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MACRO VERSUS M|CRO

How do ultraprocessed foods affect the gut?

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Walk i nto a typical supermarket, and much of what you see — breakfast cereals, frozen meals, processed meats, sodas — is considered ultraprocessed food.



These products, typically defined as foods and drinks made with ingredients you wouldn't find in a home kitchen, make up more than half of the calories people in the United States consume and have been associated with various health conditions including obesity and Type 2 diabetes.
Now emerging evidence has also linked ultraprocessed foods to poor gut health, said Kevin Whelan, a professor of dietetics at King's College London.
WHAT STUDIES SUGGEST
Over the last few years, a growing body of research has suggested that people who eat more ultraprocessed foods have higher risks of developing certain conditions that affect the stomach and the intestines.
The most consistent link, Whelan said, is with Crohn's disease — an often-debilitating inflammatory bowel disease that causes abdominal pain, severe diarrhoea, fatigue and weight loss.
In a review published in 2023, scientists found that adults who consumed the most ultraprocessed foods had a 71% greater risk of developing Crohn's disease than those who consumed the

least. Other research has linked ultraprocessed foods with increased risks of irritable bowel syndrome, stomach ulcers and colorectal cancer.

In a study of more than 29,000 female nurses published this month, researchers reported that those who consumed the most ultraprocessed foods were 45% more likely to develop a certain type of precancerous colorectal polyp than those who consumed the least.

Most of these studies have been observational, meaning they could find associations between eating patterns and health conditions but could not prove that those eating patterns caused the conditions, Whelan said.

Still, the associations "are pretty striking" and "consistent", said Dr Andrew T. Chan, a US gastroenterologist at Mass General Brigham and a professor of medicine at Harvard Medical School.

HOW ULTRAPROCESSED FOODS MIGHT CAUSE HARM

When ingredients like wheat, oats and corn are processed into products like breakfast cereals, sliced breads and crackers, they lose beneficial fibre and healthful plant compounds called polyphenols.

Fibre and polyphenols feed the "good" microbes in our guts, which prevent inflammation and keep the linings of our intestines healthy, said Dr Chris Damman, a clinical associate professor of gastroenterology at the University of Washington School of Medicine. When those healthful components are stripped away during processing, those benefits disappear.

Ultraprocessed foods are also often high in added sugars (which have been linked to greater risks of colorectal cancer and inflammatory bowel disease) and sodium (which may increase "bad" bacteria in the gut and play a role in IBD).

Additives like emulsifiers and artificial sweeteners may also harm gut health, said Dr Neeraj Narula, a gastroenterologist and an associate professor of medicine at McMaster University in Ontario, Canada. Researchers are particularly concerned about emulsifiers, which are found in many ultraprocessed foods, including certain breads, salad dressings and dairy products.

A few small studies in humans have shown that eating emulsifiers is associated with potentially harmful microbiome changes, abdominal pain and greater levels of inflammation throughout the body. But most research on emulsifiers has been in rodents, which are easier to study, Whelan said.

Those studies have found that when rodents consume certain emulsifiers — at levels similar to those in ultraprocessed foods — "bad" gut microbes grow more than "good" ones, the protective layer of mucus that lines the intestines thins, and gut inflammation increases, said Benoit Chassaing, a microbiome researcher at the Pasteur Institute in Paris. Chronic gut inflammation may increase the risk of developing conditions like inflammatory

FIBRE AND POLYPHENOLS FEED THE 'GOOD' MICROBES IN OUR GUTS

bowel disease and colorectal cancer, Chan said.

Researchers have also found that when people with Crohn's disease avoid emulsifiers, their symptoms improve.

Some rodent studies have suggested that consuming artificial sweeteners like sucralose, acesulfame K and saccharin may lead to an unbalanced gut microbiome and a "leakier" intestinal lining.

There's not enough research to demonstrate whether those sweeteners have the same effects in humans. But in a trial of 137 adults published in 2022, researchers found that those who consumed foods and drinks containing the sweeteners every day had worse gastrointestinal symptoms like diarrhoea, constipation and burning in the chest than those who avoided them.

WHAT THIS MEANS FOR YOU

There's a lot scientists don't understand yet about how ultraprocessed foods affect the gut, and not enough evidence to recommend avoiding such products completely, Whelan said.

But we do know that it can be worth cutting back, Narula said, since there is good evidence linking ultraprocessed foods to other health conditions like cardiovascular disease, dementia and obesity.

He recommended thinking about the ultraprocessed foods you eat regularly and identifying ways to swap them with unprocessed alternatives — drinking sparkling water or iced coffee instead of soda, or making a homemade vinaigrette instead of using a packaged salad dressing.

For a healthy gut, focus on consuming plenty of fibre-rich whole foods like fruits and vegetables. And limiting sodium, added sugars and saturated fats is good for your health in general. If you follow that advice, Whelan said, you are likely to consume fewer ultraprocessed foods along the way.