

# health **smarts**

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## The Keto Diet

**Proper nutrition can make a huge** difference when it comes to staying fit or being in great shape for an upcoming athletic event. However, some diets are better than others, especially when it comes to spinal-cord injury and disease (SCI/D).

The ketogenic diet has been growing in popularity over the years because of its great fat-burning and weight-loss possibilities. However, despite its hype, the ketogenic diet was actually developed back in the 1920s to help treat epilepsy in children.

More and more research is being done on this diet with various populations and diseases. Research has

keto, diet really is and its health benefits, such as:

- Balancing hormones
- Reducing sugar cravings
- Balancing blood sugars
- Reducing inflammation
- Improving mental clarity and cognition
- Boosting mood
- Increasing energy levels
- Burning fat while preserving lean muscle mass

The ketogenic diet, despite popular belief with consuming a high-fat diet, has been shown to improve cholesterol, lower blood glucose levels and reduce inflammation. It may enhance the health of the intestinal walls by supplying fuel to the good bacteria in the intestines.

It's also possible that it can cause a mild euphoric state that can improve mood and cognitive function. Furthermore, a ketogenic diet and, ultimately, the production of ketones (chemicals produced when the body burns fat for energy), could

increase substances associated with improved cognition, better serotonin, metabolism and reduced aging of the brain.

### How It Works

The ketogenic diet is a high-fat diet consisting of 70-75% fat, 20% protein and 5-10% carbohydrates.

If you're on this diet, you'll eliminate all grains, starchy vegetables and most fruits. Your carbohydrate intake is

limited to approximately 25-50 grams a day. That means one banana could potentially put you over that carb limit.

The focus of the ketogenic diet is on consuming lots of green and cruciferous vegetables, as well as foods high in healthy fats such as coconut oil, olives, avocados, lard, eggs, dairy, nuts and seeds, as well as moderate amounts of protein.

### Not Enough Research

Now that you know more about what the keto diet is, we can better address if it's right for someone with SCI.

Unfortunately, that question is tough to answer because there's very limited research and evidence on this diet's safety and efficacy in individuals with SCI. Only a few studies have been done on mice and even less on humans.

One of the biggest problems with the ketogenic diet is that people are at risk of nutrient deficiencies. Reducing your carbohydrates to 5-10% pretty much eliminates almost all fruits, starchy vegetables and whole grains.

Individuals with SCI are already at higher risk of deficiencies because of medications that deplete certain nutrients, compromised digestive systems and higher needs for nutrients because of health issues.

Able-bodied individuals struggle with potential nutrient deficiencies on this diet, so it would put someone with SCI at even greater risk.

Furthermore, this diet should be avoided by those with certain health conditions such as kidney disease, liver disease or pancreatic conditions, which are common conditions in individuals with SCI.

### Be Aware

If you decide to try the keto diet, there are a few things to watch out for once you get started.



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shown that this diet has numerous health benefits, in particular for neurological conditions including Parkinson's disease, Alzheimer's disease, multiple sclerosis, autism, brain cancer and traumatic brain injury.

But is it appropriate for individuals with SCI?

### Benefits

Before getting into that, you have to understand what the ketogenic, or

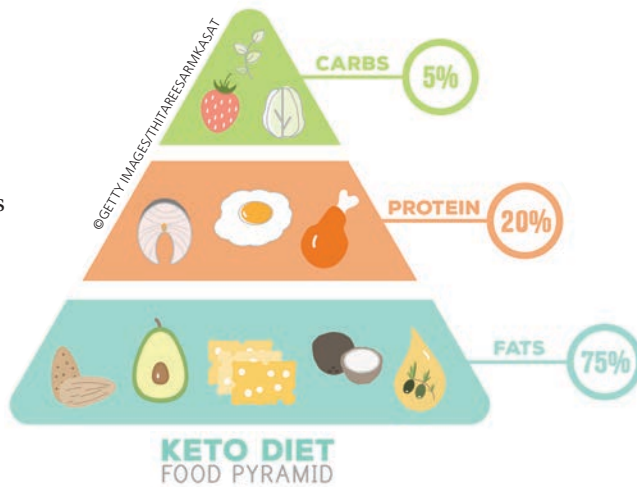
The first is what's called the "keto flu." This occurs when you're transitioning from being a carbohydrate burner to a fat burner. Symptoms of "keto flu" can include:

- Low blood pressure
- Muscle weakness or cramping
- Constipation or diarrhea
- Nausea
- Vomiting
- Fatigue
- Anxiety
- Dizziness
- Severe sugar/carb cravings
- Headaches
- Sleep difficulties
- Brain fog

This can last from several days to several weeks. Drinking keto lemonade (water, Himalayan sea salt and lemon juice) or bone broth, as well as avoiding strenuous exercise, staying well-hydrated and replacing electrolytes are ways to help minimize these symptoms.

Another problem is what's known as "keto diarrhea." The gallbladder is required to produce a lot more bile to help emulsify the increased fats you're consuming, and as a result, it can get a bit "overwhelmed."

It's really easy to do this diet the wrong way, such as eating a lot of processed fatty foods, not consuming enough green, leafy vegetables or a variety of foods in the diet, consuming too much dairy, not supplementing or drinking enough water or not consuming enough food.



### Moving Forward

The hardest thing about this diet is that it's not sustainable.

Social pressures and events with limited options, an ability to consistently limit carbohydrates, limited access to high-fat foods in the community, etc., make this diet challenging to sustain.

This diet does have amazing benefits for weight loss. However, just like other diets, when you stop the diet, the weight will return.

The diet involves a lot of planning, organizing, measuring and calculating. This can be overwhelming if your schedule is already hectic and you're relying on others.

If you're thinking about giving this diet a try, consult with your doctor to determine if it would be beneficial for you and have him or her track your blood work.

Also, do your research thoroughly before commencing this diet, and get support from a nutrition expert who has experience with the diet to ensure that you do it the right way.

For more information, visit [eatwelllivewellwithsci.com](http://eatwelllivewellwithsci.com).

*Kylie James, CNP, & Joanne Smith, CNP, are certified nutrition practitioners and co-authors of the book Eat Well Live Well with Spinal Cord Injury and Other Neurological Conditions.* ■

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