

Should we really aspire to eat like cavemen?

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Have our bodies not yet caught up to our modern diet? Credit: UNSW Sydney/Ian Joson

"Ancestral" diets like the paleo diet are hugely popular in Australia, but experts from UNSW Sydney and the Australian Museum have questions.

What happens when you take a caveman out of the cave and plonk him in a fast-food restaurant?

Some scientists say we are living out this experiment across modern society. We evolved to eat a hunter-gatherer diet during the Paleolithic era, a period from about 2.6 million years ago to approximately 10,000 BC. Our bodies are not yet accustomed to farmed and highly processed foods, with serious health consequences like [high blood pressure](#), clogged arteries and type 2 diabetes.

This idea is fueling the current craze for ancestral diets, encouraging us to replicate the food choices of our prehistoric hunter-gatherer ancestors. The [paleo diet](#) is the most popular variation; in a [2022 survey by Finder](#) 8% of Australians reported they were planning to try it.

"I think the paleo diet is a popular trend these days due to the high prevalence of processed foods. Many people see this as an unhealthy choice, and so are looking to eat less processed stuff," says Lachlan Hart, who is undertaking his Ph.D. in vertebrate paleontology at UNSW Science and the Australian Museum.

Ancestral diets commonly recommend plenty of lean meats, seafood, fruits and vegetables, and avoidance of grains and processed foods. Dairy is only permitted if it is raw—not pasteurized or otherwise processed.

"In some ways, the so-called primal or ancestral diets are not dissimilar to the Australian Dietary Guidelines. They recommend limiting discretionary foods like biscuits, cakes, pastries, soft drinks, processed meats and other processed items," says Associate Professor Sara Grafenauer, who is an Accredited Practicing Dietitian and researcher at UNSW Medicine & Health.

"But there are also some issues around primal diets that people may not pick up on."

Some experts are questioning the premise of ancestral diets. How did people really eat during the Paleolithic era? And is replicating these diets beneficial to us?

Decoding ancient diets

Hart says that researchers can understand a lot about [ancient humans](#) from the fossil and archaeological record. Analyzing [human remains](#), as well as the tools and objects around them, can reveal insights about their diet and health.

"There is direct evidence of human diets we can see in the fossil and archaeological record. This includes tools which would have been used for eating, [animal bones](#) with marks from these tools (as evidence of butchery), microwear on hominid teeth and [trace elements](#) (isotopes) present in the tooth enamel, and [changes in brain size](#), which would indicate diet," Hart says.

However, according to Fran Dorey, the Head of Exhibitions at the Australian Museum, there is a major misunderstanding about ancestral diets.

"We get a lot of questions at the museum—people asking us to explain what a paleo diet is from the archaeological perspective. And we come across several basic misconceptions," says Dorey, who has a Bachelor of Arts (Honors) in archaeology and paleontology from the University of Sydney.

Diverse food sources

"There is no one Paleolithic diet," Dorey says.

"First of all, the Paleolithic covers a period of millions of years. And the human diet during this period was incredibly diverse, depending on where they lived, the time of year and what was available."

When most people picture a caveman's diet, they think of meat and animal products (often raw), with limited fruits, vegetables and grains. However, researchers have found that is true for only some groups of humans, some of the time.

"There were some groups where red meat was a really important part of their diet, usually those far away from oceans without access to fish and other seafood... But it changed from season to season. Perhaps the diet was 70% meat at one stage with animals migrating through the area, and then it drops to 20% at other times of year," Dorey says.

Food safety

Some ancestral diets recommend the consumption of raw meat and unpasteurized dairy, which can pose a food safety risk, according to Grafenauer.

"Unpasteurized dairy is not something the normal consumer can just go to the supermarket and buy. Our dairy is pasteurized to protect us from the potential bacteria," Grafenauer says.

"As food scientists and dietitians, we acknowledge that some foods need to be processed to be consumed and to be safe... What people don't understand is that when cavemen ate raw foods, sometimes it made them very sick."

Another popular component of ancestral diets is liver, which is dense in

vitamins and minerals. However, liver can also be toxic in large amounts due to its high Vitamin A content.

"Vitamin A is a fat-soluble vitamin, stored in our fatty tissue. If we have too much of it in our [diet](#), for example by eating lots of liver, we can't easily get rid of it. And too much Vitamin A can make you quite sick," Grafenauer says.

Evolving bodies

According to Dorey, our bodies didn't freeze in time at the end of the Paleolithic period. Our bodies have been evolving along with our changing lifestyles, meaning that excluding "farmed" foods like grains and dairy is not necessary.

"Genetically, we are not the same as humans were 10,000 years ago. There are a significant number of genetic mutations that have occurred across the planet, and a lot of those are to do with our ability to digest milk and wheat," Dorey says.

"We know that in some locations humans were consuming milk and wheat, as well as other grains, in significant amounts, even during the Neolithic period, before farming was becoming standard."

Grains can not only be digested by modern humans but can also bring significant health benefits.

"Ancestral diets discourage grains regardless of their quality... But my research shows that whole grains can help to prevent diseases like type 2 diabetes and cardiovascular disease," Grafenauer says.

"We've also done other research showing that whole grain consumption can help to prevent cancers, particularly [bowel cancer](#)... Whole grains

can stimulate anti-oxidant activity in the gut and help prevent carcinogenic activity."

Missing piece of the puzzle

Fans of ancestral diets are fixated on food—but that's only one aspect of a healthy lifestyle.

"One of the reasons our ancestors were so 'healthy' is they didn't go to a shop to get their food. They were out walking, hunting and gathering. The energy they expended just to get their food was part of the health benefit," Dorey says.

"They didn't sit around all day. And that's an incredibly important part of the story that gets overlooked all the time."

Perhaps the health and fitness gurus will eventually catch on and try to exercise like humans during the Paleolithic era. Caveman-themed CrossFit, anyone?

Provided by University of New South Wales

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