

Dr. Mercola: Eating Crickets Could Be Good For Your Gut



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STORY AT-A-GLANCE

- In a quest for a sustainable, environmentally friendly protein source to rival meat-based protein, scientists wanted to find out what eating crickets does to the human bacterial ecosystem, known as the microbiome
- In a clinical trial, cricket powder eaten by study subjects increased their beneficial gut bacteria while decreasing an inflammatory blood protein linked to cancer and depression

- Crickets provide a complex array of fats, proteins, vitamins and a unique type of fiber that can help balance the microbiota in your intestines; dysbiosis, or an imbalance, is linked to metabolic problems, gut issues and even depression
- The polysaccharide exoskeleton of crickets and other insects offers a fiber source known as chitin, which is different from the fiber in fruits and vegetables, although dietary fiber from produce is also necessary to develop gut health
- If you're not sold on eating insects, there are other ways you can improve your gut health; one of the best is by adding fermented foods to your plate, as are drinking black tea, exercising regularly and avoiding sugar

By Dr. Mercola

Not everyone in the world shops at supermarkets for foods to fulfill their need for critical nutrients like vitamins, protein and fiber. Many international cultures have thrived on foods that most in the West wouldn't think of ingesting, but new research has emerged that shows insects like crickets, grasshoppers and ants can supply not just sustenance, but beneficial compounds that promote gut health and fight inflammation.

Crickets, in particular, were shown to provide a remarkably complex array of proteins and a unique type of fiber that helps balance the microbiota in your intestines. When the bad outweighs the good bacteria in your gut, your ability to fight off disease is thwarted. This imbalance, known as dysbiosis, is linked to metabolic problems, gastrointestinal issues, noncommunicable diseases, allergies, asthma and even a bad mood.¹

Your intestinal tract is the home of millions of bacterial cells. It holds three times the number of your own human cells, and encodes at minimum 100 times more genes, according

to one study.² In fact, your gut bacteria impact nearly every aspect of your physiology, including your metabolism, gene expression, immune function, energy and mood.³

Your diet (what you eat) has much more of an influence on your health, including how your gut feels and functions, than many people give it credit for. It determines nearly everything having to do with your [gut microbiota](#), and most importantly with the diversity of those bacteria. You could say your overall health is tied to what's in your gut, and what's not. According to the study, published in Scientific Reports:

“Diet is an especially relevant factor in defining the composition of gut microbiota, and even small shifts have demonstrated meaningful effects. Dietary diversity is linked with a more diverse, healthy microbiota that is more adept at adjusting to perturbations. Indigestible dietary carbohydrates (dietary fibers) are the primary energy sources for gut microbiota, and thus shape microbial growth.

Not surprisingly, dietary fiber intake has been shown to contribute to the health of the gut microbiome by increasing diversity in fecal microbiota, and high fiber intake has been associated with a reduced risk of breast cancer, diverticular disease, coronary heart disease and metabolic syndrome.”⁴

Insects like crickets offer fiber known as chitin, the polysaccharide exoskeleton of most arthropods, which is different from the fiber in fruits and vegetables. Lead study author Valerie Stull, of the University of Wisconsin, also explained that [dietary fiber](#) are “indigestible dietary carbohydrates” that the human body doesn't absorb, but they're the most prominent food and energy sources needed to develop gut health. “Basically,” she explains, “the fiber that we're getting in our diet is shaping the growth of microbes in our

gut.”⁵

Who Wants a Nice Scoop of Cricket Powder?

As noted earlier, arguably the majority of people in the West aren't too keen on the idea of noshing on crickets, no matter how good for you they're purported to be. That's why Stull devised a more palatable way for people in the U.S. and Europe to gain the benefits of the chirpy insects: edible insects are now available in powder or “flour” form from multiple sites online.

The powder form is what the 20 volunteers in the clinical trial were given so researchers could investigate potential health benefits. For 14 days, healthy men and women ranging from age 18 to 48 were given either a “control” breakfast shake or muffin, or the same, only with 25 grams of cricket powder mixed in. As a follow-up, the volunteers were then given a normal diet for a week as a “washout period.” Following that, their meals were switched for another 14 days so everyone had a chance to experience the cricket benefits.

Researchers didn't know which of their study subjects were on the control or the cricket diet, nor when, but they collected blood and stool samples before the trial began. They also administered two before-and-after questionnaires regarding the gastrointestinal experiences of the participants, who served as their own individual control. None of them reported side effects, Tech Times notes. Further:

“Researchers noted no change in microbial composition and gut inflammation. What they did find was an increase in beneficial gut bacteria and in an enzyme linked to good gut health, as well as a decrease in an inflammatory blood protein linked to cancer and depression. That said, researchers note that their study is a small but important

one that may be considered when promoting insects as a food source.”⁶

Along with the increase in metabolic enzymes associated with gut health in the samples collected from the subjects after their cricket doses, there was also a higher ratio of beneficial gut bacteria like *Bifidobacterium animalis*, a strain linked to improved gastrointestinal function due to its ability to decrease inflammation.

Arthropods Aren't Just for 'Other Cultures' Anymore

Around 2 billion people in the world consume insects on a regular basis.⁷ Crickets and other arthropods are a mainstay in the diets of people in many areas of the world, so the nutritional benefits found in them may help explain how some populations manage to thrive who don't routinely eat the [“three squares a day”](#) many people in the West insist are necessary for health.

Stull has eaten caterpillars, grasshoppers, cicadas and beetle larvae in many areas of the world, and explains, “Most of the insects consumed around the world are wild-harvested where they are and when they are available. People love flying termites in Zambia, which come out only once or twice a year and are really good; they taste like popcorn and are a crunchy, oily snack.”⁸

If that makes you shudder, keep in mind that, just as many in the U.S. frowned on the idea of eating sushi just a few decades ago, it's now sold and purchased happily in the furthest reaches of the U.S., from Oregon to New Hampshire – even in a gas station in Nebraska, Stull notes. A colleague noted that cricket consumption may provide benefits beyond

nutrition.⁹

Stull also reveals a few interesting points about cricket consumption with this riddle: What's the difference between a lobster and a cricket? Answer: One arthropod is from the ocean; the other is on land. It's only a matter of perspective which one is a delicacy, as she noted that while cricket consumption may seem "creepy" to some, edible insects are nutritious and often delicious. However, there is a caveat: If you have a shellfish allergy, you may be allergic to crickets, too.

It's Not Just Crunchy Protein Your Gut Needs

Eating insects as an alternative to or to augment meat intake is a concept that has intrigued a growing number of people who've routinely eaten livestock as part of their diet regimen. Some either add cricket powder to gain what they see as their protein requirements or to entirely replace the meat on their plates.

Not only does cricket powder offer a sustainable, environmentally friendly alternative to meat from concentrated animal feeding operations (CAFOs), it's also heart-friendly. Another benefit of insect ingesting is that you can eat as many crickets as you want without the problems that consuming high amounts of CAFO meat causes. Stull also observes:

"There is so much untapped potential when it comes to utilizing edible insects. They are abundant, and when farmed, can generate a high-quality protein with a substantially lower environmental impact than ... [CAFO] livestock. They need less feed, land and water to grow – and they generate fewer greenhouse gases."¹⁰

If you're not sold on eating insects, there are other ways you can develop and benefit from improved gut health. Exercise is an important component, as it has far-reaching advantages, particularly for your brain and metabolic system.¹¹ [Exercise](#) can actually increase the diversity of healthy gut bacteria, and that diversity is a crucial key to increasing and balancing the ratio of good bacteria while offsetting the bad.

Another excellent way to balance your microbiome is by eating [fermented foods](#), which is one reason why people in Eastern Europe, for example, have been thriving for centuries. [Black tea](#) is also great for gut health, as it also helps balance your bacteria and improve its overall function. The molecules in black tea stay in your intestinal tract longer than other teas and enhance the growth of beneficial bacteria and the formation of microbial metabolites.¹² But perhaps [avoiding sugar](#) is one of the best ways to optimize your intestinal health.

Taking antibiotics can damage your microbiome, so counterbalancing them with a probiotic is recommended. How you do it, though, is every bit as important. You shouldn't ingest both antibiotics and probiotics at the same time, as the former may completely offset the benefits of the latter. Instead, leave a buffer of a few hours either before or after taking the antibiotic, and make sure the [probiotics](#) you take are from a quality source, says Greg Leyer, chief scientific officer of UAS Laboratories.

What's so Good About Edible Insects?

The fibrous protein that crickets, grubs and other such critters provide isn't just a thing people in underdeveloped countries are forced to eat. They're truly considered treats

all over the world, and it's becoming more common in the U.S. But according to Terminix International,¹³ in some countries, insects are also consumed as part of the culture and not (necessarily) per necessity for the nutrient content, including:

- **China** – Roasted bee larvae and fried silkworm larvae are said to be rich in such vitamins, minerals and trace elements as vitamins B1 (thiamin), B2 (riboflavin), iron, copper and zinc.
- **Brazil** – In a town called Silveiras, citizens take advantage of the descent of winged queen ants, or içás, in October and November. They remove the wings and either fry or dip them in chocolate, the latter making them taste like mint.
- **The Netherlands** – Because they're a nation that embraces cultural diversity, the Dutch have introduced chocolate infused with ground mealworms.
- **Ghana** – As much as 60 percent of the protein consumed in this rural African country comes from termites, which provide such necessary nutrients as oils, fats and proteins.
- **Mexico** – Certain areas prepare butter-soaked ant eggs, candy-covered worms and chocolate-covered locusts, not to mention the worms in the alcohol known as mescal.

For thousands of years, numerous cultures have been known to practice entomophagy, the practice of eating insects. Rather than being simply gathered, whole industries have been formed around the "farming" of [edible insects](#), from bees to beetles; grasshoppers to leafhoppers. The concept has a number of advantages, as food shortages and disasters occur all over the world, including in places they weren't expected. In fact, if [industrial farming](#) technologies don't embrace [regenerative agriculture](#) soon, entomophagy may become a necessity sooner rather than later.

If you're brave enough to get in on the cricket craze, you don't have to go to Ghana or Southeast Asia. You can purchase those and other crunchy offerings in a growing number of markets throughout the U.S. UK News-Yahoo! related findings by Global Market Insights, which reported that the insect industry is currently valued at \$33 million, with potential growth of 40 percent in the next five years.¹⁴

As is often the case, the scientists say larger studies are needed to confirm their findings and to determine which cricket components were most helpful in regard to improving human gut health. As Kiro 7 News¹⁵ notes, they hope to continue their research and promote insects as a more mainstream food option in the U.S. Crickets may not be the representative "silver bullet" for solving every illness or agricultural challenge, but as Stull states, "they certainly have potential."