The Ketogenic Diet in a Nutshell

Carl Franklin

Science and Strategy for Optimum Health

Why We Get Fat

In the last 10 years, science has discovered a new hormone that plays a big role in weight regulation – Leptin. Leptin exists in fat cells. Its job is to tell your brain that you're full. For so many of us, the signal isn't working. We have become **leptin resistant**. Only recently have we discovered why this happens. In a word: Insulin. We'll come back to leptin in a minute. First, let's talk about Insulin.

Insulin is a master hormone. Its levels are a signal to many other hormones and functions. Insulin's job is to convert blood sugar to body fat. Let's say a diabetic has high blood sugar. 100 is normal. Let's say it's 300. You give them a shot of insulin, and their blood sugar goes down to 100. Where did those 200 mg/Dl (milligrams per deciliter) of sugar go? Insulin stored the energy in fat cells, where it is safe. Body fat is a safe place to store extra Calories. On the other hand, high blood sugar is dangerous. It's corrosive. It leads to Type 2 Diabetes, loss of limbs, blindness, kidney failure, fatty liver, and even cancer.

Let's say you are a thin healthy happy person. You eat 2000 Calories a day and you burn 2000 Calories a day. You feel great. Burning Calories and feeling good are the same thing. We feel good when we burn Calories. So, as an experiment, let's say I walk around with you all day, and every time you eat I'll give you a shot of insulin, just like they do with diabetics.

Just like the IRS taking 25% off the top, that insulin shunts 500 of your 2000 Calories away to body fat before it can be "spent." You've now stored 500 Calories as body fat, and you only get 1500 Calories to burn. You feel tired, lazy, and hungry. You are effectively starving. So, you eat another 500 Calories and I give you another insulin shot. 100 of those 500 get stored as fat (600 total) and you only get to burn 400. You're still not operating at 100%. Can you see how this is a vicious cycle? High insulin means Calories that you SHOULD be able to burn instead get stored as fat.

So why isn't the leptin in your stored fat cells telling your brain that you're full? This is where the recent science comes in. Turns out that **insulin blocks leptin receptors**. Have you ever had the sensation of having a full belly and still being hungry? That's why.

You may also think: that's fine, but nobody is walking around shooting me up with insulin all day! The fact is, eating a diet high in carbohydrate raises blood sugar which causes the pancreas to secrete more insulin. Worse, over the years, your insulin becomes less effective. It brings fat to the cells but the cells don't want it. So it takes more and more insulin to do the job. This is called **insulin resistance**, and ***is*** essentially type 2 Diabetes.

The obvious solution is to reduce the amount of Insulin secreted by your pancreas. You can do that a couple ways. The hard way is to exercise your brains out. You've probably tried that. Did it work? Doctors tell you to eat less and exercise more. Did that work? Clearly, it doesn't work. The easiest and safest way to reduce the amount of insulin in your body is to reduce your carbohydrate intake.

After only a few days on a well formulated ketogenic diet (low carb, high fat, moderate protein), you will lose cravings for sugar and starches. You will feel better. You will eat less because leptin is able to do its job. Your blood sugar and insulin will drop to safe levels. This IS the way to lose weight, feel good, and stop the progressive train that leads to type 2 diabetes, loss of limbs, blindness, kidney failure, fatty liver, and even cancer.

The best part? Bacon!!

Is It Safe To Eat So Much Fat?

In a word, yes. Saturated fat? Yes.

What? Doesn't that go against what doctors, nutritionists, and the government tell you? Yes, it does. Ask yourself: "Has the advice to lower intake of fat resulted in a healthy population?" No way. In fact, the rise in obesity and diabetes coincides with the onset of the low-fat movement that took full swing in the 80s.

Most of what we believe about fat being dangerous comes from a single man: Ancel Keys. Keys had a hypothesis that consuming fat caused heart disease. It's easy to understand. Just like sugar ends up in your blood, so must fat. Turns out he was wrong. The fat in our blood is made by the liver from sugar. It's the sugar in your diet that get turned into the fat that circulates in your blood, otherwise known as triglycerides.

Keys was a very persuasive man, however. He performed now-refuted and very much flawed observational studies. In one study, the 7 Countries Study, he found a correlation between intake of saturated fat and an increased rate of heart disease. However, he cherry picked his 7 countries from a list of over 20, only selecting the countries where his correlation was seen. Data from Italy and Japan where rates of Sugar were also recorded that showed that a correlation could have just as easily been made for sugar, but Keys refused to. Countries who did not fit his hypothesis became known as paradoxes - The French paradox being that the French who eat some of the highest levels of saturated fat in the world have low rates of Heart disease, as do the Swiss. The Russian Mortality Paradox is another. They eat some of the lowest levels of saturated fat and, have a high incidence of mortality from heart disease.

Consider the Inuit – or "Eskimo" people in the Arctic. They subsist on fish, seal meat, whale meat, and blubber. They give the lean meats to the dogs. No heart disease. Consider the Massai in Southern Kenya and Northern Tanzania. They eat nothing but meat, fat, milk, and blood. No heart disease. Clearly, Ancel Keys was wrong. Yet, in 1977 Keys and his cronies were able to convince the USDA to adopt the dietary guidelines still in effect today.

In her book, "The Big Fat Surprise," named best science book of 2014 by The Economist, journalist Nina Teicholz (TIE-shulz) uncovers a myriad of randomized controlled trials – the holy grail of scientific studies – that show absolutely no correlation between the intake of saturated (or other) fat and heart disease. In 2014, a **review of 76 observational and RCTs** with more than 650,000 participants found that those with a high saturated fat intake did not have an increased risk of heart disease. 76 studies! No proof!

The combination of eating a high carbohydrate and a high fat diet is clear. Your insulin is high. Fat is denser than carbs, calorie wise. All the fat you eat gets stored, but only because of the carbs which raise insulin. Sure, that's dangerous. However, take away the carbs and your body can burn the fat for fuel.

That leaves us with a paradox. If you want to lose weight, eat a bacon double cheeseburger with extra cheese and bacon, even mayo. Just ditch the bun. It doesn't sound healthy, but in fact it is.

How Does Keto Work?

A ketogenic diet, or keto for short, is any diet that puts your body in a state of nutritional ketosis, and your body is burning fat (either body fat or fat that you eat) for fuel.

If you eat a high-carb diet (and most of us do), your body burns glucose for fuel. There are problems with glucose. The body can store about 2000 Calories of glucose energy at any one time in the form of glycogen. Once that is depleted, you can lose energy (sometimes called "bonking") and you need sugar STAT! Excess glucose raises insulin. Insulin drives glucose into skeletal cells for storage as glycogen and/or burning. It also drives glucose into the liver for storage as glucose and/or burning, and/or conversion into fat. Glucose is also shipped out in LDL (or stored in the liver as foie gras). Insulin also drives glucose into fat cells to be converted into fat and stored. Fructose, one half of table sugar – and the sugar in all fruit, goes directly to the liver to be converted to fat. That's right. All fruit sugar, ½ of all table sugar, and high fructose corn syrup are **NOT** burned as energy. It's ***stored as fat***.

Excess glucose in the blood can cause major damage, as we've already discussed, leading to type 2 diabetes – a disease the medical establishment tells you is progressive, only gets worse, and cannot be reversed.

If you remove carbohydrates and instead eat moderate protein and higher levels of fat, insulin levels drop because there is much less glucose to operate on. When insulin is low, your liver can burn fat for fuel. That's just the way it is. Your body can't burn stored fat unless insulin is low.

The byproduct of burning fat is ketones. Ketones are essentially fatty acids that most cells in your body (including your brain, heart, and other organs) can use directly for fuel. In fact, we are all born in nutritional ketosis. For 180,000 years, Homo Sapiens has been in nutritional ketosis most of the time, living on animal protein and fat – with occasional plants, nuts, and fruits.

Just because your body is in ketosis doesn't mean that it's particularly good at using fat for fuel. It takes 3 to 8 weeks to become fully **fat-adapted**. Your body forgets how to deal with glucose effectively and instead gets very efficient at dealing with fat, and the ketones that come from fat burning.

Once you are fully fat adapted, you'll find you have an unending source of energy. You could run a marathon and not run out of juice. Your body fat is your new source of energy, and it doesn't need to be replenished with food. Many advanced athletes are performing amazing feats of endurance while **fasted**! As long as the body can burn body fat, it's smooth sailing.

You can expect your cravings and hunger to disappear. As long as you stay away from carbs you won't want them. The more fat-adapted you get, the less you'll **want** to eat "carbage." You can expect to return to a healthy body weight in a relatively short period of time.

WARNING: You must commit to the ketogenic diet in order for it to work. If you sneak bread or other carbs you could ruin yourself. Eating more fat with even moderate amounts of carbs – what some would consider low – isn't going to work. Throw out all the tempting carbage. Don't worry, though. You will be able to eat amazingly good food. You must be committed or it won't work for you. It takes a leap of faith to get started. But once you get a taste of ketones, you won't want to stop.

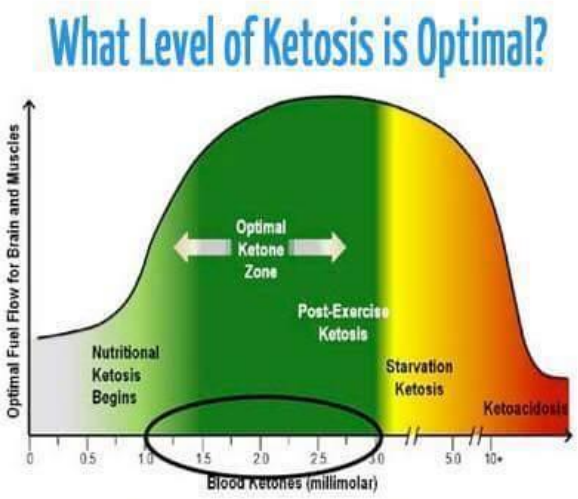
The definitive book on the Ketogenic Diet is "The Art and Science of Low Carb Living" by Volek/Phinney.

Ketosis

Ketosis is a state in which your liver breaks down body fat for fuel, the byproduct of which is ketones. There are 3 types of ketone bodies: acetone, acetoacetate, and beta-hydroxybuterate acid. When we first go into ketosis, we spill the ketone acetoacetate (pee stick ketone). First, a portion gets spontaneously converted into the ketones acetone (breath ketone) and enzymatically converted into beta-hydroxybuterate (the ketone that your brain primarily uses for energy). Part of fat adaptation is to become better at making beta-hydroxybutyrate dehydrogenase (the enezyme). Many people complain of bad breath and B.O. This is totally normal. It's from acetone. It goes away after a while.

Most of your body's cells can use these ketones for energy directly, just as well or better than they use glucose. There are a few types of cells that require glucose, however. These include red blood cells, cells in your eyes, and parts of your brain. The good news: your liver has this built in glucose generator that produces glucose from protein. The process is called ***gluconeogenesis*** (gluco = sugar, neo = new, genesis = create). Your liver creates new sugar, just enough for those vital cells to use. This isn't a magic trick. It is, indeed, how our bodies have survived without carbs for literally thousands of years.

Ketoadcidosis



Page 91: The Art and Science of Low Carbohydrate Performance
Jeff S. Volek and Stephen D. Phinney

The biggest fear health care professionals have about ketosis is the risk of it going too far, into a state of ketoacidosis. This happens when your ketone level goes too high, turning your blood dangerously acidic. Type 1 diabetics run this risk. However, if you have a working pancreas (and most of us do), you do not run the risk of going into this dangerous state. Again, type 1 diabetics run this risk. If you are a type 1 diabetic, you definitely should not adapt a ketogenic diet without the support of your health care professional. If you are a type-2 diabetic not taking insulin – or have pre-diabetes, or even just metabolic syndrome, you are safe. This chart shows optimum levels of ketones.

Pee Strips?

Many people think they need to test their ketones with pee strips. The fact is, pee strips only test for acetoacetate. Also, pee strips only measure ketones *wasted*. In fact, as you become more fat adapted, the strips get lighter, because your body is using more ketones and spilling less. It is much more accurate to use a breath meter like the Ketonix product, or a blood ketone tester like the Freestyle Precision Neo glucometer.

Macronutrient Ratios (macros)

You hear a lot of people say “to do keto right you have to stick to the macros.” That means getting 70% of your energy from fat, 25% from protein, and 5% from carbs. However, you have to combine this rule with the fundamental rule that you can’t eat more than 20g carbs per day.

One rule checks the other. If you eat 100g of carbs that doesn’t mean you now have to eat a pound of lard and a 24oz steak. That’s silly. They both go together.

Also, that 70% fat is total fat Calories burned. That could be fat that you are eating, or fat from that Krispy Kreme you ate a decade ago (stored body fat). It doesn’t mean every meal should be a stick of butter, a few shrimp, and a peanut.

If you’re one of those people who likes counting things (like Calories), there is hope for you. You can download an app called **MyFitnessPal** and enter in the food that you eat. It will tell you what the macros are. Many people find counting carbs, protein, and fat is very comforting, especially when starting out.

It should be your goal, however, to learn to feel it out. After a while you will instinctively know what to eat and what not to eat, and how much is too much. That’s real life. Obsession gets old quickly. ☺

Protein

Many people who’ve done the Atkins diet failed because they ate too much protein. The reason the ketogenic diet works is because protein is limited to 1 to 1.5 grams per kilogram of lean muscle mass. For a 5’ 11’’ 300-pound guy like me, that’s about 90-100 grams of protein per day. My Fitness Pal tells you how many grams of protein are in the food you eat. If you exercise you can eat more protein.

You’ll get 70 to 78 grams of protein from 9 ounces of steak, depending on which cut you prefer. Beef top sirloin has the most, providing nearly 78 grams of protein from a 9-ounce piece. The same amount of tenderloin offers almost 73 grams, a rib-eye steak contains 72 grams in a 9-ounce cut and flank steak has 70 grams of protein in 9 ounces.

So you can see how easy it is to go overboard with protein on a low-carb diet.

What happens when we over-eat protein?

Extra protein, that which is not synthesized by muscles, is metabolized for energy. Burned protein creates nitrogen. When you strip a nitrogen atom off an amino acid, you have left a carbohydrate (Carbon, Hydrogen and Oxygen). So the pollution is turning those nitrogen atoms into ammonia and urea, and peeing them out - which is what puts the stress on the kidneys. Human kidneys can't process more than about 3g/kg LBM of protein. Also, when your body metabolizes protein, insulin goes up. Not as much as with carbs, but still a significant amount. So, it’s best not to over-eat protein, no matter what.

You can use the Keto Calculator at http://keto-calculator.ankerl.com/ to calculate your ideal macros.

Electrolytes

When you are eating keto, your kidneys remove salts from your blood more than before. For this reason, you need to up your salt intake. Just as importantly, you must supplement potassium and magnesium. Without this, you can look forward to leg cramps, trouble sleeping, nausea, and all the things that come with electrolyte deficiency.

You can take supplements, but you can also make yourself a “keto-ade” and sip on it throughout the day. Morton Lite-Salt is ½ sodium and ½ potassium. Here’s one recipe for keto-ade:

- 24 oz filtered water (or tap water)
- ¼ Teaspoon Morton's Lite Salt
- ½ Tablespoon Magnesium Citrate (found with laxatives)

Mix well. Refrigerate for best taste.

If you want to add your favorite sugar-free sweetener, go ahead. But first, read the handout on self-testing – and then test your sugar response to the various sweeteners. See the handout on Sweeteners.

Sweeteners

Here's a short list of artificial sweeteners you may consider using.

- Xylitol
- Erythritol
- Stevia
- Maltitol
- Sorbitol
- Sucralose (Splenda)
- Aspartame (Equal)
- Saccharine (Sweet & Low)

Some of these are poison. Saccharine causes cancer and Aspartame is linked to all kinds of neurological disorders. Any or all of them could cause an insulin response even though they don't raise blood sugar. There are several ways insulin can spike. One is a gut hormone that tells your brain something sweet is afoot. However, your mileage may vary. That's why it's best to test. **See the handout on self-testing**.

I tried them all and landed on Xylitol. Xylitol is poisonous to dogs. It will kill them. Fortunately, I don't have a dog, but if you do, that might not be a good choice. Many people like an Erythritol/Stevia combination like Swerve. Sorbitol has a cooling effect that I dislike. Maltitol kicks me out of ketosis AND keeps me in the bathroom all day (Xylitol does this to some people also). You may be different.

If you really want to get into ketosis fast, don't use a sweetener. Why take a chance.

What To Expect

Before you start your journey, it's best to get a complete blood profile including insulin, liver function, and vitamin D - and then talk to your doctor. Tell her you want to go on a ketogenic diet. Resistance usually comes in the form of fat-phobia and cholesterol-phobia. Read the handout on cholesterol. Bring the science with you. If your doctor still insists that you need carbs in order to live, you might want to get another doctor.

Also, before you start, measure yourself – at least your waist circumference. This is where you'll see the most dramatic results, around your liver.

You should probably take an Omega 3 supplement and a multivitamin daily. In addition, your doctor will tell you if you need vitamin D. Many of us are deficient.

During the first or second week of keto eating, you may – for a short time – experience symptoms of "carb withdrawal," sometimes referred to as "keto flu." These include being tired, achy, nauseated and wanting to nap all the time. Just go ahead and nap. This is to be expected.

During carb withdrawal your body isn't quite good enough at burning fat and producing ketones. At the same time the organs and other cells are demanding ketones. It's really phase one of fat adaptation. Once you get through it, you will feel much better.

Another symptom you might get is a rash, sometimes referred to as "keto rash." This is thought to be candida dying off. Candida is a yeast that lives on your skin. It's harmless, but doesn't like keto for some reason. When it dies it creates an itchy rash. Thankfully, it doesn't last long. You can use any topical itch cream, such as calamine lotion or hydrocortisone, to treat the symptoms.

After you get through withdrawal symptoms – and some people never experience them – you will probably enjoy a steady weight loss. And then… you will plateau.

Plateaus can happen for a number of reasons. The first thing to do is nothing. Continue on as you normally do. Think about this. Your liver is purging itself of fat. Your blood sugar is falling. Your triglycerides are falling. Your blood pressure is normalizing. Your lean muscle mass is increasing. Measure yourself. Since muscle is denser than fat, it weighs more per volume. As you lose fat and gain muscle, your weight loss will slow or even increase. Let it happen and enjoy better health.

If your first plateau happens after 3 to 8 weeks, we have a secret weapon: fasting. You might want to try eating one meal per day, with no snacking in between – only keto-ade. You can have coffee, tea, etc., but no sweeteners, cream, or any other nutrient. You will find that not only are you not hungry, you will feel great. Which meal? Most people eat only dinner. Consider eating a late lunch: 3PM. Fasting has been shown to help us bust through plateaus. See the handout on fasting for more information.

There are, of course, other reasons why we plateau. Usually it's because we are becoming more sensitive to certain foods or additives. See the handout on self-testing for more information.

Self-Testing

There are certain fundamental foods that do not raise insulin – or raise it to a negligible level: fats, protein (if under your max daily allowance), minerals, pure vitamins, green leafy vegetables. There are other foods that seem to affect everyone differently: Dairy, artificial sweeteners, nuts, alcohol.

For this reason, the ketogenic lifestyle requires that you test these things on yourself. See the handout entitled “Testing Food Response Using a Blood Glucose Meter.”

If you don’t have a blood glucose meter it may take you more time to test each food manually. Your level of cravings and your weight the next day should be an indicator, although not entirely accurate, of whether or not to include the food in question.

I can’t stress enough how important testing is. You could save yourself lots of frustration and plateau time by figuring out which foods cause your blood sugar and/or insulin to spike. There are plenty of great foods you can eat. The trick is to omit the ones that hold you back.

Alcohol

Hard Liquor has no carbs. This includes whiskey, vodka, non-flavored rum, Scotch, gin, and pretty much any hard liquor. If it tastes sweet to you, look it up online to check the sugar content.

Wine has a few carbs, 2.5g to 5g per glass. These add up.

Beer is another story. Most beer is 10 to 30 carbs per glass.

Alcohol pauses ketosis. For that reason, excessive drinking at a meal will most likely prevent fat from being burned. The good news is that once your liver is done metabolizing the alcohol, it goes right back to burning fat, assuming you are in ketosis. My personal experience is, if I'm going to drink, it's got to replace a meal. I usually wait 5 to 6 hours after eating lunch. Then, instead of eating dinner I have drinks. I am still in the 300 pound range, so I can get away with that. If I was 200 pounds or lighter, I probably couldn't. It's best to stay away when you're trying to get into ketosis. Maybe in a few weeks a glass of wine with dinner wouldn't hurt too much.

The most important thing to remember when drinking is that alcohol usually comes with sugar. Sugary drinks are not only really bad for your liver, but they will cause weight gain, not to mention hangovers.

My go-to evening drink is a keto whiskey sour. I mix a jigger of rye whiskey, a teaspoon of apple cider vinegar, and soda water over ice.

Carb Counts:

Beer: 12 oz

Regular Beer: average is about 12 grams
Light Beer: check the label –- most are 3 to 7 grams
Ale: most are 5 to 9 grams
Stout: variable –- about 20 grams

Wine: 5 oz

Dry Champagne: ~2.5 to 4.5 grams
Dry White (e.g. Sauvignon Blanc, Chardonnay): 3 grams
Off-Dry (e.g. Riesling, Chenin Blanc): 5 to 6 grams
Muscat: 8 grams
Dry Red (e.g. Syrah, Pinot Noir, Cabernet Sav.): 3.5 to 4 grams
Zinfandel: 4.2 grams
Dessert Wines: 12 to 14 grams
Sweet Late Harvest Wine: 20 grams

Exercise

Exercise is always a good idea EXCEPT when you are becoming fat adapted. During the first few weeks of your keto adventure, you will probably find exercise very difficult. That's because your body is adapting to run on jet fuel (fat) instead of gasoline (carbs).

How will you know when you're fat adapted? You will be a) not hungry and b) wanting to exercise. Your body will tell you when it's ready. Just listen.

Once your body gives you the green light, you most likely will WANT to exercise – a lot. No, really.

I never thought I would ever WANT to willingly exercise, but I do. I started the ketogenic diet in February, 2016. For 7 months I didn't do any intended exercise. I lost 76 pounds and reversed type 2 diabetes. I also got rid of my meds. All of them. No exercise.

After 7 months I got my recumbent tricycle out of the garage and started riding. Now I can't get enough. I'm hooked. It's not hard anymore. I feel great. I'm not achy. I and I weigh 290 pounds! It's frickin' amazing.

So, lay low for a few weeks. When you feel like you HAVE to get up and move, do so.

Fasting

Fasting will happen naturally as you progress through your journey. Children should never fast. You should not fast until you are fat-adapted, which could take from 3 to 8 weeks. Fasting has been proven to drastically reduce insulin levels and permanently improve insulin sensitivity. It is also a great therapy (once fat-adapted) for losing weight and increasing stamina, mental acuity, and physical performance.

Think of the ketogenic diet as fasting-lite. Fasting does what the ketogenic diet does, just faster. When you fast, after a couple days your hunger goes completely away. Your body uses stored body fat for fuel, you get a shot of adrenaline. This is an evolutionary advantage – when there's no food, your body gives you energy to go run down a wooly mammoth. You also get a surge of Human Growth Hormone, which protects your muscles from being catabolized (used for fuel).

When people I know fast, they can do super-human feats of endurance and strength. They can go on a 50 mile bike ride, or lift weights for hours on end with no break. Body fat is a fantastic fuel because you never have to replenish it.

After 3 or 4 days fasted your metabolism starts to slow down. This also makes sense from an evolutionary point of view. Your body "gets it" that there's really no food around, and begins to conserve energy… perhaps in anticipation of a famine. It still draws down body fat, but doesn't burn as much.

Intermittent Fasting

Intermittent Fasting is simply fasting for shorter periods of time in between times of feeding. You can go for 18 hours, 24 hours, 2 days, alternate days, etc. The more time you go without food, the lower your insulin will go. Most people start their foray into fasting with a 1 day fast, starting and ending at the same time of day/night. Intermittent fasting is a great way to bust through a plateau.

Extended Fasting

An extended fast typically goes 5 days or longer. Many of us in the Facebook Group have done 7 day fasts. Tom Seest, one of our admins, just finished a 20 day fast. He called it a lazy fast, because he had a few shrimp every day (protein) but no other nutrients. He also cycled his butt off. Tom has gone from over 500 pounds to 200 something in just 2 years.

The world record for fasting was held by a 27-year-old Scottish man, Angus Barbieri, who in 1966 fasted for 382 days straight. All he took was a daily multivitamin and yeast. He was under a doctor's supervision the entire time, and lost 293 pounds!

The definitive book on fasting is called "The Obesity Code" by Dr. Jason Fung of Toronto, ON. He has been successfully treating over 1000 patients with diabetes using fasting as a therapy.

What to Eat. What Not to Eat.

This chart is a good general guide to what to eat and what not to eat.

A word about nuts:

For the first few weeks, skip the nuts. They tend to kick me out of ketosis, and I've heard reports from many others that they can't eat them either. As you start losing weight you might try adding them to your diet, but be careful. It's easy to over-eat them.

Meal Plan for the Fast Food Junkie

If you really don't want to expend any effort at all, have the cash to eat out, and just want to see immediate results, here's a no-fail one-week plan for you. First, buy the following from Amazon.com (I get no commissions or money for this):

- A loaf of Mahler's low-carb bread
- One or two bags of Cello Cheese Whisps (okay, several bags. These are awesome)
- A bottle of no sugar added ketchup (if you like ketchup)
- A bottle of Bragg's apple cider vinegar
- A jar of coconut oil

Put the bread in the freezer and keep the cheese whisps handy for snacking.

Breakfast

Every morning, toast up 2 slices of Mahler's bread. Slather them with butter. Wrap them in a paper towel and go to McDonald's drive thru. Get 2 of any breakfast bagels you like with extra cheese. (bacon, egg and cheese; sausage, egg, and cheese; steak, egg and cheese). Mix it up. Replace the bagel with your toast - put the meat and eggs from both bagels between your toast - and enjoy. If that seems like too much, just get one bagel. Also, you can get yourself a coffee or tea. Heavy cream is okay. No sugar. Sugar substitutes will probably be okay, but your best bet is to stay away from them. Definitely not milk. Half and Half is fine. No potatoes. No pancakes, no other starches or sugars. That's it. You'll be full.

Lunch

For a drink, make yourself a to-go bottle of water or seltzer with a teaspoon of apple cider vinegar. It's refreshing, and has been shown to lower insulin levels.

For lunch, you can do the same trick. Toast up some low-carb bread, add mayo and no-sugar-added ketchup if you like. Head to your favorite fast food place and order a burger or two. Extra cheese. Lettuce, mayo, tomato, pickles, mushrooms, bacon, and mustard are all okay. Ask for no ketchup. Also, avoid onions. If you like the flavor of onions, sprinkle a little onion powder on your toast after you add the ketchup and/or mayo. If you're really hungry, stock up on the burgers. More is okay, as long as you can fit it in your mouth. No fries or sugar of any kind, but extra bacon and cheese, please!

Dinner

For dinner, take yourself out to a restaurant. Try to be done eating by 7PM and eat nothing else for the rest of the night. Every restaurant offers a salad. Just ask for no croutons, and don't get "sweet" dressings like thousand island or French. I like blue cheese, personally. Go ahead and have a glass of wine. For reds, pinot noir is a good choice. For whites, pinot grigio. If you want to have hard alcohol, that's fine. Just have one, and don't mix in anything with sugar: bourbon on the rocks, vodka and lime, or rum and diet coke.

Here are some of your dinner options:

Buffalo Wings. At Chili's you can get "wings over buffalo" or "smoked wings" without sauce.

Steak. Most restaurants have steak on the menu. Get the fattier cuts: prime rib, ribeye, etc. Avoid the lean cuts like filet mignon. Ask for extra butter to melt over it. If you are hungry, get a big one. No potatoes, though. Just get the steak and perhaps a side veggie like broccoli, Brussels sprouts, or sauteed spinach.

Salmon. What could be better than a nice salmon filet or steak swimming in olive oil or butter, with a little lemon wedge, maybe a little sauce on the side with sour cream, dill, and garlic. mmmmm...

Shrimp Scampi. Again. shrimp swimming in butter and garlic. Get a double-order! Just pass on the pasta.

Pork Chops, Lamb Shank, Beef Short Ribs... these are all good choices. Just make sure you tell them no bread, no potatoes, no carbs. Most restaurants are accommodating. Remember, more fat! Eat all of the fat off your meat. Don't cut it away.

The Next Morning

The next morning, wake up and make yourself some coffee. Put 2 mugfulls (about 4 cups) in a blender with a heaping tablespoon of coconut oil. Add a dash of cinnamon, nutmeg, vanilla, or any other flavoring you want and whiz it all together. Enjoy. The coconut oil will quell your hunger, whatever is left of it, and you should be able to go a long time without getting hungry. If you are not hungry at lunch time, skip it. No worries. Eat when you are hungry and stop when you are full. If that means coconut coffee in the morning and a meal at 3PM so be it. Once you break free of carb addiction you will be able to hear the signals that your body gives you about hunger and satiety. Listen to them. You can trust them.

What Happens if I Cheat?

Falling off the horse happens. It happens to everyone. What happens next depends on how fat-adapted you are. In the beginning, before you've gone 2 or 3 weeks without carbs, you may be starting over at square one. Some people never get fat adapted because they don't have the patience to go carb free for 3 to 8 weeks. I'm not talking about will power. Keto is easy if you can stay focused. I half-assed keto for years going low-carb for a few days, then binging for a couple weeks, and repeating the cycle. It made me sicker than I was before.

Let's say you've been doing keto for a couple weeks and you decide for whatever reason to eat a slice of pizza. The carbs are going to immediately trigger cravings for more carbs. You'll start eating anything carby: crackers, cookies, etc… it just happens. You have no control over it. Your body wants carbs and it takes over. Sound familiar? If you do this, it could take you a week or two of no carbs to get back to where you were. Your weight will come back, and those two weeks will be wasted.

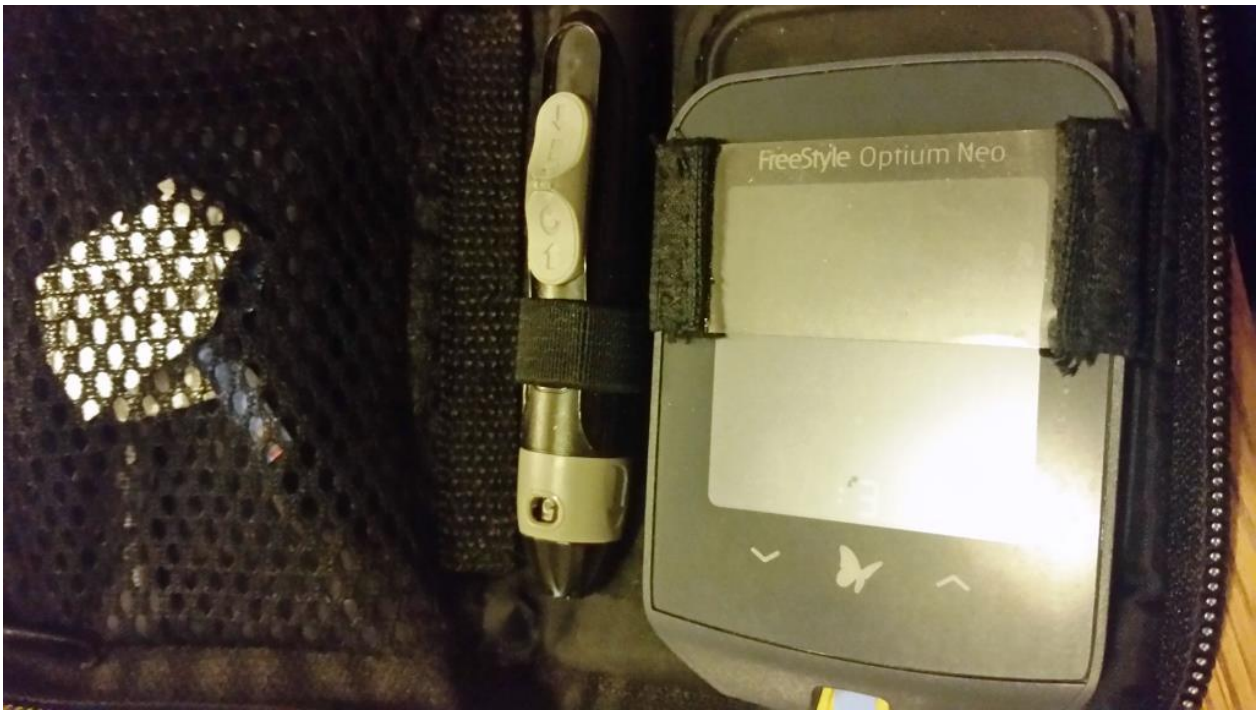
However, once you're fat adapted, and you do the same thing, starting with a slice of pizza and escalating to an entire pint of ice cream. You will wake up in the morning and most likely NOT have carb cravings. Actually, I can only attest to MY experiences here. That's what happened to me. I didn't have carb cravings, but the weight still came back on. It took me a week to get back to my previous weight – after one day. We're talking 10 pounds in one day! However, the lack of carb cravings made it EASIER for me to get right back up on the horse and continue on.

So, rather than worrying about the next time you can have your favorite carby food, focus on how good eating keto makes you feel. In the Facebook group, Kassie Ewers famously said "Every time I see someone eating fries or something else I can't eat, I look down and wiggle my toes and think, 'yeah. Toes are better than fries.'" The real goal is to not die of diabetes, renal failure, heart attack, stroke, hypertension, fatty liver, dementia, Alzheimer's, or cancer. Those are the real goals. Weight loss and fitness are a natural side-effect of good health. Stay motivated! Peruse our Facebook group. Spread the word about how you have lost weight and reclaimed your health. Save someone else's life! These things will make you so much happier than a pint of ice cream, especially when you can make yourself some keto mousse or ice cream and be completely happy with it!

Testing Food Response Using a Blood Glucose Meter

By Richard Morris (www.easylocarb.com)

Should you give up certain foods or sweeteners? Well, it depends. We all have different glucose responses to identical foods. Blood sugar levels in response to foods are highly individual, so the only way to really know is to test yourself by doing a glucose curve using a retail glucometer.



Not everyone needs to go to this level of detail but if you find after eating certain foods that you just seem to get hungrier, it's quite possible that you have a specific glycemic response.

Glucose Curve

You can do a glucose curve with any food. The two questions you want to know are; Will this food turn quickly into glucose in my blood, and if not will I secrete insulin in response to it anyway.

What you will be doing is taking a glucose curve in response to a challenge. That should directly answer the first question, and you can kind of extrapolate an answer to the second question. So you want to test far enough away from an event that would otherwise confound the results.

Normal people are usually back to a normal glucose level after a normal meal in about 2-3 hrs. A type 2 diabetic can take 4-5. Exercise is also a confounder, so give it an hour after mild exercise, several after hard exercise. Also when you wake up your body produces hormones that goose your production of glucose.

The best time is probably several hours after waking up, having skipped breakfast.

Take your baseline or T0

So take a baseline measurement – this is your time zero. In my chart below that's the green line.

You don't need a lot of blood for new style meters, as you can see I have my lancet set to only a depth of 5 so I almost don't feel the strike anymore. I also use the pad of my fingers. That is a lot less painful in my experience than the side of the finger.

You just need to insert a fresh test strip, and when your meter tells you it is ready for blood you just press your drop of blood to the capillary uptake of the test strip.

That will give you the starting glucose value. We're going to eat our test food and then see how long it takes for our blood glucose to get close to that starting value again.

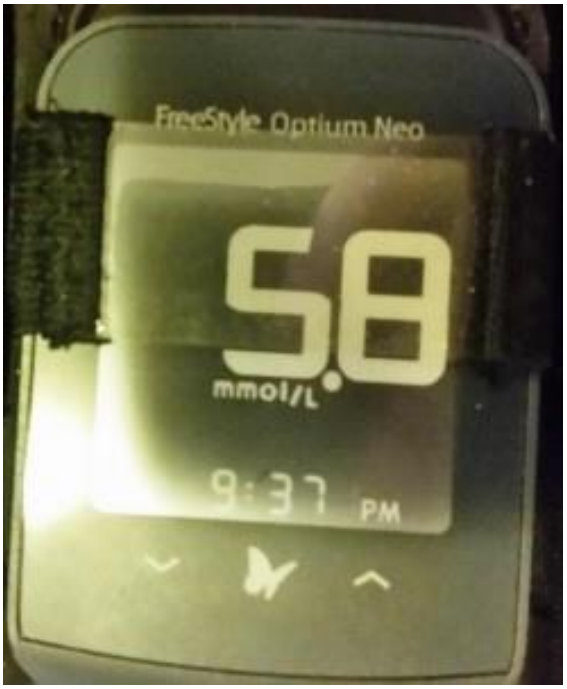
Eat your test food

This is the good bit.

Now we need to set a timer for 30 mins. I'm going to use my Microsoft Band.

When the alarm goes off take a 2nd measurement – this will be your T30.

Take a T30



This is just as your first phase insulin response should hit. So this may be top of your glucose response. Meters are only about 20% accurate so if this value is within 20% of the T0 it could still be no glucose response. Which is what non-nutritive sweeteners produce in me.

Set your alarm for another 30 mins.

Take a T60

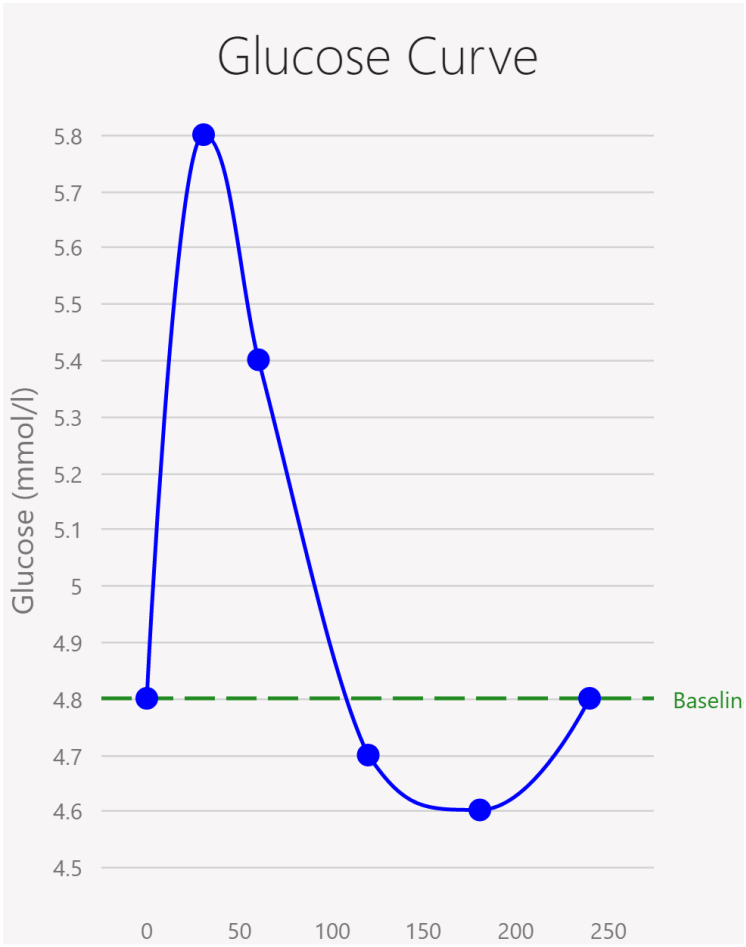
Take a 3rd measurement – this will be your T60. If you had some glucose response at T30 then you should be heading back to your baseline under the direction of Insulin releases. If you had no glucose response but you still secreted some insulin (Sweetness being recognized by your brain and directing a “just in case” release) then you might find at this point that it drops below your baseline. That’s a reactive hypoglycemic response. It implies if you eat a lot of this food and you will be making more insulin than you should and over time that may work against weight loss and developing your insulin sensitivity.

Take an hourly reading till you get to baseline

Then if you’re not at baseline you can take a few more measurements until you get back to your stasis point – maybe every hour.

If you go a little below your baseline that could be an overcorrection of slow acting insulin. I like to keep going till I see a return to baseline but to be honest the accuracy of retail devices is only 20% so 4.6 is within the margin of error.

And finally 4 hours later we're at the baseline again. You can play around with the glucose values to the left of this Glucose Curve to change its shape.



More Resources

Yummy Recipes: http://recipes.2keto.com

Links to science/books in support of the ketogenic diet: http://links.2keto.com

Links to movies/documentaries done about low-carb high-fat: http://movies.2keto.com

2 Keto Dudes Podcast: http://2ketodudes.com

Our Facebook group (3500 members!): http://fb.2keto.com

Our Blog: http://blog.2keto.com