



# 10 Graphs That Show the Power of a Ketogenic Diet

By [Rudy Mawer, MSc, CISSN](#) | March, 2016 | 49,916 views

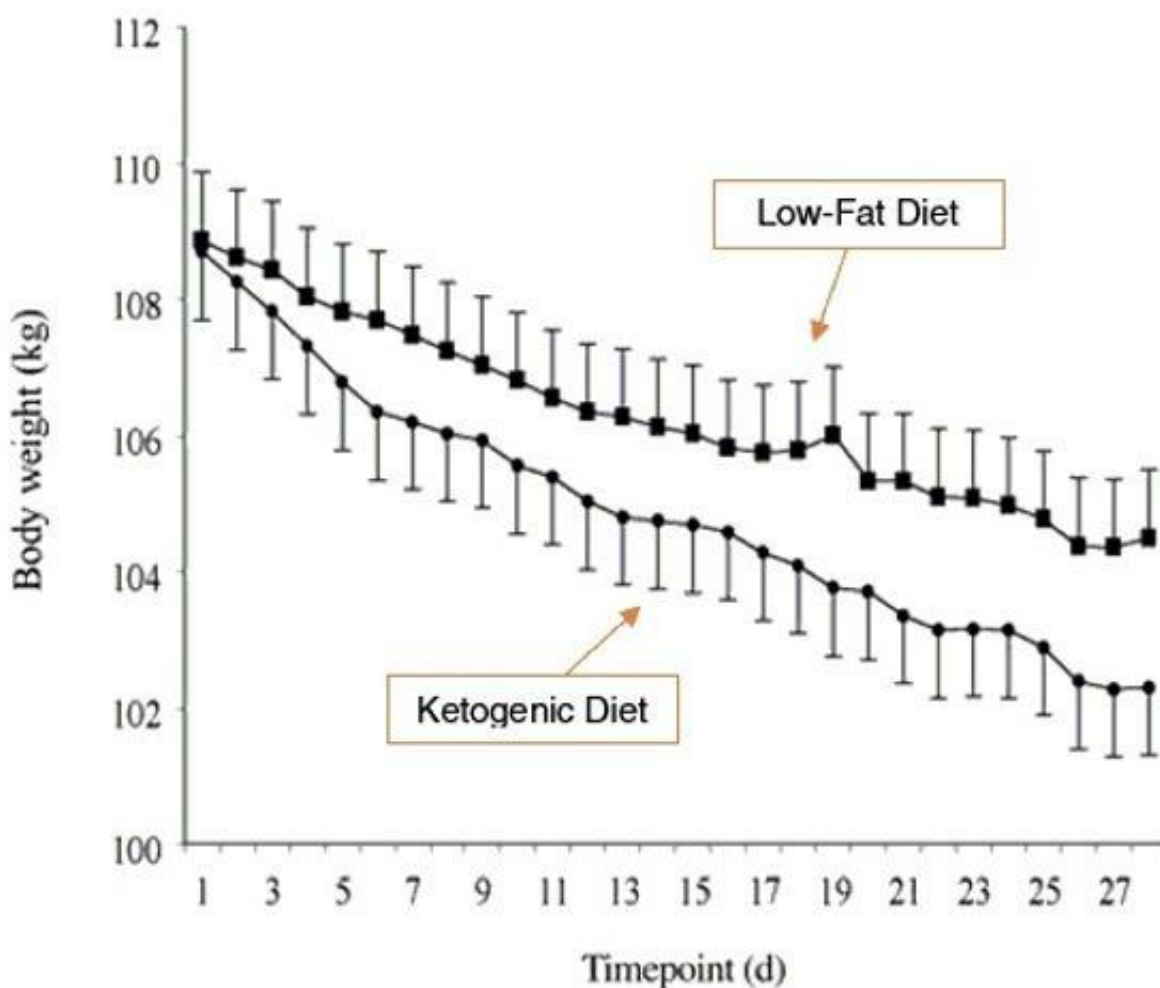
The low-carb, high-fat [ketogenic diet](#) is a proven way to lose weight (1).

It also has powerful [benefits](#) against type 2 diabetes and metabolic syndrome, and may even help treat cancer (2, 3, 4).

Additionally, it has been used to treat epilepsy since the 1920s (2).

Here are 10 graphs that show the many powerful benefits of a ketogenic diet.

## 1. It Can Help You Lose More Fat



**Source:** Johnstone AM, et al. [Effects of a high-protein ketogenic diet on hunger, appetite, and weight loss in obese men feeding ad libitum](#). *The American Journal of Clinical Nutrition*, 2008.

Over [20 studies](#) have shown that a low-carb or ketogenic diet can help you lose weight. The [weight loss](#) is usually much greater than with a high-carb diet ([5](#)).

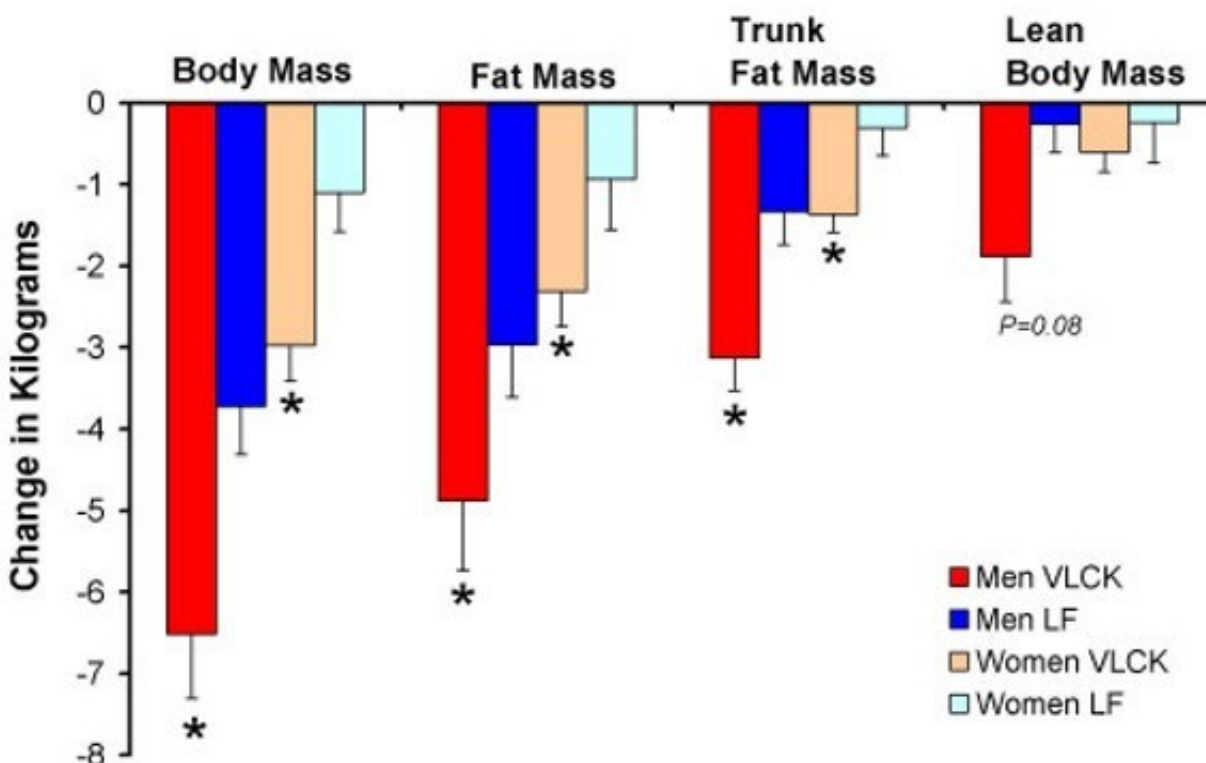
In the graph above, the ketogenic group in the study [lost more weight](#), despite the fact that their [protein](#) and [calorie](#) intake were equal to the non-ketogenic group ([6](#)).

The ketogenic group was also less hungry and found it easier to stick to the diet.

This suggests that a low-carb or ketogenic diet provides a distinct “metabolic advantage” over a high-carb diet, although this is still being debated ([7](#), [8](#), [9](#), [10](#)).

**Bottom Line:** The ketogenic diet is effective for weight loss. It is superior to a high-carb diet, and may even provide a metabolic advantage.

## 2. It Helps You Reduce Harmful Belly Fat



**Source:** Volek JS, et al. [Comparison of energy-restricted very low-carbohydrate and low-fat diets on weight loss and body composition in overweight men and women](#). *Nutrition and Metabolism*, 2004.

Abdominal obesity, or excess belly fat, is a serious risk factor for all sorts of metabolic diseases ([11](#), [12](#)).

This kind of stored fat can increase the risk of heart disease, type 2 diabetes and premature death ([12](#)).

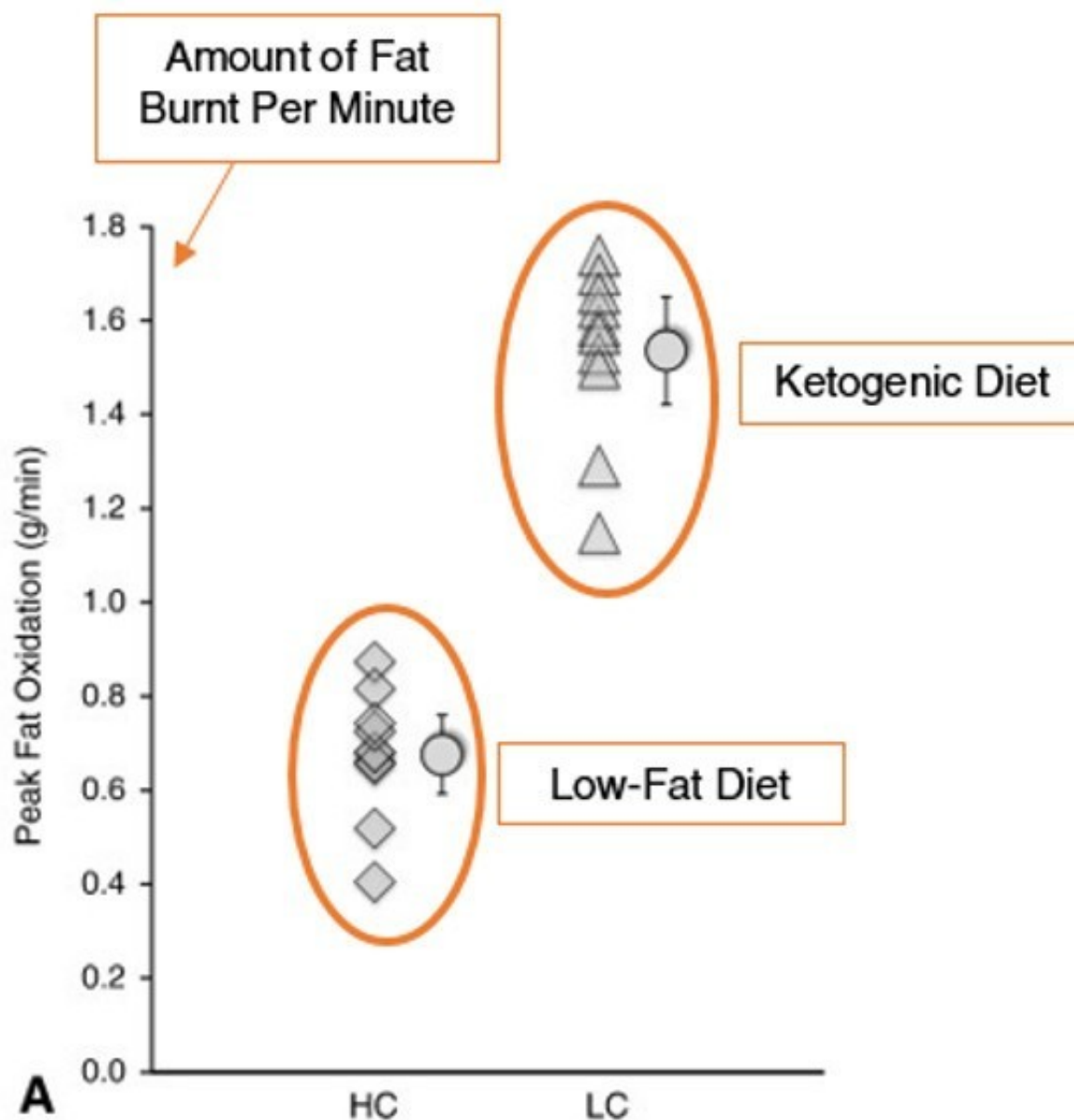
Interestingly, a ketogenic diet is a very effective [way to lose belly fat](#).

As shown in the graph above, a ketogenic diet reduced total weight, [body fat](#) and abdominal trunk fat much more than a low-fat diet did (11).

These findings were more apparent in men than women, probably because men tend to store more fat in this area.

**Bottom Line:** A ketogenic diet can help you lose belly fat, which is closely linked to heart disease, type 2 diabetes and reduced life expectancy.

### 3. It Can Help You Burn More Fat During Exercise



**Source:** Volek JS, et al. [Metabolic characteristics of keto-adapted ultra-endurance runners](#). *Journal of Metabolism*, 2008.

A ketogenic diet improves your metabolic flexibility and helps you burn stored body fat for energy,

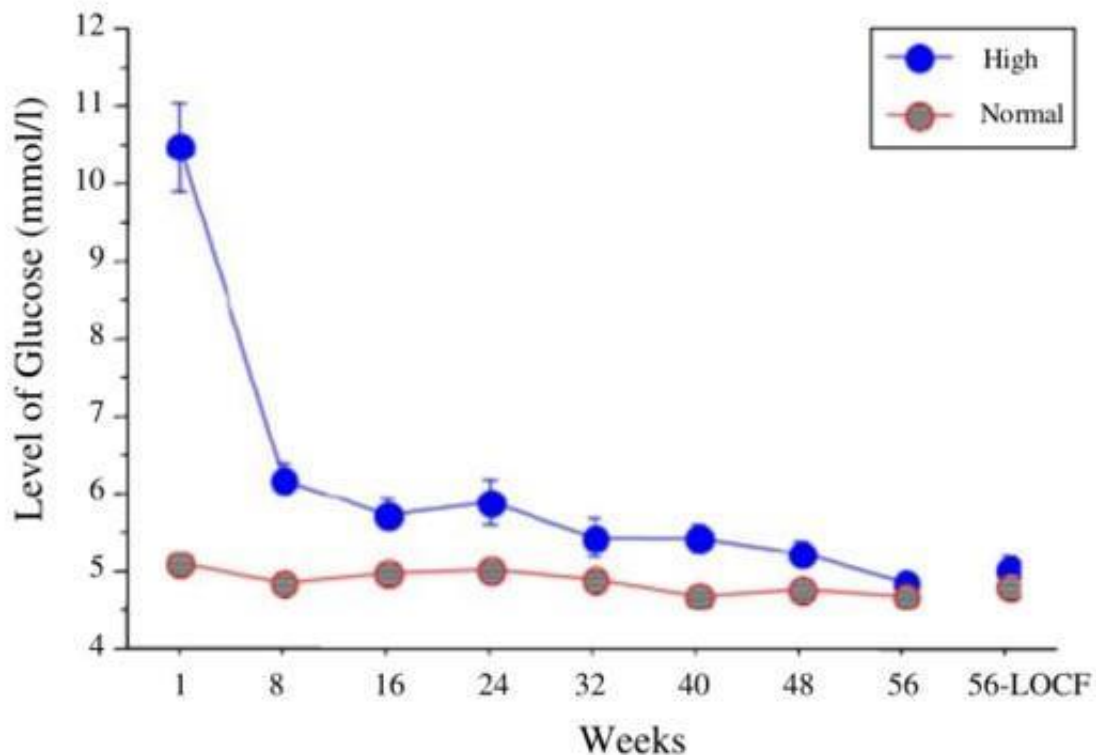
instead of glucose (9, 13, 14).

The graph shows that runners who are adapted to a ketogenic diet can burn 2.3 times more fat per minute during a workout, compared to runners on a low-fat diet.

Over the long-term, an increased ability to burn fat can provide various health benefits and protect against obesity (15).

**Bottom Line:** A ketogenic diet can drastically boost your ability to burn fat during exercise.

## 4. It Can Lower Blood Sugar Levels



**Fig. 6** Changes in the level of blood glucose after the administration of ketogenic diet for 56 weeks

**Source:** Dashti HM, et al. [Beneficial effects of ketogenic diet in obese diabetic subjects.](#) *Molecular and Cellular Biochemistry*, 2008.

Over the years, high-carb diets and poor insulin function can lead to high blood sugar levels (16).

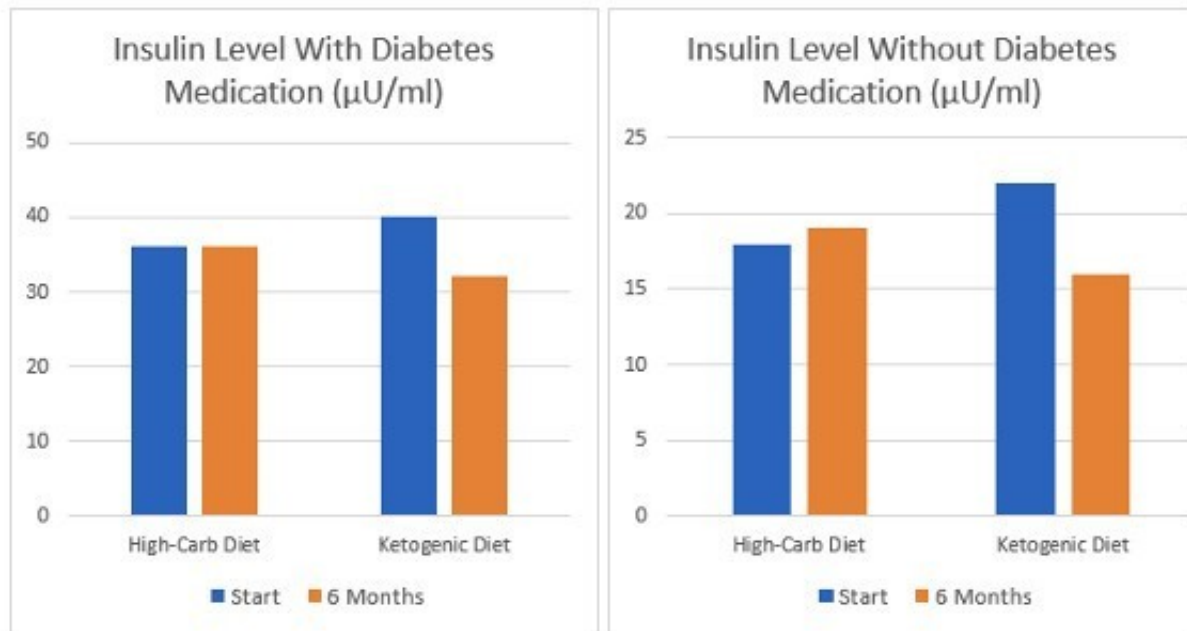
High blood sugar levels can lead to type 2 diabetes, obesity, heart disease and premature aging, to name a few (17, 18, 19, 20).

Interestingly, a ketogenic diet can be highly beneficial for people with diabetes and high blood sugar levels.

As shown in the graph, removing [carbs](#) from your diet can drastically lower blood sugars in those who have high blood sugars to begin with (16).

**Bottom Line:** The ketogenic diet is extremely effective at lowering blood sugar levels, a key marker of long-term health.

## 5. It Drastically Reduces Insulin Resistance



**Source:** Samaha FF, et al. [A low-carbohydrate as compared with a low-fat diet in severe obesity.](#) *New England Journal of Medicine*, 2003.

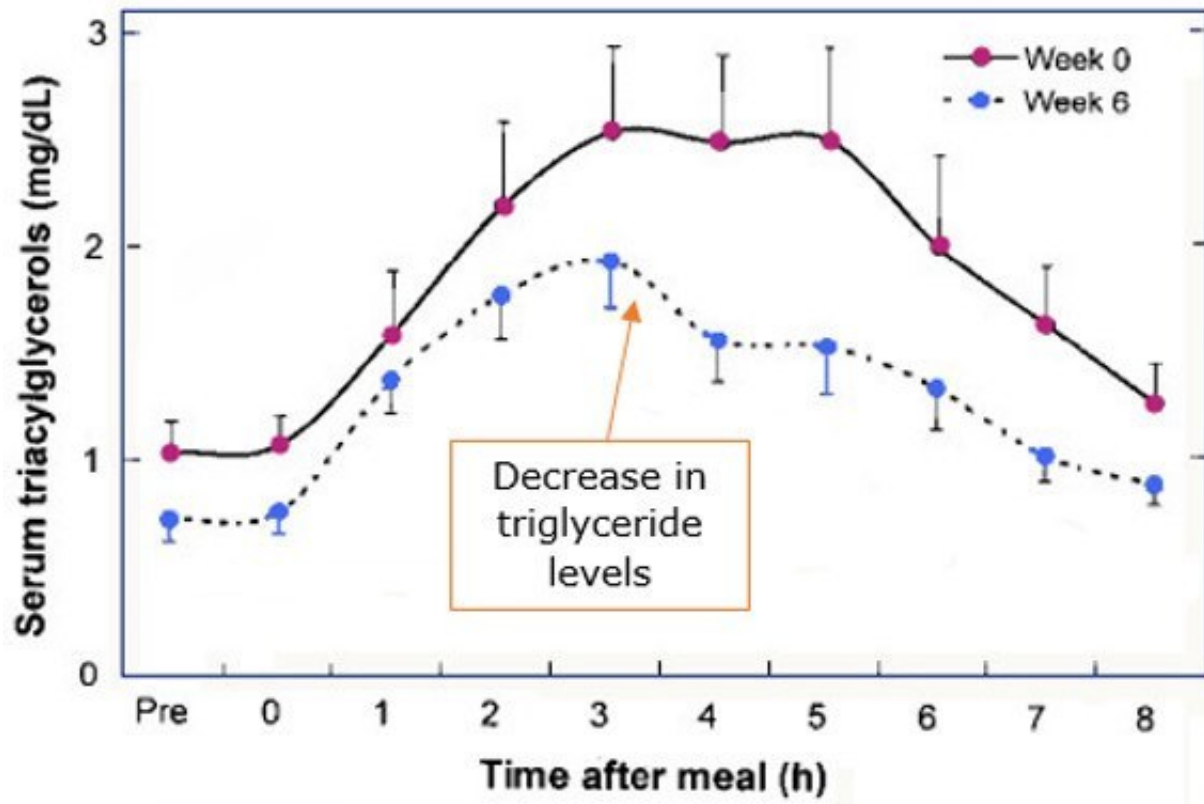
As with blood sugar, your level of [insulin resistance](#) is directly linked to your health and risk of disease (21, 22, 23).

This study found that a ketogenic diet significantly lowered insulin levels in diabetics, which indicates reduced insulin resistance (21).

The ketogenic group also lost 12.8 lbs (5.8 kg), while the high-carb group lost only 4.2 lbs (1.9 kg). Triglyceride levels decreased by 20% in the ketogenic group, versus only 4% in the high-carb group.

**Bottom Line:** A ketogenic diet will drastically reduce insulin resistance, one of the most important markers of metabolic health.

## 6. It Can Help Lower Triglyceride Levels



**Source:** Sharman MJ, et al. [Very low-carbohydrate and low-fat diets affect fasting lipids and postprandial lipemia differently in overweight men.](#) *The Journal of Nutrition*, 2004.

Blood triglycerides are an important marker of heart health, and describe the amount of fat in your blood. High levels are linked to an increased risk of heart disease (24, 25).

The increased risk can be as high as 30% in men, and 75% in women (26).

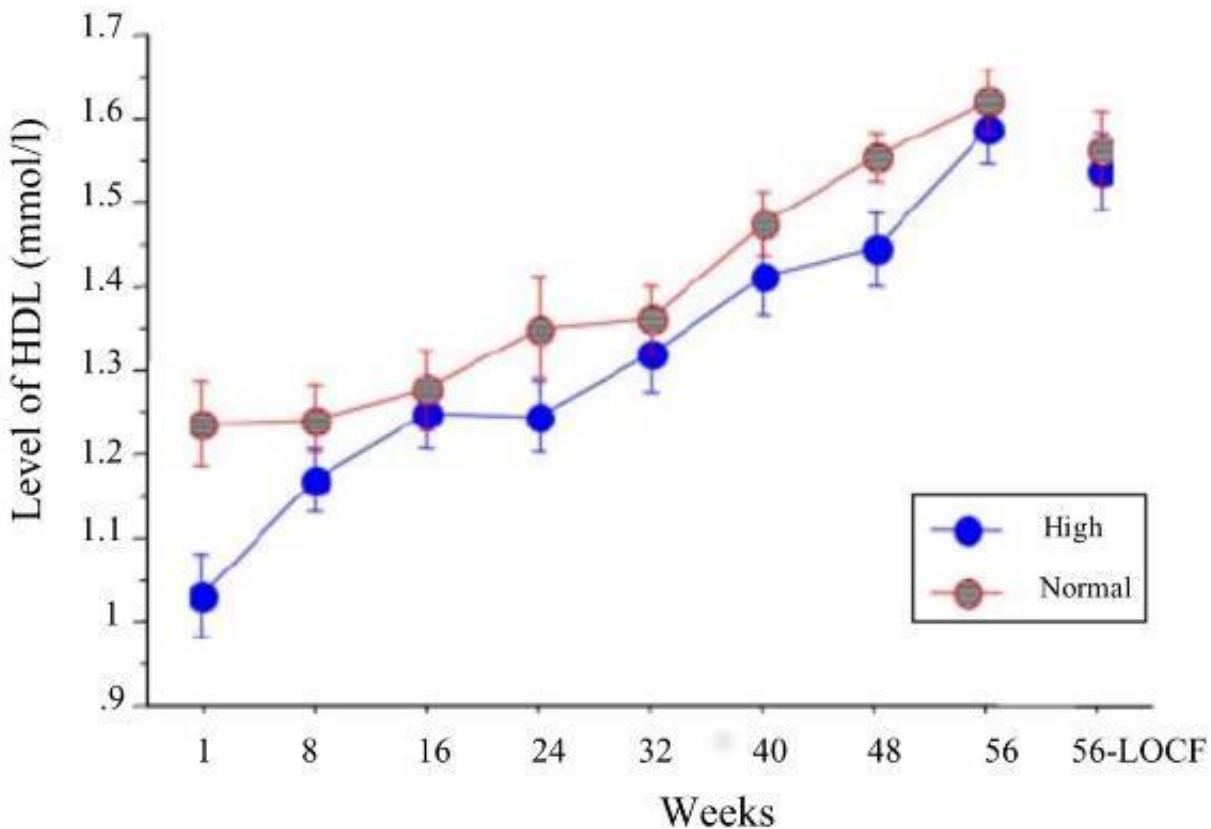
This study found that a ketogenic diet lowered fasting triglyceride levels by 44%, while no change was found with the low-fat, high-carb diet (24).

Additionally, the amount of fat in the blood after meals was significantly reduced, as shown in the graph above.

The ketogenic diet also improved other markers of metabolic syndrome. For example, it caused more weight loss, decreased the triglyceride:HDL ratio and reduced blood sugar levels (24).

**Bottom Line:** Despite a very high fat content, the ketogenic diet can cause massive reductions in blood triglyceride levels.

## 7. It Can Increase HDL (the “good”) Cholesterol



**Source:** Dashti HM, et al. [Beneficial effects of ketogenic diet in obese diabetic subjects.](#) *Molecular and Cellular Biochemistry*, 2008.

HDL cholesterol plays a key role in cholesterol metabolism by helping your body either recycle or get rid of it (27, 28).

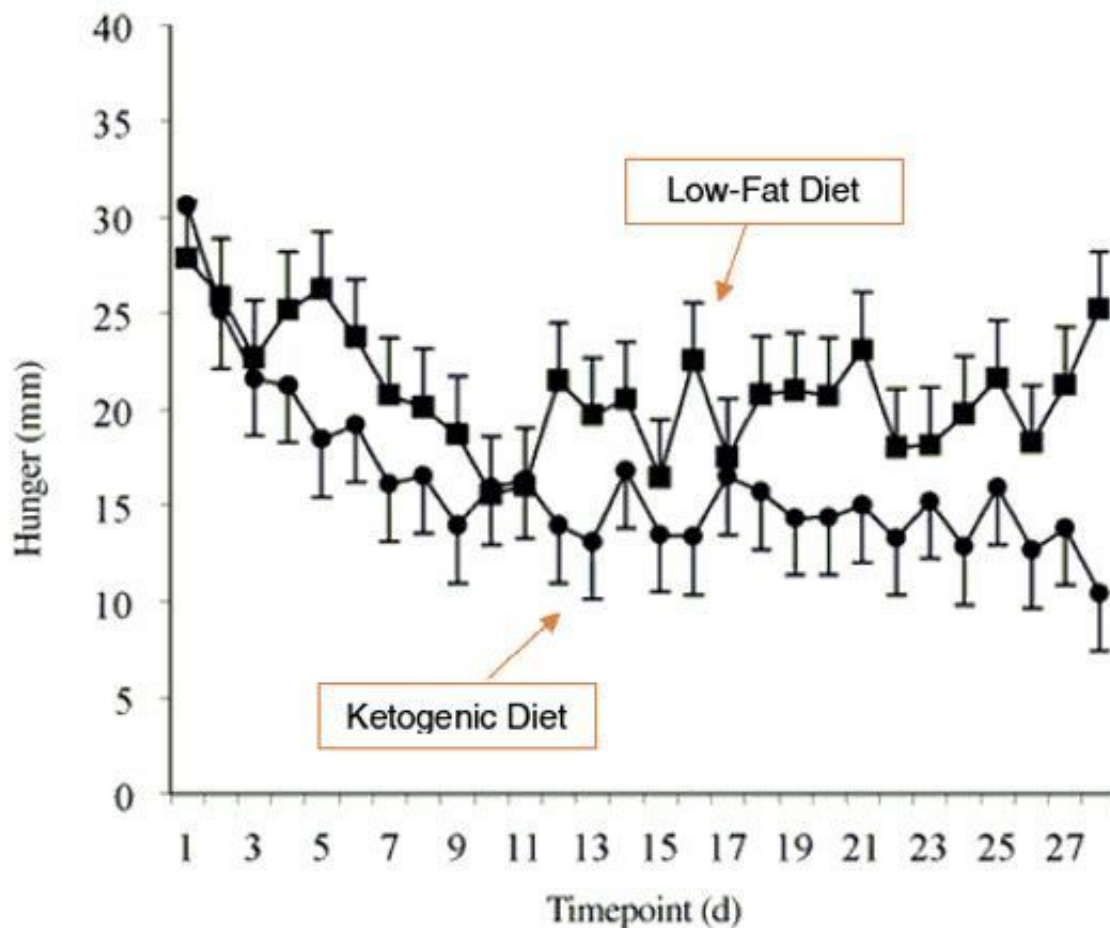
Higher HDL levels are linked to a reduced risk of heart disease (29, 30, 31).

One of the best ways to raise HDL is to increase dietary fat intake on a low-carb or ketogenic diet (16).

As you can see in the graph above, a ketogenic diet can cause a major increase in HDL levels (16).

**Bottom Line:** HDL (the “good”) cholesterol plays a key role in cholesterol metabolism, and is linked to a reduced risk of heart disease. A ketogenic diet can cause a big increase in HDL levels.

## 8. Perceived Hunger Is Lower



**Source:** Johnstone AM, et al. [Effects of a high-protein ketogenic diet on hunger, appetite, and weight loss in obese men feeding ad libitum.](#) *The American Journal of Clinical Nutrition*, 2008.

When dieting, constant hunger often leads to binge eating or quitting the diet completely.

One of the main reasons low-carb and ketogenic diets are so beneficial for weight loss, is the fact that they reduce hunger.

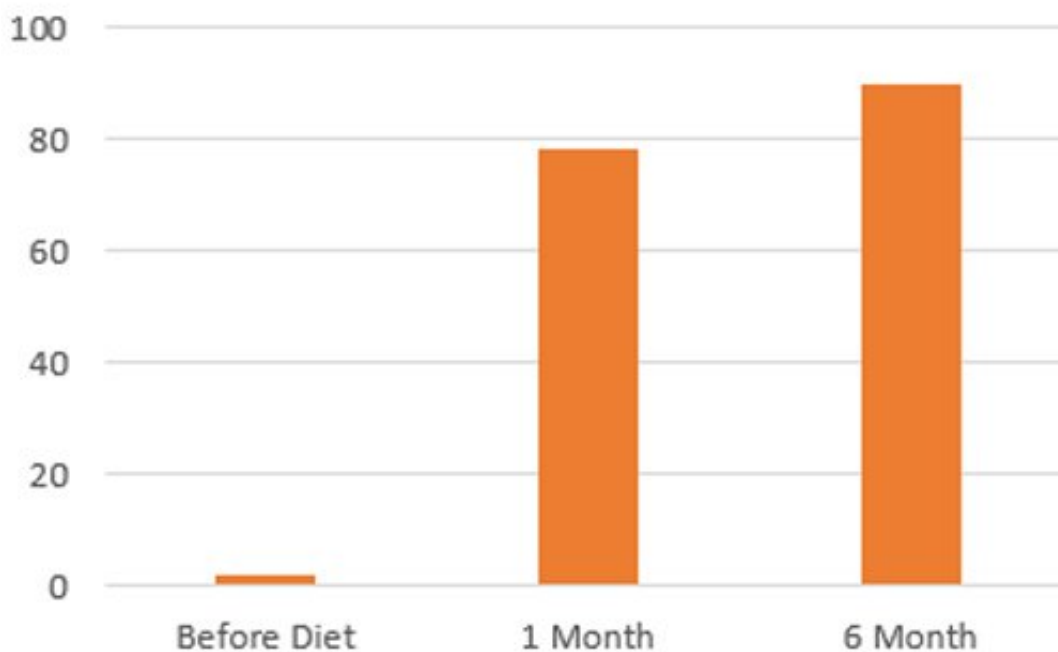
The study above compared a ketogenic diet to a low-fat diet. The ketogenic diet group reported much less hunger, despite the fact that they lost 46% more weight (6)

**Bottom Line:** Hunger levels play a key role in dieting success. A ketogenic diet has been shown to reduce hunger compared to a low-fat diet.

## 9. It Can Reduce Epileptic Seizures



## Percentage of Patients Reporting Improvements In Symptoms



**Source:** Martins LD, et al. [Effect of the classic ketogenic diet on the treatment of refractory epileptic seizures](#). *The Journal of Revista De Nutrição*, 2012.

Since the 1920s, researchers and physicians have tested and used the ketogenic diet for the treatment of epilepsy (2).

As shown in this graph above, one study found that 75.8% of epileptic children on a ketogenic diet had fewer seizures after only one month of treatment (32).

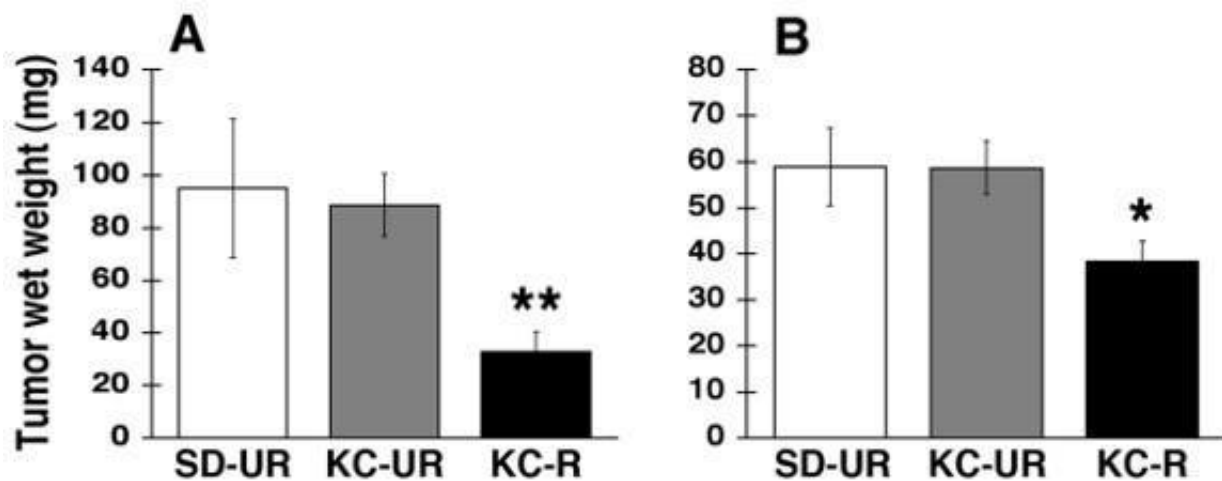
Moreover, after 6 months, half of the patients had at least a 90% decrease in seizure frequency, while 50% of these patients reported a complete remission.

At the start of the study, a large majority of subjects were malnourished and below a healthy weight. By the end of the study, all subjects had reached a healthy weight and improved their nutritional status (32).

One year after the diet, 5 of the 29 participants remained seizure-free, and several of the participants reduced or completely stopped their anti-seizure medication.

**Bottom Line:** A ketogenic diet can help reduce the frequency of seizures in epileptic children. In some cases, the diet can eliminate seizures altogether.

## 10. It May Reduce Tumor Size



**Source:** Zhou W, et al. [The calorically restricted ketogenic diet, an effective alternative therapy for malignant brain cancer.](#) *Nutrition and Metabolism*, 2007.

Medical interventions for brain cancer can fail to target tumor cell growth and often negatively affect the health and vitality of normal brain cells (33).

This study compared a normal diet (shown as SD-UR) to a higher-calorie (KD-UR) and calorie-restricted ketogenic meal plan (KD-R) in mice with brain cancer.

The bars in the graph represent tumor size. As you can see, the two tumors were reduced by 65% and 35% in the calorie-restricted ketogenic group (KD-R) (33).

Interestingly, no change occurred in the higher-calorie ketogenic group.

Other studies in humans and animals show incredible benefits against cancer, especially when it is caught early (34, 35, 36).

Although research is still in its early stages, it is likely that a ketogenic diet will eventually be used alongside more conventional cancer treatments.