



present

LEADERS *in* ECZEMA

ONE-DAY FORUMS

Alternative Treatments in Eczema: What is the Evidence?



Presented by:

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**I WANT TO
BELIEVE**



Why Alt Medicine?

When diseases are not curable

When our explanations are unsatisfying

When our treatments are felt to be unsafe or
only “symptomatic”

The Listing Tree of Science

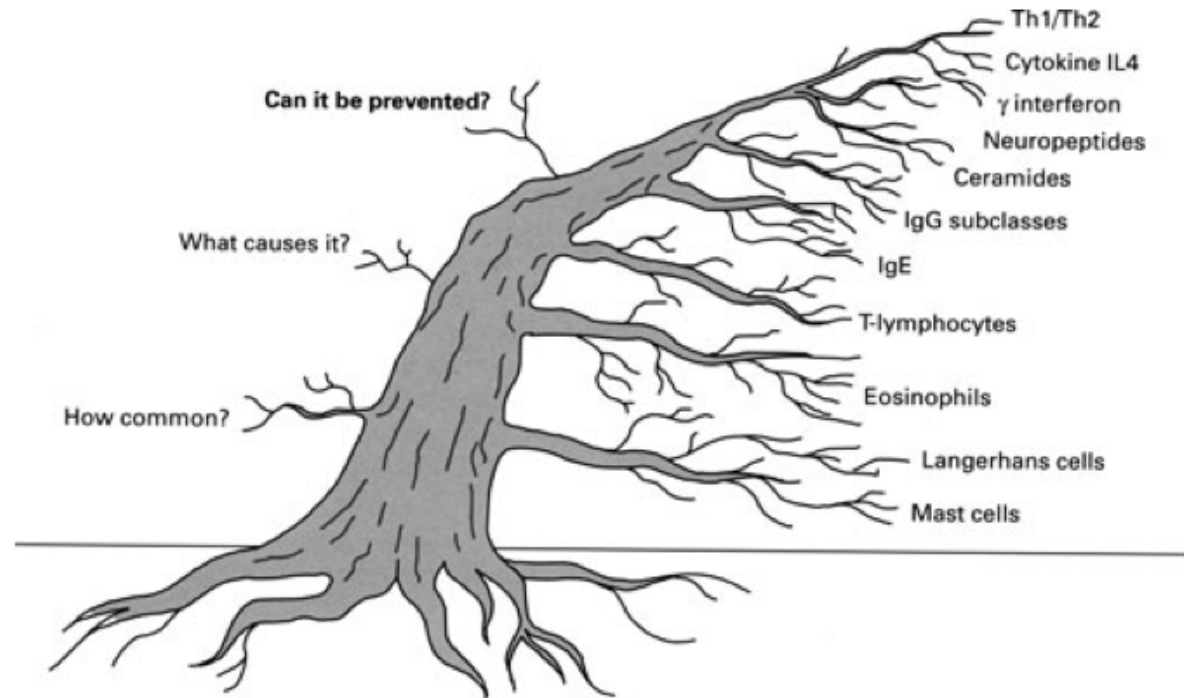


Figure 2. Depiction of how research into atopic dermatitis has been imbalanced by basic science in the past. Abbreviations: AD, atopic dermatitis; IgE, immunoglobulin E; and Th2, T helper 2 (Reproduced with permission by Cambridge University Press).³

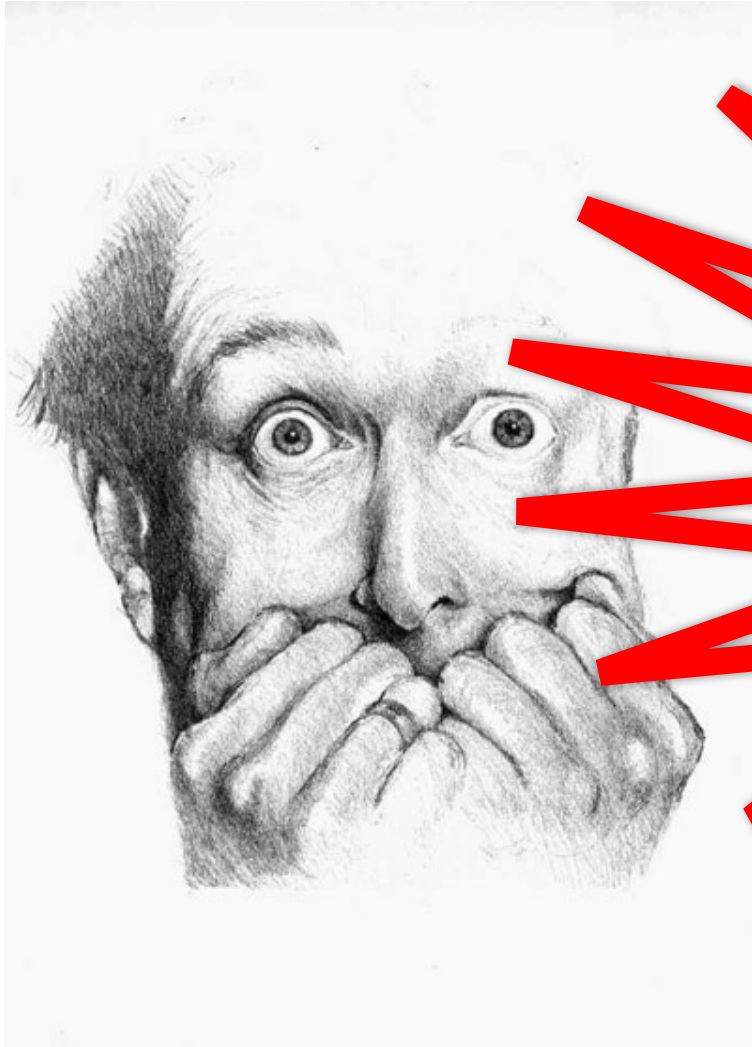
From: Williams HC. Epidemiology of human atopic dermatitis--seven areas of notable progress and seven areas of notable ignorance. Vet Dermatol. 2013 Feb;24(1):3-9.e1-2. doi: 10.1111/j.1365-3164.2012.01079.x.

Why not?

When Western medicines work (and do so safely) there is less drive for alternatives

Once the skin is under control, patients de-emphasize food allergens and diet
(Thompson and Hanifin)

Steroid Phobia



Other Phobias...

- Topical Calcineurin Inhibitors
- Antibiotics
- Preservatives (e.g., parabens)
- “Chemicals”
- Etc., Etc...

Seeking

- A huge number of patients seek alternative treatments
- In one study, 227/444 patients with eczema (51%) reported use of one or more forms of alternative medicine
- Homeopathy, health food and herbal remedies were most common (Jensen)

Jensen P. Use of alternative medicine by patients with atopic dermatitis and psoriasis. *Acta Derm Venereol.* 1990;70(5):421-4.

Jensen P. Alternative therapy for atopic dermatitis and psoriasis: patient-reported motivation, information source and effect. *Acta Derm Venereol.* 1990;70(5):425-8.

What is Alt Med?

Enormous catch-all term for everything from Kirlian photography to chicken soup

Ranges from complex systems (e.g., TCM) to oversimplified “supplements”

What is Alt Med?

Treatments that are simply not based on evidence

Having not been tested sufficiently

Having been tested and found not to work as claimed when studied in a controlled setting (e.g., borage oil)

Problems

A glass of red liquid, possibly a cocktail, with a heart shape formed by the liquid inside. The glass is partially filled, and the liquid is a deep red color. The background is a light, neutral tone.

Enormous variety of systems and non-systems

Anecdotal evidence overflowing

Insufficient resources for proper studies

Filters

- Some evidence
- Safety
- Practicality



100% Natural



- Poison Ivy

- Arsenic

- Bacteria

Is this natural?



Approach



Balance, restore, strengthen, tonify >
“Attack”, “Kill”, “Cut out”, “Suppress”

Atopic Dermatitis

Terrible disease

Incurable

Crummy explanations

Medications with side effects (some more significant than others)

“THE ITCH THAT RASHES”

Sunflower



- Topical application of sunflower oil increases synthesis of ceramides and has direct emollient and barrier repair properties
- It also has anti-inflammatory effects

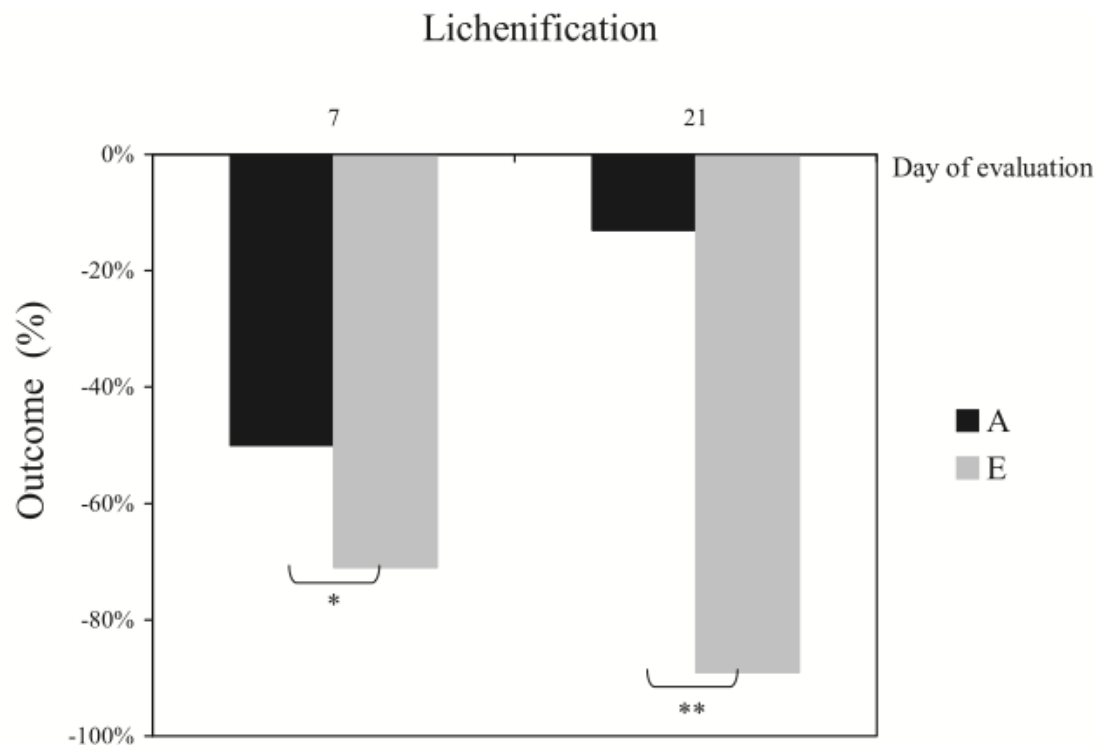


Figure 1. Outcome of lichenification item (% compared to D0) after 7 and 21 days of treatment for group A (CT twice daily) and group E (CT 1 day/2 + emollient). Statistical analysis was performed comparing A to E according to data treatment described in Methods (* $p < 0.1$, ** $p < 0.01$).

Versus Olive Oil

Sunflower

Seed Oil



- 19 adults with AD used olive oil vs sunflower oil on opposite arms for 4 wks
- Olive oil: Decreased stratum corneum integrity, increased TEWL, caused mild erythema
- Sunflower seed oil: preserved SC integrity, improved hydration and caused no erythema

Danby SG, AlEnezi T, Sultan A, Lavender T, Chittock J, Brown K, Cork MJ. Effect of olive and sunflower seed oil on the adult skin barrier: implications for neonatal skin care. *Pediatr Dermatol*. 2013 Jan-Feb;30(1):42-50.

Sunflower



- N = 497 preterm infants (<33 weeks) in Bangladesh, high risk for sepsis
- Thrice daily application of sunflower seed oil vs. petroleum-based moisturizer vs. no treatment
- Sunflower seed oil reduced sepsis by 41%, with a 26% reduction in mortality!

LeFevre A, Shillcutt SD, Saha SK, et al. Cost-effectiveness of skin-barrier-enhancing emollients among preterm infants in Bangladesh. Bull World Health Organ. 2010 Feb;88(2):104-12.

Coconut



- Virgin coconut oil (same as “extra virgin”) is cold-pressed and uses no solvents
- 8% unsaturated fatty acids (vs 82% in virgin olive oil), especially “medium-chain fatty acids”
- Colorless and odorless, cosmetically elegant

Coconut Oil



- Comparative study of VCO vs. mineral oil in 117 AD children (1-13 y/o; mild to moderate AD) for 8 wks
- 68% decrease in SCORAD with VCO vs. 38% with mineral oil

Evangelista MT, Abad-Casintahan F, Lopez-Villafuerte L. The effect of topical virgin coconut oil on SCORAD index, transepidermal water loss, and skin capacitance in mild to moderate pediatric atopic dermatitis: a randomized, double-blind, clinical trial. Int J Dermatol. 2014 Jan;53(1):100-8.

Coconut



- Topically applied coconut oil decreased staph colonization by 95% in patients with atopic dermatitis when applied twice daily for 4 weeks, vs. 50% decrease in olive oil control
- Strong evidence for broad-spectrum antibacterial activity

Massage Therapy



- 20 children with AD ages 2-8 received massage for 20 min daily vs control group with standard topical care only
- At 1 mo, parents of massaged children reported lower anxiety levels in their children
- There was significant improvement on all clinical measures including redness, scaling, lichenification, excoriation, and pruritus vs. control

Schachner L, Field T, Hernandez-Reif M, Duarte AM, Krasnegor J. Atopic dermatitis symptoms decreased in children following massage therapy. Pediatr Dermatol. 1998 Sep-Oct;15(5):390-5.

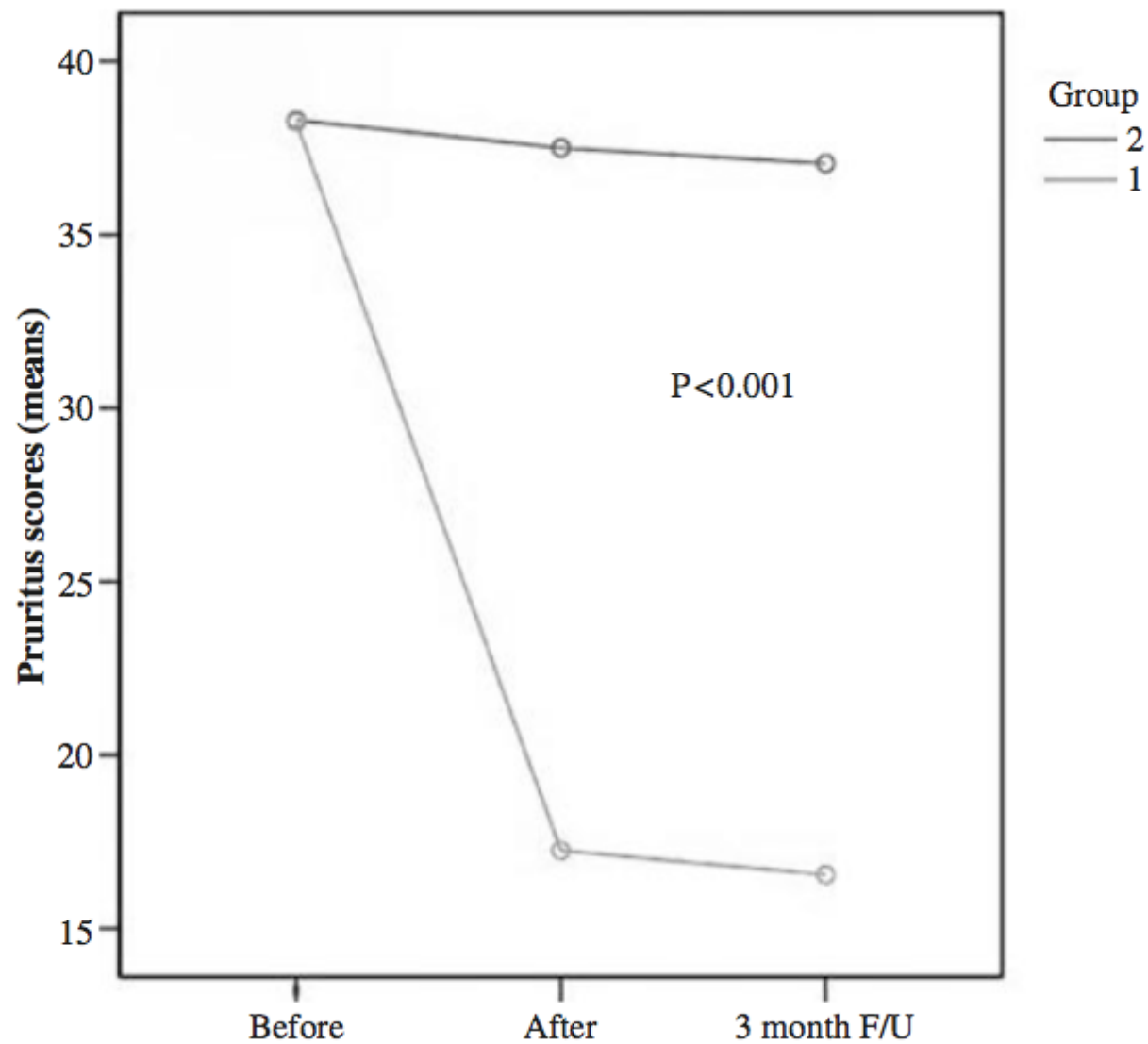
Acupuncture

40 pts with refractory uremic pruritus
randomized to:

Unilateral Quchi (LI11) acupuncture 3x/wk
x 1 mo

Control was acupuncture to sham point
3x/wk x 1 mo

Pruritus scores at baseline, 1 mo and 3 mo



Che-Yi C, Wen CY, Min-Tsung K, Chiu-Ching H. Acupuncture in haemodialysis patients at the Quchi (LI11) acupoint for refractory uraemic pruritus. *Dial Transplant*. 2005 Sep;20(9):1912-5. *Nephrol*

15 adults, with moderate-severe eczema

Half applied acupressure with small bead
in LI11 point for 3 min 3x per week for 4
weeks

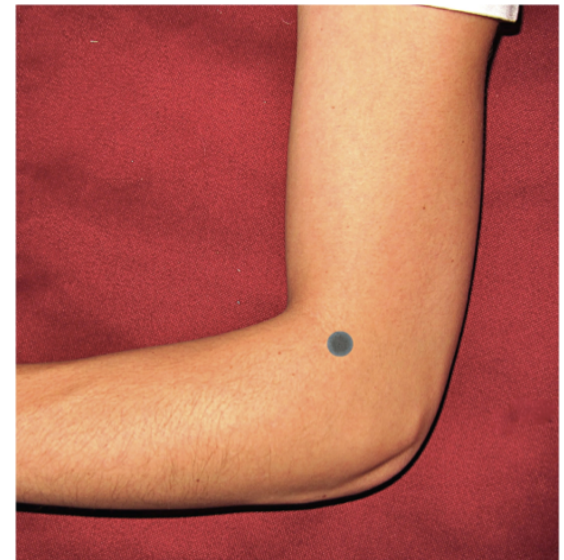


Figure 1 Anatomical location of LI11 acupressure point.

	Acupressure	No acupressure	Total
Change in VAS score			
≥25% or more increase (worse)	0	0	0
0–25% change	3	5	8
≥25% or more decrease (better)	4	0	4
Total	7	5	12
Change in IGA score			
+1 or more (worse)	0	2	2
0 (same)	2	1	3
–1 or more (better)	5	2	7
Total	7	5	12

Lee KC, Keyes A, Hensley JR, Gordon JR, Kwasny MJ, West DP, Lio PA. Effectiveness of acupressure on pruritus and lichenification associated with atopic dermatitis: a pilot trial. *Acupunct Med*. 2011 Dec 28.

Topical B12

Topical vitamin B12 inhibits NO synthase and has been hypothesized to prevent flares

In a trial of topical B12, patients treated with B12 saw significant improvement vs. placebo

Another study in children found significant improvement in as early as two weeks of use

Stücker M, Pieck C, Stoerb C, Niedner R, Hartung J, Altmeyer P. Topical vitamin B12--a new therapeutic approach in atopic dermatitis-evaluation of efficacy and tolerability in a randomized placebo-controlled multicentre clinical trial. Br. J. Dermatol. 2004;150(5):977-83.

Januchowski R. Evaluation of topical vitamin B(12) for the treatment of childhood eczema. J. Altern. Complement. Med. 2009;15(4):387-9.



What about Yeast?

- Dilute Apple Cider Vinegar soaks may help
- Anti-microbial and may help lower pH of skin
- No great data yet



Diet



Many families feel that this is “root cause”
Good data that excluding foods in unselected
patients offers no benefit
This also suggests that non-allergic
mechanisms probably play little or no role

Gelmetti C. Diet and atopic dermatitis. J Eur Acad Dermatol Venereol JEADV. 2000;14:439–40.

Bath-Hextall F, Delamere FM, Williams HC. Dietary exclusions for improving established atopic eczema in adults and children: systematic review. Allergy. 2009;64:258–64.

Diet and AD

My favorite study:

Thompson MM, Hanifin JM. Effective therapy of childhood atopic dermatitis allays food allergy concerns. J Am Acad Dermatol. 2005;53:S214–9.

Demonstrated that in some 80% foods thought to worsen AD actually do not!

Moreover: once skin is better, most drop these concerns

What I say:

We *wish* foods were the cause! It would be easier! But we're not that lucky...

If there is a food you are worried about, cut it
But: be systematic, thorough, and HONEST

Let's try our regimen at the same time to heal the skin; then you can add food back and see

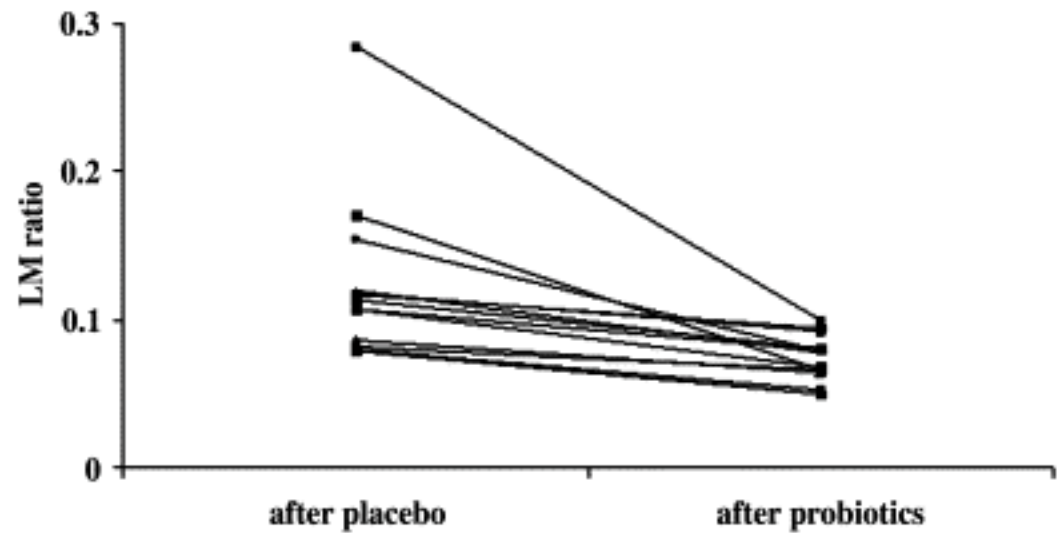
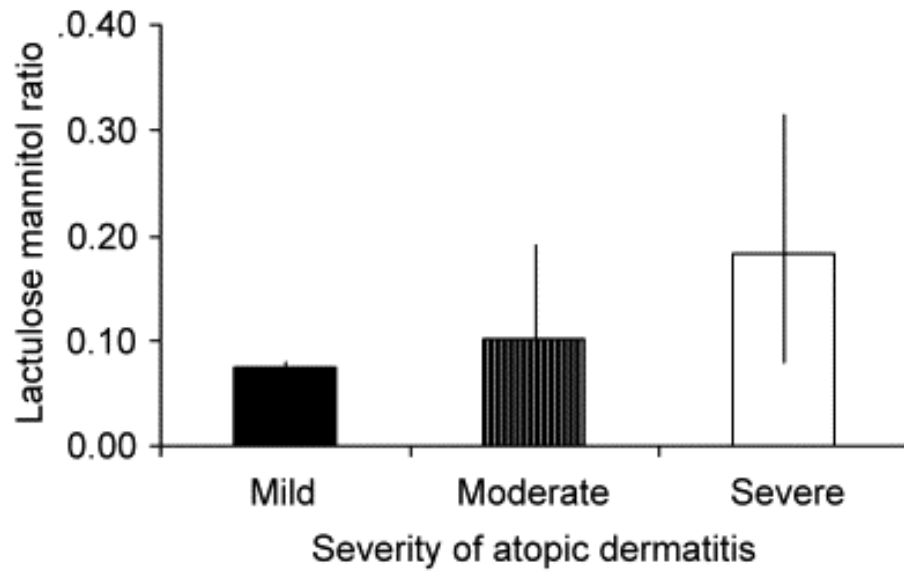
LEAKY GUT?



Studies

Small intestinal permeability was found to be impaired in children with atopic dermatitis and improved with lactobacillus supplementation ($p=.001$ on lactulose-mannitol test results)

Effect of probiotics on gastrointestinal symptoms and small intestinal permeability in children with atopic dermatitis. Rosenfeldt V, Benfeldt E, Valerius NH, Paerregaard A, Michaelsen KF. J Pediatr. 2004 Nov;145(5):612-6.



Effect of probiotics on gastrointestinal symptoms and small intestinal permeability in children with atopic dermatitis. Rosenfeldt V, Benfeldt E, Valerius NH, Paerregaard A, Michaelsen KF. J Pediatr. 2004 Nov;145(5):612-6.

What I say:

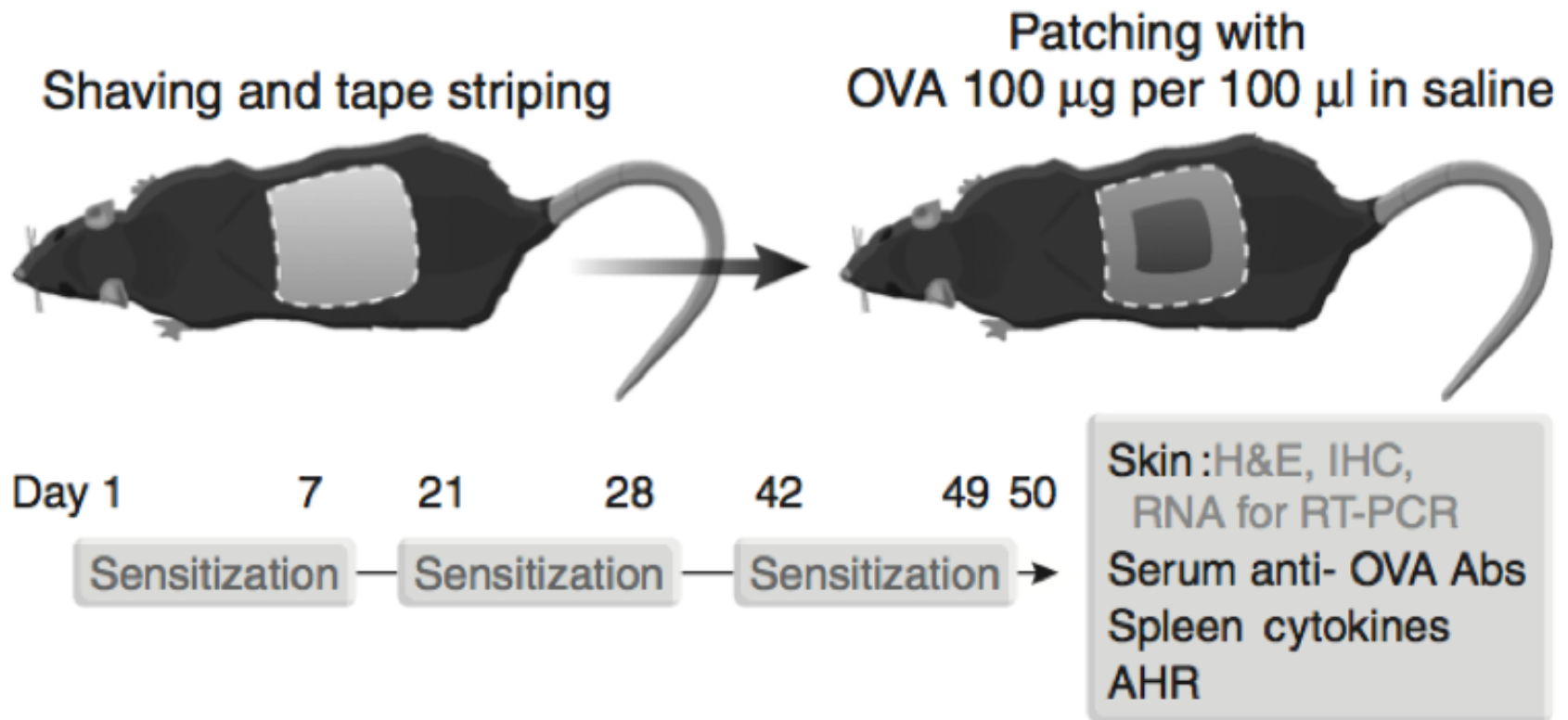
Leaky gut may be playing a role, so let's eat healthy and supplement probiotics

But: what about the idea of LEAKY SKIN!
This we *know* is the case in AD and is important to treat!

LEAKY GUT?

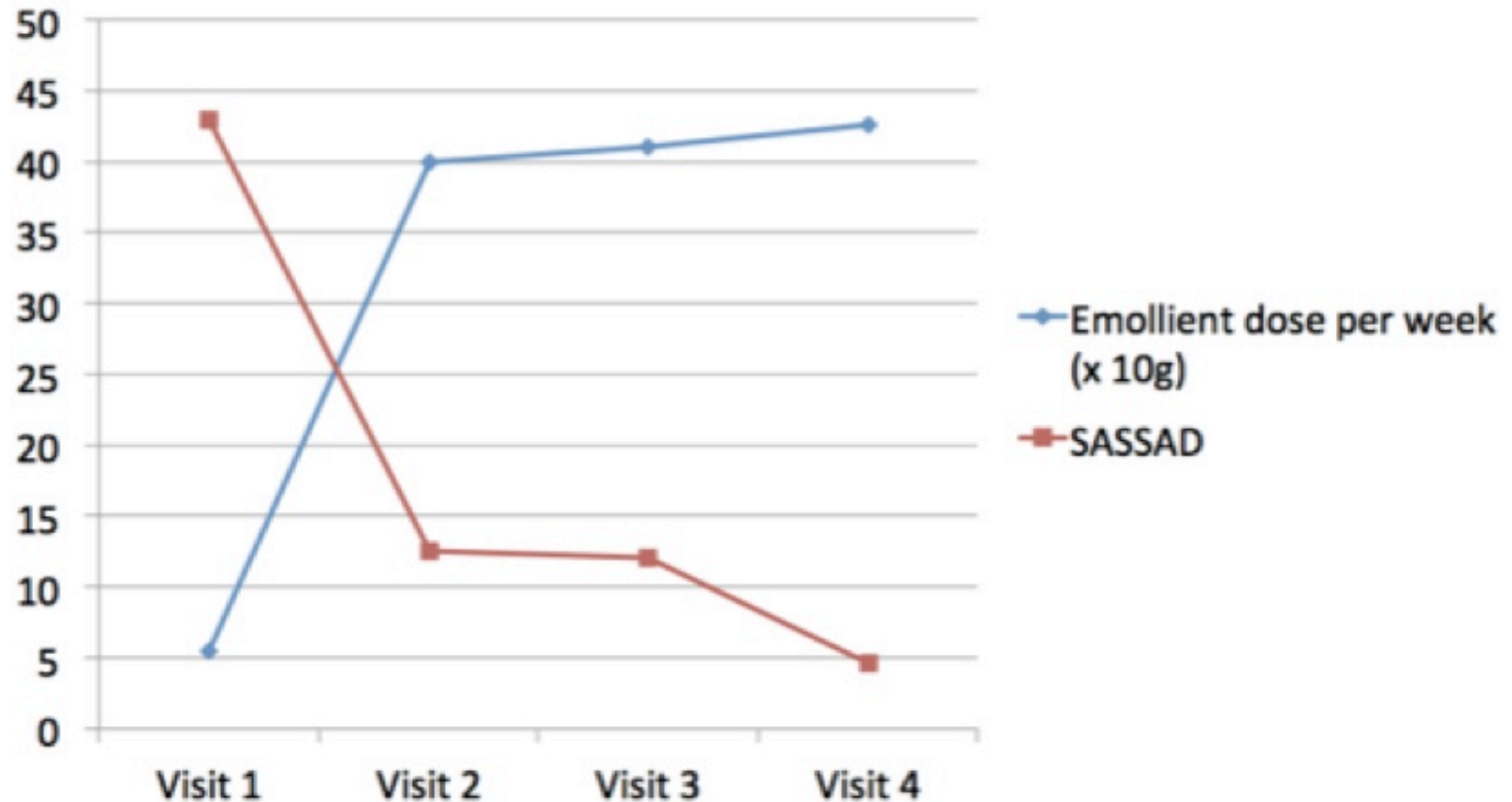


LEAKY SKIN!



Jin H, He R, Oyoshi M, Geha RS. Animal models of atopic dermatitis. J Invest Dermatol. 2009 Jan;129(1):31-40.

More Moisturizer = Less Eczema!



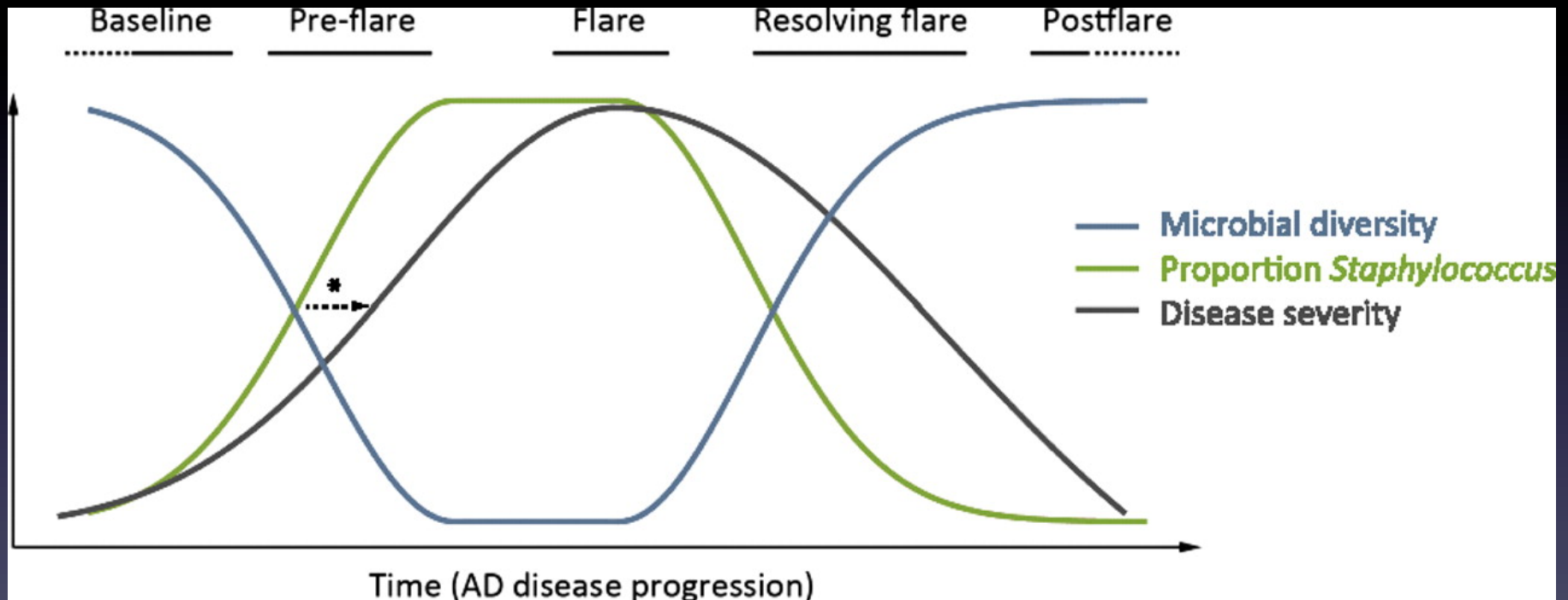
Cork, et al. BJD 2003; 149: 582-589.

Probiotics

- Compelling idea of “re-balancing” bacteria on and in body
- One study demonstrated that giving neonates *Lactobacillus GG* cut AD development in half vs. the control group

Kalliomaki M, Salminen S, Arvilommi H, et al. Probiotics in primary prevention of atopic disease: a randomised placebo-controlled trial. Lancet 2001;357(9262): 1076–9.

AD therapeutic modalities may act to recalibrate the diversity of the skin microbiome

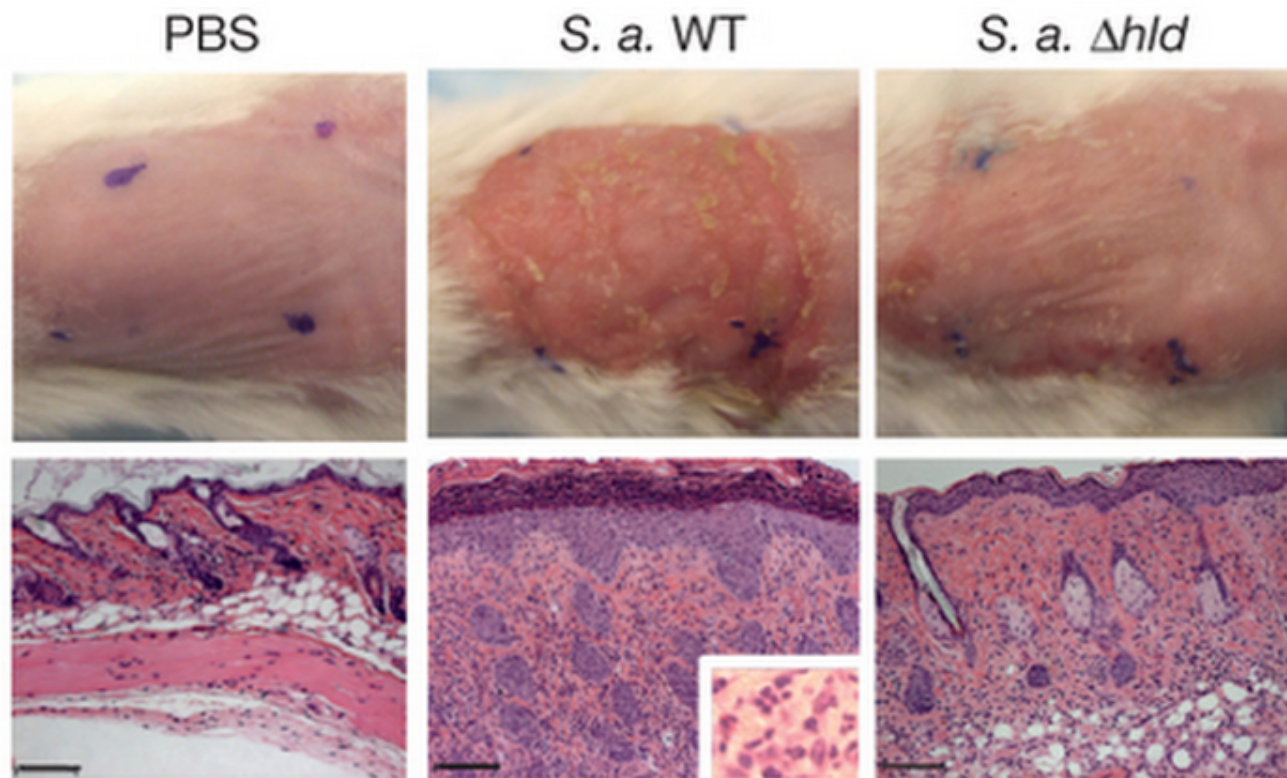


Kong HH, Oh J, Deming C, et al. Temporal shifts in the skin microbiome associated with disease flares and treatment in children with atopic dermatitis. *Genome Res.* 2012 May;22(5):850-9.

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***Staphylococcus* δ -toxin induces allergic skin disease by activating mast cells**

Yuumi Nakamura¹, Jon Oscherwitz^{2,3}, Kemp B. Cease^{2,3}, Susana M. Chan¹, Raul Muñoz-Planillo¹, Mizuho Hasegawa¹, Amer E. Villaruz⁴, Gordon Y. C. Cheung⁴, Martin J. McGavin⁵, Jeffrey B. Travers⁶, Michael Otto⁴, Naohiro Inohara¹ & Gabriel Núñez¹



Nakamura Y, Oscherwitz J, Cease KB, et al. Staphylococcus δ -toxin induces allergic skin disease by activating mast cells. Nature. 2013 Nov 21;503(7476):397-401.



<http://www.flickr.com/photos/angelo-gr/2854275002/>

Summary

Ideally, conventional medicine has the best treatments because we try to take the best from everywhere!

We don't have all the answers, however, and by opening ourselves up to these less-tested treatments, we might get some previews into the future

...And in doing so, we continue to remain humble in the face of this crummy disease

Find out more:



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