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# Is the keto diet everything it's cracked up to be?

EMILY SMITH February 13 2020



The keto diet can shift weight quickly ... but is it safe? Photo: iStock

For a short while there, the keto diet seemed to be taking the world by storm. Widely touted for promoting rapid weight loss, the high-fat, low-carb food plan gained enormous attention from media, celebrities and health professionals alike.

While many devotees still swear by the keto diet, some dietitians and researchers have started questioning its long-term benefits, potentially jeopardising its popularity and credibility.

## What is keto?

The ketogenic diet was originally developed about a century ago as a therapeutic treatment for people with epilepsy and has since been used to help treat other conditions including depression, anxiety, Parkinson's disease and Alzheimer's.



The ketogenic diet was originally developed about a century ago. *Photo: iStock*

Over the years, the Atkins and paleo diets have also popularised similar low-carb eating plans.

The typical keto diet restricts carbohydrates to just 5-10 per cent of daily energy intake, coupled with a much higher fat intake.

The low carb intake is intended to send your body into a metabolic state called ketosis, meaning your body becomes highly efficient in burning fat as its energy source, rather than glucose (sugar).

*People are starting to realise the difficulties and danger associated with adhering to the diet long-term.*

Bronwen Greenfield, accredited practising dietitian

While this sounds fantastic in theory, the diet may be difficult to maintain in the long term and research suggests that, despite some indications it can lead to fat loss and lower blood sugar and insulin levels, it may harm health over time.

Sydney accredited practising dietitian Bronwen Greenfield welcomes the recent scrutiny of the keto diet, saying people need to be aware of the lack of evidence supporting its use.

"A lot of the evidence supporting the benefits of the diet is largely limited to therapeutic use for specific health conditions [such as epilepsy]," she says.

"In other words, there is little evidence around to suggest that the diet is successful in otherwise healthy individuals."

Greenfield believes too many people overlook the risks of the diet and concentrate on its potential to offer a "quick fix" to weight gain.

"The keto diet undeniably results in short-term weight loss," she says.



Mediterranean-style diets tend to include a wider variety of foods than keto plans. *Photo: iStock*

"This is because it's cutting out so many foods, which then results in a reduction in total caloric intake.

"The depletion of liver and muscle glycogen stores, and thus water, also results in a quick loss of weight."

But it's important to remember that these are only short-term results, Greenfield says: "The key to long-term fat loss is an eating pattern that is sustainable over time."

### **Why is keto being questioned now?**

Last year, Google Trends recorded a 75 per cent decline in Australian searches for the term "keto", before increasing again in the new year, suggesting people still regard keto as a short-term fix to ditch holiday weight.

One recent blow to the diet's popularity came after the US News & World Report, which publishes rankings across education and healthcare, evaluated 35 of the most popular diets

around the world and listed keto as the worst for healthy eating out of all of the diets considered.

The list evaluated each diet's nutritional completeness, ease of maintaining, potential for long- and short-term weight loss, safety, and possible side effects.

Keto ranked poorly due to the difficulty of maintaining the diet, and the fact it restricts essential food groups such as wholegrains, fruit and vegetables. The only category it received a strong result in was its ability to achieve fast weight loss.

Greenfield says these results highlight significant concerns around the healthfulness of the diet.

"I think any diet that omits a number of key food groups should be avoided, predominantly because it makes it difficult to stick to long-term," she says.

"Studies investigating the keto diet have begun to reveal the high drop-out rates, and people are starting to realise the difficulties and danger associated with adhering to the diet long-term."

### **What about nutrition?**

The severely restrictive nature of the diet means the body is often not obtaining adequate nutrient-dense foods such as fruit, wholegrains and vegetables, Greenfield says.

"[These are] rich sources of a variety of antioxidants, phytochemicals, vitamins and minerals," she says.

Lack of fibre is also an issue, which can lead to constipation, increase the risk of bowel cancer, and limit prebiotic fibre.

By starving the gut microbiome of essential nutrients such as carbs and fibre, the changes to gut health can harm digestion, hormone balance, and even mental health.

Greenfield questions the high fat content of the keto diet, too.

Much of the total energy intake comes from fat, and while it's possible to modify the diet to place a focus on healthy fats such as extra virgin olive oil, nuts, seeds, oily fish and avocado, much of the emphasis is on foods high in saturated fats such as bacon, cream and butter, she says, saying this can increase bad cholesterol levels.

### **What does the evidence say?**

While there is still much we have to learn about the keto diet, existing studies suggest its long-term effects may harm the body's metabolism, inflammation levels and fat stores.

**One recent paper** suggests while the keto diet may offer some short-term benefits, these could be outweighed by other risks in the longer term. The study, conducted on mice and published by researchers at Yale University in January in *Nature Metabolism*, discovered that after a week keto's benefits begin to wane.

Essentially, the keto diet tricks the body into burning fat as fuel and reduces glucose levels, causing the body to behave as though it's in a starvation state. After a week, the study showed a reduction in blood sugar levels and inflammation, but any longer than a week saw the mice consuming more fat than they could burn, and starting to develop obesity and diabetes. This is owing to the body acting in survival mode, which means it is storing fat, while simultaneously using it as a fuel source.

Accredited practising dietitian Michelle Gale says the Yale study provides much-needed insight into the health effects of the keto diet and the potential risks it poses, however she recommends caution when applying these findings to humans.

"The physiological differences between mice and humans means we cannot guarantee the same effects or consequences," she says.

"We are unsure what these long-term health consequences might be, as there is simply not enough human-based evidence at the moment. A stronger evidence base of human clinical trials is needed to confirm these findings and determine the long-term safety of the ketogenic diet in healthy individuals."

Gale also says it's possible the keto diet may work for some people and not others.

"The success of a keto diet for weight loss comes down to compliance," she says.

"For the body to switch into ketosis and result in weight loss, total energy intake must be reduced and carbohydrate intake must be limited to only 20-50g per day, which equates to just two slices of bread, half a cup of rice or one large apple."

"There can also be unpleasant side effects that will reduce compliance, such as fatigue, headaches, bad breath, nausea and constipation. Following the ketogenic diet can have a negative impact on [people's] social life as well, as drastic lifestyle changes are often required."

## **Weighing up the risks**

Gale says there has been conflicting evidence to suggest that low carbohydrate diets are linked to increased mortality, but there is no consensus on the topic, and more research required to confirm these findings.

Like Greenfield, Gale says ketogenic diets tend to restrict important food groups as well as fibre, potentially leading to nutrient deficiencies and increasing the risk of bowel cancer.

To reduce the potential risks, it is important to ensure you're getting adequate nutrients. One way to do this is to try keto for a very short period of time, such as the week outlined by the Yale study, followed by the Mediterranean diet, which is rich in vegetables, fruits, herbs, nuts, beans and whole grains.

"Mild" keto - a less restrictive version of the keto diet - also allows for a higher plant intake, increased gut diversity, and healthy weight loss without depriving the body of nutrients, offering a safer, lower-risk option.

Gale says while it is possible to follow the keto diet safely for a short period of time, she recommends speaking with a health professional before starting.

"They can tailor a diet to your individual needs and monitor your progress closely to prevent nutrient deficiencies and unwanted side effects," she says.

## What next?

In the same study by the US News & World Report, the Mediterranean diet was ranked the best overall diet, best plant-based diet, and the easiest diet to follow.

"I think the Mediterranean diet is an excellent example of a healthy, balanced diet that is relatively easy to follow," Greenfield says.

Research continues to grow in support of the Mediterranean diet's beneficial effects on obesity, cardiovascular health, metabolic syndrome and Type 2 diabetes.

It has stood the test of time, Greenfield says, placing emphasis on foods we should include more of - wholegrains, fruit, vegies, beans, legumes, nuts, olive oil, fish and seafood - rather than on what we should restrict or remove.

"This is really important from a healthy mindset and long-term sustainability perspective," she says.

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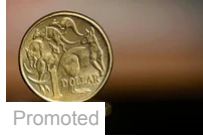
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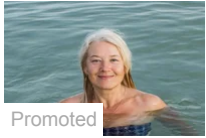
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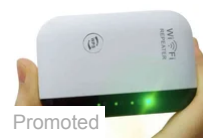
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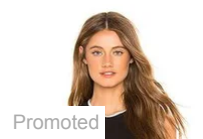
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