



BEGINNER'S *Guide to the* **KETOGENIC** *Diet*

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BEGINNER'S GUIDE TO THE KETOGENIC DIET

You might have been hearing a lot lately about the **ketogenic diet**—or **keto diet** for short. Widely considered an effective weight loss regimen with myriad potential health benefits, the ketogenic diet is designed to shift the body away from using carbs as fuel to **burning fat** for energy.

You might be wondering ...

What's this diet all about?

Why are people on this diet, and what are the benefits?

Will it help me lose weight?

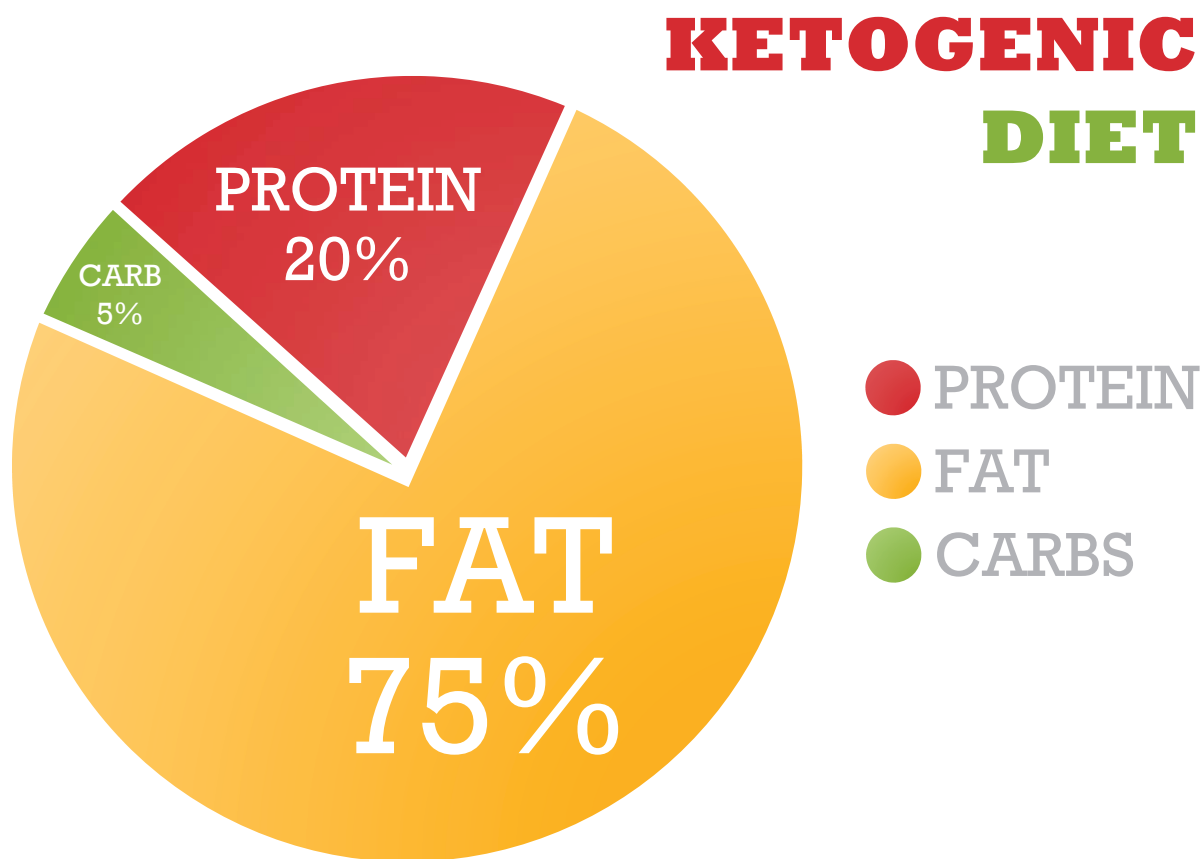
Is it safe?

We dove into the research to create this comprehensive introduction to the ketogenic way of life. Continue reading to discover the answers to all of these questions and more!

What Is the Ketogenic Diet?

THE STANDARD Ketogenic Diet involves eating a high proportion of healthy fat with a moderate amount of protein while drastically limiting carbohydrates. While the exact ratio can vary person-to-person, the commonly accepted caloric breakdown in a meal is **75 percent fat, 20 percent protein**, and **5 percent carbs**. Reducing carbohydrate intake to this level shifts the body into a metabolic state called **ketosis**.¹

You are officially in ketosis when your body is burning fat as its primary fuel source instead of glucose. Ketones are natural byproducts of fat-burning. Those ketones then travel through the bloodstream to assist with energy processes in the body. Breaking down fat and using it as energy for your body produces a steady, long-burning, more efficient fuel source.



History of the Ketogenic Diet

A LOW-CARB, high-fat diet can be traced back to as early as 500 BC. Originally used as a way to treat epilepsy and mimic the body's metabolic response to fasting, it became known as the "ketogenic diet" by modern physicians in the 1920s.² It was eventually abandoned for use on epileptic patients after new anticonvulsant therapies were discovered, but it re-emerged later when it was shown to be **more successful** than drug treatment.³

The keto diet experienced a resurgence in social popularity with the invention of the Atkins Diet in the early 1970s. A variation on keto, Atkins is a high-protein, high-fat, low-carb food plan that encourages the consumption of meat and cheese while discouraging starches and sugar.⁴

The ketogenic diet remained popular among bodybuilders and physique athletes, but now the rest of society is rediscovering this way of eating, intrigued by the associated health benefits and weight loss results.



Health Benefits of the Ketogenic Diet



RESEARCH REVEALS a ketogenic diet can help with a wide range of health challenges—including everything from weight loss to cancer to brain disorders.

Weight Loss

Studies show the ketogenic diet is an effective way to lose weight without having to count calories.⁵ The increase in ketones helps lower insulin, which enables the body to maintain more neutral and efficient energy levels.⁶ The keto diet preserves muscle while burning stored and dietary fat for fuel. The result is typically a decrease in inches around many problematic areas (e.g., stomach, chin, legs, and arms), which usually translates to lower numbers on the scale.

Even better, dietary fat provides **more energy** to the body per gram than either carbohydrates or protein.⁷ This exceptional source of energy is twice as dense, longer-lasting, and more evenly released in the body than carbs. You also enjoy a natural appetite-suppressant effect—you are less hungry and

thus eat less because fat is more filling! Hunger tells the body to **hold on** to fat, whereas nutritional satisfaction signals the body to **release** fat stores.⁸

Many people also experience rapid weight loss due to the body expunging excess water storage (water weight) as insulin levels diminish.⁹



Brain & Neurological Disorders

The brain and some body tissues depend on glucose as a sole energy source. This is one reason many fear adapting to a low-carb diet. How can we fuel those crucial parts of the body without carbs?

As it turns out, producing ketones by breaking down fat stores in the body and the fat we consume is the body's highly efficient “backup” process—an ability that kicks in should we ever experience fasting or famine.¹⁰ The brain, red

blood cells, and other glucose-dependent body parts can then use these ketones.

As mentioned above, the ketogenic diet has long been used to treat epilepsy, but it is now being studied for its ability to treat additional brain and neurological disorders such as Parkinson's and Alzheimer's.¹¹

Metabolic Disorders

When we consume carbs, the body breaks them down into glucose. At the same time, the pancreas secretes insulin, a hormone necessary for metabolizing the glucose—either for immediate use as energy or to be stored in the body for future use. Insulin helps stabilize the blood sugar when glucose is present in our systems.



Consistent overconsumption of carbs (especially sugar and refined carbs), however, causes chronically elevated blood sugar and insulin levels. The body begins losing its ability to respond properly to insulin, leading to a buildup of glucose in the bloodstream. This creates **insulin resistance**—a dangerous metabolic disorder that causes constant hunger, weight gain, and many other undesirable side effects.¹²

Keeping carbohydrate consumption at moderate to low levels can help prevent the sharp rise and subsequent crash in blood sugar. Carbs are the first macronutrient to empty from the stomach and the quickest to be digested. This means eating a meal full of carbohydrates leaves you feeling hungry soon afterward.¹³

Many suffering from type 2 diabetes can reverse their symptoms with low-carb approaches like the keto diet. Radically reducing carbs eliminates the need for chronic levels of insulin. Dr. Eric Westman, a doctor with extensive experience treating diabetics through this method, found he was able to reduce the insulin dosage by an impressive 50 percent after **just one day** on the diet.¹⁴

Dr. Jeanne Drisko, who has studied in depth the effects of the ketogenic diet, says:



We see a lot of young people that are very toxic and they have a lot of endocrine disruption, chronic illness and autoimmune disorders. The ketogenic approach has been really helpful in getting them back [to] health.¹⁵



Cancer

Many of the top disease “killers” in today’s society (e.g., obesity, diabetes, heart disease, cancer) are directly linked to how effectively our body is operating at a cellular level.¹⁶

The more efficiently our body cells communicate and the more neutral our hormonal levels remain, the healthier we stay as we age. On the other hand, long-term metabolic dysfunction sets up a downward spiral of health issues. Much of the latest scientific evidence suggests “a high-fat, low-net carb and low-to-moderate-protein diet) ... is ideal for most people.”¹⁷ Indeed, experiments in treating cancer with the ketogenic diet are showing great promise.¹⁸



Low-Carb Diets: The Differences Between Paleo, Keto, & Atkins

Paleo

A Paleo diet focuses on mimicking the eating patterns of our ancestors to the best of our ability. It involves eating high-quality protein, good fats, and fresh vegetables while avoiding grains, dairy, and processed foods and ingredients. There is no macronutrient ratio requirement—in other words, there's no set percentage of calories that must come from carbohydrates, protein, or fat. You can tailor this eating plan to suit your individual needs. Since the Paleo way of eating removes sugar, grains, dairy, and processed foods, it naturally tends to be a lower-carb approach.

You can follow a Paleo approach and be in ketosis by simply avoiding or strictly limiting the consumption of starchy tubers and carbs like sweet potatoes, carrots, and other root vegetables. That said, you would also need to increase your dietary fat intake significantly. Remember, the commonly accepted breakdown in a meal is 75 percent fat, 20 percent protein, and 5 percent carbohydrates.

Atkins

Atkins is a low-carb diet that emphasizes high amounts of both protein and fat while limiting or eliminating sugars and carbs. It also encourages the consumption of cheese and dairy.

The Atkins Diet doesn't stress the quality of food to be eaten, which can lead to the consumption of artificial and potentially toxic ingredients. It has also morphed into an industry of "low-carb" treats and snacks like cookies and candy bars that are not only processed but also low in nutritional value. A frequent criticism of Atkins is it doesn't put much emphasis on micronutrients (vitamins and minerals), so you could wind up with deficiencies that trigger a host of other health issues.¹⁹

What to Eat & What Not to Eat

To follow the ketogenic diet and kick your body into ketosis, you need to meet the majority of your dietary needs with dietary fat, followed by a moderate amount of protein and few to no carbohydrates.

Carbohydrates aren't **just** pasta, bread, and other obvious starches. They are found in candy, soft drinks, fruit, potatoes—anything the body can break down into glucose and simple sugar.



Some people can eat up to fifty grams of carbohydrates per day while others need to limit themselves to twenty grams or fewer to flip over to ketosis.²⁰

But remember, vegetables are carbohydrates, too. You definitely don't want to avoid eating vegetables as that's how your body gets the vitamins and minerals necessary for optimum cellular function.

What we **really** mean when we say "carbs" are the processed, sugary, and starchy types.



Measuring Carbs

There is a formula you can use to determine how many net carbs you are consuming at any given time from a food:

(Total Carbohydrate Content - Fiber = Total Net Carbs)

For example, let's say you want to keep your carb intake below 20 grams for the day.

An example of a typical meal for someone on a ketogenic diet may look like this:

1 chicken breast + avocado + broccoli

One cup of broccoli contains approximately six grams of carbs, **but it also has approximately two grams of dietary fiber.**

This dietary fiber is important because it lowers the glycemic load of carbohydrates present in the food. You can actually **subtract** that fiber amount from the carbohydrate amount.

6 grams of carbohydrates - 2 grams of fiber = 4 total net carbs

That means you would have to eat **five cups of broccoli** to hit twenty grams of carbs for the day.

With this example, you can see how you can eat an abundance of vegetables and **still** maintain a low-carbohydrate intake.

Let's compare this to the standard chocolate chip cookie.

A medium-sized cookie contains approximately nine grams of carbs ... and **zero dietary fiber.**

Thus, **one** chocolate chip cookie can easily use up **half** of your daily carb intake.

What to Eat on a Ketogenic Diet

High-Quality Fat Sources

Since 50–75 percent and up to 85 percent of your total calories should come from fats,²¹ we've included a reference list of **healthy fats**.

Dietary Fat Sources

- grass-fed butter
- coconut oil
- MCT oil
- olive oil
- olives
- avocados
- flax seed oil
- raw nuts and seeds (e.g., almonds, walnuts, macadamia nuts, pecans, pumpkin seeds)
- pastured lard, tallow, and duck fat
- nut butters (e.g., almond butter, cashew butter, sunflower butter)
- cacao butter

But remember—not all fat is created equal.

Fats such as industrial seed vegetable oils and trans fats are **toxic** and promote inflammation in the body. The following subpar fats and oils should be avoided.

Toxic Fat Sources

- trans fats (e.g., deep-fried foods, fast food)
- hydrogenated and partially hydrogenated oil
- margarine, vegetable shortening, and other butter substitutes
- corn oil
- soybean oil
- safflower oil
- canola oil
- cottonseed oil



Also keep in mind that you do consume some fat when eating animals. Toxins are stored in the fats of animals, so it is best to choose organic, pasture-raised, and wild-caught animals. If you must eat a conventional meat, choose lean cuts to decrease your exposure to the hormones, antibiotics, and other unhealthy substances frequently used in the agricultural industry.

High-Quality Protein Sources

Approximately 20 percent of your calories will come from quality protein sources. As mentioned, you will want to seek protein from animals ethically raised in their natural environment who have not been given antibiotics or hormones. Look for the following: **organic** sources, **grass-fed** meat, **wild-caught** seafood, and **pastured** eggs.

- eggs
- turkey
- seafood
- beef
- bison
- lamb
- chicken
- duck
- pork
- rabbit
- goat
- wild game
- organ meats



Carbohydrates

As already mentioned, approximately 5 percent of total calories comes from carbs in a keto diet. To fulfill this requirement, you will mostly focus on eating vegetables. Remember the fiber in vegetables counteracts the glycemic load, making them ketogenic diet-friendly.

- spinach
- broccoli
- kale
- cauliflower
- bell peppers
- celery
- onion
- herbs



Fruits are also carbohydrates, so eat them in moderation. Select fruits lower on the glycemic index and keep your portions small.

- apples
- blueberries
- raspberries
- blackberries
- peaches
- grapefruit
- apricots
- lemons
- limes



Foods to Avoid (High in Carbohydrates)

- grains
- bread
- pasta
- sugar
- candy
- cookies
- rice
- potatoes

NOTE: Dairy is a gray area. If you want to follow a Paleo approach to the ketogenic diet, you will want to avoid it. Many people who are simply following a Standard Ketogenic Diet, however, include dairy in their fat and protein intake for the day.



Protein + Fat = The Essential Macronutrients

PROTEIN IS essential to an optimal and healthy life. The protein we consume is broken down into building blocks called amino acids, which then circulate through the body and facilitate the growth and repair of muscles, tendons, ligaments, hair, and skin.

On a dietary level, protein also stabilizes blood sugar and does an excellent job of helping us feel satisfied so we don't overeat. Protein triggers the release of several satiety hormones, which signal to our brain that we are full. It also reduces the hunger hormone ghrelin.

Fat is the unsung hero of macronutrients. As stated above, it delivers more energy to the body per gram than carbs or protein.²² Quality fats (especially saturated) are crucial to maintaining brain, heart, bone, kidney, lung, and liver health; cellular integrity; and proper hormone functioning.²³

The carbohydrate is the only macronutrient that isn't necessary for human functioning. In addition to converting ketones from fat into energy, the body also has the amazing ability to transform protein into glucose. This process is called **gluconeogenesis**. So while it is true that parts of the brain and certain body tissues depend on glucose to survive, that glucose **doesn't have to come** from carbohydrates as the source.²⁴

How to Know When You're in Ketosis



BECAUSE THE ketogenic diet causes your body to undergo a biological change, there are several physical indicators that you're in ketosis, including:

BAD BREATH. Elevated ketone levels correspond with an increase in acetone, which exits the body through breath and urine.²⁵

WEIGHT LOSS. Some experience weight loss within the first week of adapting to a ketogenic diet. Usually, this is the result of depleting your body's carbohydrate storage while the rest is water being used up.²⁶

BLOOD TEST RESULTS. The most accurate way of measuring

your body's transition into ketosis is via a blood test that gauges the ketones in your bloodstream. You can find these tests online. You simply draw your own blood by pricking your finger.²⁷ ([Click here](#) for an example of one of these tests available at Amazon).

Is the Ketogenic Diet Safe?

KETOSIS IS a natural metabolic state the body is designed to activate at times when glucose from carbohydrates is unavailable for energy.²⁸ Back when our ancestors hunted and grew their own food, this efficient system helped keep them alive. Thankfully, most of us don't have to worry about such drastic circumstances today, but the body is still geared to use fat for energy—whether the absence of carbohydrates is intentional or unintentional.

Nora Gedgaudas, CNS, CNT writes in her book *[Primal Body, Primal Mind](#)*:

“*Many ancient hunter-gatherers would have lived in a functionally ketogenic state most of the time. There is no evidence that it is a harmful state for normal healthy individuals to be in at all. To the contrary: the newest longevity and leptin research readily concludes that the more ketones you use of energy in your lifetime as opposed to glucose, the longer and healthier you will live—by far.*”²⁹

Again, carbohydrates are not necessary for human functioning, and a diet high in quality fat + moderate protein provides the body with sufficient fuel. Glucose needed for the brain and other tissues can be derived from protein via gluconeogenesis.

Who Should Avoid It?

While a ketogenic diet is safe for most people, some may experience less than desirable symptoms when making the transition and removing carbs from their diet.

Considerations

LOW-CARB FLU. Many people experience what is called a “low-carb flu” when beginning a keto diet. Lasting up to two weeks, this is a period during which your body is depleting its carbohydrate storage and starting to break down stored body fat for energy. Fatigue, nausea, and decreased mental clarity are several of the symptoms you may experience. Once they reach the other side of this transition period, however, most people report feeling far more energized and healthier overall.

INSULIN RESISTANCE. For those who are overweight and insulin-resistant, the body is accustomed to using glucose as fuel. It may take longer for the body to learn to use ketones or fat efficiently as fuel, especially for older adults.³⁰ Be patient and understand this transition won't happen overnight.



HYDRATION. Drink plenty of water so more ketones exit through the urine rather than the breath.³¹ Staying hydrated can help your body dilute and excrete toxins that are released after being stored in adipose tissue.

QUALITY. Seek out clean, quality fat and protein sources (listed above).

Takeaways

- In a ketogenic diet, your body shifts from using sugar and carbs to **burning stored and consumed fat** as fuel.
- You enter ketosis by eating a **high-fat, moderate-protein, and low-carbohydrate** diet.
- While certain parts of the body need glucose, they can also use fat to function in times when no glucose from carbohydrates is available. The body can also convert dietary protein into glucose via **gluconeogenesis**.
- You can enter **ketosis while eating Paleo** by limiting or avoiding carbohydrates, but keto and Paleo diets are not the same thing.
- You can find the **total net carbs** of a food by using the formula:

$$\text{Total Carbohydrates} - \text{Dietary Fiber} = \text{Total Net Carbs}$$



Whether or not you decide to try a ketogenic diet, we hope this introduction helps you better understand what this low-carb, high-fat diet is all about.

You may find the ketogenic diet a bit too extreme, especially if you are coming from a Standard American Diet (SAD) high in carbs and loaded with sugar, breads, and pasta. If you are looking for ways to improve your health or lose weight, a less stringent option would be the Paleo diet.

A Paleo diet focuses on nutrient-dense, whole foods—including an abundance of healthy fats—and typically decreases overall carbohydrate consumption by eliminating sugar, processed food, grains (e.g., breads, pasta), and dairy.

Carbohydrates such as fruits, starchy veggies, and tubers like carrots and sweet potatoes **are** still allowed. Many who eat this way also report improvements in overall health, weight loss, heightened energy, better digestion, decreased inflammation, and less joint pain—just to name a few benefits!

For more information on how to start a Paleo diet and transform your life ... go [here](#).

Resources

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