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Veggie Tales

Science says to eat more plants and less meat – here's why

By E.J. Iannelli



Diets, like fashion, appear to be in a state of constant inconstancy. There's Paleo, Atkins, South Beach, DASH, 5:2 and dozens more, their popularity rising and falling according to their novelty or the number of celebrity proponents they happen to have on a given day. And in news articles that report on the latest dietary studies, the scientific findings would seem to be constantly at odds with themselves: One week eggs are linked to heart disease, the next week they're an integral part of healthy eating.

Yet, amid the tumult of dietary crazes and conflicting dietary recommendations, one piece of advice is essentially eternal: We really should be eating far more fresh fruits and vegetables and, ideally, less meat. But why?

One of the many reasons has to do with basic nutritional balance.

"Some of the advantages of reducing meat [consumption] are to focus on the other food categories on our plate," says Korrin Fotheringham, a registered dietitian nutritionist. Her company, Northwood Nutrition, serves individual and institutional clients in the Spokane area.



Dietitian Korrin Fotheringham says reducing meat allows us to "focus on other food categories."

"In my experience working with clients and patients who eat meat and don't eat meat, the meat-eaters tend to not eat a lot of legumes or pulses. Legumes are any kind of bean out there — pinto beans, black beans — and pulses are foods like lentils. These foods have a lot of nutrient-dense vitamins and minerals in them, and they're chock-full of fiber as well. If we're thinking about reducing meat or going to a meat-free diet, it allows more room for those other food groups."

As researchers are discovering, though, vegetables' vitamins and fiber might be only one part of a more complex physiological interaction.

"Gut bacteria have been just exploding in the research field recently, leading to a lot of new discoveries in regard to potential causes of obesity and irritable bowel syndrome. The latest one I saw was for Parkinson's disease," says Fotheringham.

There's even mounting evidence to suggest that a healthy microbiome in our intestinal tract, rich in diverse bacteria and other microbes, can improve sleep and mitigate mental health issues such as depression and anxiety. Eating prebiotic soluble fiber like inulin (found in garlic, onions, leeks, asparagus), pectin (plums, apples, quinces, citrus fruits) and raffinose (cabbage, broccoli, Brussels sprouts) helps to promote this diversity by "feeding" these gut species. Probiotics found in fermented foods—including kimchi, miso, certain forms of

sauerkraut and pickles, and yes, even dairy like kefir and yogurt — introduce new types of bacteria into our microbiome.

It's this combination of beneficial factors such as nutrition and gut flora that could explain why reduced-meat, plant-heavy diets are consistently associated with longer, healthier lives. One study of 450,000 adults who maintained a 70:30 (plant to meat/dairy) diet saw their risk of dying from heart disease or stroke drop by 20 percent. Another study published in *JAMA Internal Medicine* followed 120,000 health professionals over three decades. Among its extensive findings was that those who ate red meat tended to die earlier than their counterparts.

Patrick Crosswhite, an assistant professor in the Department of Human Physiology at Gonzaga University with a particular interest in metabolism and food nutrition, says that common levels of meat consumption in America still tend toward excess. Generally speaking, a portion of meat "the size of your palm" is a recommended serving amount.

Fotheringham notes that as few as "one, maybe two dinners" per week with meat portions of that size should suffice for most of us — as long as its absence is compensated for with proper complementary food.

That's why, for all the benefits of a plant-based diet, both Fotheringham and Crosswhite caution against eliminating meat "cold turkey." Vitamin B-12, which is vital for the synthesis of DNA, is only available in its natural form in meat. Supplemental Vitamin B-12 exists, but it can't just be taken indiscriminately. Crosswhite adds that iron is "one of the biggest risks for nutrient deficiencies" in a "traditional vegan" diet.

"We need iron for a lot of different things," he says. "We need it for proper heme production, and we need heme in our red blood cells so we can carry oxygen. But iron is not created equally. With a plant-based diet, you're getting mostly non-heme iron, and it's more difficult for our bodies to absorb non-heme iron than heme iron, which is basically present in mammalian muscle tissue." A lack of

heme iron also puts menstruating and pregnant women at particular risk of anemia.

But what about the contradictions of dietary information? That, says Crosswhite, is the scientific process at work.

"As individuals, we want that smoking gun that effectively proves or links something," he says, but the aim of scientific research is about coming to repeatable conclusions with different cohorts and at different times under similar conditions. That generates a lot of information, some of it at apparent odds with itself.

"It's confusing to the public. And the field of nutrition has not been around very long compared to physics or chemistry. Those disciplines have been around for 500 or 2,000 years. Nutritional science is maybe 100 years old, and modern nutritional science has only been around since the mid-1950s. But I look at information in totality. If there's, say, 1,000 studies saying that eating meat will cause colon cancer versus five studies saying [the opposite], I tend to put the most weight with the most data."

And that majority of data clearly points to the benefits of a plant-based diet and the advice that Crosswhite and Fotheringham, like other nutrition experts, offer unreservedly: The more fresh fruits and vegetables we consume, the better.

Side Effects of Meat

Nutritive benefits aside, there are ethical, ecological and economic reasons for a plant-based diet. Not only does meat on our plate necessitate the loss of sentient life, the cultivation of meat for consumption is far more resource-intensive than the cultivation of vegetables. It takes about 4 million gallons of water to produce a ton of beef, whereas vegetables require only a fraction (2.13 percent) of that: 85,000 gallons on average. Simply halving your meat intake in favor of plants like legumes and tubers can reduce your individual water footprint by 30 percent.

That sustenance and labor also equate to a pricier product.

"I teach a class about eating healthy on a budget," says Korrin Fotheringham, RDN, "and the meat group is so, so hard to touch on. It takes a lot of money to feed a family of four these days, and if meat is part of every meal, that's a huge chunk of change. I always suggest making two dinners a week vegetarian. That can really help trim the food budget."