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## The keto diet: is it safe and will it really help you lose weight?

Low-carbohydrate plans are becoming more established in the nutrition world, but what about their more extreme cousin, the ketogenic diet? Touted by Hollywood celebs for burning fat, reducing appetite and managing blood sugar, is it really everything it's claimed to be? And what about the risks?

### What is the keto diet?

The ketogenic diet has been around for more than 100 years when it was developed for the treatment of severe [epilepsy](#). Doctors at the time noticed that short-term starvation helped patients to control their seizures but this wasn't a safe or convenient option for everyone, particularly children.

Research showed that a 'water only' starvation diet worked because substances called ketone bodies, produced as a byproduct of fat burned for energy, were released into the bloodstream by the liver. These acted in the brain to combat the abnormal nerve impulses blamed for epilepsy. Later studies found that a low-carb, high-fat diet could do the same job and the keto diet was born.

After falling out of favour for a few decades, when [medicines for epilepsy](#) improved, the diet had a resurgence in the 1990s thanks to high-profile doctors in the US, and is still used today as a first-line treatment for some neurological conditions.

## How does the keto diet work?

The original keto diet consisted of one gram of protein for each kilogram of body weight, plus 10–15 grams of carbs and the remaining calories from fat, which was pretty extreme. Nowadays, specialist dietitians calculate the amount of fat, carbohydrate and protein that each patient needs based on their body weight and nutritional requirements. This can make the diet easier to follow and reduce the risk of deficiency.

A typical day's diet might involve double cream, meat, eggs, butter, vegetable oil with a few servings of low-carb vegetables and fruits, like celery, apple or berries. Starchy carbs, like bread, pasta, breakfast cereals, potatoes and rice, are excluded, as are bananas, peas, and corn.

Because the keto diet is not nutritionally complete, dietary supplements are advised.

Dietician, [Dr Frankie Phillips](#), comments: "While there is plenty of social media chatter about keto diets, I would always stress that it's primarily a therapeutic diet for medical conditions like epilepsy, Parkinson's disease, or chronic headache. If you are looking to lose weight or manage blood sugar levels, there are far less complex options available, such as low-fat diets or moderate to [low-carb](#) diets, which are also more nutritionally balanced."

## Is the keto diet safe?

Dozens of high-quality studies and specialists reviews, called meta-analyses, have been published on the benefits of the ketogenic diet for drug-resistant epilepsy.

The most important of these was a [Cochrane review](#) – the go-to evidence for medical and healthcare professionals – which looked at the findings of 11 clinical studies. The results showed that keto diets could help up to 55% of patients become free of seizures, or reduce their symptoms by up to 85%. However, the studies were small and fairly low in quality. Nevertheless, the authors concluded that there was promising evidence for keto diets, and the easier-to-use [modified Atkins diets](#), in children as well as adults.

For other conditions, the health benefits are far less clear. Some studies show symptomatic relief in individuals with Parkinson's disease or Alzheimer's but there are too few studies to be sure that keto diets would be right for everyone with these conditions. [Scientists](#) have also raised concerns about keto diets worsening malnutrition in elderly people with neurological conditions.

## Does the keto diet really work?

For weight loss – the main reason why celebs reach for keto or low-carb diets – the results don't seem worth the effort in sticking to a highly restrictive diet.

A meta-analysis published in the [British Journal of Nutrition](#) combined the results of 13 studies which followed patients using keto or low-fat calorie-controlled diets for at least a year. While the keto diets performed statistically better, the difference in average weight loss between the diets was less than a kilogram (1/2 lb) which is not clinically relevant to health. After two years, even those small differences vanished.

### Keto diet side effects

Reported side effects of the keto diet include short-term stomach upsets and increased blood [cholesterol](#) levels. From a social perspective, the long list of banned foods can make celebrations and dinner invitations rather awkward. Indeed, reports show that patients find it difficult to stick to strict low-carb diets long-term.

Phillips comments: "As the best evidence is for drug-resistant epilepsy in children and adults, these are the main groups of patients who could try the keto diet, but under supervision from medical and dietetic experts. The charity, [Matthew's Friends](#), has some great information on its website about how to get started. As for other medical conditions, or weight loss, there are alternative eating plans which are less restrictive, have fewer side effects, and which are more likely to be healthy and effective. Ask your GP for a referral to a dietician to chat through the options."

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