# Eliminate Acne For Good (No, It’s Not Another Skin Product)

Acne vulgaris is now the most common skin disease of western civilization. Over 85% of adolescents and around 50% of people who are over the age of 25 struggle with acne – and its prevalence keeps rising. Clearly, the “doctor recommended” antibiotics and skin creams aren’t helping much.

Fortunately, recent research suggests that we can eliminate whiteheads, blackheads, and red bumps with what we eat. But, is this really possible? Can we treat acne from the inside out with diet?

Why yes, yes we can. To understand how this is possible, we need to look beyond the surface of the skin.

## The Acne Epidemic – A Side Effect of Western Culture

Genetics strongly influence your risk of developing acne, but acne-causing genes cannot explain the rapid increases in the incidence of acne. Population-based studies, on the other hand, suggest that diet may have the most profound impact on the severity and prevalence of acne – more so than skin hygiene, smoking, and stress (which all have been found to have little to no association with acne).

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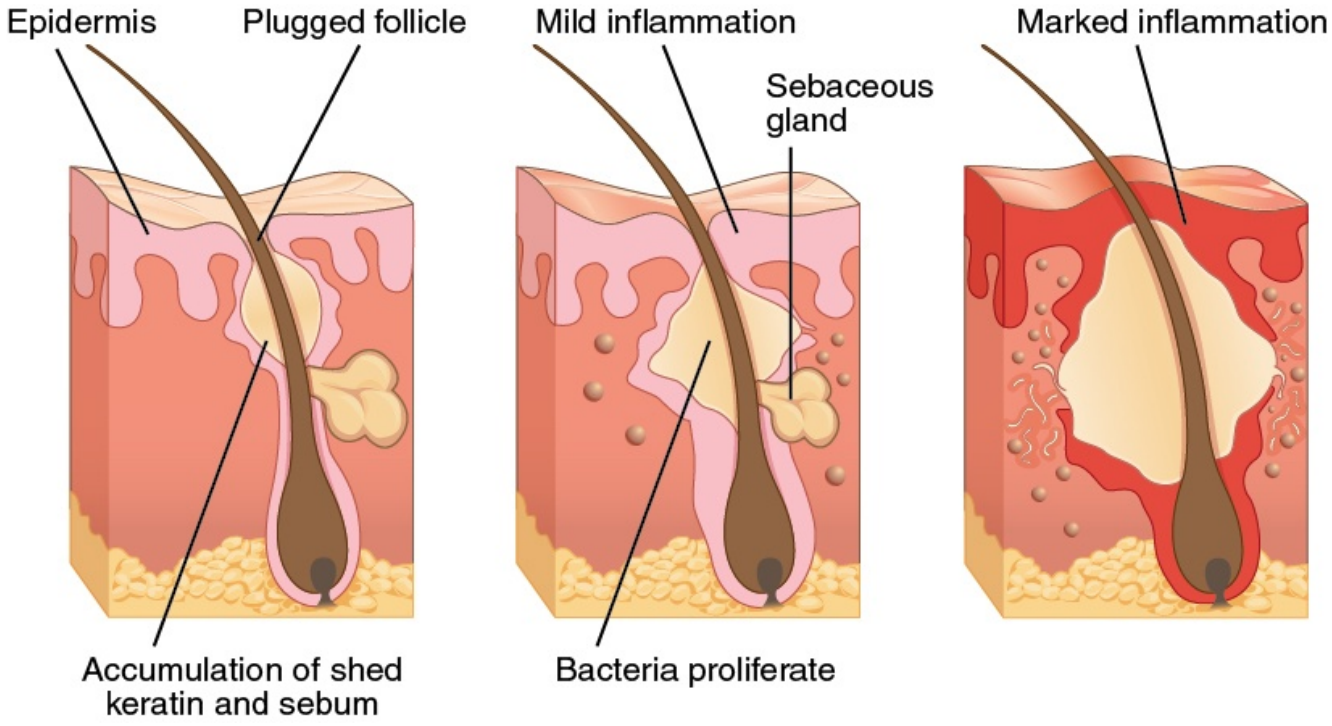
More specifically, the western diet seems to be the main instigator of the current acne epidemic. Conversely, when we look at the data from other non-westernized cultures – such as the Inuit, Okinawan Islanders, Ache hunter-gatherers, and

Kitavan Islanders – acne is a rarity.

But before we jump to any conclusions, we must keep in mind that this is epidemiological data. From this evidence, we cannot assume that the western diet causes acne. This data doesn't even provide us with strong enough evidence to claim that any diet can increase or decrease the risk of acne (there are too many confounding variables). Only when we look at the physiological mechanisms behind the creation of pimples, blackheads, and red bumps will we be able to figure out if diet can play a role in the development of acne.

## The Formation of Acne – An Inside Look at Our Poor Pores




Whiteheads, blackheads, and red bumps are formed when there is:

1. Increased reproduction of skin cells within the ducts that carry oily lubrication to the skin and hair.
2. Abnormal shedding of the skin cells around the hair

follicle.
3. Increased production of sebum – the oily, waxy substance that waterproofs and lubricates the skin and hair.
4. Colonization of the uppermost layer of the skin (stratum corneum) by a bacterium called Propionibacterium acnes, resulting in inflammation (red bumps).

As a result of these four factors, dead skin cells will stick together with the help of the excess oily sebum. This will block the pore of the hair follicle, forming a microcomedone (a clogged skin pore).

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If the microcomedone is closer to the skin, then the skin pigment called melanin will be oxidized by the air, creating what we know as a "blackhead". On the other hand, a whitehead is formed when the microcomedone occurs deep within the hair follicle. Both whiteheads and blackheads (in their early and late stages) provide an ideal environment for Propionibacterium acnes to proliferate. As the bacteria continue to colonize the area, they trigger an inflammatory response that leads to redness, tenderness, and swelling.

What creates this chaos in the skin? The current research indicates that the main culprits are insulin and other hormones that are influenced by insulin, such as testosterone, dihydrotestosterone (DHT), and dehydroepiandrosterone (DHEA), growth hormone (GH) and insulin-like growth factor 1 (IGF-1). For example, DHT and DHEA seem to increase oily sebum production, while GH and IGF-1 appear to trigger the overproduction of the specific skin cells. When these hormones are chronically high, they will disrupt the homeostasis of the skin and stimulate acne production.

# The Bigger Picture of Hormones, Acne, And Health

A helpful example of how hormones affect skin health can be found when we look at specific medical conditions that result from hormonal imbalances. Polycystic ovary syndrome (PCOS), for example, is typically caused by unhealthy increases in androgens (like DHT) in women. As a result, many women with PCOS also have acne.

Conversely, people who lack androgens or are insensitive to the effects of androgens rarely have acne. This is the main reason why people with androgen insensitivity syndrome never develop acne.

A more prevalent example of how closely linked acne and hormones are can be found in teenagers. When teenagers (and some preteens) hit puberty, they experience rapid increases in many of the hormones we mentioned above. This results in rapid growth and sexual maturation with the unfortunate side effect of acne (for most adolescents).

But don't mistake genetics and puberty as the only contributing factors to acne formation. If we look back at the data from population-based studies comparing the incidence of acne in westernized and non-westernized societies and combine that with our knowledge of the physiological mechanisms of acne, an interesting pattern emerges.

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Since insulin and other hormones that are influenced by insulin instigate the chaos in the skin that leads to acne and high-carb, sugary foods stimulate insulin, doesn't this mean that people who eat a diet filled with these processed foods will most likely develop acne?

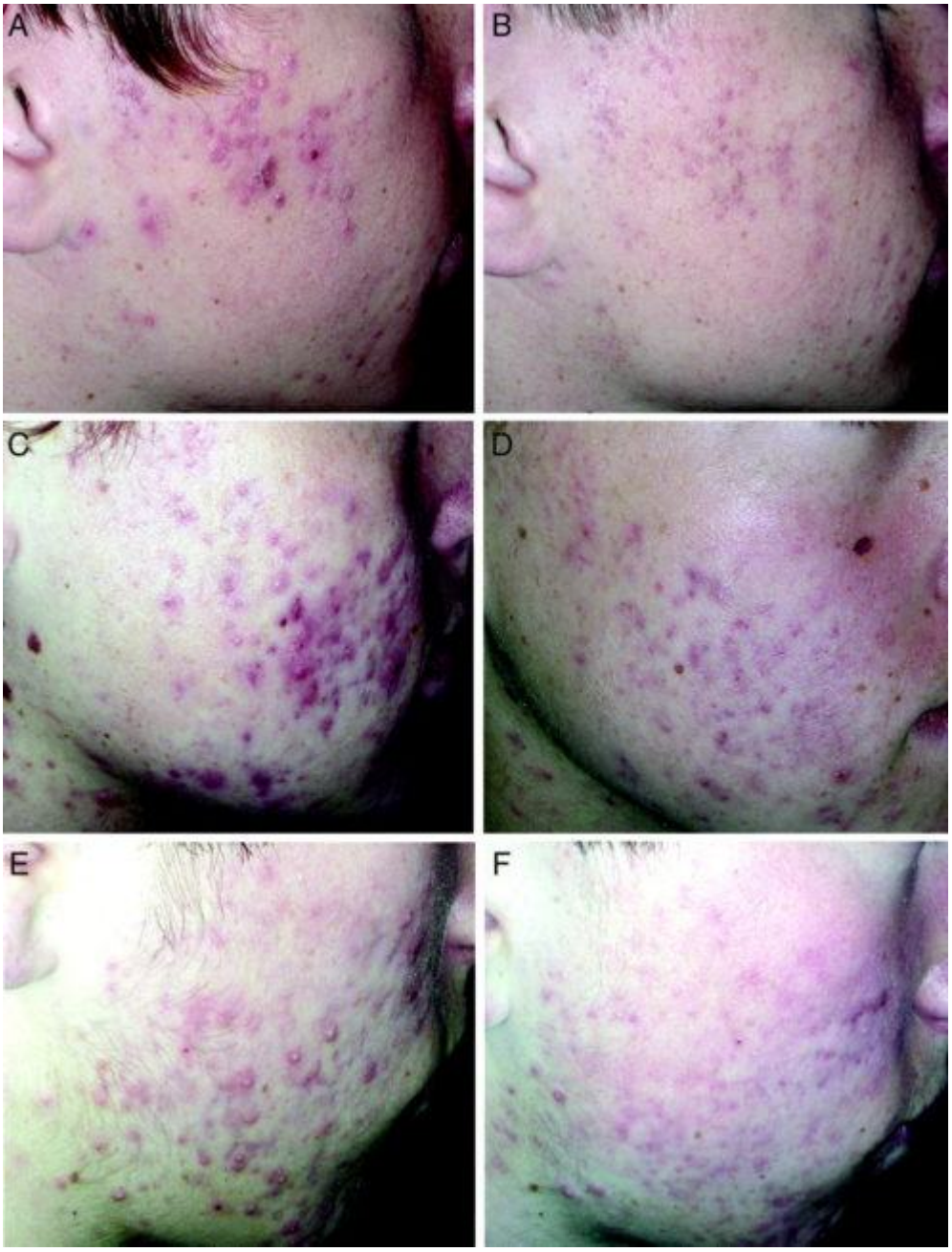
When we look at the population-based studies, this seems to be true – especially since westernized societies eat more processed sugary foods than any other culture. Yet, this is purely a contention held by many researchers. To find out if this is what really occurs in humans, we need some high-quality scientific evidence from clinical trials.

## High Glycemic Load Diet vs. Low Glycemic Load Diet – Can Diet Treat Acne?

To our knowledge, there is one study that explored the therapeutic effects of diet on acne. In this study, a total of 43 male patients with acne who were between the ages of 15 and 25 completed either a 12-week high glycemic load diet or a 12-week low glycemic load diet.

At 12 weeks, the average number of lesions in the low glycemic load diet group fell by 51% – nearly twice the reduction that was found in the high glycemic load diet.

Below are some photos of the results from the subjects in the low glycemic load diet group:




These are pretty astounding results, especially when you consider what the researchers define as a low glycemic load diet:

> *The LGL [low glycemic load] group was instructed to substitute high-GI foods with foods higher in protein (e.g., lean meat, poultry, or fish) or with foods with a lower GI (e.g., whole-grain bread, pasta, and fruit). Some staple foods were supplied, and the participants were urged to consume these or similar foods daily. The recommended LGL diet consisted of 25% of energy from protein, 45% from low-GI carbohydrates, and 30% energy from fats.”*

This diet has a lower glycemic load than the standard American diet, but I wouldn't consider this a "low glycemic load diet". Some of the foods included in this diet like grains, pasta, and some fruits can provoke an unhealthy glycemic response, especially when they are eaten in high quantities.

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Just imagine what would've happened if they eliminated low fiber, high sugar foods completely. Even better results, perhaps?

Unfortunately, there are no other research studies that can provide us with a conclusive answer.

However, we can make a couple reasonable assumptions from this data:

- Diet definitely plays a role in the incidence and severity of acne in western populations.
- If you eat more whole foods and less processed foods, then the severity of acne will most likely be reduced.
- Insulin levels and acne severity are related.

With that being said, many questions still remain unanswered. Here are some that come to mind for me:

- Are insulin levels and acne severity so strongly linked that a decrease in insulin levels will improve skin health?
- Will a low sugar, whole food diet have the same effect on women with acne?

# What This Means For You And Your Acne

The researchers of the previous study suggest that losing weight and eating more low-GI foods like meat and low-carb vegetables will create favorable changes in the body that

improve skin health. The researchers also explored the implications their findings have for women by relating acne to PCOS.

They went on to explain how both PCOS and acne can be caused by chronically high insulin levels. In fact, women with PCOS typically have acne and some degree of insulin resistance. The research on PCOS suggests that low carb diets (a variation of a low glycemic load diet) are the best diet to help reverse PCOS and its symptoms (like acne), so it is fair to assume that eating in this way will also improve acne in women without PCOS.

What does this mean for you and your loved ones who have acne? That you can all benefit from cutting out processed, sugar-laden foods your diet. However, this way of eating may not eliminate your acne completely. Some studies suggest that dairy can play a role in worsening acne as well.

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# Dairy – Just As Bad As Sugar for the Skin?

Insulin and basal IGF-I plasma levels are major players when it comes to acne, and high sugar foods aren't the only thing that increases IGF-1 and insulin to unreasonable levels. Dairy products can provoke unhealthy insulin and IGF-1 levels as well.

Although there are no clinical trials on the impact of milk consumption on acne, three large population-based studies reported a positive association between milk intake and acne. This association is probably due to the fact that the natural hormones in milk (designed to help the calves grow into massive animals) may survive milk processing and stimulate the many processes that lead to acne production. Furthermore, the

whey protein that is found in most dairy products also creates a potent insulin response that may further exacerbate any acne issues.

If you suspect that your dairy consumption could be harming your skin health, then consider replacing it with dairy-alternatives. Here is a list of some suggestions to make it easier for you:

- **Use coconut milk instead of milk.** In recipes, you can substitute coconut milk in for regular milk in a 1 to 1 ratio.
- **Replace heavy cream with coconut cream.** Make sure the coconut cream doesn't have any added sugars.
- **Replace dairy-based cheese with vegan cheese.** My personal favorite dairy-free cheese-making companies are Treeline and Miyoko's Kitchen. Their cheeses are some of the best I've ever tasted. In fact, many people think that they are better than traditional dairy-based cheese. If Treeline or Miyoko's Kitchen doesn't have the cheese you are looking for, then try Follow Your Heart's vegan cheese. Follow Your Heart makes almost every type of dairy-free cheese you could ever want.
- **Instead of Cream Cheese, have Nut-Based Soft Cheese.** Treeline makes a cashew-based soft cheese that is delicious and savory, and it has almost the same texture as cream cheese.
- **Replace Yogurt and Sour Cream with Nut-Based Yogurt.** At your local health food market, you will probably be able to find plain almond, cashew, or coconut milk yogurt. Just make sure it has no added sugars or dubious ingredients.
- **Instead of Butter use Coconut Oil or Vegan Butter.** Coconut oil has a slightly lower melting point than butter and the same smoke point as butter, which makes it a good butter replacement. If you are not a fan of the flavor of coconut oil, look for dairy-free butter in

your local health food store. Make sure the vegan butter doesn't contain any hydrogenated oils, vegetable oils, or soy oils. You can also make your own vegan butter by following recipes online – Just search for "Vegan Butter".

## Seven More Ways to Improve Skin Health And Reduce Acne

Altogether, limiting your sugar and dairy intake should have a massive impact on your skin health. If this approach isn't working as well as you'd like after a couple of weeks, then try some of these suggestions:

- **Supplement with Omega 3s.** Long-chain omega-3 fatty acids found in fish are anti-inflammatory and may improve skin health. The best sources include wild-caught salmon, mackerel, sardines, herring, and anchovies. Or if you don't want to eat fish, supplement with some vegan omega 3s that are derived from algal oil.
- **Eat non-starchy vegetables with every meal.** Leafy greens and cruciferous vegetables help promote hormonal regulation and improve skin health.
- **Take caffeine-free green tea extract**. Green tea is the best source of the antioxidant EGCG (Epigallocatechin gallate). A 2016 study found that green tea extract significantly reduced acne lesions in adult women with moderate to severe acne. We suggest taking the caffeine-free extract to mitigate the adrenal stress that is typically caused by caffeine.
- **Limit dark chocolate consumption.** A 2016 study found that 99% dark chocolate might significantly worsen breakouts in acne-prone men. For this reason, you may want to limit dark chocolate intake.
- **Eat only whole foods.** Stick to whole foods whenever possible. Avoid anything with added sugars, even if they

are natural sweeteners like honey and coconut sugar.
- **Exercise daily.** Consider adding a 15-30 min walk to your daily schedule. This will increase your insulin sensitivity, decrease your insulin levels, and reduce the severity of your acne as a result.
- **Experiment with intermittent fasting.** By restricting your calorie intake to an 8-hour eating window every day, you can decrease your insulin and IGF-1 levels more than you would by eating normally throughout the day.

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# Putting it All Together – The Best Diet For Eliminating Acne

The current evidence suggests that processed foods – specifically foods that are high in sugar and low in fiber – are the likely cause of the current acne epidemic in westernized societies. The reason why I say "likely cause" is because the existing data is scarce.

However, with our current knowledge of the physiology of acne, the prevalence of acne in westernized vs. non-westernized societies, and the results from the clinical trial on how diet affects the severity of acne, we have enough evidence to suggest that cutting out processed foods from the diet and replacing them with whole foods is one of the best (and healthiest) treatments for acne.

To put it more simply, your skin will be much healthier if you use your money to buy more organic vegetables instead of expensive creams and ineffective antibiotics.

Once you've adopted a low sugar, whole food diet into your life, you can improve skin health even further by:

- supplementing with omega 3s
- eating low-carb vegetables with every meal

- taking EGCG
- limiting dark chocolate consumption
- exercising daily
- experimenting with intermittent fasting

When you combine these suggestions together with a low sugar, whole food diet, your skin will start clearing up and your health will improve tremendously. Keep in mind, however, that it may take a couple of weeks to months before you see noticeable results – just like it did for the participants in the study we looked at earlier.

**Recommended Reading:**

- *Detox Cheap and Easy Without Fasting – Recipes Included*
- *Start Eating Like That and Start Eating Like This – Your Guide to Homeostasis Through Diet*
- *How to Make the Healthiest Smoothies – 4 Recipes*

**Sources:**


- *The effect of a high-protein, low glycemic-load diet versus a conventional, high glycemic-load diet on biochemical parameters associated with acne vulgaris: a randomized, investigator-masked, controlled trial.* – NCBI
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- *Diet and Acne Update: Carbohydrates Emerge as the Main Culprit<* – Journal of Drugs in Dermatology
- *Diet and acne: a review of the evidence* – Wiley Online Library
- *Correlation between serum levels of insulin-like growth factor 1, dehydroepiandrosterone sulfate, and dihydrotestosterone and acne lesion counts in adult women.* – NCBI
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- *Acne Vulgaris: A Disease of Western Civilization* – JAMA Dermatology