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# What's the deal with the KETO diet?

A ketogenic diet, often promoted for weight loss, is a low carbohydrate, high fat diet originally developed to reduce seizures in children with epilepsy.



## Diet comparison:



The term "ketogenic diet" refers to ketone bodies which are produced when the body is deprived of carbohydrates and no longer uses them as its main energy source. Instead, the body uses primarily fat for energy (most of which comes from the high fat diet itself as opposed to burning body fat stores).

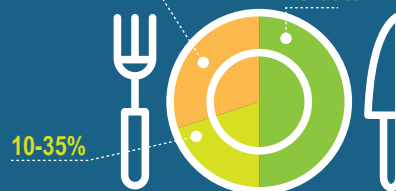
### The standard keto diet provides:

Less than 10% energy from carbohydrate  
15-20% energy from protein  
75-80% energy from fat



### The Institute of Medicine (IOM) recommends:

20-35% energy from carbohydrate  
45-65% energy from protein  
10-35% energy from fat



## The bottom line:

Although people may see considerable weight loss in the first 3-6 months of a ketogenic diet, long-term weight loss of 12-24 months is very small (less than 1 kg).

Short and long-term quality studies are needed, especially in military populations, to assess the effect of a ketogenic diet on specific military environmental factors.

Military personnel should not follow a ketogenic diet if they participate in high intensity activity as it has a negative impact on performance.



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## What does the research say?



### Weight loss

A ketogenic diet has become popular recently as a quick way to lose weight but few studies have been published. Most short-term weight loss is due to water loss from decreased glycogen (carbohydrate) stores as opposed to the effect of increased metabolism and fat loss.



### Appetite

Increased ketone bodies resulting from a ketogenic diet decrease the feeling of hunger and leads to loss of appetite, which also contributes to short-term weight loss.



### Chronic Disease

Research has shown improved symptoms in Type 2 diabetes and cardiovascular disease, but the benefits are most likely a result of the weight loss and not the diet itself.



### Side effects

Due to the restrictive, high fat/low fibre make-up of the ketogenic diet, it may result in side effects related to nutritional deficiencies (such as constipation, skin rash, muscle cramps) high fat intake (such as diarrhea, impaired lipid profile) and metabolic acidosis (such as general weakness, headaches).



### Performance

Research has shown a ketogenic diet does allow the body to burn fat more efficiently during exercise, which is fine during low or moderate intensity exercise, but it compromises our ability to use our stored carbohydrate (glycogen) during high intensity activity which leads to decreased performance. During high intensity exercise, carbohydrates are burned as muscle fuel, as fat cannot be burned fast enough for the demands of muscle fibre.



## Already following a keto diet? Keep these tips in mind:

- 1.** Eating less processed and lower sugar foods is a good philosophy. Ensure your meals are balanced. Fill your grocery bag with less processed and lower sugar foods. Add lots of vegetables and fruit for tasty, healthy meals.



- 2.** See your medical officer and/or a registered dietitian if you have concerns about your weight.
- 3.** Stay hydrated.
- 4.** A ketogenic diet will decrease your performance during high intensity activity.

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