

Mom was right: You are what you eat

We are what we eat. We've all heard it, but most of us probably don't quite believe it. After all, you've had french fries and didn't sprout french fry antennae. So we're not really what we eat ... are we?

We are. It's every bit as true as it is hard to see. Just as our homes are made from lumber without looking like trees, our bodies are made from the nutrients we extract from foods without resembling those foods. The nutritional content of what we eat determines the composition of our cell membranes, bone marrow, blood, and hormones. Consider that the average adult loses roughly 300 billion cells to old age every day and must replace them. Our bodies are literally manufactured out of the food we consume.

Before 1993, a list of the leading causes of death in the United States included heart disease, cancer, and stroke. But in that year, J. Michael McGinnis, MD, and William Foege, MD, changed this paradigm when they published "Actual Causes of Death in the United States" in the Journal of the American Medical Association, which looked at the causes of these diseases. They concluded that fully half the annual deaths — roughly a million — were premature and could've been postponed by modifying behaviors, including smoking, diet and exercise, alcohol consumption, use of firearms, sexual behavior, motor vehicle crashes, and illicit drug use. Smoking and poor eating and exercise habits alone accounted for 700,000 premature deaths in 1990.

In 2004, a group of scientists at the CDC revisited this issue in JAMA and came to the same conclusion. This time, however, the toll from eating badly had gone up, due to obesity and diabetes.

Then, last summer, CDC scientists published a paper in the Archives of Internal Medicine analyzing records of more than 23,000 German adults enrolled in the European Prospective Investigation into Cancer and Nutrition study (EPIC) and investigated four behaviors: Are you eating well? Are you a healthy weight? Are you physically active? Do you smoke?

Those with four good answers (eating well, body mass index below 30, active, not smoking), compared with those with four bad answers (not eating well, BMI above 30, not active, and smoking), were 80 percent less likely to have any major chronic disease. (Imagine if a pill could reduce our risk of dying prematurely from any cause by 80 percent!)

You have doubtless heard of nature (genes) versus nurture (environment) — but this shows that lifestyle is so powerful, we can use it to nurture nature, or influence our genes. Various studies have shown this, but Dean Ornish, MD, and his colleagues have produced the most compelling results. Assigning men with prostate cancer to a "clean living" intervention that included a wholesome, plant-based diet; regular physical activity; and stress management, they demonstrated a marked reduction in the activity of genes that can promote prostate cancer growth and a significant increase in the genes that are able to control it.

That's the power and promise in clean eating, so it helps to know what it means. Is it organic? Not necessarily. Food can be organic without being nutritious — think organic gummy bears — or nutritious without being organic, such as conventionally grown broccoli. Organic is a good thing, but it's not a summary measure of "clean."

Clean foods are minimally processed and as direct from nature as possible. They're whole and free of additives, colorings, flavorings, sweeteners, and hormones. I particularly like foods with one-word ingredients, such as spinach, blueberries, almonds, salmon, and lentils. The longer the ingredient list, the more room there is for manufacturing mischief — additions of chemicals, sugar, salt, harmful oils, and unneeded calories — and the more likely it is that you should step away from the package so no one gets hurt!

There's also strong evidence that, as a rule, the closer to nature you eat, the fewer calories it will take for you to feel satisfied. The reason? Processed foods often have low amounts of fiber and water; a high ratio of calories to nutrients; and a mix of tastes from added sugar, salt, and flavoring that overly stimulates the appetite center in the hypothalamus. Clean foods are the opposite: lots of fiber and fluid, a high ratio of nutrients to calories, and free of added flavors — all of which send signals of satiety to your brain before you consume too many calories. As an example, think of how many raw almonds you eat before stopping, then compare that to honey roasted almonds — that sugary coating spurs you to eat more. By eating clean, you can control your weight permanently without feeling deprived or hungry or having constant cravings.

So, let's sum up the importance of eating clean. Our bodies are replacing billions of cells every day — and using the foods we consume as the source of building materials. Eating well is part of the formula that can reduce our risk of any major chronic disease by 80 percent and reach into our innermost selves to improve the health of our very genes.

I recall my mother admonishing me, as a child, to clean my plate because there were starving kids in China. These days, China, like us, has epidemic obesity. Forget about cleaning your plate — focus instead on choosing clean foods to put on it in the first place. You know what's at stake: life itself, the liberty that comes with good health, and the likelihood of happiness.

Questions:

- 1) Give one argument from the article for why nurture can win over nature?
- 2) What is clean food? Why is it important?
- 3) Is it better to eat organic Jelly Beans or Inorganic Almonds? Defend.
- 4) Are we what we eat? why?