



• RESEARCH

PROCESSED PROBLEMS

CHECK THE FOOD LABELS in your grocery store, and you'll see that the use of additives in processed food is widespread. Unfortunately, these additives may contribute to the development of Crohn's disease and other forms of inflammatory bowel disease (IBD), say Cleveland Clinic researchers.

One culprit is maltodextrin, researchers found. When fed to gut bacteria, the modified corn starch used to smooth and thicken food products makes that bacteria much stickier, causing cells to clump together. These "bio-films" mimic the stickiness of bacteria found in the intestines of people with IBD, says Christine McDonald, PhD, Assistant Professor at the Cleveland Clinic Lerner College of Medicine and a member of Lerner Research Institute's Department of Pathobiology.

"In a normal, healthy intestine, you have a large amount of bacteria, but it doesn't actually stick to the surface of the cells," Dr. McDonald says. "There's this little gap — but in IBD patients, that gap is either much narrower or missing."

Follow-up lab research replicated the same stickiness and narrowing of the gap between bacteria and the intestinal surface. In addition, people who ate maltodextrin and were then infected with salmonella did not eliminate bacteria as well as those on a normal diet.

"We think maltodextrin is not only decreasing your natural defenses against bacteria, but also promoting different bacteria to stick to your intestines and be happy there," Dr. McDonald says.

Her team found maltodextrin in approximately 60 percent of packaged foods at a supermarket. A follow-up survey of 200 people showed 98 percent ate food with maltodextrin every day. It's unclear why some people develop IBD and others do not, but diet may be one piece of the puzzle, along with other risk factors, such as genetics, she says.

Next, Dr. McDonald wants to see whether a healthier diet can reduce IBD symptoms for those who have had their disease "reset," either with a colonic resection or a fecal transplant. By promoting a healthy microbiome-friendly diet, she says, "we might be able to maintain the presence of the healthy bugs and keep the ones associated with disease from setting up shop." — *Melanie Padgett Powers*

• MY STORY

Doctor Grateful for Her Mended Heart

A HEALTHY DIET and regular exercise helped keep Margaret Spear, MD, of State College, Pennsylvania, fit for most of her life. An internal medicine physician and now retired Director of University Health Services at Pennsylvania State University, she practiced what she preached, even training to become a yoga instructor.

But she wishes she had had a physical exam sooner. For 35 years, she went without one. When she eventually had an exam, the doctor ordered an echocardiogram. She was diagnosed with mitral regurgitation, a complication of mitral valve prolapse, a condition she'd had for a long time. Four years later, as the valve disease worsened, she was told that she might need surgery. She decided to go to Cleveland Clinic for a second opinion.



"I went to Cleveland Clinic's website to find a doctor because I wanted to establish a relationship before I needed surgery," she says. She chose William Stewart, MD, who told her she would probably need surgery in three to 10 years. But in January 2014, she became acutely ill and was hospitalized near her home with bacterial endocarditis, an infection of the inner surface of the heart.

After recovery, she saw Dr. Stewart. "I thought he'd say, 'Let's keep monitoring.' Instead, he said, 'This changes everything. You need to have surgery soon. Having had

one infection, your risk now is much higher.' I was surprised. When I look back on it, though, it was important that I really trusted him. And I had known that this was the place I would have surgery, and I valued his recommendation of a surgeon, as well."

She says there were many things about Cleveland Clinic that made that true. "One was the way Dr. Stewart spent time with me and answered all my questions. Also, every time I called his office, within two rings, a human being answered, not a taped message. It's those little things that you might expect of a small practice in a small town but don't necessarily expect or get at a massive tertiary care center like Cleveland Clinic."

Only a few months after Marc Gillinov, MD, who holds The Judith Dion Pyle Endowed Chair in Heart Valve Research, repaired her mitral valve, Dr. Spear, now 65 and retired, passed rigorous testing to become a certified Iyengar yoga instructor.

"Initially, I thought I couldn't go through that," she says. "But my recovery was so smooth, it became clear how quickly it would be possible to continue and achieve this personal goal."

She says her husband, Alan, sums it up best: "You had a problem. We went to Cleveland. They fixed the problem." — *Elaine DeRosa Lea*