The Psychology and Pharmacology of Treating Atopic Dermatitis

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Disclosures:

• I have no conflicts of interest to disclose
• I will be talking off label for treatments of atopic dermatitis
QUACKS ARE THE GREATEST LIARS IN THE WORLD EXCEPT THEIR PATIENTS
This is the % who did NOT open the bottle AT ALL that day.


**Table 2. Salient Maternal Comments Concerning Ease of Use**

"Who in the world puts lotion on six times a damn day?... I don’t want to stop her, she outside playing... I only put lotion on when she takes a bath. I’m just going to be honest."

"I would say a pill... or even if there was a better cream that maybe I’d only have to use once a week or once a month... instead of having to do it every day."

"... Having just one pill that circulated it all... just one thing."

"For me it would be take a pill and just be gone through with it."
“I saw this one doctor who said... that we should not use the should not use [potent topical corticosteroid] anywhere where the skin is actually broken. But then I saw another GP who told me not to use [potent topical corticosteroid] unless it is really bad because it is so strong and it would damage the skin. Could anyone please give me a clear answer about when I should use an emollient, or a mild steroid or a stronger steroid? (Parenting forum, P12-1)
What do we know?

• Patients and parents are lying about use
• Patients don’t use topical medicines much
  – If you say 2x/day, might get 1x/day, ½ the time
  – They use them less over time
• They may use them right before/after visits
• Parents hate using topical steroids due to frequency, and difficulty and complexity
• Many providers are terrified of topical steroids
  – The fear is contagious
• Parents are terrified of topical steroids
So what do we do?

- Shorten duration of therapy by using stronger steroids
- Use therapy that works FAST by using stronger steroids
- Decrease frequency of therapy by using stronger steroids
- Decrease interval and increase number of follow ups
- Give clear, easy to follow, written directions
- Address steroid phobia and stop scaring parents
Paradoxical use of oral and topical steroids in steroid-phobic patients resorting to traditional Chinese medicines

Kam-Lun E Hon, Ting Fan Leung, Ho Chung Yau, Thomas Chan
Hong Kong, China

8. A HIGHLY-MOISTURIZING REPAIR CREAM MADE FROM SNAIL MUCUS

Seoul Ceuticals Korean Snail Repair Cream, S17, Amazon

Before you count this one out entirely, you should know that reviewers have called the Seoul Ceuticals snail cream, "a life-saver" and the "best moisturizer [they've ever] tried." It's made from 97 percent snail mucin extract, which deeply hydrates and heals dry skin, but also absorbs quickly so you don't have to worry about a greasy, tacky residue.

Fig. 1. Proprietary Chinese medicine capsules, pills, tablets (a and b); cream and lotion (c and d) adulterated with corticosteroids and western medicines.
Steroid Phobia

• Educate other providers
  – Why are oral steroids OK and topicals so scary?
• Discuss later visits- (side effects not acute)
• Address it head on with families if comes up
  – “What are you worried about?”
  – “I don’t come to work to hurt children every day.”
  – “You have to have some faith in me or this won’t work”
  – “What side effect is worse than the disease?”

  • Risks of bacterial, viral superinfection, MRSA!
  • Not sleeping (parents and child) or being able to concentrate in school, parental divorce rate increases!
  • Increased risk of ADHD depression, anxiety, conduct disorder, autism

“What would you want if this was your skin?”
Rapid, successful treatment of atopic dermatitis recalcitrant to topical corticosteroids

Daniel J. Lewis BA1,2,3 | Steven R. Feldman MD, PhD3,4,5

Abstract
Atopic dermatitis is responsive to midpotency topical corticosteroids, which are the mainstay of treatment, yet many patients have disease that is “resistant” to triamcinolone prescribed for outpatient use. Such resistance is often due to poor adherence, but patients and caregivers may remain adamant that the steroid was ineffective and assure the physician that it was applied as recommended. We describe the case of a young girl with a 2-year history of atopic dermatitis resistant to triamcinolone whose condition rapidly improved with continued use of triamcinolone. Our case raises the ethical dilemma of whether physicians should base treatment plans on what patients report or what evidence on adherence suggests.

KEYWORDS
adherence, atopic dermatitis, time horizon, triamcinolone, white coat compliance
• Mom said she had been using triamcinolone daily for 2 years

• The next day, the mother sent an email message, reporting, “You were absolutely right about the triamcinolone ointment! **We were previously told to only use it ‘sparingly’**... I think I just wasn't using enough of it for two years.... Her eczema looks so much better even after 24 hours!... I will not be filling the clobetasol. **Clearly you were right and all she needed was a more liberal application of the triamcinolone. I'm so glad we came to see you yesterday!”
• Current advice to patients to apply topical corticosteroid preparations: ‘sparingly’ or ‘thinly’ contributes to ‘steroid phobia’, increasing the risk of poor clinical response and treatment failure.
• Vast majority of patients are prescribed topical corticosteroids for which the evidence suggests that the risk of harm is minimal.
• More appropriate advice on product labelling would be ‘apply enough to cover affected areas’
Often same medicine that didn’t work in 15 gram tube works amazingly better when you give a 454 gram jar.

**It is rare that less than 60 gram tube is appropriate.**

<table>
<thead>
<tr>
<th>Area</th>
<th>Birth-1yr</th>
<th>1-4yrs</th>
<th>5-9yrs</th>
<th>10-14yrs</th>
<th>15yrs</th>
<th>Adult</th>
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<tbody>
<tr>
<td>Entire Body</td>
<td>250g</td>
<td>500g</td>
<td>1,000g</td>
<td>1,250g</td>
<td>2,000g</td>
<td>2,250g</td>
</tr>
<tr>
<td>Head</td>
<td>25g</td>
<td>50g</td>
<td>60g</td>
<td>75g</td>
<td>85g</td>
<td>85g</td>
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<tr>
<td>Upper Leg</td>
<td>15g</td>
<td>35g</td>
<td>70g</td>
<td>115g</td>
<td>150g</td>
<td>215g</td>
</tr>
<tr>
<td>Lower Leg</td>
<td>15g</td>
<td>30g</td>
<td>50g</td>
<td>70g</td>
<td>125g</td>
<td>150g</td>
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<tr>
<td>Trunk</td>
<td>35g</td>
<td>75g</td>
<td>115g</td>
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<td>250g</td>
<td>300g</td>
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<tr>
<td>Upper Arm</td>
<td>10g</td>
<td>20g</td>
<td>35g</td>
<td>45g</td>
<td>80g</td>
<td>90g</td>
</tr>
<tr>
<td>Lower Arm</td>
<td>10g</td>
<td>15g</td>
<td>30g</td>
<td>35g</td>
<td>60g</td>
<td>65g</td>
</tr>
</tbody>
</table>

*Amount of Topical Ointment Required to Cover Each Area Twice Daily for a Month*
“We’ve tried everything!”
<table>
<thead>
<tr>
<th>Class</th>
<th>Generic Name</th>
<th>Formulation</th>
</tr>
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<tbody>
<tr>
<td>Class 1</td>
<td>Betamethasone dipropionate</td>
<td>0.05% G O (diprolene)</td>
</tr>
<tr>
<td></td>
<td>Clobetasol</td>
<td>0.05% C F G L O</td>
</tr>
<tr>
<td></td>
<td>Diflorasone diacetate</td>
<td>0.05% O</td>
</tr>
<tr>
<td></td>
<td>Halobetasol propionate</td>
<td>0.05% C O</td>
</tr>
<tr>
<td>Class 2</td>
<td>Amcinonide</td>
<td>0.1% O</td>
</tr>
<tr>
<td></td>
<td>Betamethasone dipropionate</td>
<td>0.05% C (diprolene)</td>
</tr>
<tr>
<td></td>
<td>Desoximetasone</td>
<td>0.05% G, 0.25% C O</td>
</tr>
<tr>
<td></td>
<td>Flucinonide</td>
<td>0.05% C G O S</td>
</tr>
<tr>
<td></td>
<td>Halcinonide</td>
<td>0.1% C</td>
</tr>
<tr>
<td></td>
<td>Mometasone furoate</td>
<td>0.1% O</td>
</tr>
<tr>
<td>Class 3</td>
<td>Amcinonide</td>
<td>0.1% C L</td>
</tr>
<tr>
<td></td>
<td>Betamethasone dipropionate</td>
<td>0.05% C (non-diprolene)</td>
</tr>
<tr>
<td></td>
<td>Betamethasone valerate</td>
<td>0.1% O</td>
</tr>
<tr>
<td></td>
<td>Desoximetasone</td>
<td>0.05% C</td>
</tr>
<tr>
<td></td>
<td>Diflorasone diacetate</td>
<td>0.05% C</td>
</tr>
<tr>
<td></td>
<td>Fluticasone propionate</td>
<td>0.005% O</td>
</tr>
<tr>
<td></td>
<td>Halcinonide</td>
<td>0.1% O S</td>
</tr>
<tr>
<td></td>
<td>Triamcinolone</td>
<td>0.1% O</td>
</tr>
<tr>
<td>Class 4</td>
<td>Betamethasone valerate</td>
<td>0.12% F</td>
</tr>
<tr>
<td></td>
<td>Flucinolone acetonide</td>
<td>0.025% O</td>
</tr>
<tr>
<td></td>
<td>Flurandrenolide</td>
<td>0.05% O</td>
</tr>
<tr>
<td></td>
<td>Hydrocortisone valerate</td>
<td>0.2% O</td>
</tr>
<tr>
<td></td>
<td>Mometasone furoate</td>
<td>0.1% C</td>
</tr>
<tr>
<td></td>
<td>Triamcinolone</td>
<td>0.1% C</td>
</tr>
<tr>
<td>Class 5</td>
<td>Betamethasone dipropionate</td>
<td>0.05% L</td>
</tr>
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<td></td>
<td>Betamethasone valerate</td>
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</tr>
<tr>
<td></td>
<td>Flucinolone acetonide</td>
<td>0.025% C</td>
</tr>
<tr>
<td></td>
<td>Fluticasone propionate</td>
<td>0.05% C</td>
</tr>
<tr>
<td></td>
<td>Flurandrenolide</td>
<td>0.05% C</td>
</tr>
<tr>
<td></td>
<td>Hydrocortisone butyrate</td>
<td>0.1% C</td>
</tr>
<tr>
<td></td>
<td>Hydrocortisone valerate</td>
<td>0.2% C</td>
</tr>
<tr>
<td>Class 6</td>
<td>Alcometasone dipropionate</td>
<td>0.05% C O</td>
</tr>
<tr>
<td></td>
<td>Betamethasone valerate</td>
<td>0.1% L</td>
</tr>
<tr>
<td></td>
<td>Desonide</td>
<td>0.05% C L O</td>
</tr>
<tr>
<td></td>
<td>Flucinolone acetonide</td>
<td>0.01% C S</td>
</tr>
<tr>
<td>Class 7</td>
<td>Hydrocortisone acetate</td>
<td>0.5% C L O, 1% C O F</td>
</tr>
<tr>
<td></td>
<td>Hydrocortisone hydrochloride</td>
<td>0.25% C L, 0.5% C L O S, 1% C L O S, 2% L, 2.5% C L O S</td>
</tr>
</tbody>
</table>

C = Cream, F = Foam, G = Gel, L = Lotion, O = Ointment, S = Solution

Improvement in Treatment Adherence With a 3-Day Course of Fluocinonide Cream 0.1% for Atopic Dermatitis

**Author(s):** Yentzer BA; Ade RA; Fountain JM; Clark AR; Taylor SL; Borgerding E; Feldman SR

- 100% adherence
- Fix the barrier-
  - Stop itch scratch cycle
  - Stop the antigen entry
- It works!
  - The psychology of success
  - Future adherence
Dr. Z’s 5-10-15 Plan for Eczema

Eczema is not something we can cure. But we can control it. The key is to:

1. **Put out the fire** - with aggressive topical medications used safely
2. **Prevent the fire from restarting** - with good skin care
3. **Maintenance therapy** - treat flares quickly and aggressively - by using the steroid ladder.

**STEP 1 – Put out the fire:**

**Day 1-5 (5 days)**
Clobetasol or Halobetasol or Augmented Betamethasone Dipropionate ointment everywhere **twice a day**
- morning
- night after the bath, pat dry, while skin still moist apply the ointment to all involved areas

**Day 6-15 (10 days)**
Fluocinonide or Triamcinolone 0.5% or Betamethasone dipropionate or Aminicondone ointment everywhere twice a day
- morning
- night after the bath, pat dry, while skin still moist apply the ointment to all involved areas

**Day 16-30 (15 days)**
Triamcinolone 0.1% ointment everywhere twice a day
- morning
- night after the bath, pat dry, while skin still moist apply the ointment to all involved areas
5-10-15
-easy to remember
-safe with limited amounts, no refills

- **Ultra/Super potency Class I**
  - halobetasol
  - 60 grams, no refills

- **High potency, Class II/III**
  - Fluocinonide ointment
  - 120 grams, no refills

- **Moderate potency, Class 4/5**
  - Triamcinolone ointment
  - 454 grams, no refills
Dr. Z’s 5-10-15 Triamcinolone Taper

Eczema is not something we can cure. But we can control it. The steps are:

1. **Put out the fire** - with aggressive topical medications used safely
2. **Prevent the fire from restarting** - with good skin care
3. **Maintenance therapy** - will discuss at follow up

**STEP 1 – Put out the fire:**

**Day 1-5 (5 days)**  
Triamcinolone 0.5% everywhere twice a day  
- morning  
- night after the bath, pat dry, while skin still moist apply the ointment to all involved areas

**Day 6-15 (10 days)**  
Triamcinolone 0.1% ointment everywhere twice a day  
- morning  
- night after the bath, pat dry, while skin still moist apply the ointment to all involved areas

**Day 16-30 (15 days)**  
Triamcinolone 0.025% ointment everywhere twice a day  
- morning  
- night after the bath, pat dry, while skin still moist apply the ointment to all involved areas
5-10-15 “light”- all ointments

• **High Potency, Class II bid for 5 Days**
  – Fluocinonide or mometasone or triamcinolone 0.5%
  – *60 grams*, no refills

• **Moderate Potency Class III/IV bid for 10 days**
  – Triamcinolone 0.1%, fluticasone 0.05%
  – *120 grams*, no refills

• **Low Potency Class V/VI/VII bid for 15 days**
  – Hydrocortisone 2.5%
  – *454 grams*, no refills
STEP 2 – Good skin care:

A) **Every day, 2-3 times a day moisturize** the entire body with Vaseline® or other moisturizer. If you want to use something natural, coconut oil is good for most people unless they have an allergy. Other options are Aquaphor® or Eucerin® ointment (if no lanolin allergy) or Vanicream® or Cerave® Healing Ointment. Aveeno® and Cetaphil® make good eczema ointments as well. (The store or generic version can also be used.)

- You want ointments or cream (ointments are better, but they are greasy).
- You do not want lotions (they have alcohol and can dry the skin out).
- You want something out of a tub or tube, not a pump. If it comes out of a pump it is too liquid and not thick enough.
- Put it on in the morning.
- Put it on after bathing, bathing should occur every night. Avoid soap on the areas. Avoid bar soap- Cetaphil, Purpose, Eucerin. Aveeno all make liquid gentle cleansers.
- After a bath put on medicines first, and let them have at least 15 minutes to soak in. Then apply your moisturizing “grease” everywhere.

B) **Consider using bleach in the bath, especially if the skin is oozy or if there are skin cracks or open sores.** It sounds weird, but it works great. It can be done 2-3 times per week.

- A bath with a small amount of bleach added to the water may help lessen symptoms of chronic eczema (atopic dermatitis).
- Eczema is an itchy skin condition caused by a problem with skin’s natural barrier. Any place there is eczema on the skin, there is a chance for a bacterial infection which can make the eczema worse. It’s a bad cycle to be in. A bleach bath kills bad bacteria on the skin which reduces the itching, redness and scaling. This is most effective when combined with other eczema treatments, such as topical medications and moisturizer.
- If properly diluted and used as directed, a bleach bath is safe for children and adults:
- Take a bleach bath no more than three times a week.
  - Add 1/2 cup (118 milliliters) of bleach to 40 gallons (151 liters) of warm water — that will fill a U.S.-standard-sized bathtub to the overflow drainage holes. Use household bleach, not concentrated bleach. Use 1 capful for a baby bathtub. Use ¼ cup of bleach for a half standard sized bath tub.
  - Soak from the neck down or just the affected areas of skin for about 10 minutes. Do not submerge the head.
  - Rinse off and gently pat dry with a towel.
- Immediately apply medicines and moisturizer generously.
One Month Follow Up

• 5+10+15= 30 days
  – Patient is clear
    • Or non-adherent or question diagnosis or needs systemic
  – Family believes
  – Rapport established

• Transition to Maintenance Phase
  – Assess family situation
  – Tailor complexity to family situation
  – Educate family on regimen
  – Quiz family on regimen to assess comprehension
A Basic Maintenance Regimen

- **Prevention** - even if clear
  - Protopic or Elidel or Eucrisa **every morning at hot spots** where get eczema
  - Dermasmooth body oil **every night all over** after bath
  - **Moisturizer** 10-15 minutes after medicines

- **Flares** - spot treat - **5 day bursts then 2 days off**
  - **FACE**
    - Hydrocortisone 2.5% or triamcinolone 0.025% ointment bid
  - **BODY**
    - triamcinolone 0.1% or Fluocinonide 0.05% ointment bid
  - **HANDS/FEET**
    - Halobetasol, clobetasol, or betamethasone ointment bid

- **If 5 day bursts consistently not working** - refer
Calcineurin Inhibitors

- **Protopic** *(tacrolimus)* 0.03% is generic and approved 2-16 years old. Over 16 years old can use 0.1%
- **Elidel** *(pimecrolimus)* covered by some insurance

- The **black box warning is not based on evidence**

- **Not steroid**
- **Not good for flares**
- **Good for prevention**
Crisaborol

- Not steroid
- Not good for flares
- **Seems to burn**
- Takes 2 weeks to kick in
- OK for prevention

• Class 6- low potency steroid in peanut oil
  – OK in peanut allergic
  – Good for papular or red patchy all over eczema
  – Compliance seems to be better with oils
    • (Sometimes substitute triamcinolone 0.025% lotion)
A Basic Maintenance Regimen for first 3 months

• **Prevention**- even if clear
  – Protopic or Elidel or Eucrisa *every morning* at “hot spots” where get eczema. Can use more.
  – Dermasmooth body oil *every night* after bath
  – Moisturizer 10-15 minutes after medicines

• **Flares**- spot treat- *5 day bursts then 2 days off*
  – **FACE**
    • Hydrocortisone 2.5% or triamcinolone 0.025% ointment bid
  – **BODY**
    • triamcinolone 0.1% or Fluocinonide 0.05% ointment bid
  – **HANDS/FEET**
    • Halobetasol, clobetasol, or betamethasone ointment bid

• **If 5 day bursts consistently not working**- refer
**Bleach Baths**

1/4 cup of bleach in half bath tub

½ cup of bleach in full bath tub

1 capful of bleach in a baby bathtub

**Moisturizers**—bathing every day is good if you moisturize after

Greasy ointments $\rightarrow$ better than creams $\rightarrow$ better than lotions (pump)

Vaseline is cheap and works great

Cetaphil ointment, Cerave Healing Ointment, Vaniply ointment, Vanicream Moisturizing Cream, Aveeno Baby Moisturizing Cream, Mustela Stelatopia Moisturizing Cream, Aquaphor Healing Ointment, Eucerin Original Moisturizing Cream

Sunflower oil and coconut oil are good, Olive oil is not good

**Soaps**—soap pulls oil out of skin. Non-soap cleanser if needed

Cetaphil Eczema Calming Bodywash, Mustela Gentle Cleansing, Aveeno Baby Cleansing, Dove Sensitive Skin

**Wet Wraps**

Wet wraps are best done after bathing, moisturizing and applying medication.

Use clean, preferably white, cotton (t shirt or pajamas) clothing or gauze from a roll for the wet layer, and pajamas or a sweat suit on top as a dry layer. If the eczema is on the feet and/or hands, you can use cotton gloves or socks for the wet layer with vinyl gloves or food-grade plastic wrap as the dry layer.

https://nationaleczema.org/eczema/treatment/wet-wrap-therapy/
3 Months Later...

• **Prevention** - even if clear
  – Protopic or Elidel or Eucrisa every morning at hot spots
  – Dermasoom at night on weekdays after bath
    • Taper the oil first to weekdays, then every other day, then every third day, and so on...
    • Moisturizer and Protopic or Elidel or Eucrisa on off nights

• **Flares** - spot treat - 5 day bursts then 2 days off
  – FACE
    • Hydrocortisone 2.5% or triamcinolone 0.025% ointment bid
  – BODY
    • triamcinolone 0.1% or Fluocinonide 0.05% ointment bid
  – HANDS/FEET
    • Halobetasol, clobetasol, or betamethasone ointment bid
Skin Care Resources

• **National Eczema Association**
  – Well respected resources for products, skin care advice, videos
  – www.nationaleczema.org

• **Dermatitis Academy**
  – Top Ten Allergens that cause pediatric allergic contact dermatitis to avoid in atopic kids
  – www.dermatitisacademy.com
Recommendations

LOOK AT THIS WEBSITE FOR PRODUCTS THAT DO NOT HAVE THE TOP 10 ALLERGENS THAT WORSEN ECZEMA

Https://www.dermatitisacademy.com

Www.nationaleczema.org

AVOID products containing chemical allergens and fragrance. Here are the top 10 pediatric allergens:

1. Fragrance/BOP - all products should be "fragrance free"
2. Neomycin/Bacitracin - in topical antibiotics, neosporin, Triple Antibiotic ointment
3. Wool wax/Amerchol/lanolin - this is many moisturizers, even in Aquaphor and Eucerin
4. Formaldehyde - bronopol, Quaternium15, imidazolidinyl urea, diazolidinyl urea, DMDM hydantoin - preservatives in many creams, lotions, soaps, and many, many products
5. MCI and MI (isothiazolinones) - in a lot of baby wipes and bubble baths, shampoos, hair conditioners, liquid soap
6. Benzalkonium chloride - in many creams, lotions, cleaning products, eyedrops
7. Cocamidopropyl betaine (CABP - in a lot of cleansers, shampoos, soaps
8. Glucosides (lauryl and decyl glucosides) - Glucosides are becoming more common as an ingredient in personal care products, especially shampoos and liquid facial cleansers,
9. Propylene Glycol - one of the most widely used ingredients in cosmetics, fragrances and various personal care products
10. Compositae - in a lot of "natural products"

Adjuncts that make parents happy

• Coconut oil, sunflower oil, Alba Botanica Un-Petroleum
  – Not olive oil

• Probiotics
  – Culturelle probably has best evidence at this point
    • Wickens, K., et al. "A protective effect of Lactobacillus rhamnosus HN 001 against eczema in the first 2 years of life persists to age 4 years." *Clinical & Experimental Allergy* 42.7 (2012): 1071-1079.

• Topical probiotics
  – We just don’t know yet

• Apple Cider Vinegar Baths
  – No→ irritant dermatitis at strengths that are bacteriatical

• Bleach Baths
  – Yes→ ¼ cup in half bath or ½ cup in a full bath

• Water softeners
  – Hard water→ use more soap to lather→ trauma to skin barrier
Adjuncts that make me happy

- Methotrexate
- Cellcept/mycophenolate mofetil
- Imuran/azathioprine
- Cyclosporine
- Dupixent/Dupilumab

>3-6 month daily steroids → refer
The Psychology and Pharmacology of Treating Atopic Dermatitis

- If you can get parents to use topical steroid for 5 days straight you can treat most atopic dermatitis
- Don’t be afraid to use stronger steroids for short amounts of time with breaks even face/folds
- Follow up is key for safety and for psychology
- **Initial Visit:** 5-10-15 topical steroid taper
- **One Month Visit:** Prevention and Pulse x3 month
- **Three Month Visit:** Taper chronic steroids
- Tailor the plan to the family
- Don’t scare patients about topical steroids
THOSE WERE THE DROIDS
WE WERE LOOKING FOR