

Could a low-cal keto diet help ease acne?

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In a small pilot study, some young women looking to lose weight on a low-calorie keto diet got an unexpected benefit: Their acne began to clear up.

"These findings represent an opportunity to control a [skin disease](#) that affects most teenagers and many adults at some point in their lifetimes, causing distress, embarrassment, anxiety and low self-confidence among

sufferers, robbing them of their [quality of life](#)," said lead study author Luigi Barrea, of the Università Telematica Pegaso in Naples, Italy.

His team presented its findings Tuesday at the [European Congress on Obesity on Vienna, Italy](#).

As Barrea's group explained, [acne](#) is thought to be a chronic inflammatory illness affecting what's known as the pilosebaceous unit: the [hair follicle](#), hair shaft and nearby sebaceous gland. About 9% of the world's population is affected by acne, largely in the teenage years.

According to the Italian researchers, acne has long been linked with obesity, perhaps because both conditions are tied to rising inflammation and [oxidative stress](#).

Could the ketogenic [diet](#) fight that underlying inflammation and oxidative stress?

"While the role of diet in acne is inconclusive, the very low-calorie [ketogenic diet](#) is known for aiding [weight loss](#) and generating anti-inflammatory ketone bodies that provide energy when dietary carbohydrates are scarce, as well as promoting resistance against inflammatory and oxidative stress," Barrea explained in a meeting news release. "We thought it would be worth exploring this potential treatment in acne."

Their study was small: Just 31 [young women](#) (ages 18 to 30) who were obese and had moderate levels of acne.

All of the women embarked on 45 days of a very low-calorie ketogenic diet (just 700–800 kilocalories per day). In keeping with the keto regimen, 44% of calories came from fat, 43% from protein and just 13% from carbohydrates.

All of the women successfully completed the diet, with some mild "adverse effects"—headaches, muscle weakness—reported.

Weight-loss results were impressive. The women lost an average of about 8% of their body weight over the 45 days, with a similar percentage drop in their waistline measurements, Barrea's team reported.

Their acne improved as well: Measured by a standard "global acne grading scale," scores improved by an average of 41.5% over the course of the 45-day diet.

As well, "the participants also reported much better life satisfaction, with an average 45% improvement in their quality-of-life score," researchers reported.

Barrea's team said there was a scientific basis for the easing of acne. They found that markers for systemic inflammation, oxidative stress and gut microbiome health all improved. Improvements in inflammation and oxidative appeared to correlate with reductions in acne severity, the team said.

"In this small pilot trial, the 45-day very low-calorie ketogenic diet demonstrated notable improvements in acne severity that seemed to be attributable to the known antioxidant and anti-inflammatory effects of the diet," Barrea concluded.

He stressed however, that the study was very small and because these findings were presented at a medical meeting, they should be considered preliminary until published in a peer-reviewed journal.

However, "if confirmed in larger, more robust studies, the very low-calorie ketogenic diet could provide a valuable alternative to antibiotics and topical treatments to help the many thousands of people affected by

acne," Barrea said.

More information: Find out more about acne and its treatments at the [American Dermatological Association](#).

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