



CASE STUDY: Eczema

-Leaky Gut Protocol plus SBI Protect-

Every part of the body is interconnected, so it is not a surprise that eczema is related to gut health. Eczema is a skin condition that affects the outermost layers of the skin. In the U.S. alone, about 20% of children suffer with this condition. There are several types of eczema: atopic dermatitis, contact dermatitis, dyshidrotic eczema, and seborrheic dermatitis (also known as “cradle cap” in infants) are the most common types that affect children. Eczema, especially atopic dermatitis, often appears in the first 6 months to 5 years of a child’s life.

With eczema, the skin becomes red, inflamed, scaly, and itchy. In more serious situations, the skin may crack, puss, or even bleed. Despite these manifestations, eczema is actually not just a skin problem—it’s actually a symptom of another, deeper issue. Many specialists prescribe medication to treat eczema, but few get to the root cause to actually help heal the condition once and for all. In Transformation’s clinical experience, eczema can be cured, but we have to get to the root cause.

Researchers believe children who develop eczema do so because of a combination of genes and environmental triggers. When something outside the body “switches on” the immune system, skin cells do not behave as they should, causing flare ups. We also know that children who come from families with a history of atopic dermatitis, asthma, or hay fever (known as the atopic triad) are more likely to develop atopic dermatitis.

Studies are now showing that individuals suffering with eczema are likely to have intestinal permeability, which is essentially a damaged intestinal tract, particularly in the small intestine. Eczema as well as other common skin conditions seem to be the result of this gut disorder. Additionally, those with eczema tend to experience food allergies and sensitivities. This correspondence indicates the bacterial balance within the body as a causative factor. When the bacteria in our bodies, particularly within our digestive system, is out of balance, we experience a whole host of issues—leaky gut and eczema being just two.

For most types of eczema, managing flares comes down to these basics:

- Know your child’s particular triggers to avoid exposure.
- Implement a daily bathing and moisturizing routine to protect the skin and lock in moisture.
- Use OTC and prescription medication consistently and as prescribed to treat symptoms.

Here is the problem with the common strategies used to address eczema. There are over 16 different triggers for eczema, and it can be near impossible to eliminate and identify all of them. While these approaches are helpful, they do not address the root cause of most eczema conditions—gastrointestinal dysfunction and imbalance. The one trigger that has been consistent in the majority of eczema cases

seen by practitioners is impaired gut health. We know that a large majority of eczema is attributable to intestinal dysbiosis. If an imbalance occurs and candida or other pathogens linked to skin issues such as H. Pylori are present in unhealthy amounts, they can upregulate penetration of the intestinal lining leading to intestinal permeability, otherwise known as leaky gut. This enables undigested proteins, fats, and carbohydrates to enter the blood stream where they do not belong. Leaky gut is a primary instigator of food allergies and sensitivities that are also common amongst those with eczema. For this reason, enzyme supplementation along with proper probiotic support is critical to help restore the balance of microflora and ensure complete digestion and absorption of foods.

- By providing a digestive formula with each meal and snack we can ensure proper digestion and nutrient acquisition to supply the body with the nutrients it needs for a healthy gut and healthy skin.
- The use of proteolytic formulas between meals will provide the systemic support needed for optimal blood flow and delivery of the nutrients as well as pH balance while also upregulating healthy detox, immune modulation, and anti-inflammatory support.
- Implementing a product designed to repair and calm damaged lining of the GI tract should also be implemented when dealing with eczema or other skin issues. After all, our skin is a mirror of what our gut looks like. In this case study, a blend of herbs and enzymes designed to eliminate growth, mend mucosal barrier breakages, and prevent the recurrence of invading organisms was selected.
- Lastly, a probiotic was selected to further support digestion and the immune system while maintaining a healthy gut environment and timely removal of waste. It is important to ensure that bowel movements are occurring daily when dealing with eczema since buildup in the colon can lead to increased toxicity that will show itself in our skin if unable to be eliminated through our colon.

CASE STUDY

5 month old baby boy.

Child's eczema began at 2 months when starting infant formula. Was also suffering from constipation and reflux. Child was originally on Holle® Goat Formula but later switched to Nutramigen® due to constipation, reflux, and skin issues that started once Holle® was introduced. Eczema was manageable but had gotten so bad that child wakes up to bloody sheets and scratches all over. Using AVEENO® Baby products topically.

RECOMMENDATIONS

Started on a combination of Transformation's Leaky Gut and Eczema protocols. Child currently eats five formula bottles a day, so the protocol consisted of 1 scoop *Kidz Digest Powder* before each bottle feeding, 2 caps *PureZyme* and 2 caps *RepairZyme* with each bottle, and 2 caps *GastroZyme* after each bottle (for leaky gut and reflux). Also recommended 3 caps *Plantadophilus* with bedtime bottle. Mom was instructed to combine all products in bottle for each feeding for improved compliance. (It is important to note that when mixing enzymes with fluid, activation occurs, so you want to wait to add water until ready to feed.) Due to the herbs and nutrients used in the *RepairZyme* and *GastroZyme*, mom was instructed to mix with blended sweet potatoes or apple sauce to hide strong taste of the products if not tolerated well in bottle.

We know that environmental triggers can upregulate eczema flares, so it was important we addressed home environment and routines. Additional lifestyle recommendations included:

Skin Care

- Keep baths short, as the prolonged time in the water can dry the skin. Baths to be done in warm water, nothing too hot, as this too can agitate eczema.
- Discontinue using regular baby soap and bathe child exclusively with Sunshine Botanicals® Redness Relief Bar. Rosacea, occasional breakouts, eczema, hormonal skin challenges, dermatitis, and yeast / fungal disorders are just a few of the conditions that greatly benefit from this original, detoxifying skin cleansing bar. It deeply cleanses and purifies the epidermis and reduces skin and face redness, itching, and inflammation associated with sensitive skin conditions.
- Also had child start with Sunshine Botanicals® Elixir™. After bath, shake up Sunshine Botanicals® Elixir™ and apply liberally where it is still damp. This high-powered corrective skin fluid is a superfood for the skin. This formula is packed with fast-absorbing Omega 3, 6, and 9 essential fatty acids, antioxidant-rich botanical extracts, and potent anti-inflammatory benefits to repair, nourish, and rejuvenate aging skin and environmental skin damage. The Elixir™ is perfect as a daytime moisture treatment (think serum + moisture in one) or as an intensive overnight treatment. The Elixir™ is also a real power tool for hormonally challenged, sensitive, and stressed skin conditions.

Home Environment

Remove anything that flagged on allergy testing done by primary care doctor. Family removed their cat from home due to allergy test. Also had home checked for mold. Instructed mom to switch to scent/dye-free detergent. Limited use of scented lotions/perfumes with those in constant contact with child.

Diet Modifications

Recommended discontinuing Holle® since the goat milk has higher propensity to cause constipation, which can exacerbate eczema. Instructed mom to wait two weeks after enzyme induction, and if constipation was not resolved, to switch infant formula to dairy-free. Mom switched child to Nutramigen®.

October 26



Child brought to TEC clinic for solution to eczema.

October 31



Photos from mom.

November 2



Check in to see how protocol was going. Constipation had improved and skin was showing signs of improvement in redness and weeping. Child was still itching a lot, but overall dermis was looking better. No change in protocol at this time. Continue with current plan of care: 2 caps *Plantadophilus* in morning bottle and 2 caps *Plantadophilus* at bedtime, 1 scoop *Kidz Digest Powder* before each feed, 1 cap *RepairZyme* 5 times daily, 1 cap *GastroZyme* with solids 5 times a day, and 1 cap *PureZyme* 5 times a day.

November 8



November 19



November 20

Not the improvement we wanted so trying different digestive formula. Switching to 3 *DigestZyme* caps with each bottle, also increased *GastroZyme* from 1 cap per feed to 3 caps 4 times a day with feeds. Increased *RepairZyme* and *PureZyme* to 3 caps per bottle. Increased *Plantadophilus* to 2 in the morning and 3 at bedtime.

December 7



Child has one 6-oz bottle every 4-5 hours and eats baby food 3 x day.

December 8

Due to lack of improvement in skin, will order a stool test from Diagnostic Laboratories to get a better idea on whether we are dealing with pathogen or *h. pylori* infection. While the gut of a child his age is still developing, the test still provides some value in someone that young, even though it is not going to be very helpful in terms of dysbiosis. The reference ranges are set for adults, and an infant microbiome is going to look very different. The value of the test is going to come more from identifying pathogens and looking at intestinal health markers.

Also switching formula to 100% dairy-free EleCare®. Nutramigen® had milk protein that mom was not aware of since the label claims to be dairy free. Not going to reorder Redness Relief Bar or Elixir™ serum as it has not seemed to have any change on child's skin. Mom has switched bath/skin products to aloe vera wash since it has been shown to help skin maintain healthy pH level.

December 18

Enzyme protocol remains same while waiting on stool test. He is tolerating EleCare® well with no issues. Constipation and reflux still resolved since starting the enzymes.

Continues to use aloe vera wash and will start applying colloidal silver cream to skin twice daily for moisture and healing.

December 29

Skin is doing better since formula change, but still not clear. No change in supplement protocol while waiting on mom to do stool sample. Tolerating enzyme protocol well. Aside from itching, the redness and weeping are better. Reflux and constipation are also no longer an issue since starting protocol back in October.

January 6

Pediatrician ran allergy panel which is not very accurate considering the child's age—he reacted to cow's milk, eggs, peanuts, wheat, cats, and dogs. Mom has already eliminated dairy, family also got rid of cat.

Mom is also out of *DigestZyme* capsules so is back on *Kidz Digest* powder. Did not see any noticeable changes with *DigestZyme* capsules, and the powder is easier for mom to administer. We also don't have any reason to believe he is allergic to flax in the formula, a healthy fat that is good for the skin.

Still getting *GastroZyme* 2-3 times daily after each feed due to reflux and to support healing of mucosal lining. Doctor called in script for famotidine but mom does not want to give. *GastroZyme* not only repairs mucosal lining but also helps with reflux and is a natural alternative to many OTCs prescribed but not tested in children. Will continue with *GastroZyme* 2-3 times daily.

January 15



Meeting with mom to go over stool test results. Skin is not improving and eczema has spread to face with some areas weeping. New protocol established based on stool test. Added *S. Boulardi* since it is linked to good skin outcomes and switched to a more targeted probiotic with pre-biotic based on findings in stool test. His *Lactobacillus* spp was low, so we added Klaire Labs Ther-Biotic® for Infants since it contains several species of lactobacilli in it. This combined with *S. Boulardi* is great for helping boost SIgA, which was low, and improving overall microbiome balance. The *S. Boulardi* is a yeast, not a bacteria, and it behaves differently and is good at flushing out food pathogens and promoting butyrate producers like the *prausnitzii* which was low. It can also kill *h pylori* in a more gentler/weaker way. After examining the child's SIgA we decided to go with a gentler approach than straight butyrate since the low SIgA was a sign his immune system was not really working that great. It was decided that Klaire Labs *S. Boulardi* for a gentler approach at flushing out any pathogens while at the same time boosting the SIgA.

The GI Map showed non-detectable *Faecalibacterium Prausnitzii*, and when looking for skin conditions some of these have been linked to skin. His *akkermansia* was high, and it is more the low levels that are linked to skin. But what a high *akkermansia* did tell is that there were some digestive problems. So, continuing with a digestive enzyme was important. There was concern that stomach acid and brush border enzymes could be off. This would not be surprising since child's mother has had gastric sleeve surgery and child was also an emergency c-section and taken at 34 weeks gestation. Stool results showed *F. Prausnitzii* was low. Low levels of this healthy bacterium has been linked to a lot of skin conditions so another goal was boosting this beneficial normal flora, and the best way to do this is with prebiotics. Also, this should be more present at his age as it comes in fairly young. This is our major butyrate producer and we know if we are lacking butyrate we can have gut inflammation which can present in the skin. This is another reason why the child's protocol was adjusted to have a probiotic that contained pre-biotic to support the *prausnitzii* which would in turn support butyrate production. A liquid butyrate supplement was recommended but unavailable at the time so we decided to see what the adjustment in the probiotic strains and introduction of prebiotic would do.

Test findings also showed the *bacteroides* being low—could be age but also poor digestion. This will start to go low especially if there is excessive fermentation in the gut. This can alter the pH where they live causing them to not thrive as well. So we want to continue to focus on the enzymes and digestion here.

Finally, wanted to provide something for mucosal lining support as well as immune system support. Due to allergies to eggs and milk, chose SBI Protect from Ortho Molecular Products. New protocol is as follows: ½ scoop SBI Protect daily in bottle or juice, Klaire Labs Ther-Biotic® for Infants, and adjusted protocol to 2 caps Klaire Labs *Saccharomyces Boulardi* daily away from food, 7 drops Designs for Health

Emulsi-D3™ with Vitamin K daily, 1 scoop Transformation™ *Kidz Digest Powder* with each bottle or table feed, 1 cap *PureZyme* 4 times daily with each bottle, and 1 cap *RepairZyme* 3 times daily. Holding on *Plantadophilus* since he has been switched to temporary targeted strain therapy. Also holding on *GastroZyme* to limit the amount of supplements child was given and to see what improvements the SBI Protect would provide for intestinal permeability.

February 20



Follow up with mom. Baby has gotten worse, appears to be detoxing. Explained this may happen as we try to eradicate the “bad bugs” and put more “good bugs” in. We’d also ramped up his immune system with the SBI Protect which would explain Herxheimer reaction as well.

February 25



February 26

Due to age (child is now 10 months old), tolerance of different formulas, and solid food intake, mom has decided to stop formula and switch to soy milk since it did not trigger on allergy testing. Will continue to give protocol initiated on 1/15 . Mom is still using colloidal silver cream as he seems to have some relief of itching when applied but still not clearing redness or weeping.

February 28

All signs of eczema on face have disappeared. Back is also clear with some rough areas, but redness and itching have stopped. Will continue adjusted protocol for 1 more month.



March 16th

Check in with mom to see how baby boy's skin is doing. He has now been on the following protocol for 2 months: ½ scoop Ortho Molecular SBI Protect daily in bottle or juice, Klaire Labs Ther-Biotic® for Infants, 2 caps Klaire Labs S. Boulardi daily away from food, Designs for Health Emulsi-D3™ with Vitamin K, Transformation™ *Kidz Digest* Powder with each bottle or table feed, 1 cap *PureZyme* 4 times daily with each bottle, and 1 cap *RepairZyme* 3 times daily. Skin remains clear with no issues. Child no longer sleeping with hands covered as itching has resolved. No more blood or weeping areas on skin. After 2 months on adjusted protocol from stool test findings, will d/c Klaire Labs probiotic and S. Boulardi once she runs out of product. Will also d/c SBI Protect and use as needed in times of suppressed immunity. Will resume maintenance protocol of 1 scoop *Kidz Digest* powder each feeding, 1 cap *PureZyme* 4 times daily, 3 *Plantadophilus* at bedtime, ½ dropper Vitamin D3 with K, and *GastroZyme* as needed for reflux.

April 1



Last check in to see how things are going on maintenance protocol. Skin still clear, constipation resolved, and reflux no longer an issue. Maintenance of GI conditions managed with Transformation's Healthy Gut Program for kids which includes *Kidz Digest* powder, *PureZyme*, and *Plantadophilus*.

For more information, please contact:

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