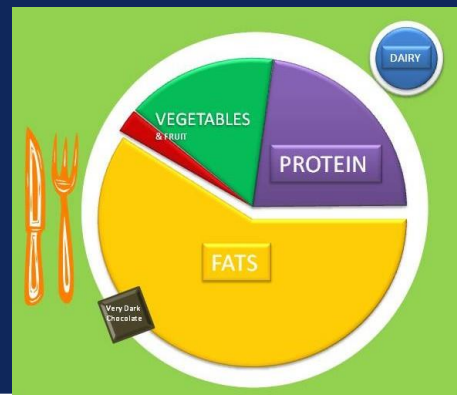


Ketogenic Diet

FACT SHEET



Brief Summary

Low carbohydrate, high fat diet designed to use fat as fuel. The body shifts into a state of 'ketosis' after 3-6 weeks where it uses fat instead of carbohydrates as fuel.

Underlying theory – If we use fat as fuel, then we have a virtually unlimited fuel supply to support physical activity and improve performance.

Diet Composition

- Low carbohydrates <50 grams per day (~2 bananas)
- High fat > 70-80% of calories
- Moderate protein ~ 15% of calories
- Higher sodium – 3-5 grams per day
- Moderate potassium – 2-3 grams per day

Performance Improvement?

Fat is a primary fuel for low intensity and long duration activities when oxygen is readily available to the muscle. As exercise intensity increases, oxygen delivery to the muscle cells declines and the muscle shifts to stored carbohydrate (glycogen) as a primary fuel. The body has 'metabolic flexibility' or the ability to shift back and forth between fat and carbohydrate.

With the Ketogenic Diet (KD) the body shifts from carbohydrate metabolism to fat metabolism. KD research has not shown performance improvements during high intensity activity – short or long bursts of activity – the body is unable to shift back to carbohydrate utilization. This is seen even with short term KD use of ~4 weeks.

Caution for athletes

- Research consistently shows carbohydrates are desirable fuel for athletes at any intensity.
- KD significantly restricts carbohydrate intake. Is this practical, feasible or sustainable?
- Multiple weeks for body to fully adapt to ketosis and achieve diet benefits. Can easily slip out of ketosis with an extra carbohydrate serving, like a banana.
- Body composition changes have been observed in the literature.
 - As with any weight change, it is best to do this in the off-season, then switch back to a more traditional athlete's diet with proven performance benefits.
- Adherence is key, otherwise this is simply a high fat, low carbohydrate diet, which can impair high intensity events by reducing training capacity, increasing effort and heart rate.

What diet is best for you?

If you choose to pursue a Ketogenic Diet, it is essential to work with a registered dietitian and your physician.

Each person has unique energy and macronutrient needs depending on their sport, training phase or daily activities. Food preferences and lifestyles vary as well. Diet trends could impair performance.

A licensed sports dietitian can work with you to develop a customized nutrition plan to boost energy, performance and recovery.

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