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Summary: For the Bleach Bath Study we identified adults with mild, moderate and severe Eczema who have *Staphylococcus aureus* on their skin. We asked them to take a bleach bath twice a week for 12 weeks. Three ounces of regular CLOROX Bleach was diluted in the bathtub filled with warm water, and the participants were asked to soak for 5 to 10 minutes and apply the bleach water to the entire skin surface. We performed skin barrier measurements, itch questionnaires, and collected blood and skin swabs for microbial analysis before the treatment, after 6 weeks, and after 12 weeks into the treatment. The study goal of 15 AD and 5 non-atopic participants has been met.

There has been a significant improvement in disease severity (EASI) and in skin barrier integrity after 6 weeks and 12 weeks of taking bleach baths shown by decrease water loss (TEWL). Subjects also reported significant improvements in itch intensity. As has been observed by other publications, we have not seen a significant effect on cultivatable *Staphylococcus aureus* from skin swabs even after 12 weeks of bleach baths. There were no significant changes in microbial populations (microbiome) in the skin after bleach baths. Most participants seem to be motivated to continue the bleach baths after completion of the study.

The results were presented in early May 2016 at the Society of Investigative Dermatology Annual Conference in Scottsdale, Arizona and in 2015 in Atlanta, GA.

Key points:

Bleach baths as add-on therapy in Adult AD subjects who are colonized with *S. aureus*:

- Reduce disease severity (EASI),
- Reduce symptoms (ItchyQoL, 5-D Pruritus, and better sleep)
- Improve skin barrier (TEWL and SC cohesion)

But have no effect on:

- Staph colonization
- Skin dysbiosis
- Serum Th2 biomarkers
- SC hydration or skin pH

We are preparing 2 manuscripts to submit for publication this summer 2016.