

## ACNE AND TEENS

The scourge of teenaged life -- acne -- may result from the very diet that feeds it, suggests a new study that flies in the face of three decades worth of conventional thinking on the cause of facial blemishes. And this time, it's not just isolated items such as chocolate or pizza being implicated. It's the entire typical western diet, a gamut of highly refined starchy and sugary foods that not only includes those "junk" foods but also the very breads, cereals, and carbohydrates that are the cornerstone of the USDA Food Pyramid. The theory, reported in the December issue of Archives of Dermatology: Most staples in the American diet are high-glycemic foods -- those that tend to spike blood sugar levels and have already been implicated in increasing risk of diabetes, obesity, cholesterol, and other health conditions. But they also cause acne, says Loren Cordain, PhD, a Colorado State University health and exercise scientist and lead researcher of the study. He says these foods cause acne by triggering a "hormonal cascade": By raising levels of insulin and insulin-like growth factor (IGF-1), more male hormone testosterone is produced, which leads to overproduction of more sebum -- the greasy gunk that blocks pores and triggers acne.

Researchers have long known that elevated testosterone levels does trigger acne. "If you eat grains, drink milk, or have any processed foods, you essentially have a high-glycemic load diet," Cordain tells WebMD. "About 85% of the grains in the western diet are refined and highly glycemic. Half of the total per capita calorie intake in this country is high glycemic load foods. It's a universal manifestation of western foods." But why are teens most likely to wear the battle scars of a national diet consumed by those of all ages? "Because the teenaged years are a time of natural insulin resistance," Cordain explains. "The teens are growth years; for tissues to grow, they become insulin resistant." In the U.S., acne plagues up to 95% of teens and about half of adults under age 40. Yet some primitive populations eating all-natural foods are virtually pimple-free, says Cordain. His international team of researchers studied 1,200 people (including 300 teens) in New Guinea and 115 (with 15 teens) in remote Paraguay and couldn't detect a single zit in two years of study. These people only eat what they hunt, gather, or grow themselves -- fruit, vegetables, seafood, and lean meats -- and no refined foods.

"We then looked at other studies that examined incidents of acne in similar populations -- South Americans and New Guineans now living in westernized settings," he tells WebMD. "We found that when they become more westernized and start eating like Americans, they do develop acne," he notes. "So it's not genetics." His advice: Eat foods with a low glycemic index -- a prediction of how much a particular food will raise your insulin levels. Low glycemic foods include lean meat and fish, vegetables, and fruit. A new study is under way in Australia to test the effect that high- and low-glycemic foods have on acne-laden teens. "This study shows the American people that there is a link between diet and acne and that it is treatable by altering diet," Cordain tells WebMD. But not all are convinced. "Hypothetically, a high-load glycemic diet could lead to (acne), but I'm not convinced that going on a low-glycemic diet would improve acne," says Diane Berson, MD, of Cornell Medical College and a spokeswoman for the American Academy of Dermatology. "There are many factors that play a role in acne -- genetics, stress. It could be these people studied were genetically less susceptible or that their lifestyle is less stressful than western civilizations. It's hard to definitively conclude that diet is the factor." Meanwhile, the academy has no plans to rewrite this long-standing policy: "Acne is not caused by food. While some people feel that their acne is aggravated by certain foods, particularly chocolate, colas, peanuts, shellfish and some fatty foods, there is no scientific evidence that suggests food causes or influences acne. Avoid any foods which seem to worsen your acne and, for your overall health, eat a balanced diet -- but diet shouldn't really matter if the acne is being appropriately treated." That policy -- along with the thinking of Berson and most health experts -- stems largely from studies in the 1960s and 1970s that found no scientific cause for the popular notion (at least by patients) that breakouts occurred after certain foods were consumed. "One of the ways in which everyone kind of blew off the food connection was because of a paper published in 1969 in The Journal of the American Medical Association examining whether chocolate caused acne," says Cordain. "One group was fed chocolate and another fed a placebo. And lo and behold, the incidences were the same. But the placebo had the same glycemic load as the chocolate - virtually all the ingredients were the same except for cocoa. Bingo!"

### SOURCES:

<http://aolsvc.health.webmd.aol.com/content/article/57/66010.htm>

Archives of Dermatology, December 2002, Loren Cordain, PhD, professor of health and exercise science, Colorado State University, Diane Berson, MD, assistant professor of dermatology, Cornell Medical College.