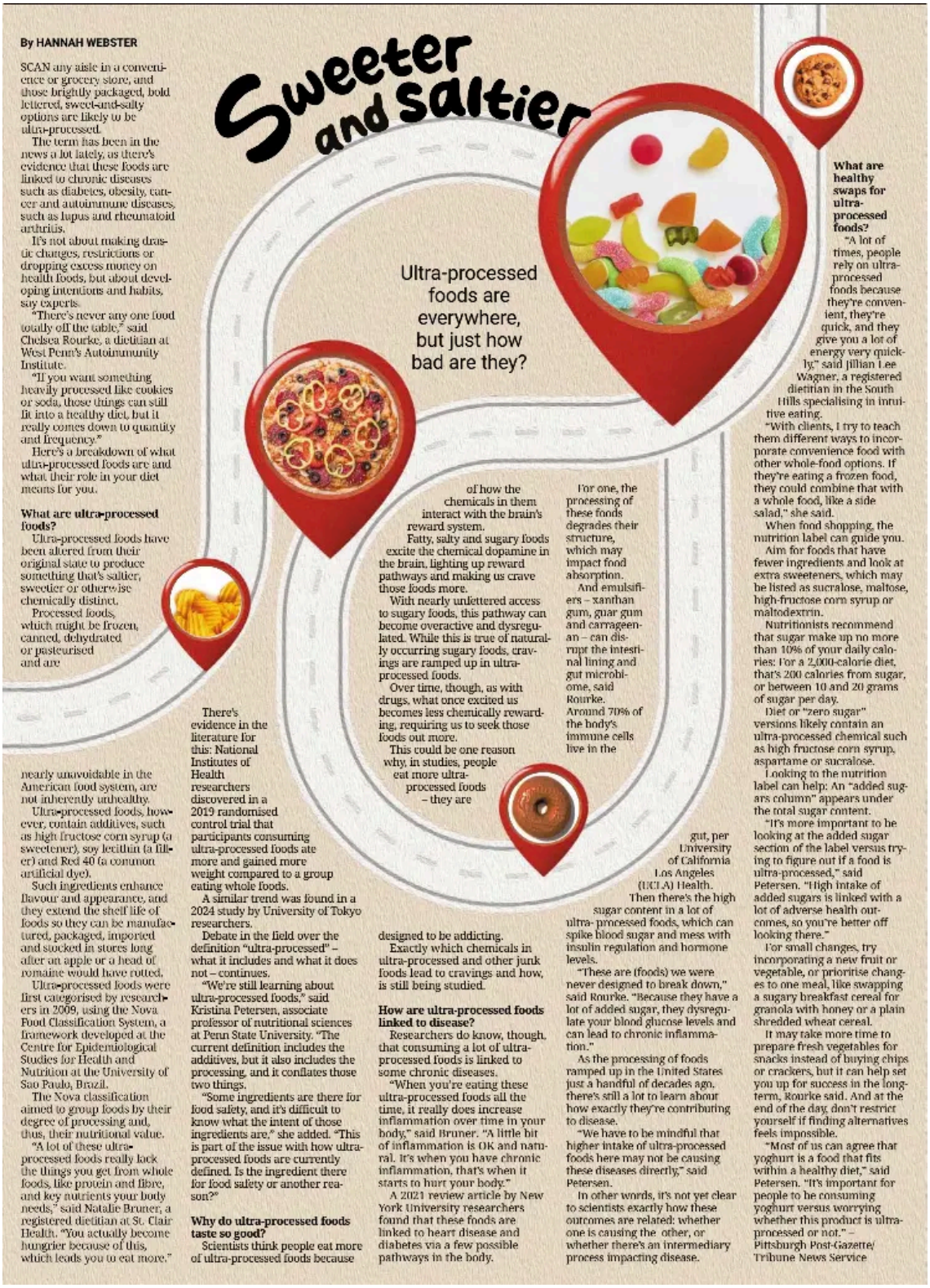
- Convenience foods

Just how bad are ultra-processed foods?

ultra-processed foods are everywhere, but just how bad are they?

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SCAN any aisle in a convenience or grocery store, and those brightly packaged, bold lettered, sweet-and-salty options are likely to be ultra-processed.

The term has been in the news a lot lately, as there's evidence that these foods are linked to chronic diseases such as diabetes, obesity, cancer and autoimmune diseases, such as lupus and rheumatoid arthritis.

It's not about making drastic changes, restrictions or dropping excess money on health foods, but about developing intentions and habits, say experts.

"There's never any one food totally off the table," said Chelsea Rourke, a dietitian at West Penn's Autoimmunity Institute.

"If you want something heavily processed like cookies or soda, those things can still fit into a healthy diet, but it really comes down to quantity and frequency."

Here's a breakdown of what ultra-processed foods are and what their role in your diet means for you.

What are ultra-processed foods?

Ultra-processed foods have been altered from their original state to produce something that's saltier, sweetier or otherwise chemically distinct.

Processed foods, which might be frozen, canned, dehydrated or pasteurised and are nearly unavoidable in the American food system, are not inherently unhealthy.

Ultra-processed foods, however, contain additives, such as high fructose corn syrup (a sweetener), soy lecithin (a filler) and Red 40 (a common artificial dye).

Such ingredients enhance flavour and appearance, and they extend the shelf life of foods so they can be manufactured, packaged, imported and stocked in stores long after an apple or a head of romaine would have rotted.

Ultra-processed foods were first categorised by researchers in 2009, using the Nova Food Classification System, a framework developed at the Centre for Epidemiological Studies for Health and Nutrition at the University of Sao Paulo, Brazil.

The Nova classification aimed to group foods by their degree of processing and, thus, their nutritional value.

"A lot of these ultra-processed foods really lack the things you get from whole foods, like protein and fibre, and key nutrients your body needs," said Natalie Bruner, a registered dietitian at St. Clair Health. "You actually become hungrier because of this, which leads you to eat more."

There's evidence in the literature for this: National Institutes of Health researchers discovered in a 2019 randomised control trial that participants consuming ultra-processed foods ate more and gained more weight compared to a group eating whole foods.

A similar trend was found in a 2024 study by University of Tokyo researchers.

Debate in the field over the definition "ultra-processed" – what it includes and what it does not – continues.

"We're still learning about ultra-processed foods," said Kristina Petersen, associate professor of nutritional sciences at Penn State University. "The current definition includes the additives, but it also includes the processing, and it conflates those two things.

"Some ingredients are there for food safety, and it's difficult to know what the intent of those ingredients are," she added. "This is part of the issue with how ultra-processed foods are currently defined. Is the ingredient there for food safety or another reason?"

Why do ultra-processed foods taste so good?

Scientists think people eat more of ultra-processed foods because of how the chemicals in them interact with the brain's reward system.

Fatty, salty and sugary foods excite the chemical dopamine in the brain, lighting up reward pathways and making us crave those foods more.

With nearly unfettered access to sugary foods, this pathway can become overactive and dysregulated. While this is true of naturally occurring sugary foods, cravings are ramped up in ultra-processed foods.

Over time, though, as with drugs, what once excited us becomes less chemically rewarding, requiring us to seek those foods out more.

This could be one reason why, in studies, people eat more ultra-processed foods – they are designed to be addicting.

Exactly which chemicals in ultra-processed and other junk foods lead to cravings and how, is still being studied.

How are ultra-processed foods linked to disease?

Researchers do know, though, that consuming a lot of ultra-processed foods is linked to some chronic diseases.

"When you're eating these ultra-processed foods all the time, it really does increase inflammation over time in your body," said Bruner. "A little bit of inflammation is OK and natural. It's when you have chronic inflammation, that's when it starts to hurt your body."

A 2021 review article by New York University researchers found that these foods are linked to heart disease and diabetes via a few possible pathways in the body.

For one, the processing of these foods degrades their structure, which may impact food absorption.

And emulsifiers – xanthan gum, guar gum and carrageenan – can disrupt the intestinal lining and gut microbiome, said Rourke. Around 70% of the body's immune cells live in the gut, per University of California Los Angeles (UCLA) Health.

Then there's the high sugar content in a lot of ultra-processed foods, which can spike blood sugar and mess with insulin regulation and hormone levels.

"These are (foods) we were never designed to break down," said Rourke. "Because they have a lot of added sugar, they dysregulate your blood glucose levels and can lead to chronic inflammation."

As the processing of foods ramped up in the United States just a handful of decades ago, there's still a lot to learn about how exactly they're contributing to disease.

"We have to be mindful that higher intake of ultra-processed foods here may not be causing these diseases directly," said Petersen.

In other words, it's not yet clear to scientists exactly how these outcomes are related: whether one is causing the other, or whether there's an intermediary process impacting disease.

What are healthy swaps for ultra-processed foods?

"A lot of times, people rely on ultra-processed foods because they're convenient, they're quick, and they give you a lot of energy very quickly," said Jillian Lee Wagner, a registered dietitian in the South Hills specialising in intuitive eating.

"With clients, I try to teach them different ways to incorporate convenience food with other whole-food options. If they're eating a frozen food, they could combine that with a whole food, like a side salad," she said.

When food shopping, the nutrition label can guide you.

Aim for foods that have fewer ingredients and look at extra sweeteners, which may be listed as sucralose, maltose, high-fructose corn syrup or maltodextrin.

Nutritionists recommend that sugar make up no more than 10% of your daily calories: For a 2,000-calorie diet, that's 200 calories from sugar, or between 10 and 20 grams of sugar per day.

Diet or "zero sugar" versions likely contain an ultra-processed chemical such as high fructose corn syrup, aspartame or sucralose.

Looking to the nutrition label can help: An "added sugars column" appears under the total sugar content.

"It's more important to be looking at the added sugar section of the label versus trying to figure out if a food is ultra-processed," said Petersen. "High intake of added sugars is linked with a lot of adverse health outcomes, so you're better off looking there."

For small changes, try incorporating a new fruit or vegetable, or prioritise changes to one meal, like swapping a sugary breakfast cereal for granola with honey or a plain shredded wheat cereal.

It may take more time to prepare fresh vegetables for snacks instead of buying chips or crackers, but it can help set you up for success in the long-term, Rourke said. And at the end of the day, don't restrict yourself if finding alternatives feels impossible.

"Most of us can agree that yoghurt is a food that fits within a healthy diet," said Petersen. "It's important for people to be consuming yoghurt versus worrying whether this product is ultra-processed or not." – Pittsburgh Post-Gazette/Tribune News Service

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