

Beauty

BREAKTHROUGHS

AMERICAN ACADEMY OF DERMATOLOGY

COULD PROBIOTICS BE THE NEXT BIG THING IN ACNE AND ROSACEA TREATMENTS?

Dermatologists encouraged by early research showing link between probiotic use and clearer skin in acne and rosacea patients

Schaumburg, Ill.
February 3, 2014

OVERVIEW:

In recent years, probiotics have become synonymous with helping maintain good digestive health. Whether as live active cultures found in some yogurts or as daily supplements, probiotics are live, “friendly” bacteria that may benefit a person’s health. Now, emerging research is finding that the benefits of probiotics may extend beyond the digestive tract to the skin. In fact, skin prone to acne or rosacea has shown improvement with daily probiotic use, giving dermatologists reason to consider supplementing traditional acne therapy with a dose of this beneficial bacteria.

AMERICAN ACADEMY OF DERMATOLOGY EXPERT

Information provided by Whitney P. Bowe, MD, FAAD, a board-certified dermatologist and clinical assistant professor of dermatology at Icahn School of Medicine at Mt. Sinai Medical Center in New York, and adjunct assistant clinical professor of dermatology at State University of New York (SUNY) Downstate College of Medicine in Brooklyn.

THE SCIENCE BEHIND PROBIOTICS EFFECT ON THE SKIN

Most bacterial cells that live inside and on the body are harmless, and studies show that, in fact, they can be extremely beneficial to the body’s normal functioning. Dr. Bowe noted that while the science of how probiotics can work to interfere with the development of acne and rosacea is very complex, Dr. Bowe noted that researchers are studying how this type of healthy bacteria applied topically to the skin or taken orally can benefit these skin conditions.

TOPICALLY APPLIED PROBIOTICS

Currently, some cosmeceutical manufacturers have started using probiotics in their products based on this early research – including probiotic masks, creams or cleansers. There are different ways that topical probiotics can benefit the skin:

Protective Shield

- In patients with acne and rosacea, living microorganisms on the skin are recognized as foreign by the body’s immune system. The immune system springs into action to counter this potential threat resulting in the inflammation, redness, or bumps common in these skin conditions.
- Probiotics applied topically sit on the skin’s surface and prevent the skin cells from seeing the bad bacteria and parasites that can cause this immune system response. This is known as “bacterial

-more-

interference,” as probiotics protect the skin and interfere with the ability of bad bugs (or bacteria and parasites) to provoke an immune reaction.

Antimicrobial Properties

- Dr. Bowe explained that sometimes the substances produced by probiotics have antimicrobial properties, meaning they can create holes in bad bacteria and kill them. Similar to the way antibiotics work in the treatment of acne and rosacea, probiotics can help fight harmful bugs from triggering inflammation.
- Researchers now are testing probiotics to determine which ones make the substances that can kill bad bacteria. Dr. Bowe predicts that the strains could be identified in the very near future and will then be marketed in products for their antimicrobial properties.

Calming Effect

- When certain types of probiotics are placed in contact with skin cells, they calm the parts of the cells that may want to react to the presence of bad bacteria that they see as a threat. These healthy signals produced by the probiotics stop the skin cells from sending “attack” messages to the immune system that result in flares of acne or rosacea.

Dr. Bowe also reported that some of her patients are experimenting with probiotics by applying homemade Greek yogurt masks to their skin to control breakouts or flares. There is currently no research or studies that demonstrate the effectiveness of this home remedy.

ORAL PROBIOTICS

Dr. Bowe explained that oral probiotics – sold as daily supplements containing *Lactobacilli* and/or *Bifidobacterium* or in yogurts containing live cultures – could influence skin conditions such as acne and rosacea by affecting what is known as the “gut-brain-skin axis.” With this theory, stress alone or in combination with processed comfort foods that lack fiber can slow digestion. This in turn changes the type and number of bacteria that live in the gut to unhealthy bacteria. Eventually the gut lining becomes leaky and toxins are released into the bloodstream causing inflammation throughout the body. People who are predisposed to acne or rosacea can experience flares as a result of this shift in gut bacteria and subsequent inflammation.

To counteract flares of acne or rosacea associated with the “gut-brain-skin axis,” Dr. Bowe advises patients to find ways to help manage or cope with stress, fix their diet or introduce healthy bacteria to the gut in the form of probiotics. The probiotics will line the gut and create a healthy, sealed barrier that prevents inflammation that can trigger acne or rosacea. While United States-based studies are underway to better understand this complex process, a few international studies have shown a correlation between oral probiotic use and improvement in acne, including:

- A recent Korean study of 56 acne patients found that drinking a *Lactobacillus*-fermented dairy beverage effectively reduced their total acne lesion count and decreased oil production over 12 weeks.
- In an Italian study, half of patients were administered an oral probiotic supplement in addition to their standard acne and rosacea treatment. The other half of patients did not receive the probiotic supplement. The probiotic group experienced better clearing of acne and rosacea symptoms.

AMERICAN ACADEMY OF DERMATOLOGY EXPERT ADVICE:

“While more studies are needed to identify the most beneficial aspects of probiotics and determine whether topical or oral probiotics yield the best results, I think we can expect to see some cutting-edge probiotic products for acne and rosacea in the near future,” said Dr. Bowe. “Until then, I would recommend that patients with acne or rosacea see their dermatologist to talk about adding foods with live active cultures, such as yogurt, to their diets or taking an oral probiotic supplement daily. Although I don’t envision probiotics ever being used as a stand-alone treatment for acne or rosacea, they could be used as an effective combination therapy with prescription medications or over-the-counter topical treatments.”

#

Jennifer Allyn
(847) 240-1730
jallyn@aad.org

Kara Jilek
(847) 240-1701
kjilek@aad.org

Headquartered in Schaumburg, Ill., the American Academy of Dermatology (Academy), founded in 1938, is the largest, most influential, and most representative of all dermatologic associations. With a membership of more than 17,000 physicians worldwide, the Academy is committed to: advancing the diagnosis and medical, surgical and cosmetic treatment of the skin, hair and nails; advocating high standards in clinical practice, education, and research in dermatology; and supporting and enhancing patient care for a lifetime of healthier skin, hair and nails. For more information, contact the Academy at 1-888-462-DERM (3376) or www.aad.org. Follow the Academy on [Facebook](#) (American Academy of Dermatology) or [Twitter](#) (@AADskin).