Quick Links | Patient Information | Differential DX | Topical Treatments | Treatment Tips

Eczema (Atopic Dermatitis) In a Nutshell

The vast majority of eczema cases can be managed in primary care

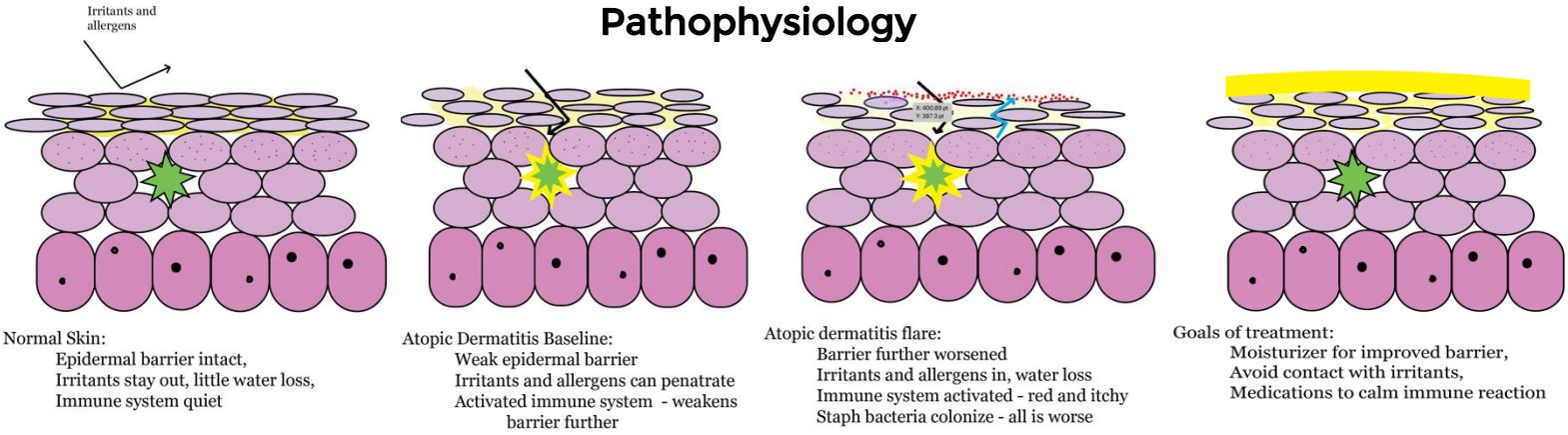
Click links below for Treatment Tips before making a referral.

The most common reasons for treatment failures are:
- Inadequate use of moisturizers
- Inadequate application of treatment with flares
- Fear of use of topical steroids
- Secondary infection

Common questions include:
- What about food allergies?
- Black box warning tacrolimus?

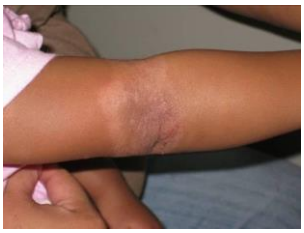
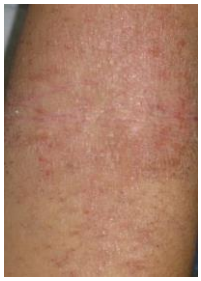
Email bundle of parent info: eczema overview plus video and action plan |✉|

Pathophysiology

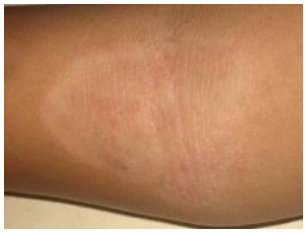
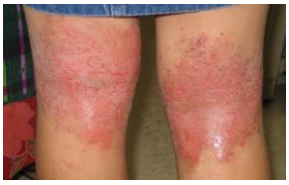
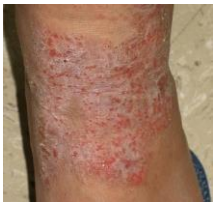
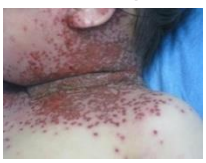


TREATMENT TIPS	
Concepts in treatment	• Avoid contact with irritants • Protect/improve barrier function • Calm immune reaction • Stabilize microbiome
Daily Skin care	• Daily bath, 5-10 min, warm water, no soap (mild cleansers OK), no scents • Pat dry • Apply medication if needed • Apply moisturizer within 2 min of getting out of water • Avoid contact with irritants (soap, fragrance incl laundry detergents, dryer sheets, known environmental allergens, frequent washing, wool clothes, bubble baths, alcohol hand sanitizer)

Choosing and applying moisturizer 	• Ointments tend to sting less than creams or lotions • Lotions and oils likely not thick enough • Choose unscented products • Products containing dimethicone have added water block that is helpful for hands and around mouth • Ointments may be too sticky in hot months & can ruin clothing • Creams can be kept in the fridge for "cooling" effect on skin

Treating flares
 
 
	• Treat until clear not just a bit better
	• Ointments tend not to sting and are a bit stronger
	• 1 Finger-tip-unit covers 2 palms of skin (prescribe adequate amount and let the volumes provide information about how much you would like patients to use) = generous application
	• Face, folds, full-body or mild areas: Hydrocortisone 2.5%
	• Moderate areas on body: Betamethasone valerate 0.1%/mometasone ointment 0.1%
	• Severe resistant areas on body esp hands/feet: Clobetasol 0.05% ointment
	• Non-steroid alternatives can be trialed for localized areas esp for recurrent flares
	  ○ Limited by cost, may feel "hot" on application
	  ○ Calcineurin inhibitors (tacrolimus, pimecrolimus)
	  ○ PDE-4 inhibitors (crisaborole)

Maintenance therapy	• Consider if plaques clear but then flare within 2 weeks of stopping treatment • Apply the effective medication or non-steroid agent twice weekly to affected areas • Continue all daily routines
Food allergies	• People with atopic dermatitis have higher rates of food allergies • Atopic dermatitis is not a food allergy • Atopic dermatitis can flare if someone has an allergic reaction to food • Diet should be advanced normally for infants with atopic dermatitis • Food-based moisturizers might increase risk of food allergy by transdermal sensitization (ie. Coconut oil, almond oil, olive oil) • Facial eczema in infants is not an allergy, but might increase risk of transdermal sensitization – apply barrier aggressively to prevent contact as often triggered by contact with saliva and acidic foods (tomato, citrus)

<table>
<tr><td>Fear of topical steroids
  </td><td colspan="2">Common fear as all steroids are lumped together in people's minds and horror stories are ubiquitous on the internet
Appropriate use of topical steroids when managing eczema is safe and effective
Avoid using too little or too weak therapy because this can lead to longer duration of treatment required and feed into concerns of needing to increase potency due to "accommodation" to the cortisone
If using potent cortisones, do monitor for increased visibility of blood vessels in areas of treatment
Point out background hypopigmentation when present prior to treating as this might be seen as bleaching from the medication when it becomes more visible with therapy</td></tr>
<tr><td>Microbiome</td><td colspan="2">More is being learned about microbiome in eczema
Normal skin flora often disrupted by MSSA
Gut microbiome also altered in many with eczema
Oral probiotics do not cure eczema, but have been shown to be modestly helpful</td></tr>
<tr><td rowspan="2">Infections</td><td>Bacterial
 
  </td><td>Staphyloccous aureus is frequent colonizer of eczema and triggers worsening flares
GpA strep and MRSA can also cause infections
If localized crusting add fucidin or mupirocin to treatment for 5-7 days
If widespread erosions, crusting:
Swab for C&S
Empirically start treatment for MSSA, GpA strep (i.e. cephalexin)
Consider dilute bleach baths (1/4 cup bleach in ¼ full tub of water)
Continue to treat eczema</td></tr>
<tr><td>Viral
  </td><td>Several viruses tend to track in areas where skin barrier is compromised</td></tr>
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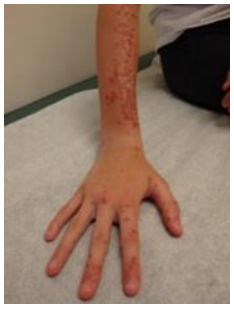
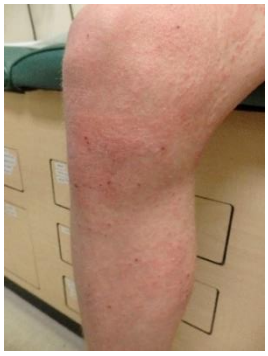
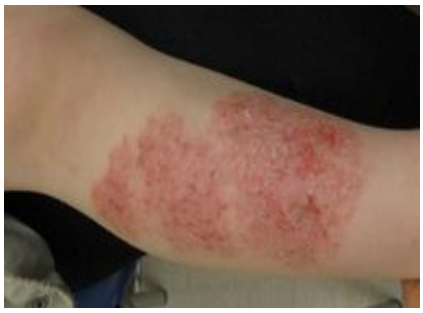
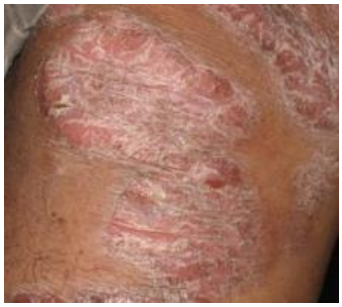
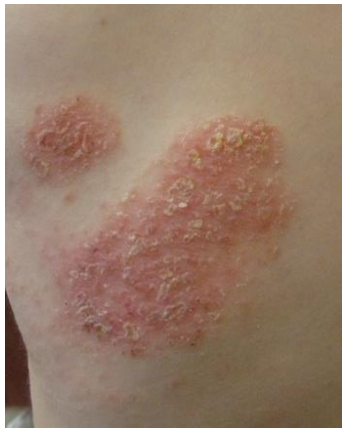
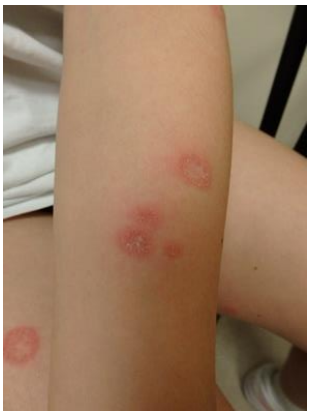
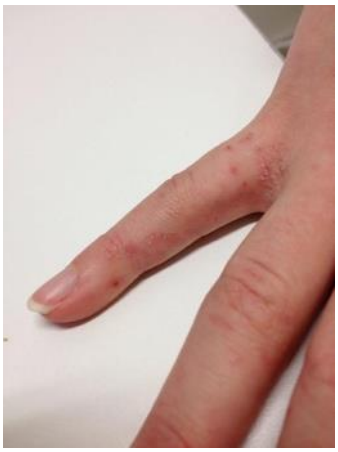
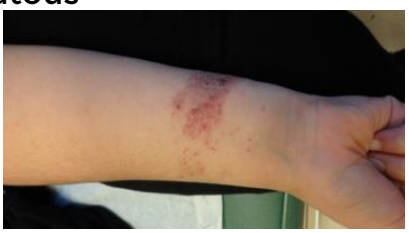
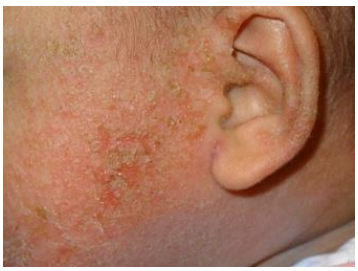
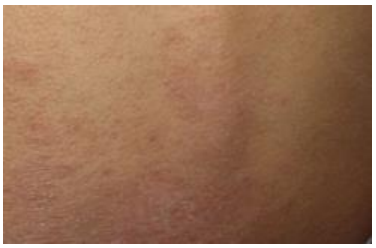
		**Eczema herpeticum** • Monomorphous erosions that coalesce into large eroded plaques ○ Swab for PCR ○ Acyclovir 15mg/kg/dose QID (max dose 800mg/dose) or consider admit for IV treatment if severe Eczema coxsackium ○ No treatment is needed ○ Can be confirmed on PCR if concerns for other infxn Molluscum contagiosum ○ Continue to treat background eczema with hydrocortisone or other mild corticosteroid
Black box warnings	- Warning labels can raise concerns for use of the medications - Label on tacrolimus has been removed in many jurisdictions as large studies have not shown increased risks with routine topical use	
Escalating therapy 	If not improving as would anticipate: ○ Check how much medication and moisturizer are actually being applied (ask families to bring in containers) ○ Consider possibility of infection/colonization as trigger ○ Consider ongoing contact with triggers ○ Consider alternative diagnoses as below If eczema cannot be controlled with topical therapy despite adequate treatment and review as above or if required mid-potency cortisone daily to prevent flares – consider escalation Options that will be considered include: ○ Narrow band UVB therapy ○ Methotrexate or other conventional immunosuppressants (CsA, MMF, AZA) ○ Biologics – Dupilumab, tralokinumab ○ JAKi – Upadacitinib, abrocitinib	
Comorbidities	Atopic diathesis: asthma, environmental allergies, food allergies, eosinophilic esophagitis Mental health and neurodevelopment: ADHD, Anxiety, Depression Autoimmune conditions: alopecia areata	

PATIENT INFORMATION Click HERE to view ALL atopic dermatitis info in Pathways			
Atopic Dermatitis - Eczema - Skin Care Guide (Dr Scott Cameron)	✉	Atopic Dermatitis - Parent Handout (UBC CPD)	✉
Atopic Dermatitis - Eczema Care Online Toolkit (Eczema Care Online)	✉	Atopic Dermatitis - Parent or Caregiver Video (UBC CPD)	✉
Atopic Dermatitis - Eczema and Food Allergy in Babies and Young Children Handout - Multilingual (HealthLinkBC)	✉	Atopic Dermatitis – Parent Action Plan (UBC CPD)	✉
		Bundle of all 3 above	|✉|

TREATMENT			
Daily treatment for flares until skin is clear, then maintenance skin care only If flares within 2 weeks: resume daily treatment until clear and consider treatment twice per week for maintenance			
Patient Education: • Chronic relapsing disease course • Recognizing flares and infection • When to seek medical care		**Basic Skin Care:** • Gentle skin care products • Daily lukewarm baths • Apply moisturizer head-to-toe BID Should go through: 150–200g of moisturizer weekly for young children and 250–500g weekly for older children/teens	
TREATMENT FOR FLARES Use BID until skin clears – max 2 weeks			
	Mild areas OK for Face & Folds	Moderate areas Not on face/folds	Severe areas Not on face/folds
First Line Treatment	Hydrocortisone 2.5% cream	Betamethasone valerate 0.1% cream/ointment	Mometasone 0.1% cream/ointment
⇩ Persistent flare despite adequate treatment for 2 weeks? Verify diagnosis and patient adherence, then escalate treatment: ⇩			
Second Line Treatment	Desonide 0.05% ointment Or Calcineurin inhibitor	Mometasone 0.1% ointment	Clobetasol 0.05% ointment
TREATMENT FOR MAINTENANCE Daily moisturizer, avoid irritants, avoid hot/long baths			
If frequent flares	Twice weekly hydrocortisone 2.5% or calcineurin inhibitor	Twice weekly moderate potency topical steroid or calcineurin inhibitor	Twice weekly moderate or potent topical steroid or calcineurin inhibitor

DIFFERENTIAL DIAGNOSIS		
Atopic dermatitis (Eczema)	VS.	**Differential Diagnosis**
-poorly defined -more likely crusted -more pruritus -assoc asthma, allergies 		**Psoriasis** -well defined -more likely scaly -more scalp involvement -assoc arthritis 
-Eczema has scale throughout lesion - chronic history 		**Tinea corporis** -annular with scale at edge -acute history -possible history of exposure ie new pet, wrestling or martial arts, farm exposure, friend with similar 

-chronic history -no axillary nodules or burrows	**Scabies** -linear scale = burrows -web space involvement -acute onset -family members also itchy -nodules in axilla or genital area 
	Contact dermatitis -localized to areas of contact <u>Irritant</u> – often lips/hands <u>Allergic</u> – often odd distribution, acute may be vesicular, chronic more typically eczematous 
-Eczema may also appear yellow due to crusting, but not greasy -Fissures at earlobe more typical 	**Seborrheic dermatitis** -localized to scalp, nasal ala, eyebrows, skin folds -scale is yellow and greasy

-Eczema can have diffuse follicular prominence 	**Ichthyosis** -some forms may occur in conjunction with eczema -scale predominant -often less itch
-Eczema does not have acneiform papules -can accentuate on and around lips esp if licking lips often	**Periorificial Dermatitis** -around mouth, nose, eyes -may have background erythema -studded with tiny acneiform papules -worsens with topical steroids -does not usually involve lips
	Keratosis pilaris -autosomal dominant -perifollicular papules on upper outer arms, thighs, lateral cheeks -may have associated erythema -may have loss of lateral eyebrows -less itchy than atopic dermatitis -can be associated with Atopic Dermatitis

Indications for Referral
1. Ongoing disease activity despite appropriate and adequate therapy (Hydrocort to face, mid-potency cortisone to body BID) Note: Recurring flares which **respond** to treatment are expected in the waxing/waning course of eczema, and do **not** require referral
2. Severe presentation: widespread body surface area, secondary complications such as severe infections, or with significant impact on quality of life (sleep, school, daily function)
3. Systemically unwell: including failure to thrive, recurrent infections
Referral Options: Community Dermatologists. Make sure to check the Clinic tab and Advice tab Community Pediatricians who see skin conditions If concurrent atopic comorbidities – consider referral to Allergist