



Since 2013

# Basics of the Ketogenic Diet



COMFORT KETO  
By MyKetoPal 



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By **MyKetoPal** 

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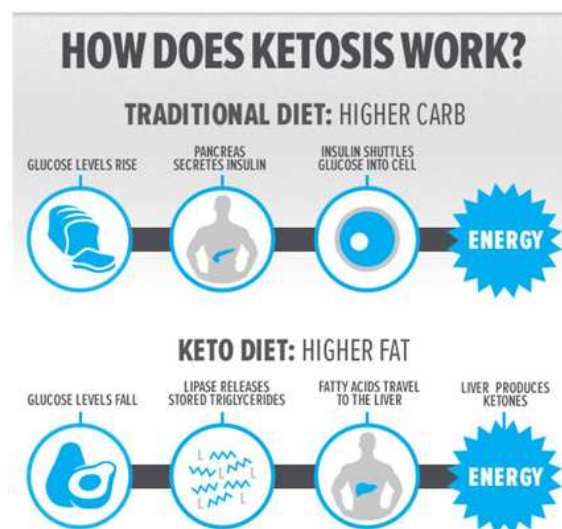


## Starting a Ketogenic Lifestyle

The ketogenic diet (also known as keto diet) is a low-carb, high-fat diet that can help you lose weight and offers many health benefits. Ketogenic diets may even have benefits in combating metabolic diseases such as diabetes, cancer, epilepsy and Alzheimer's disease. Here is a detailed beginner's guide to the keto diet.

One of the key characteristics of the ketogenic diet is that it lowers the blood sugar and insulin levels, and shifts the body from carb metabolism into fat metabolism.

Note: In regular ketogenic diet, about 14 grams of daily carbohydrate intake is recommended to feed the liver (liver can only feed from carbs and not fats).



## Types of Ketogenic Diets

There are different approaches to ketogenic diet in terms of the kind of foods being consumed.

- **Clean Keto:** This approach is the best way to achieve optimal weight loss and health. Clean keto is a very powerful, therapeutic way of eating, especially for those who have severe insulin resistance, type II diabetes, PCOS or epilepsy, just to name a few. Clean keto means you are:



- Eating whole, real foods
- Choosing organic, grass-fed, free-range, non-GMO foods
- Avoiding dairy,
- Eliminating sweeteners,
- Avoiding processed foods,
- Avoiding artificial ingredients,
- Avoiding/restricting your nuts consumption
- Avoiding alcohol



- **Lazy Keto:**

Lazy keto is a variation of the keto diet. As the name suggests, it's easy to follow. Lazy keto is far less strict, as a person has to pay attention only to his/her carb intake. Like most variations of the ketogenic diet, lazy keto restricts the carb intake to around 5–10% of the total daily calories — or around 20–50 grams per day for most people. However, one doesn't have to worry about tracking calories, protein, or fat on lazy keto.



- **Dirty Keto:**

This approach follows the same principles as the standard keto diet in terms of macros, yet not much else.

Dirty keto does not care as much about where your fat sources come from. Dirty keto dieters also don't pay much attention to vegetables and other keto-friendly sources of fiber.

Some typical examples of dirty keto are a fast-food bun-less bacon cheeseburger (with American Cheese) or a bun-less hotdog on this diet.



Depending on the aimed goal, several different versions of the ketogenic diet is practiced.

- **Standard ketogenic diet (SKD):** This is a very low-carb, moderate-protein and high-fat diet. It typically contains 75% fat, 20% protein and only 5% carbs.
- **Cyclical ketogenic diet (CKD):** This diet involves periods of higher-carb refeeds, such as 5 ketogenic days followed by 2 high-carb days. We do not practice this technique.
- **Targeted ketogenic diet (TKD):** This diet allows you to add carbs around workouts.
- **High-protein ketogenic diet:** This is similar to a standard ketogenic diet, but includes more protein. The ratio is often 60% fat, 35% protein and 5% carbs.



## Benefits of Ketogenic Diet:

### Ketogenic Diet Helps You Lose Weight

Ketogenic diet is a very effective way to lose weight and lower risk factors for chronic diseases. In fact, research shows that the ketogenic diet is far superior to the often recommended *low-fat diet*.

What's more, the diet is so filling that you lose weight without even counting calories or tracking your food intake (lazy keto). Several studies found that people on a ketogenic diet lost 2.2 times more weight than those on a calorie-restricted low-fat diet.



With Ketogenic diet, Triglyceride and HDL cholesterol levels are also improved. The increased ketones, lower blood sugar levels and improved insulin sensitivity also play a key role.

### Ketogenic Diet is great for combating Diabetes and Pre-diabetes

Diabetes is characterized by changes in metabolism, high blood sugar and impaired insulin function. The ketogenic diet can boost insulin sensitivity and cause fat loss, leading to significant health benefits for people with type 2 diabetes or pre-diabetes.

Several studies found that the ketogenic diet improved insulin sensitivity by a whopping 75%. Other studies in people with type 2 diabetes found that 7 of the 21 participants were able to stop using all diabetes medications.



In another study, the ketogenic group lost 24.4 pounds (11.1 kg), compared to 15.2 pounds (6.9 kg) in the higher-carb group. This is an important benefit when considering the link between weight and type 2 diabetes.





## Other Health Benefits of Keto

Ketogenic diet provides many health benefits, especially with metabolic, neurological or insulin-related diseases. Studies have now shown that the diet can have benefits for a wide variety of different health conditions:

- **Heart disease:** The ketogenic diet can improve risk factors like body fat, HDL cholesterol levels, blood pressure and blood sugar.
- **Cancer:** The diet is currently being used to treat several types of cancer and slow tumor growth.
- **Alzheimer's disease:** The keto diet may reduce symptoms of Alzheimer's disease and slow its progression.
- **Epilepsy:** Research has shown that the ketogenic diet can cause massive reductions in seizures in epileptic children.
- **Parkinson's disease:** Studies found that the ketogenic diet help improve symptoms of Parkinson's disease.
- **Polycystic ovary syndrome:** The ketogenic diet can help reduce insulin levels, which may play a key role in polycystic ovary syndrome.
- **Brain injuries:** Several animal studies found that the diet can reduce concussions and aid recovery after brain injury.
- **Acne and other skin conditions:** Lower insulin levels and eating less sugar or processed foods may help improve acne and skin conditions.





## **Keto Macros: A Guide to Understanding Nutrient Ratios**

### **Keto Nutrient Ratios - Calculating Macro for Keto**

Keto macros are the most important aspect of the ketogenic diet. They include the three nutrients that your body needs in large amounts— fat, protein, and carbs. Get them wrong and your chances of reaching ketosis are close to zero!

In this section, we explain what macros are and how you can calculate your keto macros. We also offer practical bits of advice that can make meeting your keto macros a whole lot easier.

### **Calculating Keto Macros**

The easiest way to calculate your keto macros is with a keto calculator. We suggest [MyFitnessPal.com](https://myfitnesspal.com) to log your food macros..

### **What Are Macros?**

Macros (short for “macronutrients”) are nutrients that your body needs in large amounts in order to sustain wide range of metabolic processes. Medical and nutrition experts classify the following five nutrients as macros.

1. Carbohydrates
2. Proteins
3. Fats
4. Fiber
5. Water

However, what most people refer to when talking about macros is carbohydrates, proteins, and fats. These three are also of great importance on a ketogenic diet. They are energy-providing nutrients whose total energy yield is defined in calories.

A balance in macros is also of huge importance for overall health. Studies show that eating too much or little of a single macro increases one's risk of obesity, heart disease, and diabetes. The worst offender of the three is carbs, but the one carrying the greatest stigma is fat (we'll talk more about that later).

Besides macronutrients, your body also needs micronutrients. Micronutrients are nutrients that you need to eat in smaller amounts, and they mostly include vitamins and minerals. It's easy to get adequate amounts of both micro and macronutrients from a well-planned ketogenic diet.



## What Are Keto Macros? How to Calculate Macros For Keto

"Keto macros" is a term referring to the macronutrient ratio of a ketogenic diet. This ratio looks something like this:

60-75% of calories from fat  
15-30% of calories from protein  
5-10% of calories from carbs

This macronutrient ratio is different from what the medical community recommends and from what most people are used to. In fact, The Institute of Medicine recommends that active people get 45-65% of their energy from carbs, 10-35% from protein, and 20-35% from fat.

So, what's the deal here? Well, the goal of a keto diet is different from that of standard health diets. On a keto diet, your goal is to radically change the way your body uses nutrients for energy production by placing the body into a metabolic state called ketosis. The standard diet, on the other hand, is meant to optimize the way your body already makes and uses food for energy.

There are many reasons why you'd want to induce ketosis, but the most sought-after is to force your body to burn fat, instead of glucose, for fuel. When your body does this, you lose excess body fat, become more energized, and experience greater mental clarity.

Dr. Russell M. Wilder at the Mayo Clinic originally developed these standard keto macros as a treatment for childhood epilepsy. Decades later, this ratio is now used to achieve a variety of objectives: from weight loss and boosting energy to treating diabetes and neurological diseases.

Below is a breakdown of each macro so you can better understand their function on the keto diet:

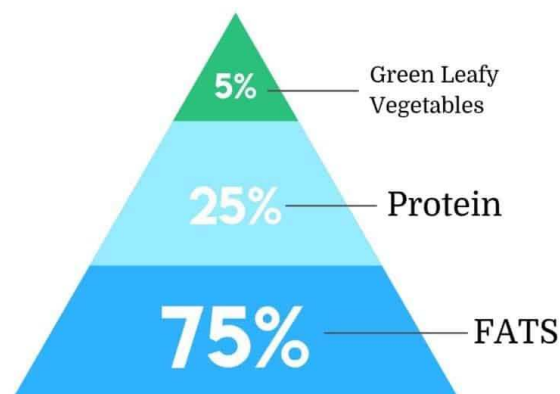
### Carbohydrates

Carbohydrates are your body's preferred fuel source. The reason for this is that they are easy to break down and turn into energy. However, unlike proteins and fat, carbs are still not an essential nutrient.

Carbs are simply a cheap and convenient sources of energy. In the absence of carbs, your body is perfectly adapted to surviving on protein and fats. Not only that, but your body may just benefit from occasional carb restriction.

The biggest problem with carbs is that they're easy to over consume. The typical Western diet is laden with all of the wrong carbs, and this is believed to be behind the global rise in metabolic diseases and obesity.

## KETO FOOD PYRAMID







Another problem with carbs is that some can cause low-grade inflammation, a condition linked to things like cancer and cardiovascular diseases.

The keto diet minimizes carb intake to a level that will help your body burn fat and also maintain good health.

## **Protein**

Protein is an essential macronutrient that the body needs to build and repair tissue. Proteins are large molecules consisting of amino acids. There are around 20 amino acids in nature, 9 of which are essential for human health. You can get essential amino acids from both plant and animal foods.

On a keto diet, you have to adjust your protein intake in accordance with your activity levels: the more active you are, the more protein you'll need. However, going overboard on protein can, and will, kick you out of ketosis because your body is able to turn a portion of the protein you eat into glucose.

On a positive note, one great thing about protein is that it keeps you feeling full for a long time because it takes longer to digest. Protein also boosts weight loss because your body actually burns calories to digest it. Finally, protein builds muscle tissue, which further increases your energy expenditure.

## **Fats**

Fat is a central keto macro but also the reason behind much of today's nutrition controversy. Medical experts have been warning the public about the dangers of high-fat diets for decades. The fact of the matter is that fat is an essential nutrient that your body cannot do without. Eliminating it from your diet does more harm than good, and researchers have been saying this for at least two decades now after reevaluating the role of fat in health and diseases.

What we now know about fat is that it:

- Provides energy
- Helps your body use fat-soluble vitamins (A, D, E, and K)
- Maintains body temperature
- Maintains healthy skin and hair
- Promotes cell health
- Accumulates toxins to protect internal organs
- Supports hormone production

Fat is central to the ketogenic diet, helping the body make ketones to fuel your body and brain by replacing glucose. If you lower your calorie intake, your body will also start to use stored fat for energy.



## Types of Fat

There are many different types of fat, some good and some bad.

Bad fats are trans fats found in excess in highly processed and fried food. Some margarines are also high in trans fats. Good fats are the monounsaturated and polyunsaturated fats found in plant oils. Saturated fats are also good, but some may not agree with this. Keto experts vouch for it as do many researchers and medical experts today.

Fats also contain essential and non-essential fatty acids. Essential fatty acids are alpha-linolenic acid (omega-3 fatty acids) and linoleic acid (omega-6 fatty acids). Your body can make other fatty acids from omega fats, but it cannot make omega fats on its own so you need to get them from food.

You can get essential fatty acids from a wide range of food sources. The best sources by far are fish, other seafood, nuts, plant oils, and seeds. Eating a variety of these foods is a foolproof way to meet your daily needs for omega fatty acids.

## How to Calculate Macros for Keto

Keto macros are roughly the same for your most people. However, for maximum efficiency, you want keto macros to match your physique, needs, and goals. The easiest way to do that is by using a keto calculator.

However, there are other ways to calculate and keep track of your keto macros:

### 1. Start with net carbs

Net carbs are total carbs minus fiber. Calculating them is important on a keto diet because your body makes glucose only from net carbs. Fiber has no effect on your blood glucose levels whatsoever, so feel free to load up on it.

Take a look at nutrition labels on food packaging or online for fresh produce. MyFitnessPal and SELFNutritionData have great nutrition databases for this purpose. When you find the total carbs, subtract the fiber and what you get is net carbs.

Your daily intake of net carbs should not exceed 30 grams. This is the upper limit you can reach before being kicked out of ketosis. However, eating around 20 grams a day is optimal for most people. Athletes may need to eat more to have enough energy during workouts.

### 2. Move on to proteins

Your protein allowance on a keto diet will depend on whether you want to build muscle, lose weight, and your body fat percentage\*. As a rule of thumb, you need around 1.5 to 2.5 grams of protein per kilogram of muscle mass to maintain or gain muscle\*\*. That's 0.7 to 1 grams of



protein per pound of muscle mass. You will need less if you are not trying to gain muscle. Below is a formula to help you determine your daily protein allowance.

1. Start by calculating your body fat by using the following formula\*\*\* (the example provided is for someone weighing 160 pounds with a 20 % body fat percentage):  
 $160 \text{ pounds} \times 0.20 (20 \%) = 32 \text{ pounds of body fat}$
2. Subtract your body fat percentage from 100 to get your lean muscle mass percentage:  
 $100 - 20 \text{ percent (of body fat)} = 80\% \text{ of muscle mass.}$
3. Then divide this by 100 to get the decimal for your muscle weight:  
 $80 / 100 = 0.80$
4. Finally, multiply this decimal by total weight to calculate your total lean mass weight:  
 $160 \text{ (pounds)} \times 0.80 = 128 \text{ of lean mass}$
5. To calculate your daily protein allowance, simply multiply your muscle mass by gram of protein. The formula goes like this:  
 $128 \text{ pounds (of muscle mass)} \times 0.7\text{-}1 \text{ grams (protein per pound of muscle mass)} = 89\text{-}128 \text{ grams of protein}$

**Note:**

To determine your body fat percentage, you can use the visual representation provided in our keto calculator. Other options include a body fat scale or a skinfold caliper.

An easier way to calculate your daily protein needs is simply relying on the recommended 0.8g per kg of total body weight (0.36g per pound of body weight). However, this formula works best for the average (nonathlete) person.

Your body percentage estimate can help you determine how much weight you want to lose.

### **3. Finish with fats**

After you've determined your daily carb and protein allowance, you'll have to calculate how much fat you should eat. This will depend on whether you want to lose or maintain weight. To maintain weight, you need to eat more fat than to lose weight.

The easiest way to calculate your daily fat allowance is, of course, by using a keto calculator. The calculator will provide you with your daily allowance of fat in grams. If you want to know how many calories you are taking in, consider the following facts:

Protein and carbohydrates contain 4 calories per gram

Fat contains 9 calories per gram.

This means that if, say, a keto (macros) calculator shows you need to eat 200 grams of fat that 1,800 of your daily calories should come from fat:

$200 \text{ grams (of fat)} \times 9 \text{ calories (per gram)} = 1,800 \text{ calories from fat}$



On average, women need to eat around 2,000 and men around 2,500 calories per day. But these numbers vary greatly depending on your age, weight, and physical activity levels along with your goals (if you're trying to lose weight or gain muscle mass).

A surplus of 500 calories will either help you maintain muscle mass or total weight, while a deficiency will help you lose body fat. However, we need to mention that many keto experts doubt the necessity of counting calories on a keto diet. The reason being that fat is highly satiating, so going overboard is difficult. Another reason is that the ketogenic diet in itself suppresses appetite but also has a strong thermic effect.

### **How to Calculate Food Macros**

You know that some foods are high in fat and low in carbs, while others are the exact opposite (think avocado vs. white rice). But that doesn't really help you on a practical level. You want to know how many keto macros you're taking in with your meals.

Calculating keto macros in food items as well as whole meals is pretty easy. However, we need to warn you that it can be time-consuming when you first start doing this. Nevertheless, calculating macros is an important step in getting your ratio just right. You can do this by using nutrition facts from reliable websites.

Take for example Myfitnesspal.com. The website offers nutrition facts for a wide range of food items. Simply enter a food item in the search bar and the website will give you precise nutrition facts per serving, including total fat, total carbs, dietary fiber, protein, and calories.

Besides Myfitnesspal.com, you can use our food list of keto-approved foods and visit our Foods & Nutrition Blogs to learn more about keto foods. Once you have a list of keto foods ready, use nutrition facts websites to calculate your keto macros.

Example: 1 medium avocado (250 calories)

Fat: 23 grams

Net carbs: 5 grams (15 grams total carbs - 10 grams fiber),

Protein: 0 grams

Served with one poached egg (74 calories)

Fat: 5 grams

Net carbs: 0 grams

Protein: 6 grams

Topped with a teaspoon of olive oil (40 calories)

Fat: 5 grams

Net carbs: 0 grams

Protein: 0 grams

From this 364-calorie meal, you get a total of 33 grams of fat, 5 grams of net carbs, and 6 grams of protein. Make similar lists for all your meals and keep them close when you plan your meals.



## **Tips & Tricks for Meeting Macros**

### **Stick to whole foods**

Highly processed foods contain hidden ingredients that can sabotage your dieting efforts. In other words, you never know what you are taking in when munching on packaged foods labeled "low-carb" or "keto". The keto diet is all about clean eating as this supports good health, and most importantly – helps you stay within your keto macros.

### **Plan your meals**

Planning meals is non-negotiable on a keto diet. You simply can't make food choices on spur of the moment because then you won't be able to track your keto macros. Planning meals is time-consuming at first. But once you have your list ready, most of your planning is already done.

### **Join a keto community**

The keto diet can be confusing for newcomers. To make the transition easier, consider joining online keto communities to learn about other's experiences. Facebook and Reddit have great keto communities where dieters also discuss how they meet their keto macros – give it a try and see if you can learn from others' experiences.

### **Find a ready-made meal plan**

An even easier way to meet your keto macros is to use existing meal plans. Many keto websites offer weekly, monthly, and even half-year meal plans. This takes away much of the hassle that you initial go through when trying to plan meals and meet keto macros. Make sure you only use meal plans from reputable sources with good ratings.

### **Take-Home Message**

Keto macros are the essence of a ketogenic diet. You want to balance them out perfectly to reach your goals and feel good along the way. This can be a bit tricky as it involves plenty of planning and mathematics.

But once you have your macros set and your meal plan in place, keto dieting will become your second nature. Use our keto calculator, read our informative blog posts, and consider our guidance and tips given here when trying to meet your macros.

And also, don't worry if you don't get your keto macros perfect the first time. As long as you are eating less than 30 grams of carbs per day and lots of fat, chances are your diet will work like a charm.

Make sure you also measure your ketones levels with your favorite device, be it a breathalyzer, a blood ketone meter or our ketone strips.

After all, the keto diet is a lifestyle you're supposed to enjoy. Make meeting your macros an exciting challenge and your keto meals as delicious and decadent as they should be.



## Side Effects of Ketogenic Diet, How to Minimize Them

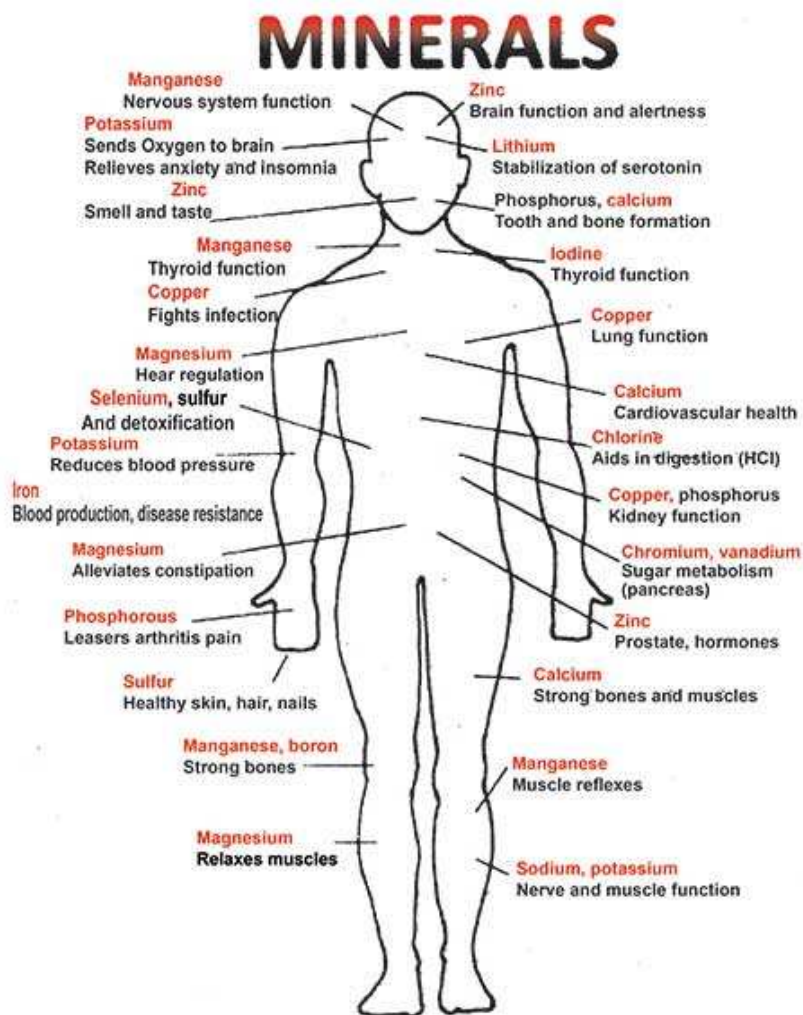
Usually, a ketogenic diet causes weight loss even without intentional calorie restriction. At least in the beginning, for two weeks, it is important to eat until you're full and avoid restricting calories too much.

Many of the side effects of starting a ketogenic diet can be limited. Easing into the low-carb diet and taking mineral supplements can help.

### Mineral balance of the body:

A ketogenic diet can also change the water and mineral balance of your body, so adding extra salt to your meals or taking mineral supplements can help. For minerals, try taking daily the below listed amounts to minimize side effects:

- 3,000–4,000 mg of sodium,
- 4,500 mg of potassium,
- 350 mg of magnesium.





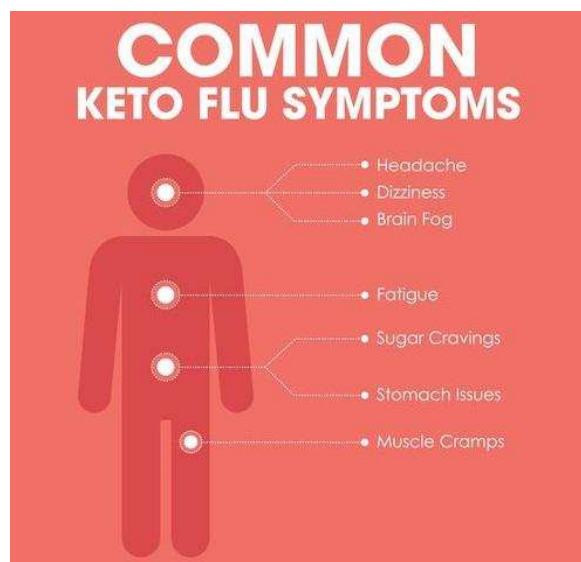


### Keto Flu:

Although the ketogenic diet is safe for healthy people, there may be some initial side effects while your body adapts. This is often referred to as the *keto flu* and is usually over within a few days. Keto flu includes:

- poor energy and mental function,
- increased hunger,
- sleep issues,
- nausea,
- digestive discomfort, and
- decreased exercise performance.

It may take one week for those symptoms to completely disappear. But depending on the person, it may take up to **2 weeks** until all these symptoms are replaced with **higher levels of energy** and all the **benefits** that keto diet brings. To minimize the effects of keto flu, you can try a regular low-carb diet for the first few weeks. This may train your body to burn more fat before you completely eliminate carbs.



### Supplements for a Ketogenic Diet:

Although no supplements are required for ketogenic diet, some supplements can be useful.

- **MCT oil:** Added to drinks or yogurt, MCT oil provides energy and increases ketone levels.
- **Minerals:** Added salt and other minerals as listed above can be important when starting out due to shifts in water and mineral balance.
- **Caffeine:** Caffeine can have benefits for energy, fat loss and performance.
- **Creatine:** Creatine provides numerous benefits for health and performance. This can help if you are combining a ketogenic diet with exercise.
- **Ashwaganda:** Ashwaganda is a cortisol blocker.
- **Tulsi:** Works great with Ashwaganda
- **Omega 3 Fish oils:** Improves brain functions.
- **Omega 7:** Helps burn adipose fat.
- **Vitamin B complex:** Improves brain function and helps creating serotonin.
- **Milk Thistle complex:** Detoxes and strengthens the liver.
- **Collagen:** Improves the skin and gut health.



- **Exogenous ketones:** This supplement may help raise the body's ketone levels.

## How Do Exogenous Ketones Work?

*Exogenous ketones increase the ketone (energy) levels in your body which will:*



Provide ketones to teach the body how to keto adapt and remedy the symptoms of the keto flu.



Boost energy at anytime of day (great for work or exercise)



Provide feelings of fullness in between meals or during a fast

*Ketones can be used to improve fat loss, physical performance, mental focus and to improve longevity.*

### Frequently Asked Questions

Here are answers to some of the most common questions about the ketogenic diet.

1. **Can I ever eat carbs again?**  
Yes. However, it is important to significantly reduce your carb intake initially. After the first 2–3 months, you can eat carbs on special occasions — just return to the diet immediately after.
2. **Can I build muscle on a ketogenic diet?**  
Yes, but it may not work as well as on a moderate-carb diet.
3. **Do I need to refeed or carb load?**  
No. However, a few higher-calorie days may be beneficial every now and then.
4. **How much protein can I eat?**  
Protein should be moderate, as a very high intake can spike insulin levels and lower ketones. Around 20% of total calorie intake is probably the upper limit.
5. **What if I am constantly tired, weak or fatigued?**  
You may not be in full ketosis or you may not be utilizing fats and ketones efficiently. To counter this, lower your carb intake and re-visit the points above. A supplement like MCT oil or ketones may also help.



**6. My urine smells fruity. Why is this?**

Don't be alarmed. This is simply due to the excretion of by-products created during ketosis.

**7. My breath smells. What can I do?**

This is a common side effect. Try drinking naturally flavored water or chewing sugar-free gum.

**8. I heard ketosis was extremely dangerous. Is this true?**

People often confuse ketosis with ketoacidosis. The former is natural, while the latter only occurs in uncontrolled diabetes. Ketoacidosis is dangerous, but the ketosis on a ketogenic diet is perfectly normal and healthy.

**9. I have digestion issues and diarrhea. What can I do?**

This common side effect usually passes after 3–4 weeks. If it persists, try eating more high-fiber veggies. Magnesium supplements and consumption of chia seeds can also help with constipation.

**10. Is ketogenic diet good for everyone?**

A ketogenic diet can be great for people who are overweight, diabetic Type II or looking to improve their metabolic health. Yet, keto diet It may be less suitable for elite athletes or those wishing to add large amounts of muscle or weight.

### **Tips to Get Into Ketosis**

Ketosis is a normal metabolic process that provides several health benefits. During ketosis, your body converts fat into compounds known as ketones and begins using them as its main source of energy.

Studies have found that diets that promote ketosis are highly beneficial for weight loss, due in part to their appetite-suppressing effects. Emerging research suggests that ketosis is also helpful for type 2 diabetes and neurological disorders, among other conditions. That being said, achieving a state of ketosis can take some work and planning. It's not just as simple as cutting carbs. Here are some effective tips to get into ketosis.

**1. Minimize Your Carb Consumption**

Eating a very low-carb diet is by far the most important factor in achieving ketosis.

Normally, your cells use glucose, or sugar, as their main source of fuel. However, most of your cells can also use other fuel sources. This includes fatty acids, as well as ketones, which are also known as ketone bodies.

Your body stores glucose in your liver and muscles in the form of glycogen. When carb intake is very low, glycogen stores are reduced and levels of the hormone insulin decline. This allows fatty acids to be released from fat stores in your body. Your liver converts some of these fatty acids into the ketone bodies (acetone, acetoacetate and beta-hydroxybutyrate). These ketones are used as fuel by portions of the brain.



The level of carb restriction needed to induce ketosis is somewhat individualized. Women are recommended to limit net carbs (total carbs minus fiber) to 20 grams per day, men can achieve ketosis while eating twice this amount or more. For this reason, we recommend that carbs be restricted to 20 or fewer grams per day for two weeks to guarantee that ketosis is achieved. After this point, small amounts of carbs can be added back to your diet very gradually, as long as ketosis is maintained.

These carb and ketone ranges are advised for people who want to get into ketosis to promote weight loss, control blood sugar levels or reduce heart disease risk factors.

In contrast, therapeutic ketogenic diets used for epilepsy or cancer therapy often restrict carbs to fewer than 5% of calories or fewer than 15 grams per day to further drive up ketone levels. However, anyone using the diet for therapeutic purposes should do so under the supervision of a medical professional.

## **2. Add Coconut Oil into Your Diet**

Eating coconut oil can help you get into ketosis as it contains fats called medium-chain triglycerides (MCTs). Unlike most fats, MCTs are rapidly absorbed and shuttled directly to the liver, where they can be used immediately for energy or converted into ketones. In particular, coconut oil is one of the best ways to increase ketone levels in people with Alzheimer's disease and other nervous system disorders.

Although coconut oil contains four types of MCTs, 50% of its fat comes from the kind known as lauric acid. Some research suggests that fat sources with a higher percentage of lauric acid may produce a more sustained level of ketosis. This is because it's metabolized more gradually than other MCTs.

MCTs have been used to induce ketosis in epileptic children without restricting carbs as drastically as the classic ketogenic diet. Several studies have found that a high-MCT diet containing 20% of calories from carbs produces effects similar to the classic ketogenic diet, which provides fewer than 5% of calories from carbs.

When adding coconut oil to your diet, it's a good idea to do so gradually in order to minimize digestive side effects like stomach cramping or diarrhea. Start with one teaspoon per day and work up to two to three tablespoons daily over the course of a week. You can find coconut oil at your local grocery store or purchase it online.

## **3. Increase Your Physical Activity**

Being more active can help you get into ketosis. When you exercise, you deplete your body of its glycogen stores. Normally, these are replenished when you eat carbs, which are broken down into glucose and then converted to glycogen. However, if carb intake is minimized, glycogen stores remain low. In response, your liver increases its production of ketones, which can be used as an alternate fuel source for your muscles.



One study found that at low blood ketone concentrations, exercise increases the rate at which ketones are produced. However, when blood ketones are already elevated, they do not rise with exercise and may actually decrease for a short period.

In addition, working out in a fasted state has been shown to drive up ketone levels.

In a small study, nine older women exercised either before or after a meal. Their blood ketone levels were 137–314% higher when they exercised before a meal than when they exercised after a meal.

Keep in mind that although exercise increases ketone production, it may take **one to four weeks** for your body to adapt to using ketones and fatty acids as primary fuels. During this time, physical performance may be reduced temporarily.

#### 4. **Increase Your Healthy Fat Intake**

Consuming plenty of healthy fat can boost your ketone levels and help you reach ketosis. Indeed, a very low-carb ketogenic diet not only minimizes carbs, but is also high in fat. Ketogenic diets for weight loss, metabolic health and exercise performance usually provide between 60–80% of calories from fat.

The classic ketogenic diet used for epilepsy is even higher in fat, with typically 85–90% of calories from fat. However, extremely high fat intake doesn't necessarily translate into higher ketone levels. A three-week study of 11 healthy people compared the effects of fasting with different amounts of fat intake on breath ketone levels. Overall, ketone levels were found to be similar in people consuming 79% or 90% of calories from fat.

Furthermore, because fat makes up such a large percentage of a ketogenic diet, it's important to choose high-quality sources. Good fats include olive oil, avocado oil, coconut oil, butter, lard and tallow.

In addition, there are many healthy, high-fat foods that are also very low in carbs. However, if your goal is weight loss, it's important to make sure you're not consuming too many calories in total, as this can cause your weight loss to stall.

#### 5. **Try a Short Fast or a Fat Fast**

Another way to get into ketosis is to go without eating for several hours (intermittent fasting). In fact, many people go into mild ketosis by restricting their eating times into a 4-6 hours window, and reducing the meals from three times a day to two or one (One meal a Day = OMAD).

Children with epilepsy are sometimes fasted for 24–48 hours before they start a ketogenic diet. This is done to get into ketosis quickly so that seizures can be reduced sooner.



Intermittent fasting, a dietary approach that involves regular short-term fasts, may also induce ketosis. Moreover, "fat fasting" is another ketone-boosting approach that mimics the effects of fasting. It involves consuming about 1,000 calories per day, 85–90% of which come from fat. This combination of low calorie and very high fat intake for up to 10 days may help you achieve ketosis quickly.

## **6. Test Ketone Levels and Adjust Your Diet as Needed**

Like many things in nutrition, achieving and maintaining a state of ketosis is highly individualized. Therefore, it is necessary to test your ketone levels to ensure you're achieving your goals.

The three types of ketones — acetone, beta-hydroxybutyrate and acetoacetate — can be measured in your breath, blood or urine.

Acetone is found in your breath, and studies have confirmed testing acetone breath levels is a reliable way to monitor ketosis in people following ketogenic diets. The Ketonix or Ketomojo meters measure acetone in breath. After breathing into the meter, a color flashes to indicate whether you are in ketosis and how high your levels are.

Ketones can also be measured with a blood ketone meter. Similar to the way a glucose meter works, a small drop of blood is placed on a strip that's inserted into the meter. It measures the amount of beta-hydroxybutyrate in your blood, and it has also been found to be a valid indicator of ketosis levels. The disadvantage of measuring blood ketones is that the strips are very expensive.

Lastly, the ketone measured in urine is acetoacetate. Ketone urine strips are dipped into urine and turn various shades of pink or purple depending on the level of ketones present. A darker color reflects higher ketone levels.

Ketone urine strips are easy to use and fairly inexpensive. The urinary ketones tend to be highest in the early morning. Although their accuracy in long-term use has been questioned, they should initially provide confirmation that you are in ketosis.