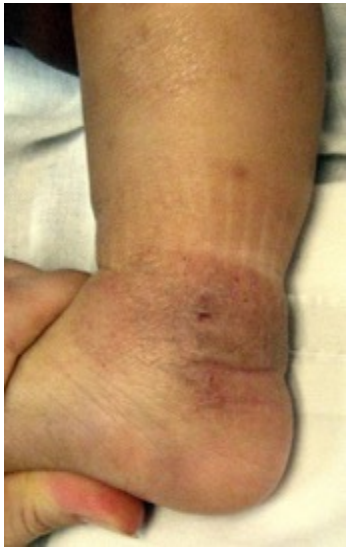
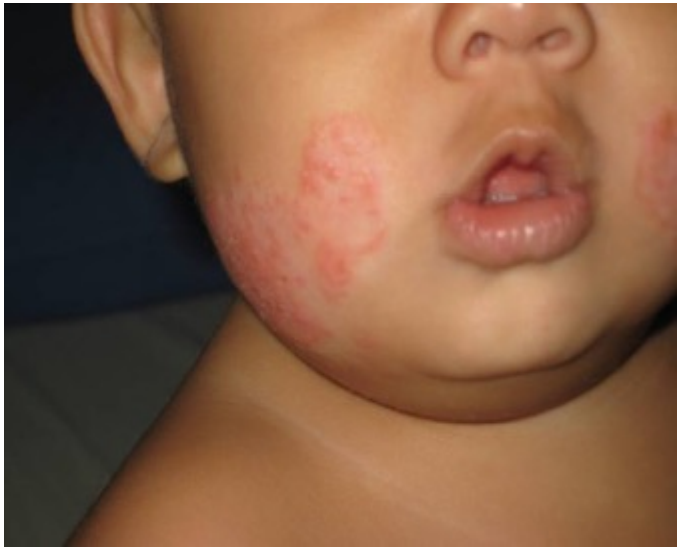
Atopic Dermatitis (Eczema)

Background:

- Very common, up to 15% of population
- Runs in families
- Associated with allergies and asthma
- Skin barrier defects (including changes in Filaggrin, ceramides, natural moisturizing factor) allow for loss of water and penetration of irritants/allergens/pathogens
- Stimulated dentritic cells activate immune response with Th2 bias
- Chronic condition with relapsing and remitting course characterized by “flares”





Clinical Features:

- Dry, red, itchy, scaly skin
- May become thickened (lichenified), eroded, or crusted
- Infants
  - common locations: face, hands, wrists, ankles, scalp, or all over
  - often irritated by saliva
- Older children
  - common locations: folds of arms, behind knees, hands, all over

Routine Eczema Skin Care:

✓Avoid anything that irritates the skin (wool, fragrance, dryer sheets, dry skin, known allergens)

✓Use plenty of moisturizer/cream – especially after the bath, but anytime skin is dry

✓Bath every day with warm water for about 10 minutes

✓No strong soaps, no scented products, no bubble bath

✓Right after the bath apply prescriptions as needed to red areas then apply moisturizer to all skin to improve barrier

✓Thicker moisturizer is better than a runny one

Food allergies are more common in kids with atopic dermatitis, but are not the cause.

More information: http://eczemahelp.ca

http://www.healthlinkbc.ca/kb/content/major/hw216104.html

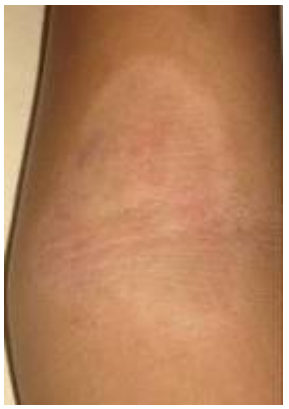
Atopic Dermatitis (Eczema)

Potential Complications

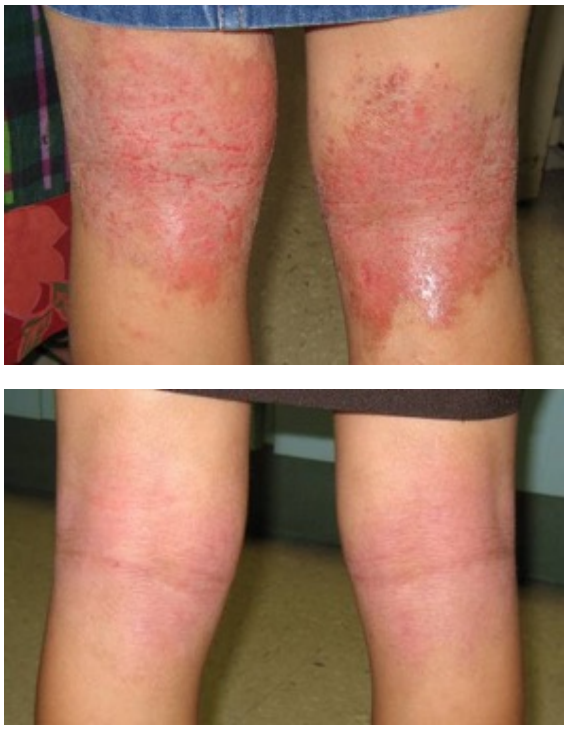
- Skin lightening or darkening in the affected areas
  → Note: This is caused by the eczema and not the topical steroid
- Infection
- Loss of sleep due to itching
- Distraction at school
- Embarrassment
- Cost of medication
- Stress and frustration

Infections and Eczema

- Skin gets infected easily, usually *staph. aureus* or *streptococcus*
- Risk of viral spread in affected areas – eczema herpeticum, eczema coxsackium, widespread molluscum
- Infection can trigger a flare
- May require systemic antibiotics/antivirals



Light color of the skin in an area of eczema



Eczema before and after treatment

Common prescription medications and their use:

Low potency steroids: Hydrocortisone 1% or 2.5% for face and mild areas
Medium potency steroids: Betamethasone valerate, triamcinolone, or mometasone for flares
High potency steroids: Betamethasone dipropionate or clobetasol - only for hands/feet or thick areas

Calcineurin inhibitors (tacrolimus, pimecrolimus), phosphodieterase-4 (PDE-4) inhibitors (crisaborole)
- alternatives to corticosteroids when worried about side effects and/or for maintenance
- may sting when first applied esp to face

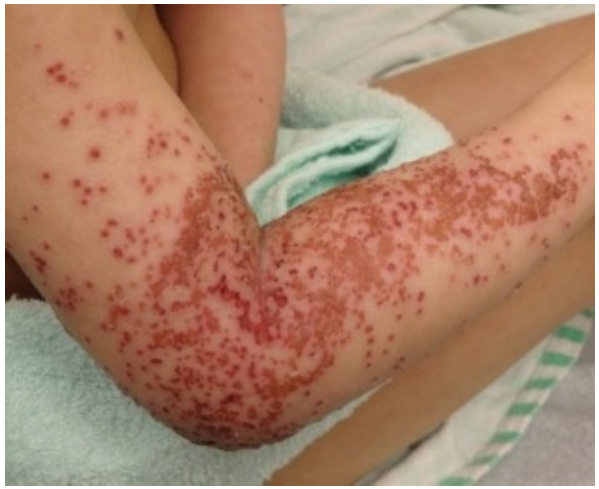
Goal is daily treatment for flares until clear, then maintenance skin care only, treatment can be given twice weekly as part of maintenance program if needed

Oral antibiotics for infections (cephalexin, clindamycin, erythromycin)

Dilute bleach baths (¼ (½) cup of bleach for ¼ (½) tub of water twice per week for 10 minutes to prevent frequent infections

Sedating antihistamines no longer recommended for long term use to aid sleep

Severe atopic dermatitis, not controlled with topicals alone, may be treated with UVB therapy or systemic treatments including methotrexate, cyclosporin, and dupilumab.



Eczema herpeticum

Atopic Dermatitis DDx:

Congenital disorders	Infections/ Infestation	Inflammatory dermatoses	Malignancy	Autoimmune	Immunodeficiency	Metabolic
• Ichthyosis • Netherton syndrome • Keratosis pilaris	• Tinea • Scabies • HIV-associated dermatitis	• **Seborrheic dermatitis**[3] • **Nummular eczema**[2] • Psoriasis • Contact dermatitis	• Cutaneous T-cell lymphoma • **Langerhans cell histiocytosis**[1]	• GVHD • Dermatitis herpetiformis	• Wiskott-Aldrich syndrome • Hyper IgE syndromes • SCID • IPEX	• **Zinc deficiency/ acrodermatitis enteropathica**[4] • PKU