

Nutraceutical acne treatment meta-analysis suggests better nutraceutical acne treatment studies are required

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A meta-analysis by the Brigham and Women's Hospital, Boston, has found a possible role for nutraceutical supplements in treating acne, one

that will require better research practices to reveal their effectiveness.

In a paper, "Safety and Effectiveness of Oral Nutraceuticals for Treating Acne—A Systematic Review," [published](#) in *JAMA Dermatology*, the team reviews 42 articles encompassing various nutraceutical effects on acne. While the study sample sizes were individually small, the collective [meta-analysis](#) included 3,346 participants across diverse methods and treatments tested.

Zinc was the most studied nutraceutical, with approximately half of the studies showing efficacy, especially at [higher doses](#). Zinc also had the highest rate of adverse effects, primarily gastrointestinal.

Vitamins A and B5 showed some effectiveness. The vitamin dosages in the studies analyzed were often well above daily recommended use, suggesting they may not be sustainable without running into toxicity issues.

Vitamin D reduced inflammation, but not the number of lesions, when used on vitamin D-deficient subjects in a single study. Vitamin D was dosed similarly to the recommended daily allowance in its clinical trial, making it the one item studied with an existing recommendation.

Various probiotics demonstrated improvements in small sample studies. The researchers suggest these may be the result of [publication bias](#), given the large number of probiotics available on the market.

Green tea extract showed some effectiveness on the nose and chin in one study, though it was overall not significant in reducing acne.

Cheongsangbangpoong-tang is an herbal therapeutic formula approved by the Korean Food and Drug Administration for clinical use in patients with acne. A single trial is reported to have reduced inflammation but

not in reducing the number of lesions. Some participants reported digestive discomfort during treatment

The small number of studies on each nutraceutical revealed a potential for publication bias, and there may have been other trials with negative findings that were never published. It is exceedingly rare for clinicians to make any recommendations based on a single study.

According to the researchers, most of the studies they used in the analysis needed to be of better quality, and most had small sample sizes, making it challenging to extrapolate anything considered clinically meaningful. The findings suggest a possible role for nutraceutical supplements in treating acne based on previous studies, yet also finds that the previous studies lack rigor. More extensive trials are needed to understand the efficacy of these treatments better.

More information: Ali Shields et al, Safety and Effectiveness of Oral Nutraceuticals for Treating Acne, *JAMA Dermatology* (2023). [DOI: 10.1001/jamadermatol.2023.3949](https://doi.org/10.1001/jamadermatol.2023.3949)

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