
The Ketogenic Diet (Part 1 of 2)

An Answer for More than Weight-Loss Resistance

Health Centers of the Future, LLC.

The ketogenic diet is rapidly becoming one of the hottest topics in health for good reason. It's a quick way to drop extra weight and get lean, and has numerous positive effects on overall well-being. Developed in the 1920's to improve brain function in epileptic children, it fell out of popularity when anticonvulsant drugs hit the market. The recent resurgence of the diet is exciting since it's so effective for weight-loss and healing a variety of other health conditions. I have been following my True Cellular Detox™ Diet for many years; but, more recently have been intermittently following a ketogenic diet, and have achieved the best health and fitness of my life (read my personal experience with the diet at the end of the article). I now believe it's one of the best tools available to improve health and get into your best shape yet.

Note: This diet is not for everyone, and can simply be used as a tool for healing weight-loss resistance and other conditions. Once good health is achieved, you may return to following a diet that suits you genetically, or the True Cellular Detox™ Diet. However, some people should stay on a version of the ketogenic diet for life to have lasting energy and remain lean.

What is the Ketogenic Diet?

The ketogenic diet is a high fat (up to 70-80%), moderate protein (15-30%), low carbohydrate (5-10%) diet. The very low carb intake forces the body to use fat for energy instead of glucose, which produces a high level of ketones in the blood, hence the name. Ketones are acids made when the liver breaks down fat for energy. They are the preferred source of fuel for the body, particularly the brain, and the presence of ketones shifts the body's metabolism away from glucose burning towards fat burning and moves you into the state of ketosis.

The diet diverges from the popular Atkins and Paleo approaches, which typically recommend too much protein for optimal health. The body can only use so much protein, and when consumed in excess protein converts into glucose via the process of gluconeogenesis. The glucose then must either be used as energy or it will be stored as fat. High protein diets can also lead to cellular damage and cellular aging to boot. Moderate, not high, protein intake is an important aspect of the ketogenic diet and the reason why it works for weight-loss and healing other conditions.

The key to ketogenic success is the high intake of good fats, such as grass-fed animal protein, full-fat dairy, and oils like coconut oil and MCT oil. The good fat fixes our cells by healing the cell membranes, which are composed of fat. Without adequate dietary fat, especially cholesterol and saturated fat, our bodies become inflamed and disease develops. However, when we eat lots of healthy fat and few carbohydrates, our cells regenerate, inflammation drops, and excess weight sheds.

Note: Being in a state of nutritional ketosis is safe and differs from diabetic ketoacidosis, a life-threatening complication of diabetes that occurs when the body produces very high levels of ketones in response to a lack of insulin. I recommend working with a trained practitioner when beginning any new diet or health plan.

How does the diet support weight loss?

It helps you burn fat and reduce inflammation: By following a ketogenic diet, you force your cells to burn fat for fuel instead of sugar, and essentially become a fat burning machine. It works like this: cells can only use two things for energy, sugar or fat. Sugar burns as a "dirty" fuel, whereas fat burns clean. Imagine lighting a fire: when you put wood on the fire it creates smoke and waste, like sugar in the body. When you light a gas stove, the natural gas burns clean, as does good dietary fat. Because

fat burns clean, less cellular oxidation occurs, and consequently less cellular inflammation. This is why the ketogenic diet is exceptional for reducing inflammation. Moreover, since hormone receptors reside on the cellular membrane, a reduction in membrane inflammation makes the diet very effective for healing hormone-related conditions, including weight-loss resistance.

It removes sugar and everything that turns to sugar: Most Americans today eat a high carbohydrate (aka high sugar) diet, averaging up to 300 grams per day. As our carb intake has increased, our waistlines have as well. When carbohydrates are consumed, including whole “healthy grains,” the body converts them into glucose for energy. But the body can actually survive—and thrive—with very few carbohydrates; it is protein and fat that is vital to survival and maintaining a lean body mass. Gary Taubes, author of “Why We Get Fat,” says it well: “You don’t lose fat because you cut calories; you lose fat because you cut out the foods that make you fat—the carbohydrates.”

It keeps you satiated: Eating enough good fat and protein also keeps us satiated, controls appetite naturally, and so aids in weight management. No more calorie counting: just listen to your hunger. For years my wife felt frequent hunger pangs until she dramatically increased her fat intake and the cravings diminished. Too many people today are fat deprived, and fat and protein are more satisfying than carbohydrates. For years we’ve been advised to eat a low-fat, high carb diet to stay trim and healthy, but that way of eating has left us fat, sick, and hungry. A calorie is not a calorie, and we need to give our bodies the right fuel for natural weight control and optimal function.

It helps you drop belly fat: The diet has also been shown to promote abdominal fat loss, which is the most dangerous place on the body to store fat. Belly fat is linked to metabolic syndrome, cardiovascular disease and diabetes.

Benefits of Ketosis

Some benefits of ketosis include Mood stabilization, Hormone regulation, Increased HDL (“good”) cholesterol, Slowed aging, Blood sugar regulation, and Memory and Cognitive Improvement. Research studies also show that certain health conditions such as Obesity and Hyperlipidemia, Epilepsy, Alzheimer’s Disease, Cancer, Acne, PCOS, Cardiovascular Disease, Autism, Metabolic Syndrome, and Fatty Liver Disease may benefit from Ketosis.

How long will it take to get into ketosis?

The process of pushing your body into ketosis, or becoming keto-adapted, takes varying amounts of time depending on many factors including gender, age, genetics, and past and current diet. On average, a healthy person can adapt in about two to three weeks, but adaptation can continue for 6 months to a year. It took me two weeks to adapt, but my wife (in peri-menopause) took about four months. The adaptation phase can be challenging, but don’t give up and you’ll be rewarded. Once the breakthrough occurs, it’s like a rocket ship breaking through the atmosphere.

Accelerating keto-adaptation

To break into ketosis faster, count every carbohydrate, using my following guide as a reference tool:

- **Week 1:** Eat less than 10 grams of carbs per day
 - **Week 2:** Eat less than 20 grams of carbs per day
 - **Week 3:** Eat less than 30 grams of carbs per day
 - **Week 4:** Eat less than 40 grams of carbs per day
 - **Week 5:** Eat less than 50 grams of carbs per day
-

On average, after week 5 most people can keep their carb intake at or below 50 grams and stay within ketosis. However, some people need to consume less carbs (20-30 grams) while others, especially athletes, can consume more (80-100 grams). Each person's health condition and genetics are unique and so you must experiment to find the amount of carbs your body can tolerate.

To support and speed up adaptation, I suggest adding high-quality MCT oil to your diet. MCTs, or Medium-Chain Triglycerides, are a unique type of fatty acid found in coconut and palm oils and full-fat dairy that are quickly assimilated and converted into energy. The body actually metabolizes MCTs more like carbohydrates than fat. MCTs are more ketogenic than Long Chain Triglycerides (LTCs), which are found in toxic vegetable oils like canola and soybean. Athletes often use MCTs to improve performance and endurance and to help them stay in ketosis. Pure MCT oil does not have any flavor or color, so it's an easy addition to your diet that can be drizzled on food, used in dressings and sauces, stirred into your coffee, or added to a low carb smoothie.

In the past, research experiments often used an "eggnog" drink as part of the diet to induce ketosis. I created my own tastier version of a keto-friendly eggnog smoothie, full of good fat, including MCT oil, to encourage ketone production. A great on- the-go meal!

"Eggnog" Smoothie

2 whole, pastured eggs
½ can unsweetened, full-fat coconut milk
1 cup ice
3 caps vanilla extract
2 teaspoons freshly ground nutmeg
2 teaspoons cinnamon powder
2 tablespoons MCT oil
1 tsp sea salt
Optional add-ins: stevia to taste; ground flax seed; almond butter

Blend all ingredients until smooth.
Dust with freshly ground nutmeg or cinnamon and enjoy!

You know you're in ketosis when...

The presence of ketones in your body is proof that you're in ketosis. The best current method to test for ketones is using a blood meter, which is much more accurate than urine testing. I recommend the brand Precision X-tra, which can measure your blood sugar and blood ketones. You will need to purchase ketone testing strips separately from the meter. When testing, if blood ketones measure between .5 and 5.0, you're in ketosis, with the optimal range between 1.5 and 3.0.

Post-adaptation: My rules to maintain ketosis and continued fat loss

The body will always try to adapt to any circumstance, including the process of keto-adaptation. If it fears starvation, your body holds on to fat. I've observed two things the body does to slow down fat metabolism in the keto-adaptation process:

1. It plugs fat cells with water, creating an odd, loose fat, mostly in areas where fat is difficult to lose.
 2. It creates a type of insulin resistance which makes the cell's insulin receptors less sensitive, and therefore causes you to
-

burn less fat. This is not a dangerous type of insulin resistance (as in Type 2 Diabetes), but only an attempt by the body to hold on to fat as it may be needed for survival.

Through considerable self-experimentation, I've come up with some rules that help me remain lean and continue to burn fat:

5-1-1 Rule

- For 5 days of the week, eat a ketogenic diet and check your blood ketones to make sure you're in ketosis.
 - 1 day of the week is a fasting day to support detoxification and give your digestive system a rest. Fasting has numerous proven benefits, but most importantly it down-regulates inflammation which helps to heal most any health concern. You can choose to 1.) fast only on water for 24 hours; 2.) consume coconut oil or MCT oil throughout the day to maintain energy until you can achieve a true fast; 3.) do an intermittent fast (consuming 500-900 calories), where you restrict food intake to a certain time window in the day (i.e. 1PM-7PM, skipping breakfast.) Fasting accelerates fat burning, but only once you're keto-adapted. Once adapted, your body burns fat during a fasted state; however, if you're not adapted and fasting, your body burns more muscle than fat.
 - 1 day of the week is a fun "carb load" or "protein load" day. The carb load day serves to refill your glycogen stores, and reminds your body that it is not starving. The protein load day seems to work better for some of my patients, especially those with thyroid conditions. Load days can be altered every other week (one week carb load, the following week protein load, etc.), depending on what works best for your body, health goals and condition.

Note:

Do not fast and then carb or protein load on consecutive days. It's best to space these days, for example fasting on Tuesday or Wednesday and then carb or protein loading on Saturday or Sunday.

Following this rule keeps your body in fat burning mode and helps to push through weight-loss plateaus. Plateaus are normal and occur for many reasons, including continually consuming too many carbs (like "hidden" ones in your honey-cured ham), eating too little food and over exercising, food sensitivities (particularly gluten and dairy), not eating enough good fat, and consuming too much protein (gluconeogenesis). If you hit a plateau, however, it is no reason to quit. Observe your daily habits, energy expenditure, and food intake and make sure you're on track. By staying consistent with the keto diet, incorporating fasting, and adding protein/carb load days, you can stay within the coveted fat-burning zone and continue to shed pounds. As a side note, it's fine to go in and out of ketosis, and will naturally happen when you consume too many carbohydrates. Once you're well keto-adapted, it usually only takes a day or two to get back into ketosis.

2-2-2 Rule

I developed this rule to assure two crucial factors for successful keto adaptation: sufficient daily fat intake (using MCTs for efficient fat metabolism) and electrolyte balance (using sea salt).

Each day consume the following:

- 2 tbsp. of coconut oil, MCT oil or a combination of the two.
- 2 tbsp. of grass fed butter, ghee, X-Factor butter oil, or a combination of the three.
 - 2 tsp. of sea salt (can be mixed with water). Note: when adapting, the body loses sodium, potassium, and other electrolytes which can make you feel weak and tired. Salt intake is very critical at this time, especially during the first month of adaptation. If you're feeling dizzy, weak, or experience rapid heartbeat, adding more salt to your diet is the antidote.

To boost fat loss and the benefits of ketosis, I suggest incorporating burst training (aka High Interval Intensity Training) to your routine. Burst training is exercise performed in short, intense "bursts" interspersed with brief periods of recovery, and is much

more quick and effective than the old method of pounding the pavement or logging hours on the elliptical machine. It works by pushing your hormones for weight loss in the right direction by raising human growth hormone and testosterone. Burst training is more effective for fat burning than other types of exercise, and when done three or four times per week avoids the negative effects that excessive cardio has on the body .

My experience

With age, I found it harder to stay as lean as I preferred. But since implementing the Keto Diet and becoming keto-adapted, I can stay as lean as I was in my twenties and feel better than ever. My brain function and memory have improved, my body fat decreased, I'm more productive, have stable blood sugar, and no food cravings. Sometimes, especially when very busy, I even forget to eat. My athletic performance has noticeably improved as well. I can go cycling (my favorite activity) for hours without eating or the worry of what cyclists refer to as "bonk," which means depleting your stored energy. By the way, this is the reason that most endurance athletes must eat every few hours: they run out of glycogen (stored glucose) which they depend upon for continued performance. Once keto-adapted, you can burn fat as an almost endless energy source. I'm definitely the type of person who functions optimally when in ketosis, and like to stay in ketosis most of the time.

Ultimately, the ketogenic diet is a powerful tool for those looking to lose weight, decrease inflammation, improve physical performance and brain function, and much more. It works very well for some people, but not everyone, and others find success by cyclically going in and out of ketosis. It's a significant topic for continued research to learn more about its long-term effects, but is promising because it offers real results without relying upon medication. The bottom line: when you change the energy your cells use, magic can happen. And, as I always say, if you don't fix the cell, you won't get well. All healing begins at the cellular level, and the ketogenic diet can help to fix the cell. It has tremendous potential to impact the modern epidemic of obesity and many other diseases yet to be studied.

Disclaimer: The entire contents of this website are based upon the opinions of Health Centers of the Future, LLC., unless otherwise noted. Individual articles are based upon the opinions of the respective author, who retains copyright as noted. The information on this website or in this article is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Health Centers of the Future, LLC. Health Centers of the Future, LLC. encourages you to make your own health care decisions based upon your research and in partnership with a qualified health care professional.

The authors of this content do not dispense medical advice nor prescribe the use of any technique or form of treatment for physical, emotional, or medical problems. The intent of the authors is to offer information of a general nature to help you on your quest for well-being.

No portion of this website may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopy, recording or any other except for brief quotations in printed reviews without the prior written permission of the publisher.
