

How to Keto-Adapt

What is keto-adaptation?

It is not a diet, and it is not a lifestyle; keto-adaptation is a training program. The end goal of keto-adapting is not to change your life-long diet, it is to create an awesome metabolic tool you can use to program your metabolism. When you keto-adapt, you train your body to use fat from your diet, or from stored body fat, as fuel. Many people believe we easily burn fat on a daily basis, but in fact, we burn fat only when we have used up all the carbohydrates we have eaten. Because we are lucky enough to live in a society where we have access to food every single day of our lives, we rarely run out of carbohydrates, so we are not forced to regularly use our fat as fuel. Over time, our bodies lose their natural ability to easily burn fat and we become carb-dependent.

When was the last day you went without eating fruit, vegetables, grains, or beans? What about the last day without refined sugar in a dessert, a sauce, a snack, or a beverage? Most people will admit they never go more than twenty-four hours without eating either a complex, whole-food carbohydrate or foods containing refined sugar, all of which break down to glucose. As long as you have glucose in your blood, your body will preferentially use glucose as fuel, because, unlike fat, sugar cannot be easily stored in our bodies.

Perhaps the best way to think about it is that when glucose is available, we burn glucose; it's easy to use, and we can't store it. When glucose is not available, we burn fat, which is stored in abundance. Training your body to easily access fat stores when you have low blood sugar is what keto-adapting is all about.

To keto-adapt, you will need to be committed and focused for two to three months, *once during your lifetime!* When you complete keto-boot camp, you will be keto-adapted forever, as long as you follow some simple steps to maintain your ability to use fat as fuel.

Steps

1. Decide if you are ready to keto-adapt
2. Assess your health
3. Order supplies
4. Organize your kitchen

5. Gather your support team
6. Set your health goals
7. Set a start date

Decide if this is the right program for you at this time in your life

Most people, who fully commit to keto boot camp for 2-3 months, will successfully keto-adapt. However, keto-boot camp is physically and emotionally demanding; you will want to be fully prepared to avoid health risks and optimize success. Some health conditions are an absolute contraindication for keto-adapting; others will require additional preparation prior to getting started. Remember, you will only need to keto-adapt *once in your lifetime*. Make sure you are ready and that you are not putting your health at risk.

Do NOT start boot camp if...

1. You have symptomatic heart disease including, but not limited to; a recent heart attack, recurrent chest pain, or significantly blocked arteries. If you have been diagnosed with heart disease, or have symptoms you think may indicate your heart is not healthy, please consult with your doctor before embarking on keto-adaptation.
2. You have insulin dependent diabetes.
3. You have kidney disease.
4. You have active kidney stones, or a history of kidney stones plus high uric acid on a blood test. Not all kidney stones are made from uric acid, but if you have uric acid kidney stones, a ketogenic diet puts you at high risk for increasing the size of those stones and potentially dislodging and passing a stone. If you have ever experienced passing a kidney stone, you know firsthand that you want to avoid making them. Consult with a doctor, treat as needed, and then decide if keto-adapting is the right plan for you.
5. You have a history of gout, or someone in your family has gout, and your uric acid is high. If this is you, there is a good chance you will have a gout attack during boot camp. Not only is that a painful fate, it will limit your ability to exercise; a key

component to successful adaptation. See your doctor, lower your uric acid, and then start boot camp.

6. You have an injury that limits your ability to exercise. Some people will be able to keto-adapt without exercise, but everyone gets into ketosis faster and easier with a regular exercise program.
7. You are on prescription drugs for a medical condition. Consult with your doctor to determine if it is safe for you to keto-adapt.
8. You are pregnant or are nursing a baby

Assess Your Health

Even if you don't have any of the conditions mentioned above, take the time before embarking on this program to assess your health. Keto-adapting is no small feat. In this 12-week program, you will alter the metabolic function of your liver, muscles, heart, brain, and kidneys. In fact, you will alter the metabolism of nearly every cell in your body. See your doctor for a basic health assessment, followed by health optimization; investing in your wellbeing before embarking on this rigorous training program will improve your chances of a safe and easy metabolic transformation.

Order supplies

1. Blood ketometer and blood ketone reagent strips
2. Supplements

Blood ketometer and reagent strips are essential tools to monitor your success and refine your diet. We are all unique individuals, with unique metabolisms. There is no single ketogenic diet that will allow each of us to successfully keto-adapt. Monitoring your ketones will teach you about your metabolism and allow you to create the perfect macronutrient balance for you.

Why are nutritional supplements necessary? Supplements protect your body during the rigors of boot camp; contribute to your success; and prevent uncomfortable side effects. You will need minerals, antioxidants, fiber, probiotics, essential fatty acids, and B vitamins. What dose you need depends on your current health and may need to be adjusted in response to symptoms that occur. Start with the basic recommendations found on the

supplement planner; then work with a health coach or refer to the trouble shooting appendix to adjust how much you take.

Organize your kitchen

Stock your kitchen with healthy organic fats, animal protein or low-carb vegetable protein, spices and low-carb condiments, and above ground veggies. Refer to the category one foods checklist. Remove all fruits, roots, grains, and legumes (beans and peas) and all refined foods, which are high in carbohydrates. If you share your kitchen with family or roommates who are not keto-adapting, create a separate dry shelf and refrigerator shelf for your keto-friendly items.

Gather your support team

Your doctor

Make an appointment with your doctor for a physical exam and blood work. Your should have basic screening blood work; looking at liver and kidney function, blood sugar, cholesterol and uric acid. You should also assess health conditions you already have, or that your doctor thinks you should rule out, such as hypothyroidism or anemia.

If your goal is optimizing body composition with weight loss and/or muscle building, body composition monitoring is crucial. I use a bio-impedance analyzer (BIA) in my practice, although there are other equally good methods to assess muscle mass and fat mass. Some doctors have a BIA in their office; alternately you can buy a home machine for personal use. Find out if your doctor is comfortable monitoring your progress, or can refer you to someone who can.

A keto-buddy

Keto-adapting with a buddy is ideal, especially if that person lives with you and you share meals. A small group of people keto-adapting together is even better. For most people during keto-boot camp there are times of frustrations and pesky symptoms. Often the most understanding person is someone going through the same process.

A keto-coach

Keto-adapting is relatively straight forward, but can become complicated along the way. Some people will struggle making ketones; others will have symptoms they don't understand. Discipline can also be an issue for many people. A health coach is invaluable; they will help you stick with the program and help you make adjustments for success, comfort, and health. If your goal is weight loss, and you have struggled in the past, regular sessions with a health coach may be your key to success. If you don't have any serious underlying health concerns, and you are not on prescription drugs, a keto-coach can help you monitor your progress instead of a doctor.

Your supportive family and friends

Because most family members and friends want you to be healthy, the support of loved ones during and after keto-boot camp can really boost your moral, and help you stay committed to your program and your health goals. However, some people may be skeptical or even fearful of keto-adaptation and end up being critical and unsupportive. Make a list of everyone you know, including family, friends, and co-workers, who you believe will be supportive. These are your cheerleaders; you will appreciate them throughout your program and sometimes truly need their support.

Identify your health goals

Keto-adapting will at times be challenging, remember, you are will need to be fully committed to boot camp for eight to twelve weeks, and follow some simple rules to stay keto-adapted for the rest of your life. You are going to alter the metabolism of nearly every cell in your body; you are going to think and feel differently about nutrition; you are going to learn how your unique metabolism works. This is no small feat!

If you are going to do all that; you had better have a pretty good reason. Take the time before you embark on this health journey to write down your health goals. Don't limit yourself to what you think might happen if you keto-adapt; identify what you want your health to look like. Visualizing optimal wellbeing can be a powerful tool, and can help you stay on track. By writing your health goals down, you are making a commitment to

yourself. Throughout this course, and for the rest of your life, you can refer back to these goals when the going gets tough.

Set a start date

Now that you are fully organized, take out your calendar and identify a three-month window of time that you can be fully committed to your program. It can be anytime of year, but it is best to avoid holidays, travel, and special events such as weddings and anniversaries. Alternately, you may want to adapt right away, regardless of the time of year, to seize the motivation you have right now and to experience the health benefits immediately.

No matter when you chose to adapt, there will be temptations that will require discipline. During boot camp you will need to rigorously adhere to the diet and supplements. Avoid adapting in a window of time when you are concerned you will be tempted to cheat on your diet. After boot camp, you will not need to be so strict; and occasional high-carb food won't be a big deal. Once again, you will only need to adapt *once in a lifetime*; set yourself up with optimal success by picking the most ideal time for you.

The Seven Basic Requirements

1. Commit to the program for a full twelve weeks
2. Eliminate alcohol, sugar of all types, and all refined foods
3. Eat a very low carb diet
4. Exercise regularly
5. Get good quality sleep
6. Detoxify as needed
7. Monitor you progress

Commit to the program

This program is called keto-boot camp for a reason; to be successful you will need to strictly stay on the ketogenic diet for a minimum of eight weeks, track your progress daily, and adjust your program as needed to achieve a state of ketosis. You are creating a very

low-carb nutritional environment; signally your organs to adapt to fat as the primary fuel. Effortlessly burning fat will require a metabolic rewiring at the cellular level that takes most people two to three months. If you are lucky, you will only need eight weeks for complete transformation, but count on twelve weeks to assure your success.

You must stay in ketosis long enough for your complete metabolic transformation. If during boot camp you send confusing signals to your body by even occasionally eating high carb foods, you may sabotage your ability to keto-adapt. Take heart, once you do adapt and truly experience metabolic flexibility, you will be able to eat high-carb foods in moderation and easily shift your metabolism back and forth between carb-burning and fat-burning. You will no longer have a carb-dependent metabolism; you will readily burn fat or carbohydrates for fuel. Fully dedicate two to three months to this process and you will achieve the ability to control your metabolism for the rest of your life.

Eliminate alcohol, sugar of all types, and all refined foods

Sugar must of course be eliminated if you want to make and burn ketones. Sugar is used in most packaged foods including sauces, condiments, and dressings. Our palate has grown so accustomed to sugar that prepared store-bought foods and restaurant dishes almost always contain sugar because that is what sells. Don't be tricked by products sweetened with fructose, agave, or honey; all sweetened foods must be eliminated.

What about sugar alternatives such as stevia, saccharin, and sugar alcohols such as xylitol? Artificial sweeteners such as saccharin, aspartame, and sucralose have a very negative impact on our metabolism and have been linked to obesity, insulin resistance, heart disease and Alzheimer's. Alcohol sugars, such as xylitol, erythritol, and mannitol are low in carbohydrates because they are only partially digested. This sounds like a good idea; you can eat something sweet and still be on a low-carb ketogenic diet. However, the carbs in alcohol sugar have no nutritional value; you will be better off "spending" the small amount of carbs allowed on the ketogenic diet on nutritionally dense vegetables instead of empty calories. In addition, since alcohol sugars are not completely absorbed, they stay in your intestines with the potential to negatively alter your gut flora, an important component of your metabolism. Stevia is the only sweetener I recommend. It is best to avoid refined stevia as many brands use toxic solvents in its production.

You may have heard that low-carb alcohol, such as white wine or liquor without the mixer, is allowed on a ketogenic diet. The reasoning behind this allowance is that alcohol will not suppress ketosis like glucose will. In part that is true, alcohol does not trigger the same mechanisms managing metabolism as glucose. It is in fact a completely different fuel type with a completely separate metabolism. However, it is a fuel your body can easily burn and cannot store, so it will be used as fuel before you will burn fat. Be kind to your hard-working body during boot camp and abstain from alcohol of all types.

Eat a very low carb diet

At each meal, eat two to three servings of low-carbohydrate, category-one vegetables with a serving of protein. You should attempt to eat about twice as much protein as you are used to eating. The rest of your meal is healthful organic fats—avocados, olives, cream, butter, ghee, olive oil, coconut oil, sesame oil, zero-carb cheeses, and fats from meat, fish, and eggs. There is no limit to how many calories you eat, just eat enough fat so you are no longer hungry. Vegans will need to add zero-carb protein powder, such as hemp seed or pumpkin seed and should eat a small quantity of low-carb category two nuts to get enough protein. Unless you are vegan, I recommend that you stick with category-one foods in the beginning. Once you start producing greater than 2.0 mM/L of ketones, you can start to slowly introduce category-two foods. Remember, your metabolism is unique. You will not be carb counting to determine what foods will work for you; you will be monitoring your ketone production.

Exercise regularly

Daily exercise is a great tool that will stimulate your metabolism. To get into ketosis, your blood sugar needs to be low. Avoiding carbs in your diet is half the equation; burning carbs is the other half. Your body is amazing in its ability to respond to your needs if you consistently send the right signals. When you exercise regularly, your muscles easily burn up excess glucose and start to require fat as fuel. It is a simple supply and demand system; your muscles demand fuel, there is no glucose left, fat is available in abundance, and ketosis is stimulated.

Get good quality sleep

Insomnia in the middle of the night is generally caused by a flight-or-fight adrenal reaction due to chronic stress and anxiety. If you wake in the wee hours, and lay awake worrying about the concerns of the coming day, you will signal your body to search for quick fuel and initiate a process called gluconeogenesis, literally the production of “new” sugar from protein. Since you have not eaten in many hours, the protein you burn as fuel comes from your muscles.

The symptoms of adrenal insomnia include; abrupt awakening, heart palpitations, and/or an inability to get back to sleep, sometimes for several hours, because you are worrying and your mind won't quiet. When you convert protein to glucose, ketosis is suppressed, making it hard to get in the zone until later in the day. There are many things that can help re-set your adrenal rhythms, however you may need the help of a doctor to address underlying hormonal imbalances.

Detoxify as needed

Keto-adaptation begins in the liver with the production of ketones, the necessary first step in adaptation. The liver receives all the macronutrients from the foods you eat in the form of glucose from carbohydrates, amino acids from proteins, and fatty acids from fat. The liver converts these macronutrients into fuel reserves such as triglycerides and glycogen, and building blocks for the body such as proteins and cholesterol. In addition, the liver makes ketones and releases glucose, both for immediate use to fuel all your activities. The liver dictates the fate of dietary macronutrients based on the signals you send by what you eat and the activities you do.

The liver also takes fat-soluble toxins and transforms them into water-soluble waste. If your liver is overwhelmed by toxins you are regularly exposed to, or by toxins stored in your body, you may have difficulty keto-adapting. Start by identifying common everyday chemical exposures and replacing them with less toxic alternatives. Organic food can be more challenging to find, and more expensive, but it is worth the effort.

Conventionally grown foods are high in toxic pesticides and growth hormones, substances that can overwhelm your liver, and can actually cause weight gain. Consider a seasonal cleanse before you start boot camp or get some help to reduce your toxic burden from an environmental medicine doctor.

Once you start burning body fat, you will mobilize toxins stored in that fat, and you may begin to experience toxic symptoms such as; headaches, joint pain, body aches, and/or brain fog. With every 3-5 pounds of weight loss, I suggest you complete a fat flush to bind fat-soluble toxins and get them out before they make you sick.

Monitor your progress

Keto-adapting is an individual process with much variation. To safely and successfully adapt, you will want to monitor your ketones, your body composition, and your other measurable health markers on a regular basis during boot camp.

Measure ketones

Use your daily tracking sheet to track your ketone levels first thing in the morning and one to two hours after a meal. You don't need to check every morning or after every meal, just often enough to make sure you are on track. You will begin to see patterns indicating what food combinations work for you to get in the zone.

Body Composition

If you are using this program for weight loss or for increasing muscle mass, you will need a way to measure your body composition with roughly every three pounds weight change. Your health coach may have a way to measure muscle and fat mass for you. Alternately, you can buy a home bio-impedance analyzer for under \$200.

Blood pressure

Keto-adaptation has been shown to lower blood pressure. If you are adapting with the goal of lowering blood pressure, be sure to track how the program is affecting you.

Hip-to-waist ratio

Women should have a ratio of 0.8, with the hips being larger than the waist, while men should have an equal ratio of 1.0, indicating the belly is not larger than the hips. Increased belly fat increases inflammation and is a risk factor for diabetes, heart disease, Alzheimer's and other dementia, osteoporosis, and cancer.

Blood tests to monitor pre-existing conditions and abnormal values

If you start boot camp with health issues, or you discover an abnormal lab when preparing for boot camp, work with a doctor who can monitor inflammatory markers, blood sugar, triglycerides, cholesterol, uric acid, and any other concerning markers.

Life after keto-boot camp

Although a ketogenic diet is necessary to train your body to make and burn ketones, remember, this program is not a diet. By keto-adapting you will create an awesome metabolic tool you can use to program your metabolism. When you can easily burn fat, you will finally be able to discover what your ideal nutrition really is. You may end up eating a low-carb diet, or you may find that a low-fat diet serves you better. There are multitudes of well-researched, sound nutrition plans available for you to experiment with after this program. No matter what ongoing food plan you choose, you will maintain the benefits of easily burning fat for fuel while you go back to eating complex carbohydrates and even an occasional dessert with refined sugar.