

Learning Circle: Jan 26, 2011

Childhood Eczema

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Eczema

- Greek Ekzema: ek=out zein=to boil
- Non-contagious inflammation of the skin, characterized chiefly by redness, itching, and the outbreak of lesions that may discharge serous matter and become encrusted and scaly.
- Many forms: atopic dermatitis, seborrheic dermatitis, nummular dermatitis, winter eczema, stasis dermatitis, contact dermatitis
- Most common form in children is atopic dermatitis

BC Children's Hospital 2008-2009

Approximate number of visits for the 10 most common diagnoses

Atopic Dermatitis	1100
Acne	160
Hemangioma	150
Congenital Nevus	100
Warts	95
Molluscum Contagiosum	85
Psoriasis	80
Eczema, NEC	75
Vitiligo	60
Nevus	40

Atopic Dermatitis



Atopic Dermatitis: Infants



Atopic Dermatitis: Older children

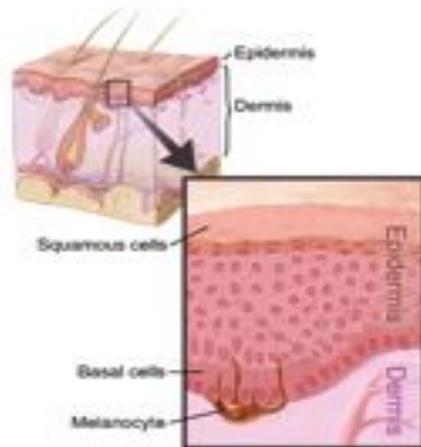


Infections



What causes atopic dermatitis

- Genetics
- Skin itself
- Immune system
 - Assoc. with hayfever, food allergies, asthma
 - Poor handling of infections esp staph



[http://www.caring4cancer.com/uploadedImages/Website-C4C-20/Skin_Cancer_\(Non-Meloma\)/The_Basics/Epidermis-dermis.jpg](http://www.caring4cancer.com/uploadedImages/Website-C4C-20/Skin_Cancer_(Non-Meloma)/The_Basics/Epidermis-dermis.jpg)



[http://en.wikipedia.org/wiki/Epidermis_\(skin\)](http://en.wikipedia.org/wiki/Epidermis_(skin))

Filaggrin and Atopic Dermatitis

Filaggrin mutation

- Strongest risk factor for AD
- Patients with mutation
 - High rate of referral to dermatologist
 - Refractory to treatment
 - Increased risk of asthma
 - Dry skin
 - Hyperlinear palms



http://eso-cdn.bestpractice.bmj.com/best-practice/images/bp/584-2_default.jpg

What makes it worse?

- Dry skin
- Contact with chemicals and fragrances
 - Bubble bath
 - Harsh soaps
 - Perfume
 - Fabric softener, dryer sheets
- Contact with saliva, acidic foods
- Contact with irritating fibers i.e. wool, tags in clothing
- Infections



Impact on the family

- Concern
- Frustration – comes and goes
- Sleeplessness
- Extra work, time
- Cost
- Changes in food prep/eating
- Social concerns
 - embarrassment, fear of contagion



What can be done to make it better?

- There is NO cure
- Fix the protective function
 - Moisturize!!!!
- Avoid contact with triggers
 - No bubble bath, soap with fragrance
 - Fragrance free laundry soap, no dryer sheets
 - Cut tags out of clothing
 - Rinse after swimming
- Use medicine to calm the immune system
 - Corticosteroids
 - Steroid sparing agents
- Prevent and treat infections



Atopic Dermatitis Home Care

- Daily bath: warm not hot, 10 minutes
- No scented products in bath
- Wash with mild cleanser
 - Dove Sensitive Skin, Cetaphil, Spectro, etc.
 - **No** Ivory, Dial, Irish Spring, bath gels
- Pat dry
- Immediately apply medication
- Seal medication in with plain moisturizer
 - Ointment, cream
- Use moisturizer several other times a day



Treatment

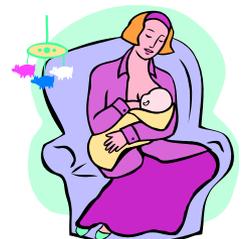


- Corticosteroids – ointments > creams > lotion
 - Hydrocortisone 1%, 2.5%
 - Betamethasone valerate 0.1%
 - Mometasone 0.1%
- Calcineurin inhibitors (tacrolimus, pimecrolimus)
- Antihistamines – Benadryl, Hydroxyzine
- Systemic Therapy:
 - NbUVB, MTX, CSA, Azathioprine



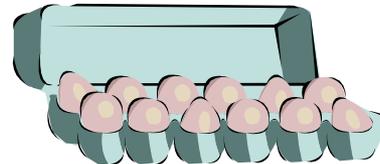
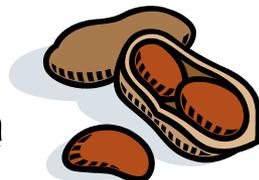
What else can parents/caregivers do?

- Keep fingernails short
- For babies, sleep with socks on hands
- Cover areas frequently scratched after applying medicine
- Consider impact of mold, dust mites, dander, pollens
 - Mattress covers
 - Avoid wall to wall carpets
 - Dogs better than cats
- Breastfeeding until 6 months, then introduce all foods



Eczema and food allergies

- AD and food allergies are related
- Children with AD have an increased risk of food allergy
- Food allergies do not cause eczema
- Occasionally withdrawing a food can make eczema better
- Possibly food allergies occur due to contact between food and broken skin
- Most common causes of food allergy in US
 - Dairy, wheat, nuts, egg, shellfish, soy



Infections

- Prevention
 - Baths with $\frac{1}{4}$ - $\frac{1}{2}$ cup bleach per full tub
 - If recurrent, consider staph carrier state
 - Treat both nares and perianal area with mupirocin BID for 3 weeks
- Impetigo
 - Culture
 - Keflex, Erythromycin, Clindamycin
- Eczema herpeticum
 - IV acyclovir





Differential Diagnosis: Could this be anything else?



- Tinea Corporis
 - Edges are more distinct
 - Improves, then worsens with steroid use
 - Raised border, often with scale
 - Central plaques less scaly



Scabies



- Scabies

- Itching out of proportion to findings
- Papules, nodules, pustules - esp hands, feet, axilla
- Other family members itchy
- Lack of typical eczema features



Nummular eczema



- Localized
- With or without history of atopic dermatitis
- Often require stronger corticosteroids to treat
- Often have a secondary infection associated

Seborrheic dermatitis



- Generally more limited involvement - head and scalp plus folds
- Yellow greasy scale compared to dryer appearance of AD scale



Atopic Dermatitis

- Barrier inadequate -> water out and irritants in
- Over-active immune response which worsens barrier
- Treatment
 - Emolliation
 - Corticosteroids:
 - HC ointment to face and groin
 - Betamethasone valerate to moderate plaques or everywhere to calm a major flare
 - Mometasone to thicker, stubborn areas
 - Calcineurin inhibitors
 - Around eyes, to groin, if concerned about atrophy
 - Perhaps as maintenance
 - Newer moisturizers with ceramides etc. an alternative but pricey
 - Avoid abrupt discontinuation of steroids, calm parents fears about steroid use,
- Bleach baths $\frac{1}{4}$ c bleach in tub for crusted, excoriated patients
- Antihistamines if disrupting sleep
- Antibiotics if clearly infected