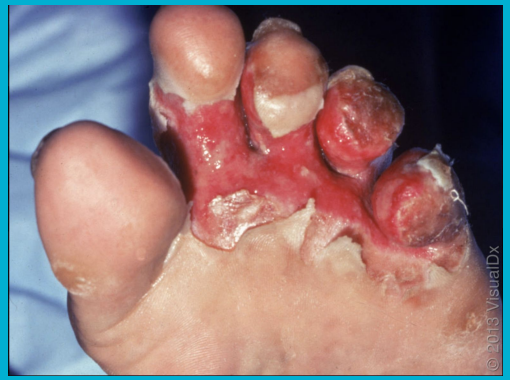
Tinea Pedis

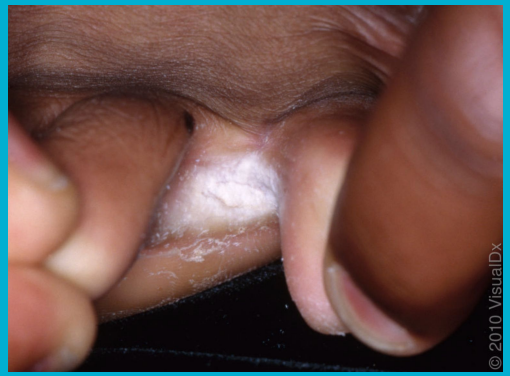
- Most common disease affecting feet and toes
- Most common organisms: T. rubrum, T. mentagrophytes, and E. floccosum
- Very contagious
- Chronic infections -> toenail infections, secondary bacterial infection, or cellulitis

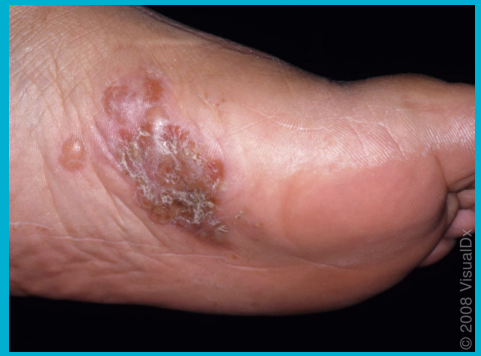
Tinea Pedis

1. Moccasin type: T. rubrum or E. floccosum
2. Interdigital type: T. rubrum, T. mentagrophytes, and E. floccosum
3. Inflammatory/vesicular:T. Mentagrophytes
4. Ulcerative type: T. rubrum, T. mentagrophytes, and E. floccosum







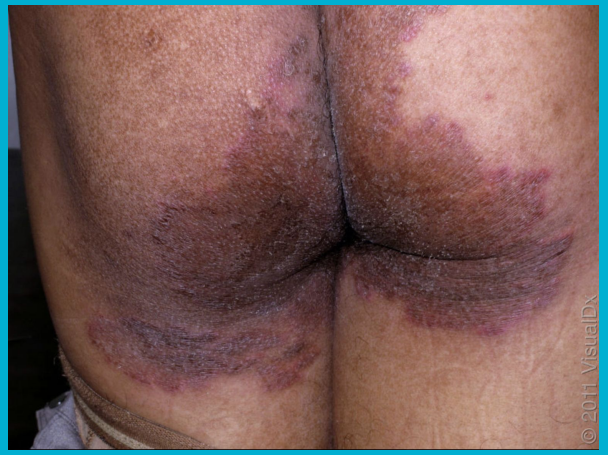


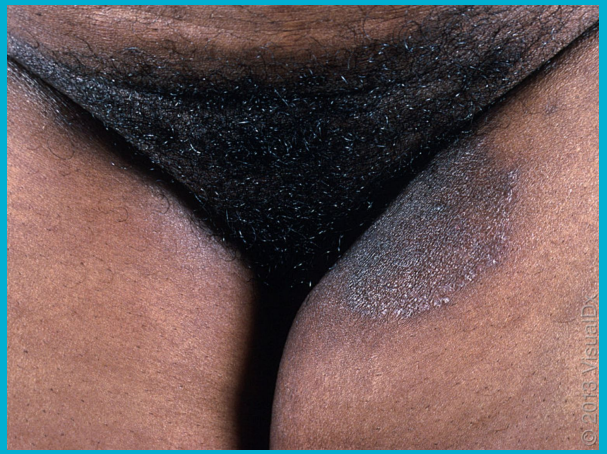
Tinea Pedis Management

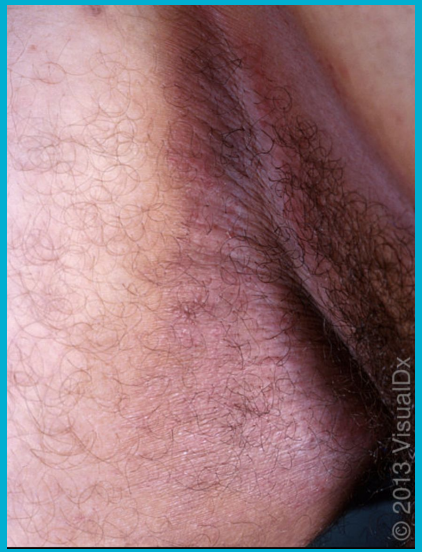
- Keratolytics for hyperkeratosis
- Broad spectrum topical azoles
- Moisture wicking socks
- Systemic antifungals - for extensive disease or if recalcitrant to topicals
    - Terbinafine and itraconazole are more effective than griseofulvin in the treatment of tinea pedis.

Tinea Cruris

- Responds to any topical antifungal (allymines>effective)
- Topicals 2-4 weeks until clear + 1 week
- Culture proven tinea that does not improve switch to another class of antifungal agent

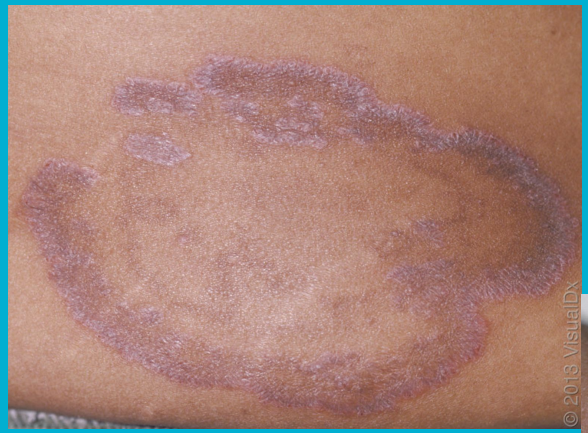


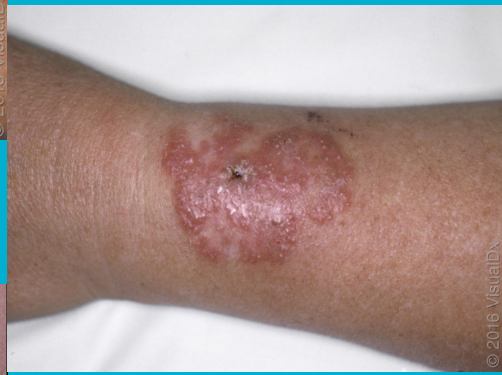


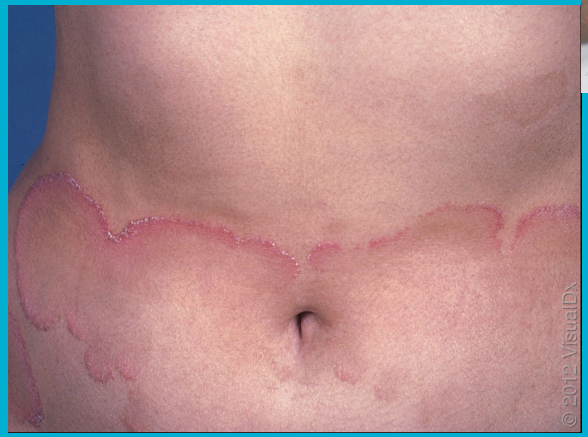


Tinea Corporis

- Involving trunk and extremities
- T. rubrum most common pathogen
- Variant - Majocchi granuloma
- For small areas use topicals in allylamine or benzaline groups
- Systemic therapy: immunocompromised patients, large BSA, not responsive to topicals, or Majocchi.
    - Terbinafine good option

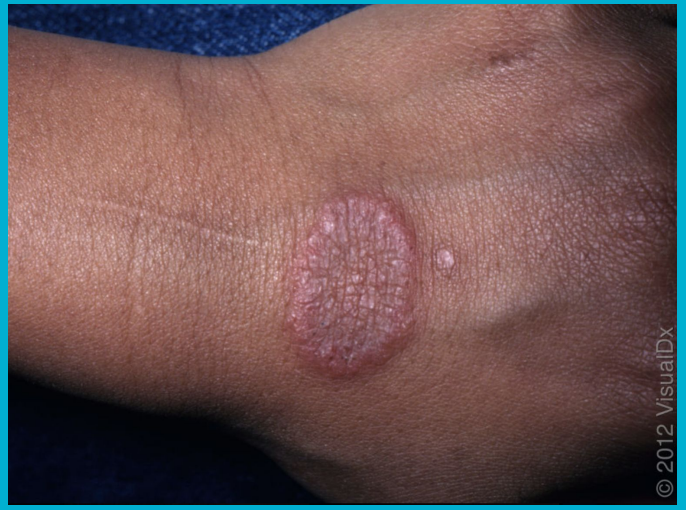


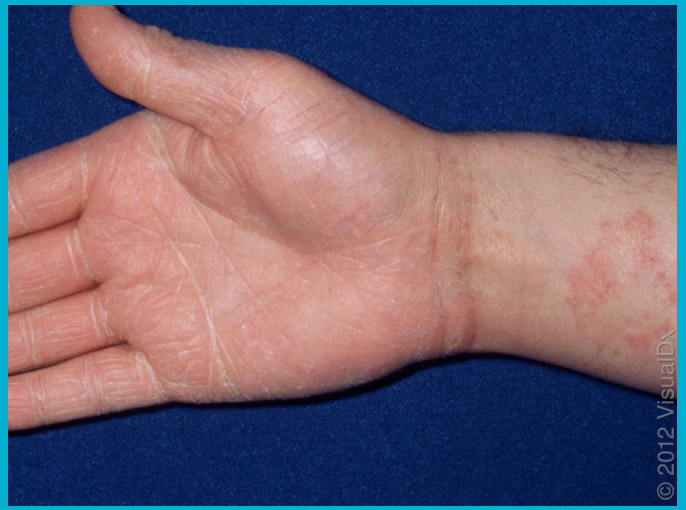




Tinea Manuum

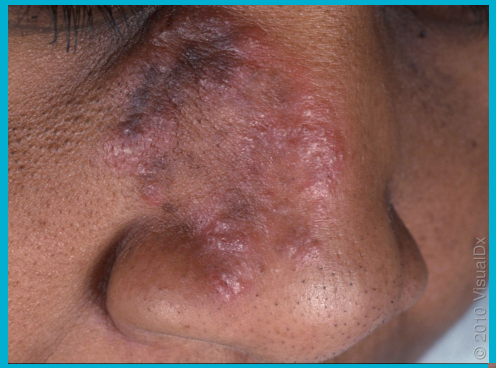
- Tinea on palms have a similar appearance to moccasin type tinea pedis
  - Two feet, one hand
- Tinea on dorsum of hand has a more annular appearance similar to tinea corporis
- Stratum corneum of the hands is thick so often topicals are not enough
  - Terbinafine and itraconazole

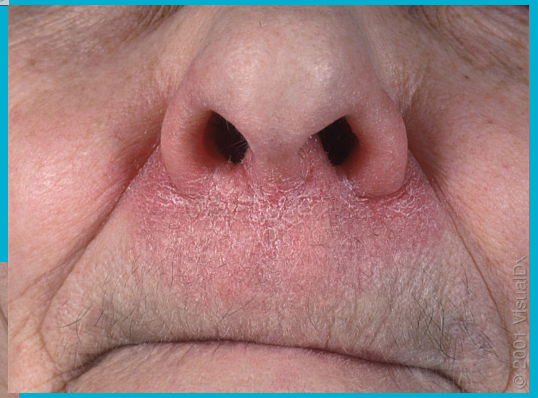


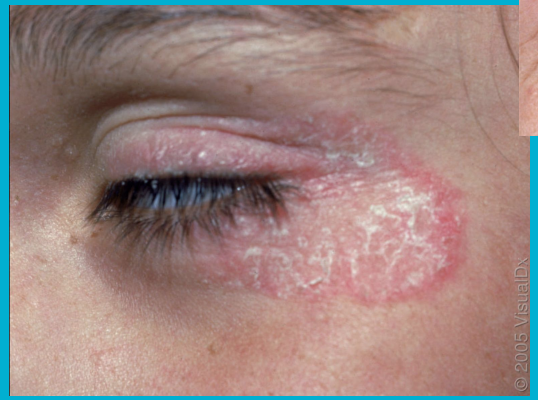


Tinea Faciei

- Often misdiagnosed as they are not always annular
- Could be caused by autoinoculation from tinea pedis or corporis
- KOH can differentiate from CLE, eczema, seb derm, PMLE, and psoriasis
- Treat with topicals

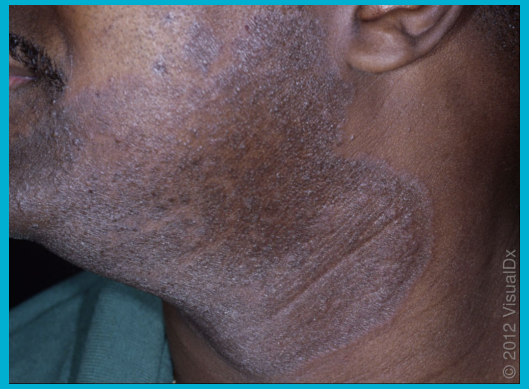


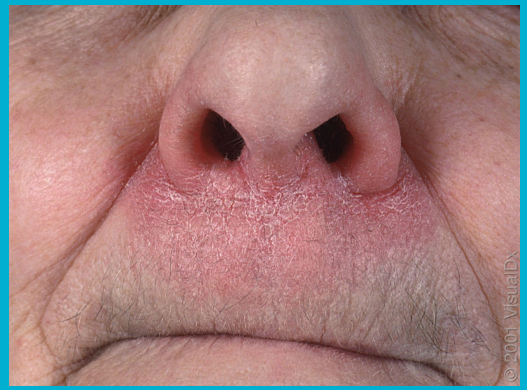


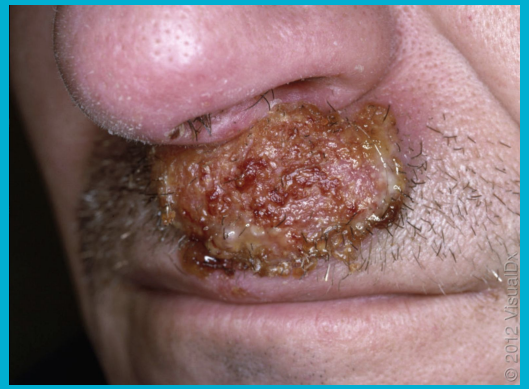


Tinea Barbae

- Mostly seen in adolescent men
- Caused by T rubrum
- Usually requires topical antifungals for 2-4 weeks
    - Terbinafine is drug of choice

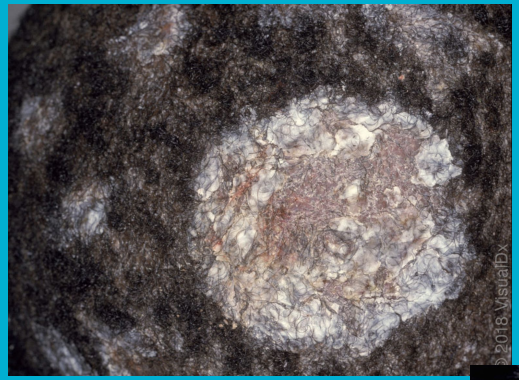


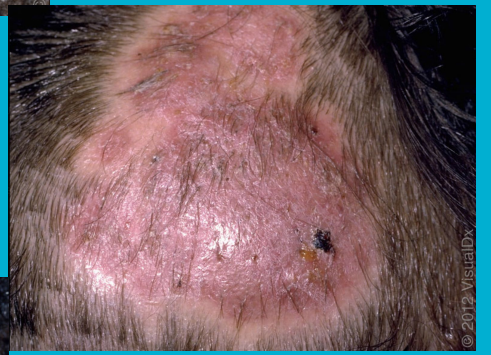


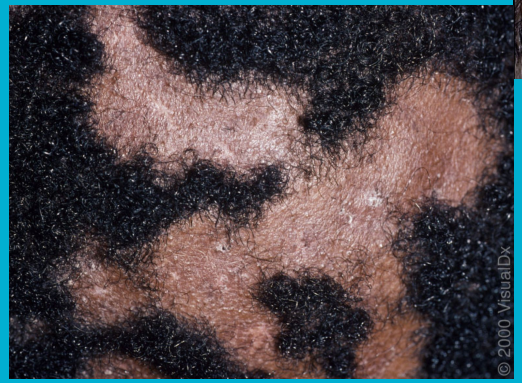


Tinea Capitis

- Commonly seen in children
- Endothrix (infection in the hair shaft) caused by T. tonsurans is responsible for 90% to 95% of tinea capitis in the United States.
  - Patchy alopecia with noninflammatory scaliness
- Ectothrix (infection outside the hair shaft) less common grey patch usually caused by M. canis.
  - Partial alopecia with broken hairs
- Griseofulvin GOLD STANDARD 6 week course
  - Treat for 2 weeks beyond symptom resolution



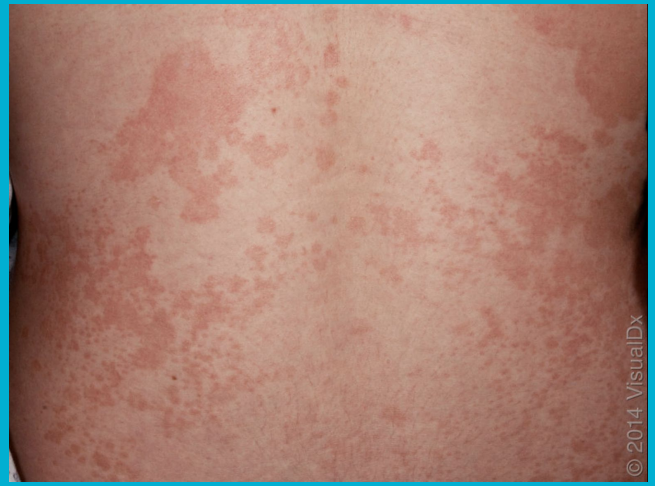


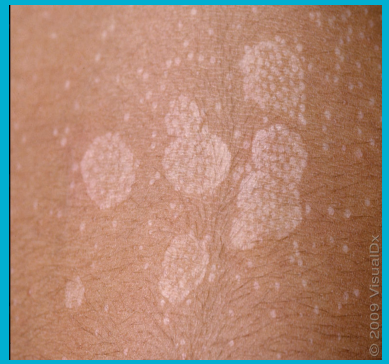


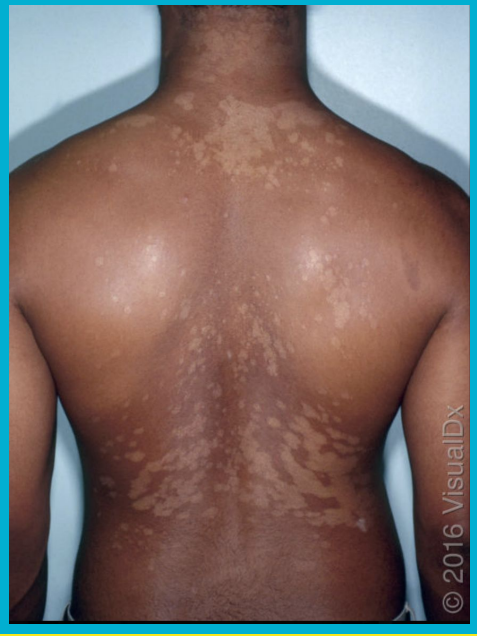
Pityrosporum: Tinea Versicolor

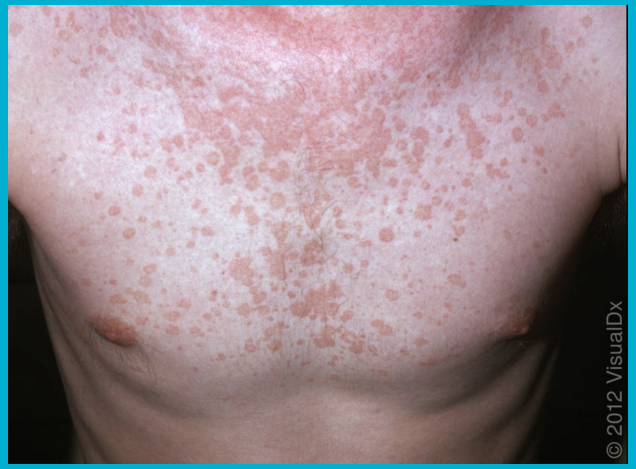
- Caused by an overgrowth of pityrosporum, which is a component of normal skin flora
- Not contagious
- Asymptomatic-mildly pruritic
- Recurrence is common and maintenance is recommended
- Can take weeks-months for pigment to normalize
- Ketoconazole shampoo 2% applied like a lotion to wet skin is highly effective when used for 3 to 14 consecutive days
    - Once a week during summer months
- Fluconazole (300 mg), given once a week for 1 to 4 weeks
- Itraconazole 200 mg, once daily for 5 to 7 days, or alternate dosing of 100 mg daily for 2 weeks

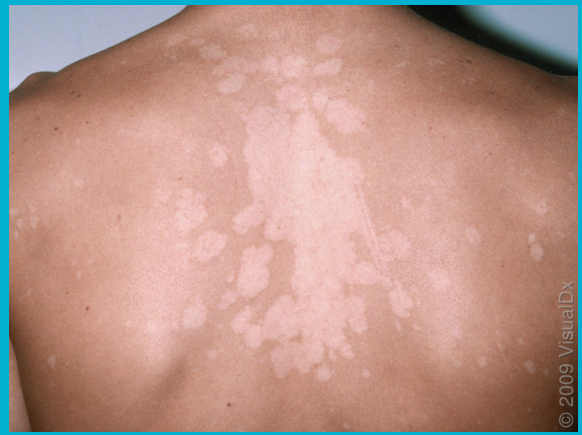
Tinea versicolor





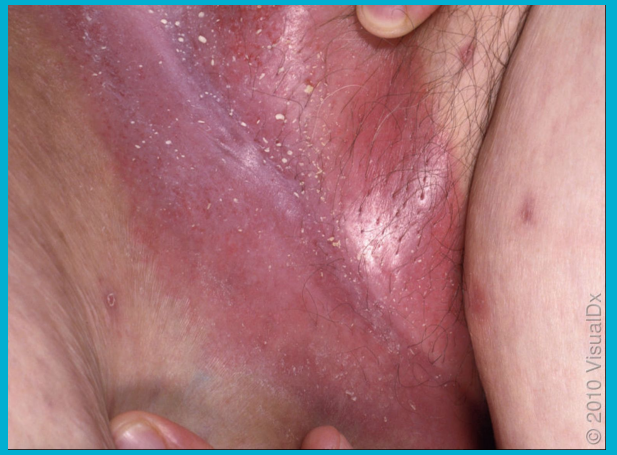


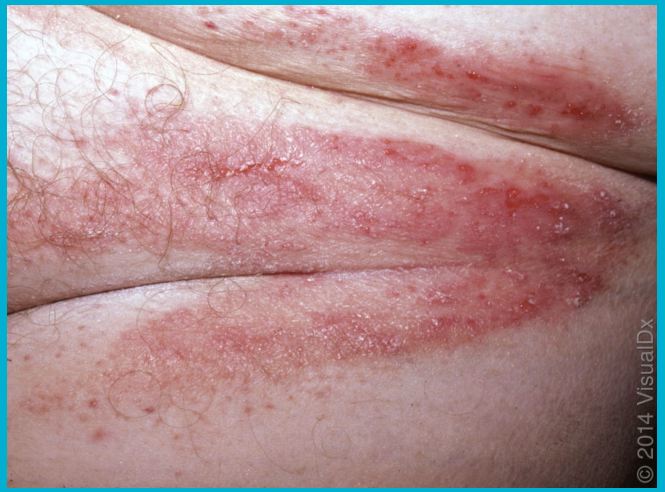


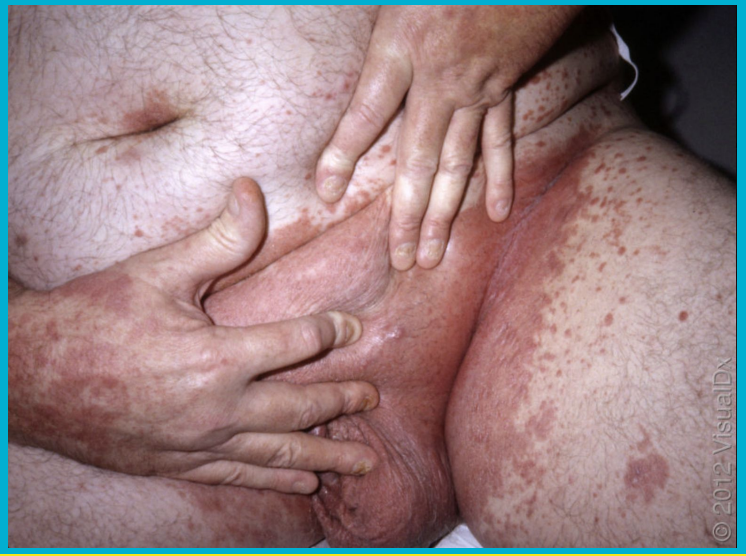


Candida - Intertrigo

- Satellite pustules with maceration
- Chronic friction and moisture usually in obese patients
- Tx with azoles and keeping area dry





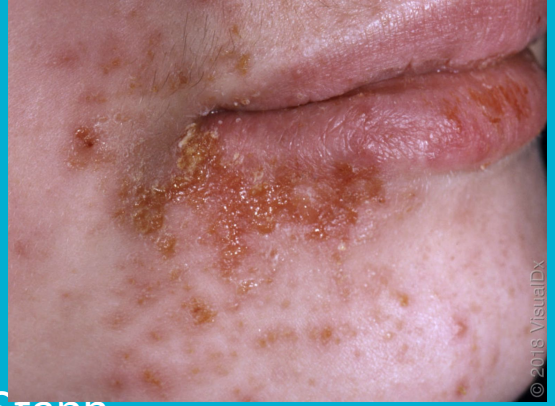


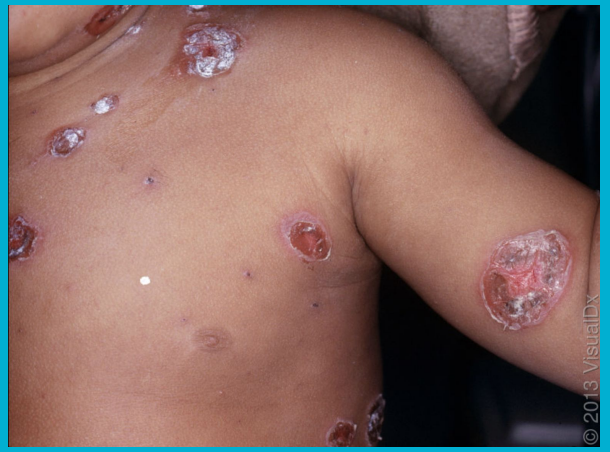
Bacterial infections

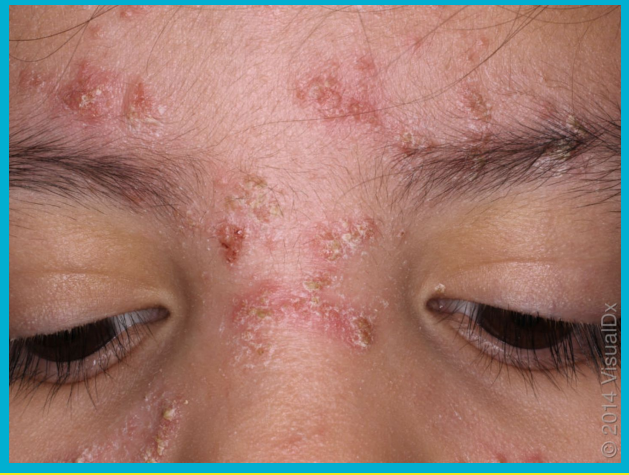
- Very common in primary care
- Usually caused by:
  - Staphylococcus Aureus (MSSA) or MRSA
  - Streptococcus pyogenes (Group A strep)
  - Less commonly Haemophilus influenzae, Pseudomonas, corynebacterium
- More common in skin that has been damaged already allowing access to skin pathogens

Impetigo

- Superficial, contagious
- Caused by Group A Strep, Staph aureus
- More common in hot climates or with poor hygiene.
- Close living quarters can be an issue
- Can be bullous or nonbullous

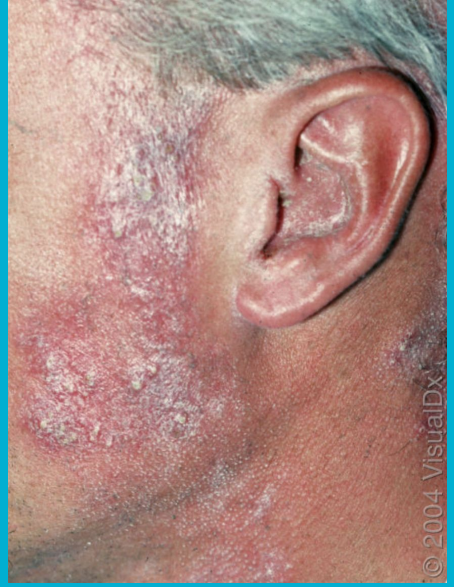


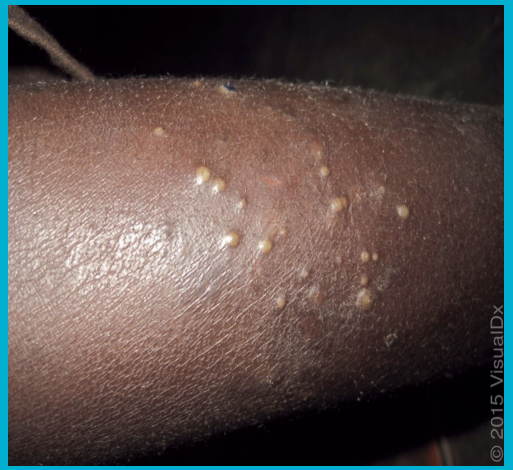


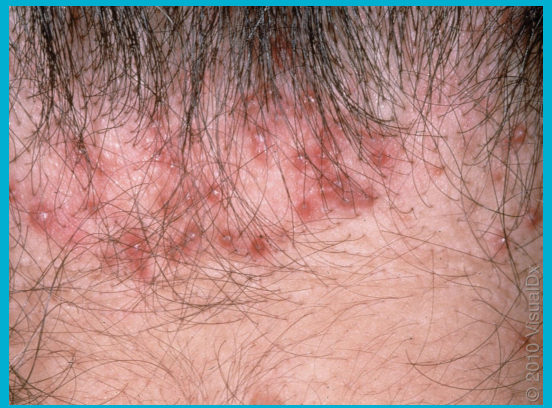


Folliculitis

- VERY COMMON
- (Typically) bacterial infection of the hair follicle
- Usually caused by coagulase positive staph,
- Other organisms include pseudomonas, *Klebsiella, Escherichia,Serratia marcescens, and Proteus, MRSA, fungi*
- Red elevated tender pustule
- Hair in center of pustule







Bacterial infections - Medications

Topical therapy (mild impetigo):

- Bacitracin (not preferred)
- Mupirocin (Bactroban) *BID x 5-10 days*
- Retapamulin ointment (Altabax) 1% BID x 5 days *9 months of age and older*

Topical treatment of folliculitis:

- Clindamycin topical BID
- Erythromycin topical BID
- Bactroban topical BID

Bacterial infections - Medications

Oral antibiotics 1st line:

- Amoxicillin/clavulinic acid 25-50 mg/kg/day divided BID
- Cephalexin 25-50 mg/kg/day divided TID max 500 mg TID
- Dicloxacillin 250-500 mg QID x 5-7 days

Oral antibiotics 2nd line:

- Azithromycin 500 mg po on day one, then 250 mg po qd x 4 days
- Erythromycin 250 – 500 mg po (adult) x 5-7 days
- Clindamycin 15 mg/kg/day po TID x 10 days

Bacterial infections - MRSA treatment

- Clindamycin 30-40 mg/kg/day max 450 mg po TID
- Bactrim 4-6 mg/kg/dose of TMP max 2 DS tabs BID
- Doxycycline 100 mg po BID
- Minocycline 200 mg po x1, then 100 mg po BID
- Linezolid 600 mg po BID

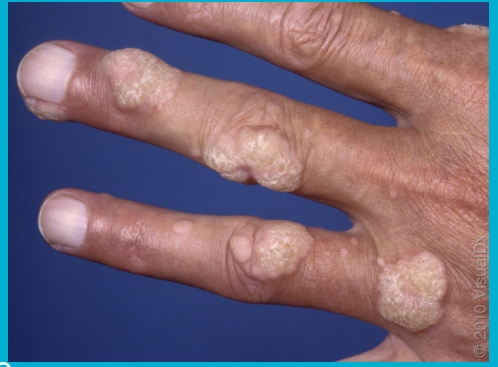
Bacterial infections - Decolonization

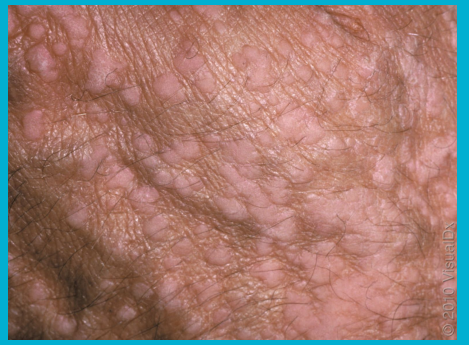
- Mupirocin nasal
  - Apply to nares BID x 5-10 days
- Chlorhexidine
  - Apply to body x 7-14 days
- Bleach baths

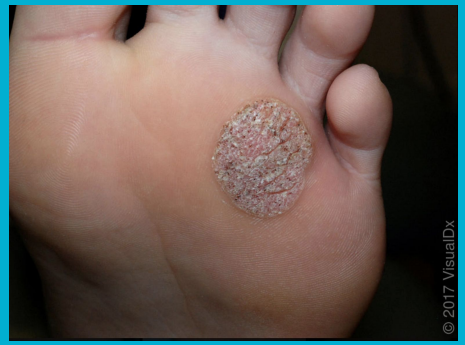
Warts

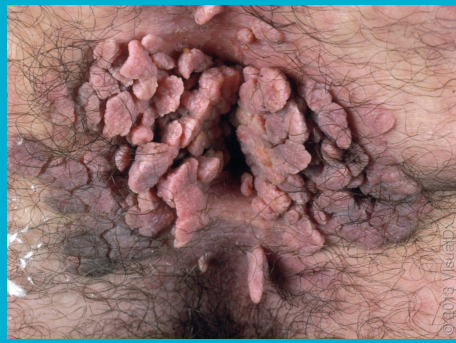
1. Common warts:
    a. Seen 5- 20 years. Only 15% occur after the age of 35 years. Mostly on hands
2. Flat warts:
    a. Children and young adults
3. Plantar warts
4. Anogenital warts and condyloma acuminata

Always interrupt skin lines, thrombosed capillaries









Warts - treatments

TABLE 10-1 First- and Second-line Treatment Options for Warts

THERAPY	ADVANTAGES	DISADVANTAGES	CONTRAINDICATIONS	COMMENTS
First-line				
Salicylic acid (keratolytic)	Available over the counter, inexpensive, easy application, effective, including plantar warts or thick lesions, nonscarring	Macerates any skin where it is applied, reapplied if it gets wet, requires multiple applications, can cause tenderness	Peripheral neuropathy, peripheral artery disease, nonintact skin or erosions, pregnancy	Can be used in conjunction with cryotherapy
Cryotherapy (thermal destruction)	Effective in older children and adults, anesthesia is not necessary, great for warts on hands, safe in pregnancy and breastfeeding, fast, can treat multiple lesions and thick lesions	Painful, can result in hyper- or hypopigmentation especially on dark skin tones, caution should be used in the treatment of facial warts, requires multiple in-office treatment by clinician, which can be expensive and inconvenient	Cryoglobulinemia, cold agglutinins, cold urticaria	Treatment on fingers and toes (especially with freeze–thaw–freeze cycle) may cause hemorrhagic bullae which are benign, use caution on the digits and near nerves (severe pain and neuropathy), cautioned use in dark skin tones, treatment of periungual warts may result in nail deformity; see chapter 24 for instructions on use
No intervention	No cost or risk of pain or scarring, two thirds of warts spontaneously resolve within 1–2 years	Warts may grow or spread on self or transmission to others, psychosocial burden, pain, and bleeding especially on the hands and feet		Patient education regarding transmission and prevention of autoinoculation

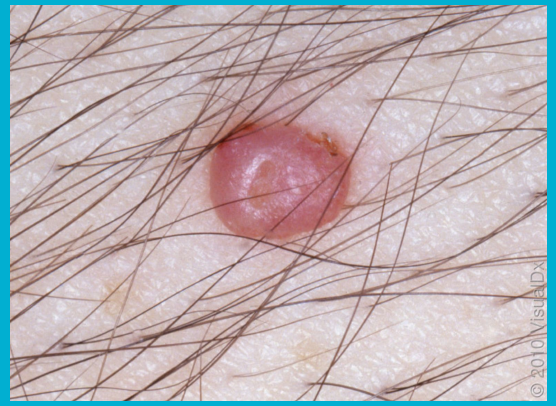
Warts - treatments

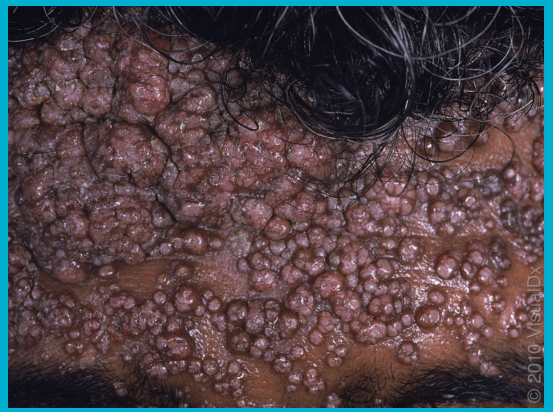
TABLE 10-1 First- and Second-line Treatment Options for Warts *(continued)*

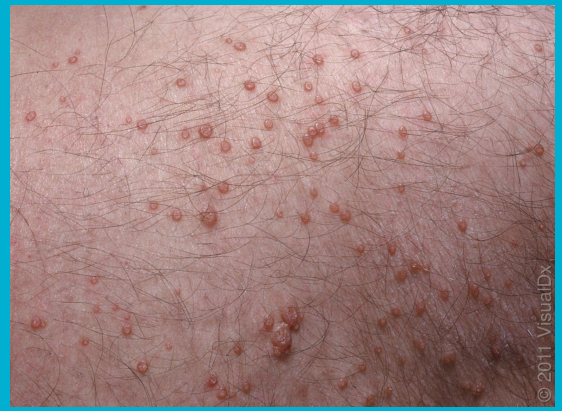
THERAPY	ADVANTAGES	DISADVANTAGES	CONTRAINDICATIONS	COMMENTS
Second-line (not evidence-based)				
Duct tape (occlusive)	Inexpensive, easy to do at home, easy for children, pain-free	Can be difficult to keep tape on, effectiveness is uncertain		Cover with duct tape, leave on for 6 days, then soak and pare; leave uncovered overnight; then repeat cycle until resolved
Cimetidine (systemic immune modulator)	Available over the counter	Many possible drug interactions	See FDA recommendations	Mostly anecdotal reports
Cantharidin (blistering agent)	Painless at time of application, useful for multiple lesions and in young children, no scarring	In-office treatment only, blisters can cause discomfort, response varies, may need additional treatment with same or other modalities	Face or genital mucosa	Caution with use on digits, severe blistering can occur if applied incorrectly; see chapter 24 for instructions on use
Third-line: If no improvement with above therapies repeated over several months, consider referral to dermatology for more aggressive treatment				

Molluscum Contagiosum

- Self limiting, localized, subacute viral infection transmitted by skin to skin contact
- Can spontaneously resolve in about 2 months
- Can treat with cantharidin, cryotherapy, or curettage





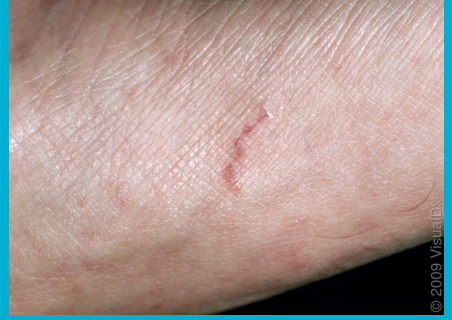


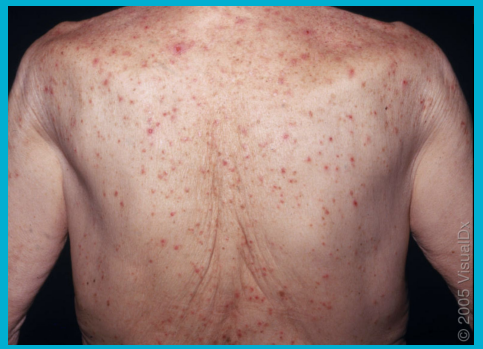
Infestations

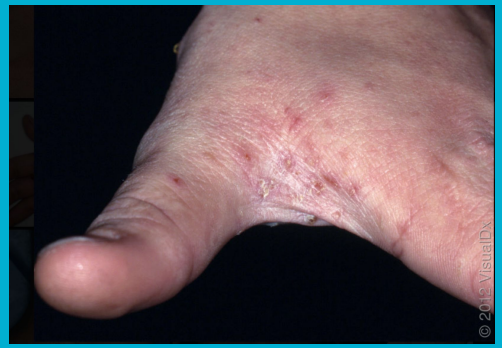
1. Scabies
2. Lice

Scabies

- Look for dermatitis that is worse on trunk, hand/feet, perineum
- May have burrows
- Treat with Elimite cream
  - Sleep with cream on and in am shower off and watch clothing/bedding in HOT water.
  - Topical antiparasitic/pediculicide/scabicidal
  - s/e: pruritis, erythema, rash, edema
- Pruritus associated with hypersensitivity to mites can last for up to 2 to 4 weeks after effective treatment.







Scabies treatment

TABLE 13-1 Prescribed Medications for Treatment of Scabies

MEDICATION	ADULT NONCRUSTED	ADULT CRUSTED	PEDIATRIC NONCRUSTED	PEDIATRIC CRUSTED	SPECIAL INFORMATION
Permethrin 5% cream (Rx)	Apply × 1, may repeat in 7 days if live mites still present; rinse after 12 hr	Apply q.d. × 7 days, then 2×/wk until cured; rinse after 12 hr (recommend use w/ oral ivermectin)	>2 m: Apply × 1, may repeat in 14 days if live mites still present; rinse after 8–12 hr	>2 m: Apply QD ×7 days, then 2×/wk until cured	Pregnancy category: B Lactation: Probably safe Diminished sensitivity has been documented Apply neck down, w/special attention to the nails and umbilicus
Lindane 1% lotion (Rx)	Apply 30 mL 1% lotion ×1 (maximum 60-mL dose for larger adults; rinse off after 8–12 hr	Not indicated	1 mo–5 yr: Apply ×1 (max: 15 mL); rinse off after 8–12 hr >6 yr: Apply ×1 (max: 30 mL); rinse off after 8–12 hr	FDA approved but **not recommended** for use on open, crusted skin Must try other agents first	**Black-Box Warnings** Pregnancy category: C Lactation: Probably safe Contraindicated in seizure disorder Neurotoxicity NOT first line treatment Do not retreat Do not apply on open wounds Banned in some geographic areas Apply neck down, w/special attention to the nails & umbilicus
Ivermectin 3-mg tablets (Rx)	0.2 mg/kg PO ×1 (may repeat in 2 wk if symptoms persist)	0.2 mg/kg PO ×1 on days 1, 2, 8, 9, 15 (may also give on days 22 & 29 for severe cases; use with topical scabicide)	Not FDA approved	Not FDA approved	Pregnancy category: C Lactation: Safety unknown Give on an empty stomach

Pediculosis

- Can be on head, body or pubis
- Very contagious
- Erythema & scaling may be present
- Treat with a pediculicide – in which case treatment will need to be repeated
  - Or ovicidal in which case treatment will not need to be repeated
  - Great care to avoid recurrence must be taken
  - A fair amount of resistance to medication exists

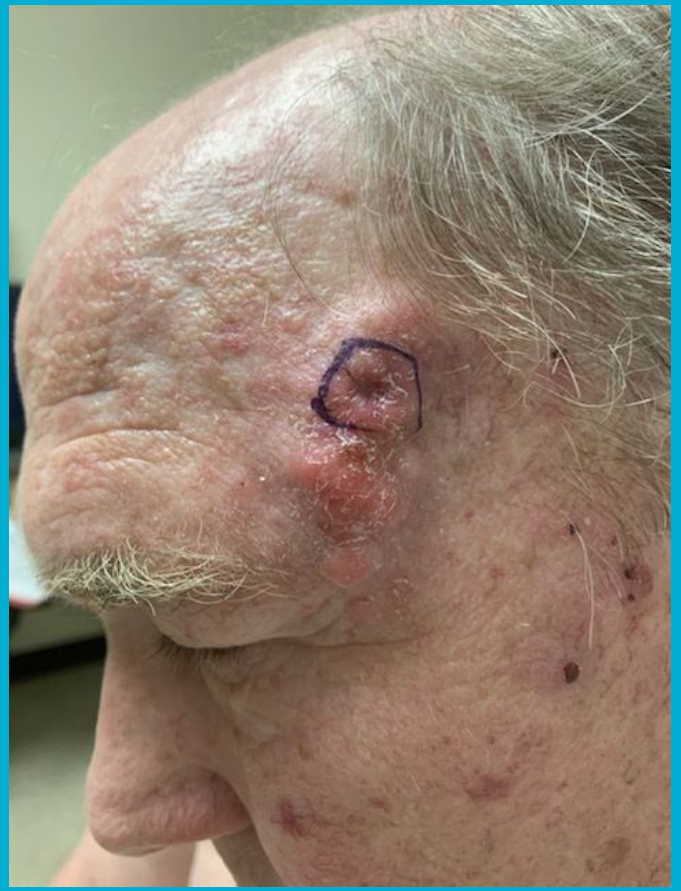
Pediculosis Treatment

TABLE 13-2 Medication Options for Pediculosis Capitis and Pubis

MEDICATION	CAPITIS (DAY 1 & 8)	PUBIS (DAY 1 & 8)	SPECIAL INFORMATION	EFFICACY
Permethrin 1% cream/lotion (OTC)	Topical application for 10 min to clean, dry hair	Topical application for 10 min to clean, dry hair	None	*Capitis:* Poor–fair *Pubis:* Fair
Permethrin 5% cream (Rx)	Topical overnight application to clean, dry hair	Topical application for 8–12 hr	Approved for use ≥/2 mo of age Pregnancy category: B	*Capitis:* Poor–fair *Pubis:* Good
Lindane 1% shampoo (Rx)	Topical application for 4 min to clean, dry hair, then add water to lather and rinse	Topical application for 4 min to clean, dry hair, then add water to lather and rinse	Potential CNS toxicity Not recommended for infants or breast feeding Pregnancy category: C	*Capitis:* Poor–fair *Pubis:* Poor
Spinosad 0.9% cream (Rx)	Topical application for 10 min to dry hair	Not FDA approved	Approved for use ≥/4 yr of age Pregnancy category: B	*Capitis:* Poor–fair
Benzyl 5% alcohol lotion (Rx)	Topical application for 10 min to dry hair	Not FDA approved	Approved for use ≥/6 mo of age Pregnancy category: B	*Capitis:* Poor–fair
Ivermectin 0.5% lotion (Rx)	Topical application for 10 min to dry hair	Not FDA approved	Approved for use ≥/6 mo of age Pregnancy category: C	Not available
Ivermectin 3-mg tablets (Rx)	Adults: 0.2 mg/kg PO Q10 days × 2 doses Pediatric: Not FDA approved for lice	Adults: 0.25 mg/kg PO Q10 days × 2 doses Pediatric: Not FDA approved for lice	Give on an empty stomach Potential CNS toxicity Not recommended in breastfeeding Pregnancy category: C	*Capitis:* Poor–fair *Pubis:* Excellent

Biopsies

- Know type of biopsy needed
  - Shave vs deep shave vs wedge
  - Punch
  - Excisional biopsy
- Include morphological description and DDX to pathology report
- Preferably send to dermatopathologist
- Clinical pathological correlation is ESSENTIAL

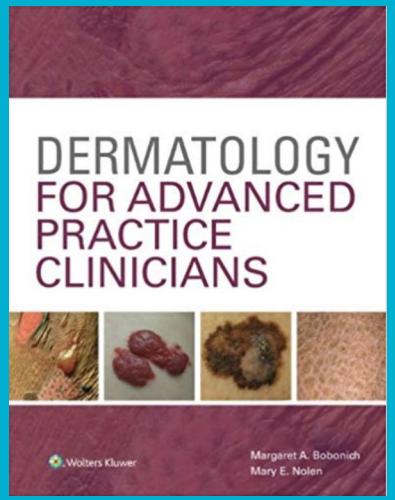


Resources

Visual DX Learning modules: https://www.visualdx.com/learnderm/

AAD Basic Derm Curriculum: https://www.aad.org/education/basic-derm-curriculum

Learn Derm Podcast: https://learndermpodcast.com/



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