

A QUICK START GUIDE TO METABOLIC HEALTH

BEAT INSULIN RESISTANCE AND REGAIN
YOUR HEALTH WITH KETO, FASTING AND FITNESS



by Jack Coletti

You should never take medical advice from a comic book...

That said, humans are natural storytellers, and many of us learn best through simple, relatable narratives. The goal of this guide is to provide a big-picture understanding of metabolic health and offer a clear, actionable plan to reset your metabolism and reverse chronic disease. It is generally intended for people who already have chronic health issues, so some of the guidelines may seem extreme to healthy people. But the information and habits described can help anyone who wants to optimize their health and avoid disease.

Some of the ideas in this guide are intentionally oversimplified. Others may challenge conventional medical thinking. But every major claim is supported by resources including articles, lectures, and interviews from respected medical doctors, surgeons, researchers, and health professionals.

This approach aligns with the principles of *Functional Medicine*, a growing field that treats the body as an interconnected system. Leaders like cardiologist Dr. Pradip Jamnadas describe it as the most important shift in medicine since germ theory - emphasizing the role of insulin resistance and inflammation in modern chronic disease.

This guide is intended to give you a fairly detailed snapshot of this topic. Something you can wrap your head around and give you a clear idea of how and why you should consider adopting this lifestyle. I encourage you to explore these topics further for a deeper understanding.

But don't wait for perfect information before taking action. Start now. Point yourself in the right direction — and you'll be amazed at how quickly your health can begin to change.

So, without further ado ...

DISCLAIMER: yada-yada-yada Medical Professional, yada-yada Medical Advice.

what's in this guide?

1. The Problem:

- *Insulin Resistance* and Metabolic Syndrome. **A concise explanation** of the problem and why it happens.

2. The Solution:

- Blood Monitoring, Diet, Fasting, Movement & Sleep.

3. Daily Practices (*a clear path forward*)

- A **step by step timeline** to ease yourself into this new lifestyle.
- **Test blood daily** or get a Continuous Glucose Monitor (CGM).
- Keep a simple **meal log** and make a weekly calendar.
- Learn to “**count carbs**” and prepare ketogenic meals.
- Learn to do **intermittent fasting** with minimal discomfort.
- Create a sustainable **weekly exercise routine**.
- **Stay in touch** with friends for support.

YouTube Playlist

Throughout this guide, I will refer to a number of YouTube videos from doctors and other health professionals to help you dig deeper into the science of metabolic health. Some of these are long videos, so watch them in comfort and on a big screen.



Metabolic Quick
Start Guide Playlist



https://www.youtube.com/playlist?list=PLZ-IE7uqks_gAmEpjGANfgEaBeOvJsNtT

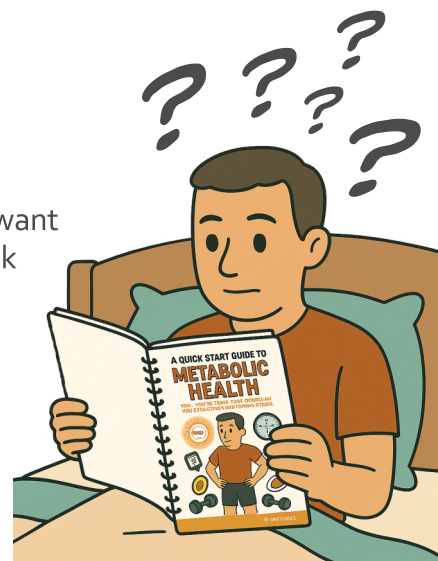
Where do I Start?

So, you've heard about the importance of metabolic health and you want to heal your body. But it feels like a tall mountain to climb. There's talk of blood tests, diet changes, and fasting. It sounds complicated. Maybe even a little miserable.

It's natural to doubt yourself and wonder if you'll really stick with it. Or if it's even worth the effort. Well, I'm here to tell you that it is more than worth it. It will transform every part of your life for the better. Yes, there will be hard moments - especially at the start.

And yes, you'll stumble. Probably more than once. But if you stay with it, you'll build skills. Those skills become habits. And those habits become a lifestyle.

Eventually, you'll feel so good, you won't want to live any other way.



The plan in a Nutshell...

1. Learn to **test your blood** for glucose & ketones and to understand the results. This is the foundation of everything that follows.
2. Learn to **control your glucose & ketones levels** with low carb meals, intermittent fasting and exercise.
3. **Share your the results, struggles and successes** with your friends & community.



How will I know if it's working?

Your blood tests will quickly show how you're progressing. You'll learn to interpret the numbers and recognize when your body is in a healing state. You'll see when you're burning fat—and when you're storing it. You'll spot signs of inflammation, both rising and falling.

Testing your blood is more than just data. It's a tool to teach you how to take control of your metabolic state. It shows when you're getting it right. It may take a few weeks—or even a few months—of regular testing to dial in the diet and routine that works for you. But once you figure it out, testing becomes occasional. If jabbing your finger bothers you, there are a few options. **Continuous Glucose Monitors (CGM)** or newer **CO2 breath testing devices** can offer alternative data feedback (more on those later).

So there's no guessing. No more wondering if what you're doing is working. The blood test or biofeedback device will tell you. When you're thriving, you will know it. When you're struggling, you'll know why.

Soon, you'll develop the ability to feel your metabolic state even without testing. But in the beginning, **blood testing proves it's real**. This process works. It's not just 'some guy' who puts names on boats told you to eat a certain way to get healthy. You can take direct control of your health. When the numbers look good, you'll feel better, lose excess weight, and start to heal. Blood testing is the bedrock of success.

but first ...

Know the Enemy

Before you can truly commit to changing your lifestyle, you should understand why it matters. If you don't see the root of the problem, the changes will feel arbitrary - and you won't believe in them enough to stay the course.

Insulin resistance is the silent force behind weight gain, fatigue, cravings, inflammation, and most chronic diseases. It's **why so many diets fail** and why energy levels crash even when you're "eating right."



Once you understand how insulin resistance works and how it quietly erodes your metabolic health, you'll see the logic behind every recommendation in this guide. You won't feel like you're blindly following rules. You'll be taking action from a place of clarity, purpose, and confidence.

Let's break it down so you know exactly what you're up against - and how to win.

So here's the general idea...

- **Chronic diseases are caused by inflammation**
- **Inflammation is caused by high blood sugar**

Of course this oversimplifies the problem, and **there are other drivers of inflammation**. Seed oils, processed foods and *visceral fat itself* can cause inflammation & insulin resistance. But high blood sugar is overwhelmingly the low hanging fruit of metabolic health for most people.

- heart disease
- arthritis
- anxiety/depression
- skin disease
- cancer
- autoimmune disease
- inflammatory bowel
- weight gain or loss
- alzheimers
- vision/hearing loss
- hormonal imbalance
- swelling / edima
- fatty liver
- cognitive decline
- sexual dysfunction
- COPD/asthma (and much more)

All because there's never a time when we don't have high blood sugar.

Why is high blood sugar so bad?

Every cell in our body contains proteins. Excess blood **sugar binds to proteins** in the body, damaging them through a process called **glycation**. These distorted proteins no longer function properly, and the **immune system begins to treat the entire cell as a threat** - triggering a healing response known as inflammation.

Inflammation, in itself, is not bad. In fact, it's essential. If you hit your thumb with a hammer, inflammation increases blood flow and activates your body's natural healing process.

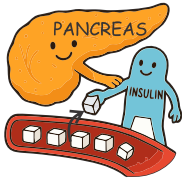
The problem is **chronic inflammation**. A constant, low-grade immune response that never shuts off. Over time, this ongoing damage spreads throughout the body & becomes the root cause of most chronic diseases.



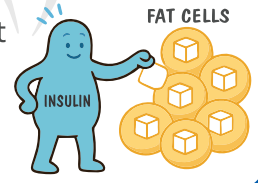
The root of chronic disease...

How do we *usually* get rid of excess blood sugar?

INSULIN



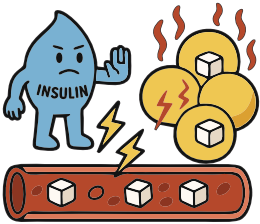
Your **pancreas** produces the **hormone** Insulin to get the sugar out of your blood and to store it in your fat cells (and also your muscles & liver) for later use. Insulin works by “stimulating” your fat cells to open up and receive the extra energy.



But when your pancreas is pumping out insulin 24/7 for years on end, you get...

Insulin Resistance

...the root of chronic health evil



Day after day, year after year, your pancreas works hard to produce insulin. Over time, the body becomes numb to the insulin, much like an alcoholic who builds a tolerance to alcohol. Insulin resistance means **your body stops responding effectively to its own insulin**. It's still there, but the signal is weakened.

As this resistance builds, your blood sugar rises—and stays elevated. The pancreas tries to compensate by producing even more insulin, but eventually, it can't keep up. At that point, blood glucose reaches harmful levels, and your metabolic system begins to break down.

When blood sugar reaches a toxic threshold, doctors call it **Type 2 Diabetes**. But that diagnosis is only a matter of degree. The underlying damage from insulin resistance begins years—even decades—before diabetes is formally diagnosed.

It didn't happen because your old. **Insulin resistance starts in childhood**. You can be insulin resistant **even if you don't eat a lot of refined sugar or junk food**.

Because your body converts all carbohydrates into sugar. This is why a low carbohydrate “keto” diet (paired with intermittent fasting) is the gold standard treatment for insulin resistance (pre diabetes & diabetes).



But it's not just the carbs. Once the fat is created, it self perpetuates...

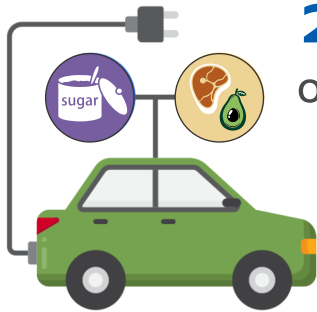
Insulin Resistance Feedback Loop

more **fat** → more **insulin resistance**
more **insulin resistance** → more **insulin**
more **insulin** → more **fat storage**

The root of chronic disease...

How can this be?!?

Why would our bodies respond to sugar this way? Don't we need glucose for energy?



2 Types of Fuel

Our body can run off of 2 different fuels: **Sugar (glucose)** or **Fat (ketones)**.

Think of it like a hybrid vehicle. **Sugar and carbs are the gasoline**. They burn dirty and gunk things up. **Fats (ketones) are the clean burning fuel** like hydrogen or electric. (I know, electric can be dirty too, but stick with me here). Carbohydrates are plentiful in our world, but evolution has not caught up to modern food sources. **Why?**

We have cave man genes

(but we don't eat like cavemen)



Hunter Gatherer:
mostly meat



Agrarian:
mostly grains



Modern:
refined carbs

ALL HUMAN HISTORY

From Ketones to Carbs: The Evolution of Modern Metabolic Disease

Before agriculture, humans rarely ate grains, starches, or sugars. Our metabolism evolved to rely on animal fat, and in times of scarcity, we burned body fat for energy, producing **ketones**. With little to no dietary carbohydrates, blood sugar stayed low, and insulin resistance was rare. Occasional fruit or honey caused brief glucose spikes, but these were infrequent.



While early humans often died from trauma or infection, they were largely free from heart disease, cancer, and obesity.



Agriculture changed that. Carbohydrate-rich grains became staples, and signs of obesity and insulin resistance appeared.

Food, however, remained mostly **unprocessed and scarce**. Modern diets are far worse. They are packed with refined sugar, white flour, and ultra-processed foods - keeping blood sugar chronically high.

More recently, inflammatory seed oils have made things even worse, but that's another topic.

Take the deep dive to learn more ...

You Tube Playlist video: **"The Bittersweet Truth" Dr. Jamnadas, MD"**

am I insulin resistant?

Standard Blood tests for insulin resistance

If you have had a recent routine blood workup by your doctor, you most likely already have some of the information you need to evaluate your level of insulin resistance. Most people have access to all their medical lab tests through a patient portal like *myChart*. Ask your primary care doctor if you don't already have access.



HbA1c

HbA1c is the most basic measure of insulin resistance. It **measures your average blood sugar over the past 2–3 months** by detecting how much glucose is attached to hemoglobin in red blood cells. Insulin resistance can raise HbA1c because blood sugar stays elevated longer. However, HbA1c is indirect and may remain normal in early insulin resistance if the body is still producing enough insulin to compensate.

HbA1c Values

Optimal: **4.8 - 5.2**

Early warning: **5.3 - 5.5**

Prediabetes: **5.7 - 6.4**

Diabetes: **> 6.5**

$$\text{HDL Ratio} = \frac{\text{Triglycerides}}{\text{HDL}}$$

Excellent: **< 1.0**

Fair: **1-2**

Suggestive of IR: **> 2**

Strong Concern: **> 3**

Triglyceride-to-HDL Ratio

Even though these tests are part of your *cardiac lipid panel*, they are a surprisingly useful indirect marker for insulin resistance. Plug the values from your most recent test into the formula shown to get your current score.

Fasting Glucose

This test shows your residual level of blood glucose after not eating for 12 hours. High blood sugar in a fasted state shows that your insulin is not able to pull your glucose down to a healthy level in 12 hours. This test is usually part of your *metabolic blood panel*.

Fasting Glucose (mg/dL)

Usually Optimal: **< 90**

Early warning: **90 - 99**

Prediabetes: **100-125**

Diabetes: **> 126**

Fasting Insulin

Not typically ordered by physicians, this valuable metric shows residual insulin levels in a fasted state. High fasting insulin means that it took more insulin than usual to bring down your blood glucose.

Fasting Insulin (μIU/mL)

Usually Optimal: **< 2-6**

Early warning: **7-10**

Prediabetes: **10-15**

Diabetes: **> 15**

$$\text{HOMA-IR} = \frac{\text{F. Insulin} \times \text{F. Glucose}}{405}$$

Excellent: **< 1.0**

Normal: **1.0-1.9**

Early IR Possible: **2.0-2.9**

Significant IR Likely: **> 3.0**

HOMA-IR

Combines fasting glucose and fasting insulin into a single estimate of how much insulin your body must produce to maintain your blood sugar level. It can reveal early insulin resistance that fasting glucose alone may miss, because **glucose can stay normal for years while insulin rises to compensate.**

Oral Glucose Tolerance Test w/ Insulin Response

The test starts in a fasted state with a fasting glucose measurement. Then 75g of liquid glucose is consumed. Glucose measurements are then taken at the 1, 2 and 3 hour mark to see how long it takes your body to bring down your blood sugar. If you request this test from your doctor, make sure they include the 1, 2 and 3 hour insulin measurements (not usually included in the standard OGTT).

OK, so what can I do about it?

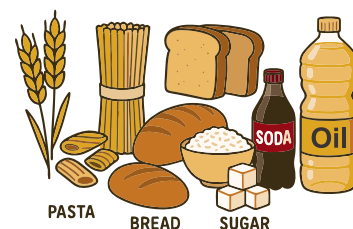
1) Test Your blood (a lot...at first)

Testing your blood glucose and ketones, especially several times a day in the beginning, gives you a real-time window into your metabolic health. The data you collect will reveal how your body responds to everything you eat, every fast you attempt, and every habit you change. At first, it may feel unfamiliar. But once you begin, the patterns will start to make sense and the **insights will be empowering**. Eventually you'll learn to read your body and you'll only test rarely.



2) Eliminate Inflammatory Foods

Switching to a **Ketogenic** or at least low carb diet of whole foods is your biggest weapon against insulin resistance. **Changes** to your diet **will show up in** your **blood tests** within **hours or days**.



3) Learn to Fast

Fasting is your body's **natural healing mechanism**. It accelerates the benefits of dietary changes and helps reverse insulin resistance. Fasting rapidly **lowers inflammation**, **resets the immune system**, and **restores insulin sensitivity**.

Done correctly, **fasting becomes your health superpower**.



4) Daily Exercise & Supplements

Your **muscle mass is the bedrock of your body's metabolism**. With every passing year, we lose muscle mass - often masked by excess weight. If you don't have enough muscle mass, **none of your organs will function properly**. Cardio is good, but **resistance training is key** for health & longevity. Carefully selected supplements can also help support your lifestyle changes.



5) Network with Friends

Choosing discomfort and change is never easy—even when we know it's essential for our survival. That's why **we need each other**. When you experience the excitement of your first ketone spike, or hit the toughest hour of your first 36-hour fast, you'll want someone in your corner—cheering you on. Sometimes we need encouragement. Sometimes we need a nudge, a pep talk, or even a little tough love. Find a community you connect with—whether it's our underused **Facebook forum**, a support group, or a few **like-minded friends**. And stay plugged in daily or weekly. That connection can be the difference between giving up and breaking through.



<https://www.facebook.com/groups/metabolicfriends>

the keto diet

How do we teach our bodies to become responsive to our insulin again?

UNDER 30 grams of NET carbs per day

A low-carb diet significantly reduces your body's need to produce insulin. With less insulin circulating, your body becomes more sensitive to it—meaning it can clear blood sugar from the bloodstream more efficiently. One of the first effects of a ketogenic diet is a rapid reduction in inflammation and visceral fat—the deep abdominal fat associated with chronic disease.

COUNTING NET CARBS

A Keto diet contains no more than **20 to 40 grams of carbohydrates** per day

How can you tell how many carbs you're eating?

Ask your favorite search engine

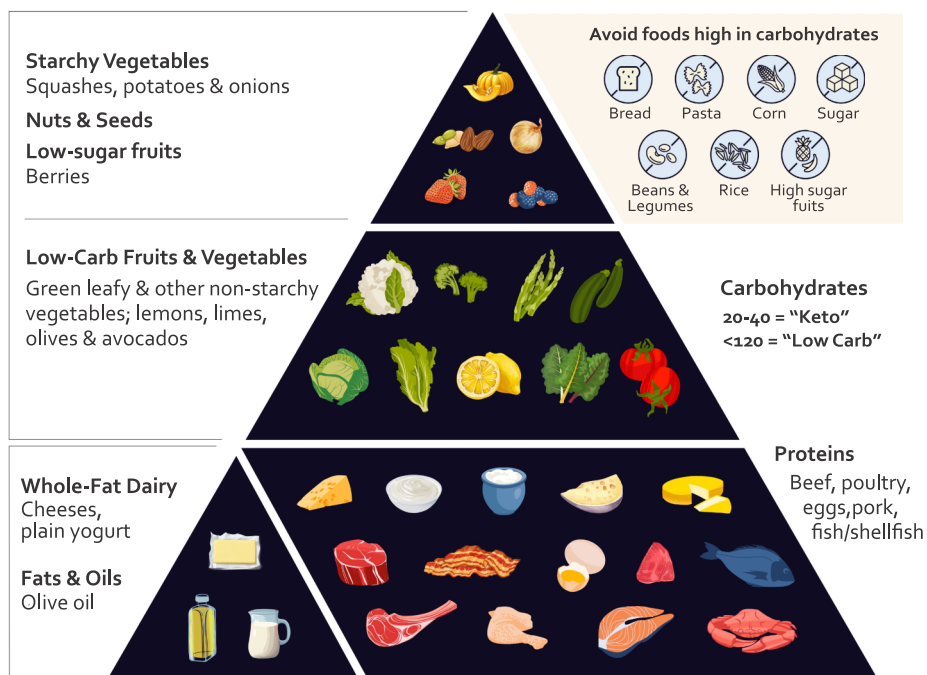
Hey Google: **How many NET carbs in 1 cup of broccoli?**

net carbs = total carbohydrates - fiber

Even though fiber contains carbs, we don't digest it - so you get to subtract the grams of fiber from the total grams of carbohydrates in your food. Usually, you will find this info on the food label. For fresh foods, look it up. Now, just try to shoot for **under 30 grams** of carbs each day.



KETOGENIC FOOD PYRAMID



Avoid Seed Oils & Processed foods

Seed oils are high in omega 6 fatty acids and are **highly inflammatory**. These should be avoided whenever possible. Use olive oil, coconut oil, ghee or beef tallow instead. And stick to whole foods. If it comes in a box, don't eat it. We'll address cheat days later.

keto friendly foods

The lower the carbs, the better...

FRUITS	SERVING	NET CARBS
Avocado	1 med	2
Star Fruit	1 cup	4
Lemon	1 med	4
Tomatoes	1 cup	5
Coconut (shredded)	1 cup	5
Blackberries	1 cup	6
Plums	1 med	6.6
Raspberries	1 cup	7
Celementine	1 med	7.7
Strawberries	1 cup	8
Grapefruit	1 cup	10
Watermelon	1 cup	11
Cantaloupe	1 cup	11
Kiwi	1 cup	12
Peaches	1 cup	12.2
Cherries	1 cup	16.5
Blueberries	1 cup	17.4

VEGETABLES	SERVING	NET CARBS
Kale	1 cup	0.05
Broccoli Rabe	1 cup	0.2
Watercress	1 cup	0.3
Arugula	1 cup	0.4
Spinach	1 cup	0.45
Jalapeno	1 med	0.5
Lettuce	1 cup	0.5
Swiss Chard	1 cup	0.75
Bok Choy	1 cup	0.8
Mustard Greens	1 cup	0.8
Collard Greens	1 cup	0.8
Garlic	1 clove	0.9
Celery	1 cup	1.4
Olives	10 large	1.8
Asparagus	7 med	1.9
Radish Slices	1 cup	2
Mushrooms	1 cup	2
Cabbage	1 cup	2.25
Eggplant	1 cup	2.3
Cucumber	1 med	2.96
Cauliflower	1 cup	3.2
Fennel	1 cup	3.3
Kohirabi	1 cup	3.5
Green Beans	1 cup	3.6
Okra	1 cup	3.8
Tomato	1 med	4
Broccoli	1 cup	4
Zucchini	1 med	4
Carrots	1 med	4.3
Bamboo Shoots	1 cup	4.5
Brussels	1 cup	4.5
Jicama	1 cup	4.6
Snow Peas	1 cup	4.9
Turnip	1 med	5.8
Pumpkin	1 cup	7.4
Bell Pepper	1 cup	7.5
Onion	1 med	8.6
Leek	1 cup	11.4

MEAT / POULTRY	SERVING	NET CARBS
Beef	3 oz	0
Chicken Breast	3 oz	0
Chicken Thigh	3 oz	0
Lamb	3 oz	0
Pork	3 oz	0
Turkey	3 oz	0
Ground Beef	3 oz	0
Ribeye Steak	3 oz	0
Ground Lamb	3 oz	0
Liver	3 oz	0
Pork Chop	3 oz	0
Bacon	3 oz	1.35
Sausage	3 oz	1.4

SEAFOOD	SERVING	NET CARBS
White Fish	3 oz	0
Prawns	3 oz	0
Salmon	3 oz	0
Shrimp	3 oz	0
Scallops	3 oz	2.7

OTHER	SERVING	NET CARBS
Eggs	1 large	0.7
Tofu (firm)	3 oz	1.9
Tempeh	3 oz	6.5

NUTS / SEEDS	SERVING	NET CARBS
Chia Seeds	1 tbsp	0.4
Pecans	1 oz	1.2
Pine Nuts	1 oz	1.2
Brazil Nuts	1 oz	1.2
Pumpkin Seeds	1 oz	1.3
Macadamia	1 oz	1.5
Tahini	1 tbsp	1.8
Hazelnuts	1 oz	2
Walnuts	1 oz	2
Peanut Butter	1 tbsp	2
Almond Butter	1 tbsp	2
Almonds	1 oz	2.7
Sunflower Seeds	1 oz	3.2
Pistachio nuts	1 oz	4.9
Cashew Nuts	1 oz	7.6

FLOURS / BAKING	SERVING	NET CARBS
Stevia	1 tbsp	0
Erythritol	1 tbsp	0.5
Flax Meal	1/4 cup	0.6
Cocoa Powder	1 tbsp	1.13
Almond Milk	1 cup	1.2
Psyllium Husk	1/4 cup	1.4
Almond Flour	1/4 cup	2.2
Coconut Flour	1/4 cup	3.2
Hazelnut Flour	1/4 cup	4
Monk Fruit	1 tbsp	4
Coconut Milk	1 cup	6.4

DAIRY / ALTS	SERVING	NET CARBS
Butter	1 tbsp	0
Brie	1 oz	0.
Mayonnaise	1 oz	0
Mascarpone	1 oz	0
Sour Cream	1 tbsp	0.55
Heavy Cream	1 oz	0.6
Cheddar Cheese	1 oz	0.6
Gouda Cheese	1 oz	0.6
Greek Yogurt	1 oz	1
Mozzarella	1 oz	1
Parmesan	1 oz	1
Feta Cheese	1 oz	1.2
Cream (full-fat)	1/4 cup	1.6
Cream Cheese	1/4 cup	1.6
Cottage Cheese	1 cup	7.1

FATS / SAUCES	SERVING	NET CARBS
Aioli	1 tbsp	0
Mayonnaise	1 tbsp	0
Olive Oil	1 tbsp	0
Tabasco	1 tsp	0
Mustard	1 tbsp	0.3
Guacamole	1 tbsp	0.5
Soy Sauce	1 tbsp	0.9
Bernaise	1 tbsp	1
Tartar	1 tbsp	1.9
ACV	1 cup	2.2
Lemon Juice	1 oz	2.4
Balsamic	1 tbsp	2.7
Pesto	1/4 cup	3
Salsa	1/4 cup	3.1

BEVERAGES	SERVING	NET CARBS
Tea	1 cup	0
Soda Water	1 cup	0
Liquor	1 oz	0
Diet Soda	1 cup	0
Beer (light)	1 oz	0.5
Red Wine	1 oz	0.7
White Wine	1 oz	0.7
Coffee	1 cup	0.81
Beer	1 oz	1

keto meals

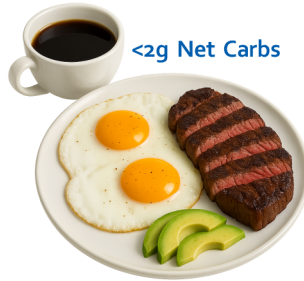
Get Creative ... Just keep it under 30 'net grams' of carbs per day

The internet is full of articles, videos and recipes for keto meals of every kind. There's even carb substitutes like keto bread or keto pasta. Always check the carb count for the quantity you intend to eat. To get started, here are some basic Keto meals. Most of them are only a few grams of net carbs..

Breakfast

Steak & Eggs

- Steak (approx. 6 oz): 0g
- 2 Eggs: ~0.6g (0.3g each)
- Avocado (1/4 fruit / ~50g): ~1g
- Black coffee : 0g



<2g Net Carbs

Eggs & Bacon

- Scrambled Eggs (2 eggs, no milk): ~1g
- Crispy Bacon (3 slices): 0g
- Sautéed Spinach (~1/3 cup): ~1g
- Avocado Slices (~1/4 avocado): ~1g



<3g Net Carbs

Lunch

Grilled Chicken

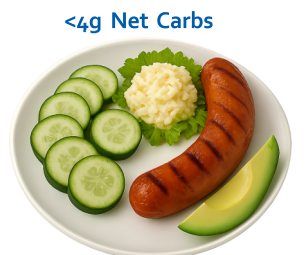
- Grilled Chicken Breast (~6 oz): 0g
- Steamed Broccoli (~1/2 cup): ~2g
- Cherry Tomatoes (~4 halves): ~2g
- Cheddar Cheese (~1 oz): ~0.5g



<5g Net Carbs

Sausage & Egg Salad

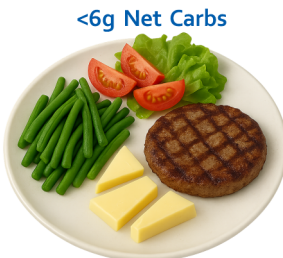
- Grilled Sausage (1 link): ~1g
- Cucumber Slices (~1/3 cup): ~1g
- Egg Salad (w/ mayo, ~2 tbsp): ~0.5g
- Avocado Wedge (~1/8 fruit): ~1g



<4g Net Carbs

Grilled Hamburger

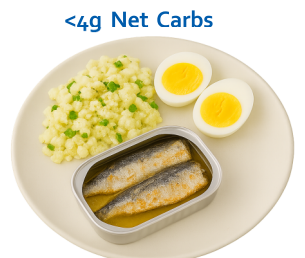
- Grilled burger Patty (no bun): ~0g
- Green Beans (~1/3 cup): ~3g
- Lettuce & Tomato Wedges: ~2g
- Cheese Wedges (~1 oz): ~0.5g



<6g Net Carbs

Sardines & Cauliflower Salad

- Sardines in Can (~3–4 fillets): 0g
- Hard-Boiled Eggs (2 halves): ~0.6g
- Cauliflower Salad (~1/3 cup): ~3g



<4g Net Carbs

Dinner

Grilled Salmon

- Grilled Salmon Fillet (~8 oz): 0g
- Asparagus (~5 spears): ~2g
- Mushrooms (~1/4 cup): ~1.5g
- Cauliflower Mash (~1/3 cup): ~3g
- Hollandaise Sc. (~1 tbsp): ~0.5g



<7g Net Carbs

Ribeye Steak

- Ribeye Steak (~12 oz): 0g
- Steamed Broccoli (~1/4 cup): ~2g
- Sautéed Mushrooms (~1/4 cup): ~1.5g
- Cauliflower Mash (~1/3 cup): ~3g
- Creamy Sauce (~1 tbsp): ~0.5g



<7g Net Carbs

Roasted Turkey Thigh

- Roasted Turkey Thigh (~8 oz): 0g
- Green Cabbage (~1 cup): ~5g
- Mushrooms (~1/4 cup): ~1.5g



<6.5g Net Carbs

Lamb Chop

- Grilled Lamb Chop (~6 oz): 0g
- Roasted Cauliflower (~1/3 cup): ~2.5g
- Salad Greens (1 tbsp vinaigrette): ~2g
- Crispy Bacon (2 strips): 0g
- Creamy Sauce (~1 tbsp): ~0.5g



<5g Net Carbs

keto

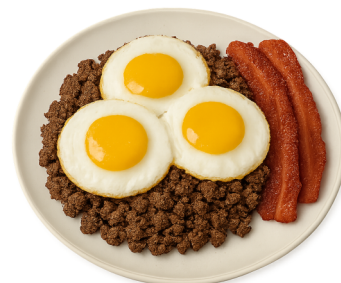
What if I cheat and eat carbs? Make up for it with a day of carnivore



Carnivore

Meat & Eggs

- All Meats: 0g
- 3 Eggs: 0.3g (each)



Keep plenty of low carb snack foods on hand

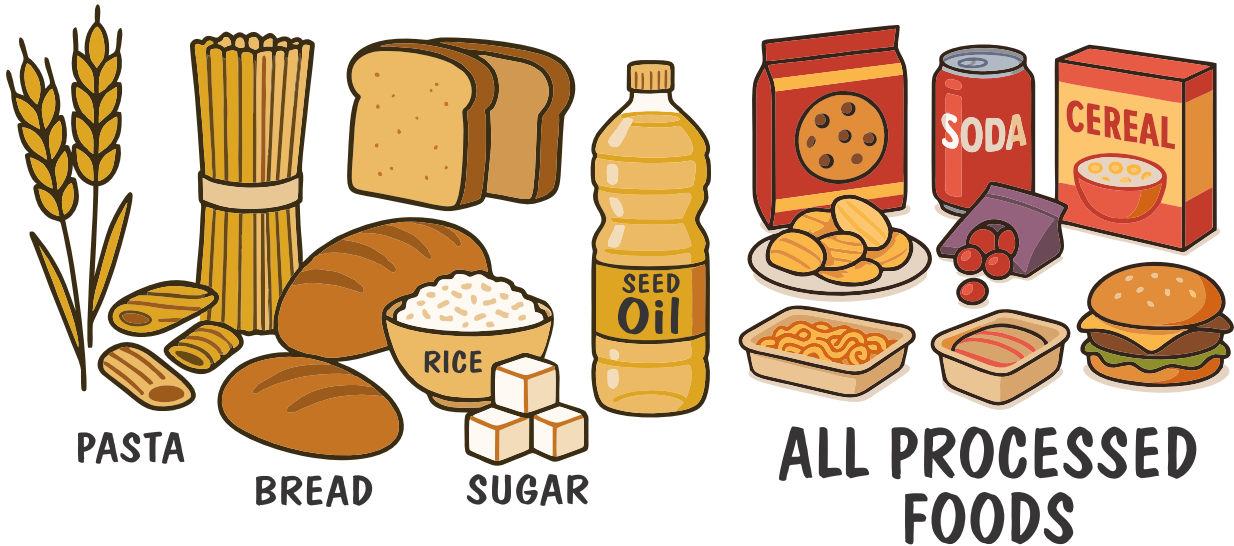
There are plenty of other keto snacks available.
Just always verify the carbs per amount you are eating
and **keep it under 30 grams per day.**

Snack	Net Carbs
Cucumber + Guacamole	~3g
Cheese Cubes or Sticks	~1g
Hard-Boiled Eggs	~0.6g each
Avocado Slices	~2g
Coconut Chips (unsweetened)	~2-3g
Bacon Strips	0g
Macadamia or Brazil Nuts	~1-2g
Beef/Turkey Jerky (no sugar)	~1-3g
Celery + Cream Cheese	~2g
10 Olives	~1g
Brie or Goat Cheese	~0.5-1g
Mini Egg Muffins	~1g each
Stuffed Shrooms Mushrooms	~2g
Dark Chocolate (85-90%)	~1-2g
Bone Broth	~0-1g
Fat Bombs (coconut or cocoa)	~1-2g each
Almond/Macadamia Milk (unsweetened)	~1g/cup

SNACKS



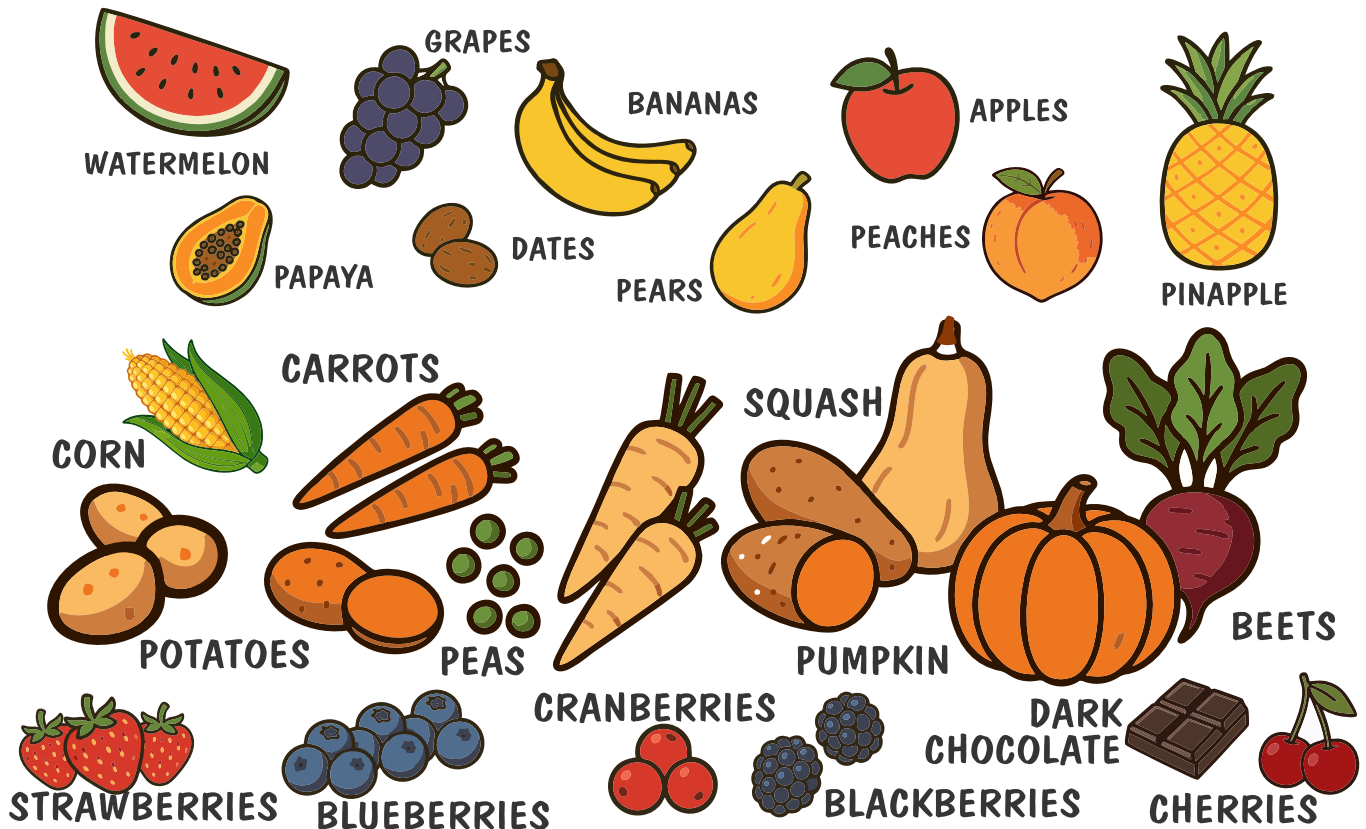
AVOID THESE FOODS!



EAT THESE FOODS

IN MODERATION!

Look up the NET CARBS for the amount you are eating
& **keep it under 30 grams per day**

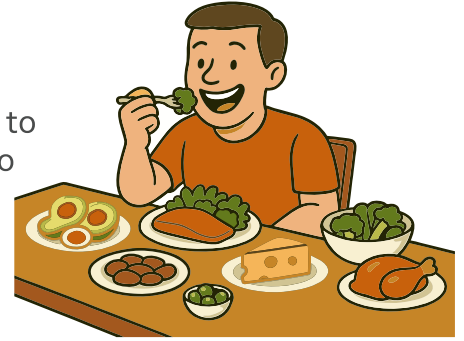


EAT AS MUCH AS YOU WANT!

Keto is **not about the quantity** of caloric intake. This diet is designed to rehabilitate your endocrine system (hormones) and allow your body to heal itself. Weight loss is only a side effect. Eat until you are satisfied.

Healthy fats are good

Actually, they are **GREAT** for you. Most of your calories should be coming from things like animal fat, olive oil, avocados and other Omega 3 rich fat sources. **Worried about heart health?** I encourage you to do a deep dive into modern cardiology where you will learn the growing consensus that heart disease is largely caused by inflammation and insulin resistance. The role of cholesterol in heart health is currently being redefined.



Keto Challenges



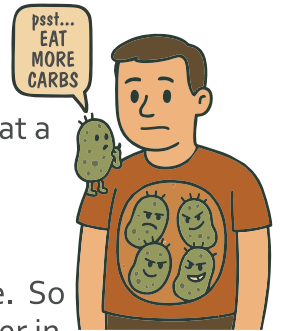
Overcoming Carb Addiction

Cutting out sugar, bread, pasta and other complex carbohydrates is the biggest hurdle for most people when adopting a Ketogenic diet. These are very addictive foods and if denied, your body will crave them just like someone trying to quit tobacco.

Your gut will mess with your mind

Your gut microbiome flora will always be calibrated to your current diet. So if you eat a lot of carbohydrates, there will be more carb-loving bacteria in your gut. Because that's what you're feeding them.

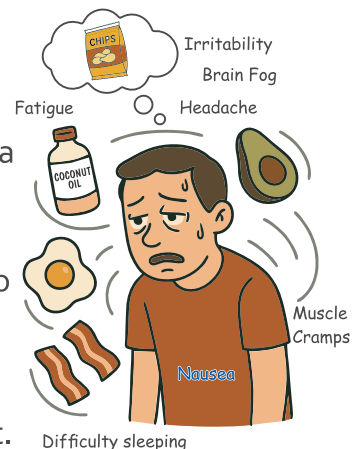
Some are calling the microbiome the "second brain" because it's the core of the immune system and can actually communicate with your brain via the Vagus Nerve. So if you are carb addicted and you deny your body carbs, your microbiome will whisper in your ear to "eat more carbs". That's why you "can't eat just one Lays" potato chip. The good news is that the microbiome adapts very quickly. Most gut microbes only live for a day or two. So your body can change its gut flora makeup in very short order.



Keto Flu (carb withdrawal)

Not everyone experiences Keto Flu, but it is worth noting in case you feel like crap in the first week or so. If you change your diet suddenly, your body may have a difficult time processing your food for a week or so. During this time of transition, some people experience "Keto Flu" where they show flu like symptoms.

Each cell in our bodies contains organelles called mitochondria whose purpose is to process our fuel (sugar or fat) and convert it into energy that our cells can use. Like the microbiome, mitochondria also become optimized to process the foods that we usually eat. As your body replaces its cells each day, you will gradually make more mitochondria that are optimized for a low carb, high (healthy) fat diet.



fasting

Why do people fast?

1. Metabolic Health

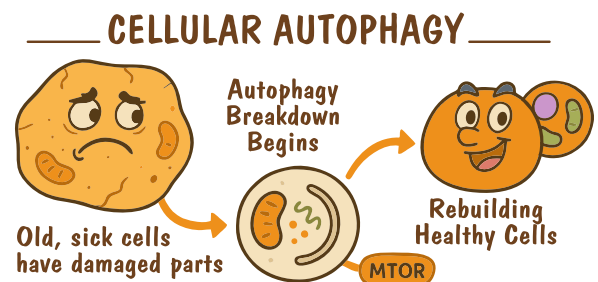
- **Lower Insulin Levels:** Allows the body to burn stored fat more effectively.
- **Improved Insulin Sensitivity:** Helps reverse insulin resistance, a key driver of type 2 diabetes.
- **Lower Blood Glucose:** Blood sugar levels drop & stabilize, reducing glycation & inflammation.
- **Increased Ketone Production:** Fasting shifts metabolism from glucose-burning to fat-burning, producing ketones for brain and body fuel.

2. Weight Loss

- **Access to Body Fat Stores:** Fasting forces the body to burn stored fat for energy.
- **Reduced Caloric Intake:** Naturally reduces overall food consumption without strict calorie counting.
- **Appetite Regulation:** Helps reduce cravings and normalize hunger cues.

3. Cellular Cleanup & Regeneration

- **Autophagy:** The body begins breaking down damaged proteins, pre-cancers & cells with bad gene expression.
- **Stem Cell Activation:** Prolonged fasting can stimulate stem cell production, aiding tissue repair & regeneration.
- **DNA Repair & Reduced Oxidative Stress:** Fasting lowers free radical production & promotes cellular repair.



4. Cognitive and Mental Clarity

- **Mental Focus:** Ketones fuel the brain more efficiently than glucose, leading to enhanced mental clarity.
- **Reduced Brain Fog:** Lower blood sugar variability and inflammation improve overall cognitive function.
- **Neuroprotection:** Increase Brain-Derived Neurotrophic Factor, supporting brain health and memory.

5. Hormonal and Longevity Benefits

- **Increased Human Growth Hormone (HGH):** Fasting boosts HGH, which supports fat loss & muscle preservation.
- **Improved Lipid Profile:** Fasting often reduces triglycerides and increases HDL (good cholesterol).
- **Potential Lifespan Extension:** Animal studies link caloric restriction & fasting to longer lifespan & delayed aging.

6. Inflammation and Immune Function

- **Reduced Inflammation:** Lower insulin & blood glucose lead to less systemic inflammation.
- **Immune System Reset:** Longer fasts may help clear out old or damaged immune cells & promote regeneration.

7. Spiritual or Psychological Reasons

- **Mental Discipline:** Fasting trains patience, impulse control, and resilience.
- **Spiritual Practice:** Many religions use fasting for reflection, humility, and a deeper connection with the divine.
- **Detachment from Food Addiction:** Breaking cycles of emotional or compulsive eating patterns.

8. Chronic Disease Management

- **Type 2 Diabetes Reversal**
- **Hormonal Disorders**
- **Fatty Liver Disease**
- **Hypertension & Cardiovascular Risk Reduction**

YouTube *Playlist video:*

"Fasting for Survival" Dr. Jamnadas, MD"

fasting

What happens when you stop eating for 3 days?

Begin



Day 1



Dinner



Sleep counts as fasting



Morning coffee suppresses hunger

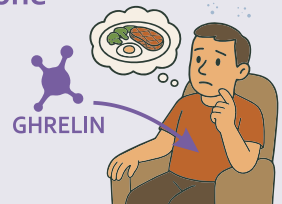


The Hunger Hormone

Ghrelin is produced in the stomach to trigger hunger in time with your normal daily meal schedule. It will pass after about an hour even if you don't eat.

GHRELIN

Lunch Time



Fasting Hours: 0-4 Hours
Fed State

Blood glucose and insulin levels elevated. Body burns glucose from food.

4-12 Hours
Transition to Fasting

Insulin begins to drop, sugar (glycogen) stored in the liver & muscles is used for energy.

12-16 Hours
Insulin Sensitivity Improves

Lower insulin levels enhance receptor responsiveness.

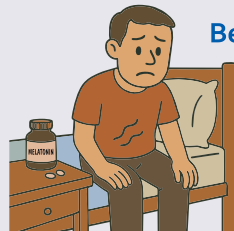


Day 2



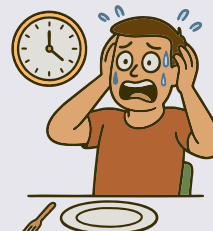
Guzzling Water Helps

Don't just sip it. Drink enough to fill your belly. It will help the hunger pass.



Bedtime

Bedtime can be hard on day 1 & 2. Don't be too proud to take some melatonin to get you to sleep. Hunger will subside after a while.



Terrible Day 2

Days 2 & 3 are usually the hardest. It's when many people give in. If you can stick it out until late day 3, it gets much easier.

16-24 Hours
Fat burning begins

Liver switches from insulin to glucagon. Abdominal visceral fat is targeted first.

18-30 Hours
Human Growth Hormone (HGH) Surges

2-5x increase in HGH; supports fat burning and muscle preservation.

24-36 Hours
Autophagy Initiation!

Damaged cell components begin recycling. Deep healing begins.



Day 3



Ketosis Kicks In!

At 24-36 hours, you will experience a sudden **burst of energy** and clarity of mind as your body fully switches to fat for fuel.



Hunger Subsides

Ghrelin has given up and hunger pangs are almost gone. It gets much easier from here.



Total Control

After 3 days, most people's body has adapted to fasting. You feel almost euphoric with boundless energy.

24-48 Hours
Inflammation Decreases

Lowered pro-inflammatory cytokines. Oxidative stress reduced.

48-72 Hours
Stem Cell Activation

Intestinal & blood stem cells regenerate; old immune cells cleared.

72+ Hours
Deep Autophagy & Cellular Regeneration

Break down pre-cancers, enhanced tissue repair, immune system reset, mitochondrial biogenesis.

Hour markers represent when a condition is just getting started. You'll want to stay in a fasted state for a while to gain the full benefits.

two types of fasting

Long Term

Fasting for more than 24 hours is a powerful tool for deep cellular repair and healing through a process called autophagy. Most people who practice extended fasting do so for **3 to 10 days**, typically consuming only water during that time. However, long-term fasting isn't something to jump into without preparation. Before attempting an extended fast, it's essential to **train your body to become fat-adapted** by consistently practicing intermittent fasting and following a low-carbohydrate or ketogenic diet. When done correctly and safely, long-term fasting can be a profound reset for your body and metabolism.

Intermittent Fasting (aka Time Restricted Feeding)

Intermittent fasting is not about eating less food. Let that sink in. The goal isn't calorie restriction—it's time restriction. Intermittent fasting means eating all of your daily food within a specific window of time. For example, an 18:6 fasting schedule means you fast for 18 hours and eat all your meals within a 6-hour window. Yes, you may naturally eat less—but that's not the primary goal. The real purpose of intermittent fasting is to restore metabolic health and help prevent or even reverse chronic disease.

Which type of IF is right for you?



16:8



18:6



20:4



One Meal Per Day (OMAD)

18:6 is the minimum for therapeutic fasting

Remember that sleeping counts as fasting!

Even the slightest morsel of food will ruin your fast!

The goal during a fast is to avoid triggering an insulin response. Even a small amount of food—like a few pieces of popcorn—or a sip of juice can break your fast by raising insulin levels. That's why it's important to steer clear of anything containing carbohydrates or calories, including sweetened beverages, flavored creamers, or even certain supplements. To get the full benefit of fasting, stick to water, black coffee, or plain tea—anything that keeps insulin quiet and your body in a true fasted state.

Water, Black Coffee or Tea

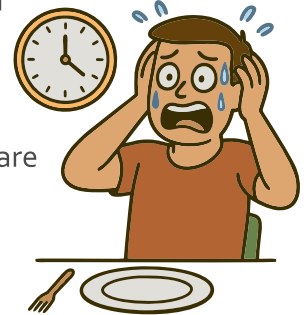
And that's it. If you must, you can add a tablespoon of **Whole Cream** to your coffee. Not skim milk or 2% because these have more carbs per unit. One tablespoon is not enough to cause a significant insulin spike. When long term fasting, it's best to stick with water only.

But wait, I heard it's better to eat several small meals throughout the day.

This widely held belief is based on the assumption that we are all addicted to short term glucose intake for energy. Once you teach your body to run off of cleaner burning fat, your body won't want or need the short term jolt to your metabolism. You will be trained to switch to your ample energy reserves.

The Psychology of Fasting

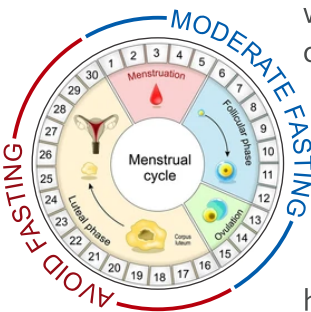
One of the biggest barriers to fasting is psychological rather than physical. Many people are conditioned to interpret normal hunger sensations as danger or emergency, especially in cultures built around constant eating, snacking, and blood-sugar management. Early fasting often produces anxiety, irritability, fixation on food, and fear that energy, concentration, or muscle will collapse—even when the body is physiologically capable of adapting. A lot of this discomfort comes from habit disruption and *uncertainty* during the **transition from frequent carbohydrate fueling to greater reliance on stored glycogen and body fat**. Hunger also tends to come in waves rather than continuously, and many beginners are surprised that **cravings often pass within 15–30 minutes** if they are not immediately acted upon.



Psychologically, fasting becomes easier when approached gradually and experimentally rather than as a test of willpower. Strategies that help include shortening the eating window slowly over days or weeks, staying hydrated, using black coffee or tea if tolerated, keeping mentally occupied during usual meal times, and **reframing mild hunger as a normal metabolic signal** rather than a threat. It also helps to avoid catastrophizing temporary sensations such as low energy or stomach growling during adaptation. Beginners often benefit from “permission structures,” such as knowing they can stop the fast if they feel genuinely unwell, which reduces panic and all-or-nothing thinking. Tracking mood, energy, sleep, and hunger patterns can also build confidence by showing that the body is more resilient and adaptable than many people initially believe.

Fasting for women

Women—especially those of childbearing age—often respond more sensitively to prolonged fasting than men because female hormones are closely tied to energy availability. Aggressive fasting, chronic calorie restriction, or combining fasting with intense exercise can sometimes disrupt ovulation, menstrual cycles, thyroid function, mood, sleep, and fertility signals in susceptible women. Many women tolerate gentler approaches better, such as a 12–14 hour overnight fast or occasional moderate fasting rather than frequent multi-day fasts or very restrictive OMAD patterns. Women who are underweight, highly stressed, very lean, pregnant, breastfeeding, recovering from eating disorders, or experiencing irregular periods should be especially cautious and usually avoid frequent prolonged fasting.



Across the menstrual cycle, fasting tends to be better tolerated during the first half of the cycle—from menstruation through ovulation—when estrogen is rising and insulin sensitivity is often somewhat better. In the second half of the cycle (the luteal phase, after ovulation and before menstruation), progesterone rises and the body tends to prefer more consistent energy intake; during this phase some women experience stronger hunger, lower stress tolerance, sleep disruption, or worsening PMS if fasting is too aggressive. Many women therefore do better easing off fasting in the week before their period, using shorter fasting windows and ensuring adequate protein, some carbohydrates, and overall calories.

Exercise

Why can't I just exercise to lose the fat & regain my health?

Because the body always uses short term sugar reserves before it can switch to fat burning

Fat cells act as long-term storage for excess blood sugar. But your body also maintains short-term energy reserves—stored as glycogen in the liver and muscles—for quick access when energy is needed.

When insulin levels are high, your body is instructed to store incoming sugar as glycogen in those short-term reserves. Once those are full, any additional sugar is converted into fat and stored in fat cells. Think of fat as your emergency fund: it's only accessed when your glycogen reserves are depleted.

During exercise, your body always draws from short-term glycogen stores first. Because excess sugar in the bloodstream can be harmful, your body prioritizes using it up before turning to fat for fuel. This is the key to understanding how your body fuels itself: **fat burning doesn't begin until glycogen is gone.**

If you exercise intensely & long enough, your body will eventually tap into fat stores. But here's the catch—unless you lower your insulin levels, fat loss is fleeting. The moment you reduce your exercise intensity or frequency, high insulin will refill those fat stores—erasing your progress.

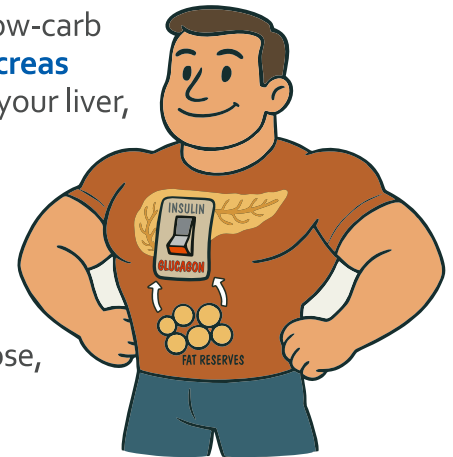


There's a much easier way to lose fat & build muscle

When you finally deplete your short-term glycogen reserves through a low-carb diet and intermittent fasting, something remarkable happens: your **pancreas stops producing insulin**. This immediately stops the storage of sugar in your liver, muscles, and fat cells.

At this point, your pancreas **"flips the switch"** from insulin to glucagon. **Glucagon is insulin's hormonal opposite** - it signals your fat cells to release stored energy in the form of ketones (fat). This is the foundation of the ketogenic diet.

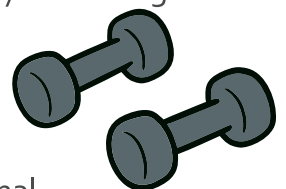
The goal of this guide is to teach you how to flip that switch, on purpose, whenever you choose.



Focus your exercise on strength training

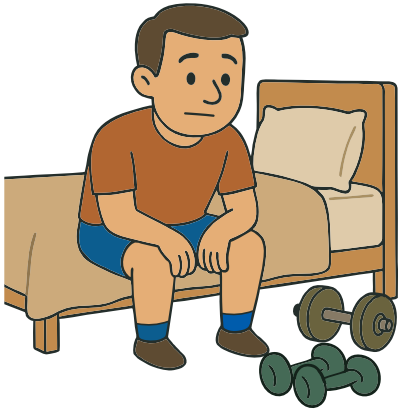
When it comes to improving metabolic health, strength training stands out as one of the most effective forms of exercise. Unlike cardio, which primarily burns calories during the activity, **strength training builds muscle that continues to burn energy even at rest**. Muscle tissue is metabolically active, meaning it requires more energy to maintain. The more muscle you build, the higher your resting metabolic rate becomes, which helps your body burn fat more efficiently over time.

Strength training also has a profound effect on insulin sensitivity. As your muscles grow stronger and more efficient, they become better at absorbing glucose from the bloodstream without needing as much insulin. This helps lower insulin levels and reduces the risk of insulin resistance. And strength training triggers beneficial hormonal responses that support fat burning, improve blood sugar control, & promote overall metabolic balance. It doesn't just make you stronger, it makes your entire metabolism more resilient & efficient.

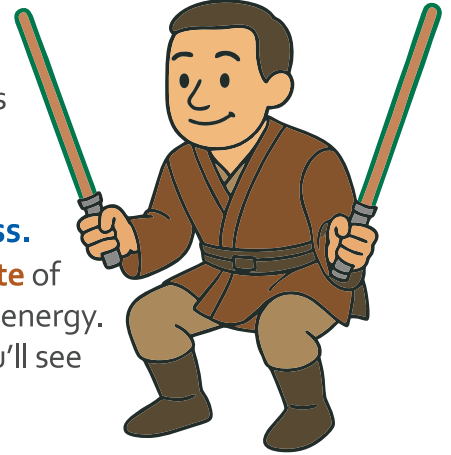


weekly exercise

Exercise Avoidance



Let's be honest. It's hard. And it kinda hurts. Doing the first couple of repetitions is hard, but **getting off your duff** in the first place **is even harder**. Yet it's interesting to realize that *action* - **ANY action** - in the right direction **will generate the energy** and motivation that you need to get started. You just need a **Jedi mind trick** to get the ball rolling. Start by placing the dumbbells next to your bed or where you'll see them every morning & evening.



KAIZEN: The 1-minute Japanese technique to overcome laziness.

When your brain is telling you to put it off, resolve to **do just one minute** of exercise. Once you get going **you will want to do more**. Effort begets energy. Or, you can resolve to do just 30 seconds - or even one single squat. You'll see that it's almost impossible not to do at least a few more.

A Basic Strength Training Routine

You can get away with surprisingly few exercises to cover most of your whole body. Try to do some form or variation on each of the following exercises at least 3 or 4 days per week. Do them **when you wake up** in the morning and **before bed** at night.

Shoot for 3 sets of 10-12 repetitions...



Dumbbell Squats

Squats are one of the single best **whole body** exercises. If you can't do a full squat, do a mini-squat or whatever you can do. Move your arms with the dumbbells for added effect.

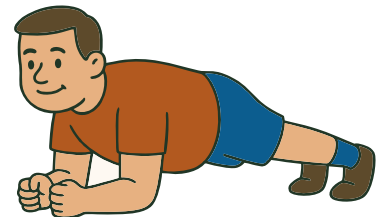
Pushing Movement

Some kind of pushing motion is important. If you can't do push ups, do standing wall push ups. Work your way up to knee push ups and eventually regular push ups.



Core Strength

Core strength is a critical part of overall health. Try planking, crunches, leg lifts or whatever you can to engage your core.



Dead Lifting

If you only do one strength training exercise, make it dead lifting. The weight should be heavy enough so you can only do less than 5 per set.



Upper Body Strength

Work your arms, shoulders, chest and upper back with as large a dumbbell as you can handle. You should only be able to do 10-12 reps before failure. Maybe start with 16 or 18 pound dumbbells.



here's the plan...

✓ On the following pages use the checkboxes shown to the left to mark tasks as done

It's all about the Setup

Success in forming new habits sometimes depends less on willpower and more on environment. When attempting something difficult or unfamiliar, preparing your surroundings in advance can reduce resistance and make follow-through easier.

One example is laying out workout clothes and shoes the night before, significantly increasing the likelihood of exercising in the morning. The presence of these visual cues acts as a gentle nudge, lowering the mental barrier to action.

Small, intentional setups like this help shift decisions from effortful to automatic - making it more likely that the desired behavior will happen, even when motivation is low.



Set up your house for success

Designate a spot in your house that is dedicated to the most important components of your new lifestyle goals...

☐ Blood Glucose Testing Station

In the beginning, you'll test your blood a few times a day. Establish an area to test your blood glucose & ketones. Your kit should include the tester, supplies, small bottle of isopropyl alcohol and some paper towels or wipes. Use a tray to keep everything together.

☐ Throw out all the carbs in your pantry & buy low carb comfort foods

I know. It's crazy talk. But if you're anything like me, and there are carbs in the house, you will eat them. Don't worry, it's not forever. Eventually, you will regain insulin sensitivity and be able to eat carbs in moderation again. But for now, your body needs to detox and heal. **Get rid of all the SUGAR, BREAD, PASTA, RICE, PROCESSED FOODS and SEED OILS** (canola, vegetable, etc). Now go buy some beef jerkey, pork rinds or whatever low carb things you like. (see low carb food list on [page 7](#))



☐ Exercise Station

If you don't already have one, set up whatever exercise area is right for you. I can barely find the room to do jumping jacks in my small house, but I keep some dumbbells next to my bed and do power squats, push ups, etc. the best I can. The dumbbells sitting there remind me to do it.

keeping track of input...

Keep a Food Journal

A food journal is the essential companion to your blood testing. Without it, you won't know why and when your glucose is spiking. Get an app, tell Alexa or just write the time and food on a piece of paper. The main thing is that you compare your glucose readings to the food journal to find out what's causing glucose and insulin spikes.



A simple list is all you need.

DATE	TIME	FOOD	CARBS

Or use a smartphone app

Cronometer — Best overall

- Excellent carb tracking (total and net carbs)
- Tracks protein, fiber, electrolytes, vitamins, and minerals
- Integrates with glucose monitors and fitness devices
- Much more accurate food database than many competitors
- Particularly useful if you're focused on insulin sensitivity, fasting, keto, or diabetes

Carb Manager — Best for low-carb/keto

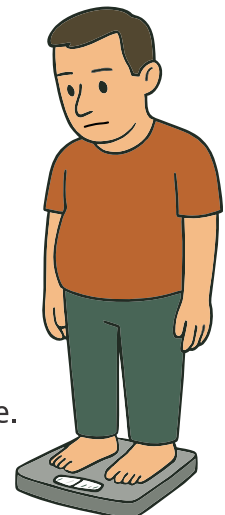
- Very easy carb tracking
- Net carb calculations built in
- Keto-oriented reports and recipes
- Simpler than Cronometer

MyFitnessPal

- Largest food database
- Good if your main goal is general food logging
- Less accurate and less focused on metabolic health metrics

Weigh yourself every day

Your weight is another key metric to gauge your progress. You'll **Check your weight right before your first meal of the day** and keep a log for later reference.



day 1

*So, you remember that whole thing about...
High blood **glucose is bad** & high **ketones are good**?
*Well, this is it. Now we're gonna find out ...**

START TESTING YOUR BLOOD

I recommend the Keto-Mojo testing device—it's one of the few affordable options that accurately measures both blood glucose and ketones. If the idea of finger pricks makes you cringe, don't worry—you'll get used to it. And you **won't have to do it forever**. Once you understand how your body responds, testing becomes occasional. Believe me, the insights you gain from this data are well worth the momentary discomfort.

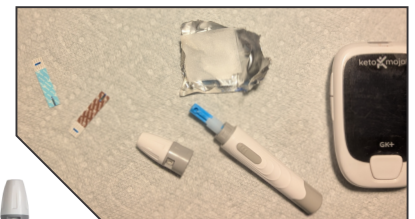


Initial Setup:

- 1) Read the instructions:** No, I'm serious, read the instructions. Set up the gizmo and make sure it has the right day and time.
- 2) Install the Keto-Mojo app:** Track your results and monitor your progress.

☐ **OK, do it...Do it now...**

- 1) Open your kit,** lay down a piece of **paper towel**, get your **alcohol wipe** ready & open **1 blue (ketone)** test strip & **1 brown (glucose)** test strip.
- 2) Insert a fresh needle** in the lancet & **set the depth of the needle**. Start at 3 and go deeper or shallower based on your skin. You just need a **good size drop of blood**.
- 3) Insert brown glucose test strip.** The unit will beep when ready.
- 4) Cock the lancet** by pulling back on its base. Press it against your finger & press the side button to release. Squeeze to express a drop of blood.
- 5) Gently touch the blood drop to the intake slot** of the test strip.
- 6) After countdown, remove glucose strip** and insert **ketone strip**.
- 7) Squeeze out a little more blood & touch it to the ketone strip.**
- 8) After countdown, clean up & sync your phone** app to the device.



You  **Playlist video: "Testing Demonstration with Keto-Mojo.."**

interpret your results

Blood Glucose (Normal Range: 70-140)

Throughout the day, a healthy person's blood glucose levels should generally stay within the range of **70-130 mg/dL**. It will peak after mealtime and is usually lowest early in the morning. **Inflammation & fat storage occur** when levels remain near the top of that range (or higher) for long periods of time.

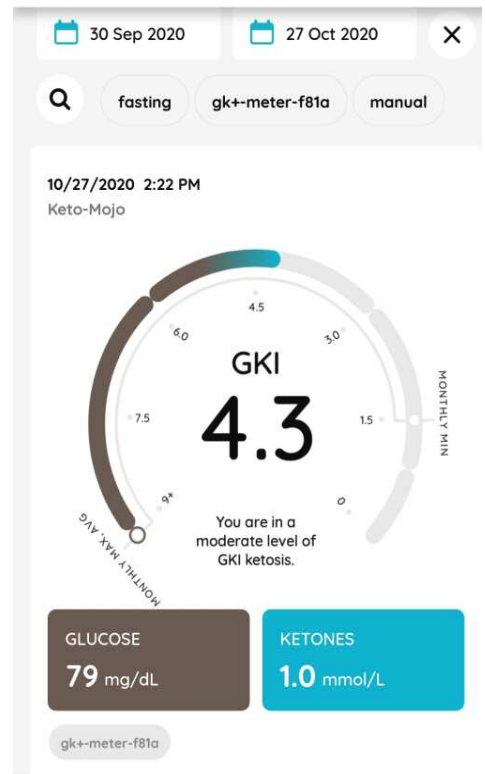
Blood Ketones (Healthy Range: 0.5-3.0)

A healthy person, who limits carb intake or fasts, will typically have blood ketone levels of **0.5 - 3.0 mmol/L**. It will be higher during periods of fasting or with extreme low carb intake.

ALERT!

If your glucose is high, your ketones should be low!

People with diabetes need to be aware that they **should never have high ketones & very high glucose at the same time!** This is a sign of 'diabetic ketoacidosis' a serious medical condition that occurs when your body produces too many ketones, leading to a buildup of acid in the blood. **If your glucose is over 250 and ketones are over 3.0, take your diabetes medication and/or seek medical treatment.**



The only number you really need...

The **Glucose Ketone Index (GKI)** is a simple number that shows how well your body is balancing sugar & ketones in your blood. It's like **a score for your metabolic health**. The **Keto-Mojo app will calculate it for you**.

A **lower GKI** (like 2-6) means your body is using fat for energy and keeping blood sugar in check, which is great for staying healthy or managing type 2 diabetes. A **higher GKI** means more sugar and less fat-burning.

Try to keep your GKI under 6.0. The lower, the better.

GKI Glucose Ketone Index		GKI Calculation	
		$\text{GKI} = \frac{\text{Blood Glucose} \div 18}{\text{Ketone Reading}}$	
<1	2-3	3-6	>6
Deepest State of Ketosis	High State of Ketosis	Mild Ketosis	Not In Ketosis
Prolonged fast or strict therapeutic keto drives near-total ketone use, autophagy & inflammation while aiding cancer, epilepsy, & neuro-degeneration.	Efficient fat-burning with steady glucose; boosts mental clarity, fat loss, & insulin sensitivity. Sustainable for daily living.	Typical of low-carb meals or short fasts; supports weight control, curbs appetite, and builds metabolic flexibility.	Glucose-dominant state common on high-carb diets; minimal ketone benefit & often linked to insulin resistance. Fat storage mode.

■ Eat your normal diet

Do what you normally do and eat what you normally eat. We need a baseline. We need to observe the state of your metabolism and how it reacts to high glycemic foods.

- **Start getting rid of all the refined carbs in your pantry**

No one likes to be wasteful, but the temptation needs to go in preparation for the Keto diet. Either eat it now or toss it out.

■ Test your blood 2-4 times a day

It's a lot, I know. Who likes to poke a hole in their finger a couple of times a day? But **it's only for a few weeks** while you retrain your body and develop new habits. Set up your station and put it close to your favorite chair. It needs to be out where you see it.

- **First thing in the morning** (before coffee or tea)

If taken after 12 hours fasting, this is your '**fasting blood glucose**'. This reading will tell you how well your body has removed excess blood glucose overnight. A healthy reading is **below 99 mg/dL**. **Do this reading every day.**

- **After lunch** (20 min after eating)

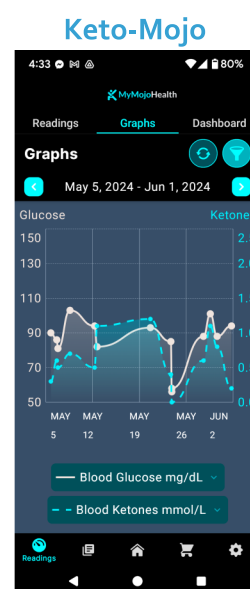
This reading is a good measure for your peak daytime glucose level. This is when inflammation and fat storage are at their highest. Do this every day.

- **Before Dinner**

This reading is a good measure for your average daytime glucose level.

- **Bedtime**

A useful peak glucose reading. Compare to the next morning's reading to establish an upper and lower range.



Continuous Glucose Monitors

CGM's are all the rage right now because they give you higher resolution, continuous data without the daily jabs. They last for 2 weeks and save you the daily finger jabs. CGM's are getting popular with non-diabetics as a tool to optimize their metabolism. Cheapest ones are about \$100/month. Diabetics can usually get insurance coverage.



■ Start a food journal

You need to see how your daily blood readings correlate with your food intake. Without this context, you won't be able to tell what part of your diet are causing issues. See example journal on page 18.

■ Practice counting "net" carbs

You need to see how your daily blood readings correlate with your food intake. Without this context, you won't be able to tell what part of your diet are causing issues. **See carb counting on page 7.** Even though you're not cutting the carbs just yet, you will want to **develop this skill** to you can gauge the net carb content of most foods without looking it up.

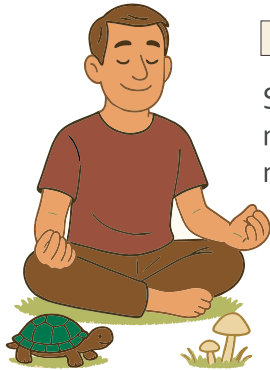
Go shopping for Keto

It's time to learn to love low glycemic foods. Try to have fun with it. Watch some Keto recipe videos. Use your culinary skills to keep it interesting. Check the food list on page 7 and sample meals in the following pages. When you find processed "Keto Friendly" snack foods, be very suspicious and always check the carb count on the label. Now make a run to the grocery store. **Do it today.**



Begin Keto Diet

At first, you'll be very strict about maintaining **under 30 grams of Net Carbs per day**. After your body becomes fat adapted, and insulin sensitivity returns, you can try carb cycling. [See page 26.](#)



Prepare your brain for fasting

Start thinking about what it's like to not eat when you are hungry. Postpone a meal for an hour or two and focus on being "OK with it". Skip some of your normal snacks and make note of how you feel. Drink some water to fill your belly. Avail yourself of the numerous Youtube videos on the subject of fasting, and start with the ones on the playlist for this guide. Fasting is much easier when you eat a low carb diet because your body fat adapted. That's why we'll let your body adjust to low carb for a couple of weeks before testing the waters with intermittent fasting - and eventually longer fasts.

Start modest daily exercise

We all fall off the exercise wagon. It's easy being off the wagon - and it's actually easy being on the wagon too. The hard part is catching up to the wagon after you fall off. That's why it's helpful to focus our efforts on improving the catching up to the wagon part.



Keep testing & Stay in touch!

Share your status daily. Get feedback from your friends. We all need social pressure from time to time. A little kick in the pants when we're lazy - or someone to brag to when we're kicking ass. I'm working on an app to serve this function, but in the meantime, use whatever social media you have to build a circle of like minded friends for mutual support. Facebook groups or just plain text messages will work just fine.

the power of good sleep

■ Optimize your sleep patterns

When it comes to transforming your health, nothing replaces good sleep. You can eat perfectly, fast like a pro, and exercise daily—but if your sleep is broken, your metabolism never truly heals. zzz

During deep sleep, your body shifts into repair mode. Growth hormone surges. Insulin sensitivity improves. Cortisol levels drop. Your brain flushes out toxins, and your cells reset their internal clocks. This is when your metabolism gets fine-tuned for fat burning, stable blood sugar, and long-term health.



Poor sleep, on the other hand, spikes cravings, raises blood sugar, and drives fat storage—even if you're doing everything else "right." Just one night of bad sleep can make your body act pre-diabetic the next day. It's that powerful.

Want better sleep & a sharper metabolism?



Stick to a **consistent bedtime** and wake-up time—even on weekends. Your body craves rhythm.



Avoid caffeine after noon—even if you think it “doesn’t affect you.”



Say **no to daytime naps**—they confuse your sleep-wake cycle and delay nighttime sleep pressure.



Limit screens an hour before bed. The blue light tricks your brain into staying alert.



Keep your room **cool, dark, and quiet**. Treat it like a cave: a sanctuary for deep restoration.



Get **sunlight first thing in the morning**. This resets your circadian rhythm for better sleep at night.

This resets your circadian rhythm for better sleep at night. Prioritize sleep like your life depends on it—because in many ways, it does. Metabolic healing starts the moment your head hits the pillow. So sleep like a champion, and let your body do the rest.

You  **Playlist video:**

"The impact of Sleep on Lifespan & Healthspan", Peter Attia, MD & Matt Walker, Phd

week 3-4

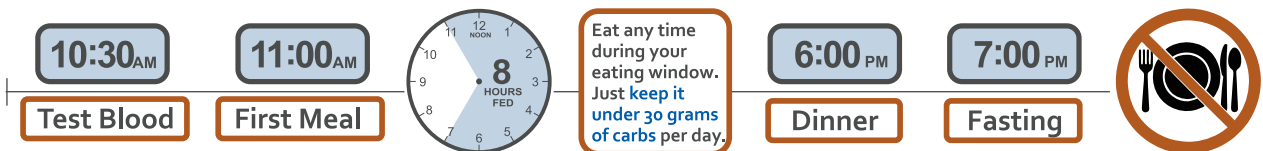
Keep testing your blood (Get a CGM?)

Getting you know your glucose spikes and patterns is essential for optimizing your metabolic health. You will want to see how your body responds to fasting and specific foods. If stabbing yourself in the finger 3 times per day, is getting tiresome, order a continuous glucose monitor. You'll be glad you did.



Begin Intermittent fasting (16/8)

Lets start with the easiest form of intermittent fasting - **16 hours of fasting** with a **8 hour eating window**. It basically means skipping breakfast. The goal is to prepare your body for longer term fasting. It is absolutely critical to avoid any calories whatsoever during fasting hours.



Test your blood glucose right **before your first meal** of the day. This is your “fasting blood glucose” a key metric of your metabolic health. It tells you how well your body got rid of the sugar overnight. A reading of **<98** is **normal**. **99 to 125** is **pre-diabetes**. **Over 126** indicates **diabetes**.

Fasting Tips

Bulletproof Coffee is popular in fat-fasting protocols, where the goal is to maintain ketosis and metabolic benefits while easing hunger and improving compliance. It adds **butter & MCT Oil** which helps keep you satiated. It's best used in longer fasts or as a morning ritual in time-restricted eating (like 16:8 or 18:6), especially for those easing into fasting.



Drink Water! Lots of Water. And don't just sip it. Drink enough to fill your belly. The effect will last 20 or 30 minutes. If you are still hungry, drink another glass. You will piss like a racehorse, but it will get you through the hunger waves. Also, try sparkling water (flavored is fine). The bubbles will help satiate you. When you drink coffee in the morning, add a teaspoon of olive oil to coat your stomach and ease the hunger.



Hunger comes in waves - but it always passes. Our bodies produce the hormone **Ghrelin** in sync with our daily circadian rhythm. So you will feel hungry around the time you normally eat. If you resist the urge to eat, the grehlin will subside and the **hunger will go away** after a while. It will take a week or two of intermittent fasting for you body to adjust. After that, you will no longer feel hungry in the mornings.

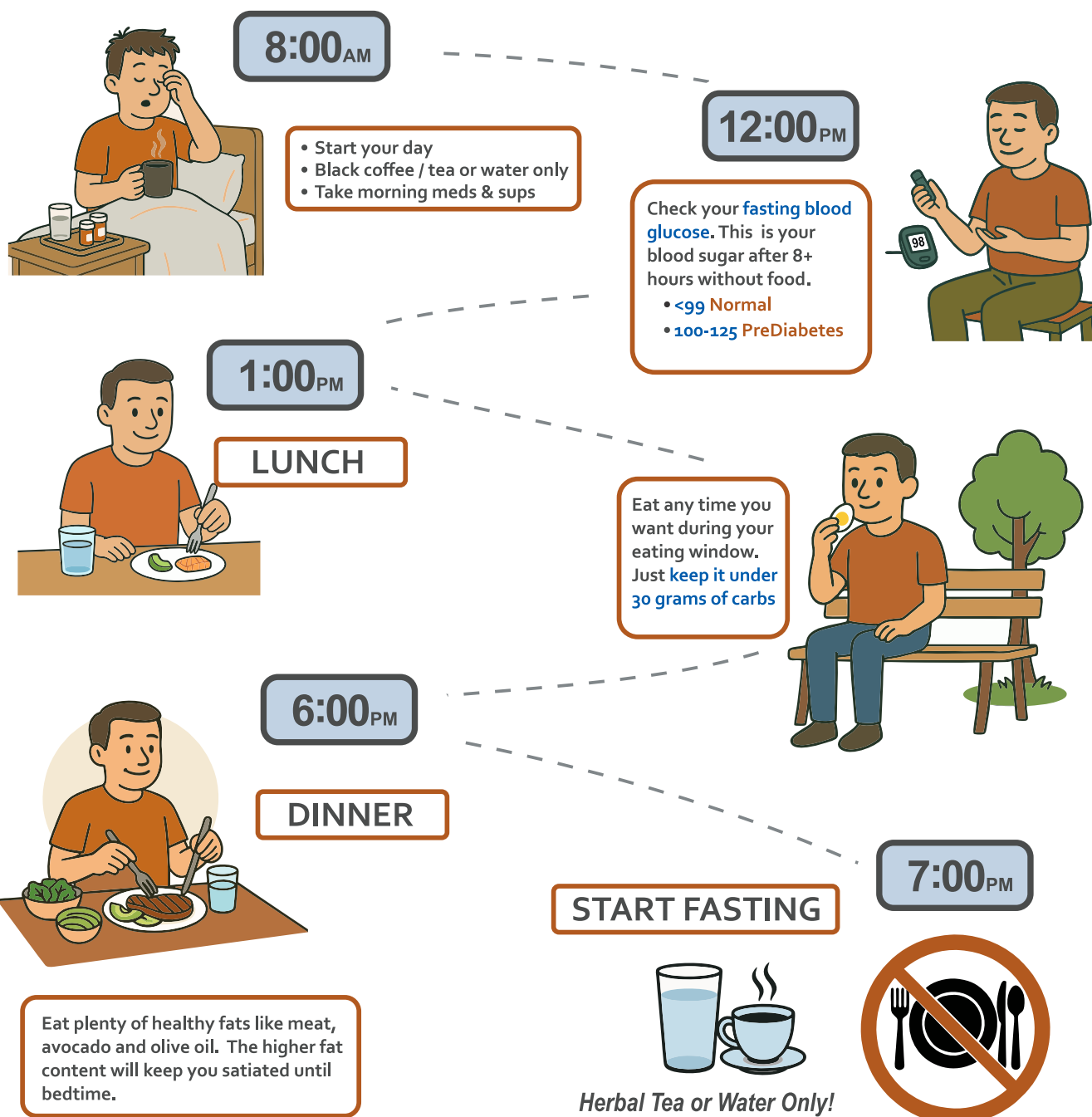


kick it up a notch

Step up to 18:6 fasting

18:6 is often considered the minimum fasting duration for metabolic “therapy” - meaning you're not just skipping breakfast; you're engaging biological processes that improve health at the cellular level.

Remember that more aggressive fasting is not for everyone. Women of child bearing age (p.16) and people cortisol dysregulation benefit more from less aggressive fasting like 14:10. Most people should not fast aggressively on an ongoing basis. Use aggressive fasting as a periodic tool to keep your metabolism flexible and healthy.



weekly carb cycling

Own the Week. Master Your Metabolism.

This isn't just a meal schedule—it's a metabolic strategy. Each day has a purpose. You'll dip into deep ketosis, then push through powerful fasts, and strategically reintroduce carbs to keep your hormones balanced.

Start the week strong with extended fasting and fat-burning. Rebuild and refuel midweek with clean keto and healthy carbs. By Friday, enjoy the freedom to indulge—guilt-free—knowing your body is primed to handle it. Then reset and recover, ready to do it again.

You're not just eating differently. You're training your body to thrive.

CARB CYCLING WEEK

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Early Keto Brunch Fast after Lunch	Fast until Dinner Carnivore Dinner	18:6 I.F. Keto	18:6 I.F. Keto	18:6 I.F. Keto	18:6 I.F. Light Carbs	Eat Whatever You Want Party Night
  	  	 	 			
36 hour fast to make up for party night Break fast with zero carb dinner to extend deep ketosis		Intermittent fasting Under 30 grams carbs per day Stay in moderate ketosis			Under 80 grams carbs per day Replenish glycogen	Party like there's no tomorrow Replenish glycogen

Rinse & Repeat

It's all about the hours or days "in a row"

Stack the Wins

In metabolic health, consistency beats intensity. One hour of fasting is good—but hours in a row is where the magic happens. That's when your insulin drops, your body taps into stored fat, and real healing begins. But it only works if you stay in that state. A single bite can reset the clock and shut the door on all the progress you've made.

That's why this plan is built around streaks—**consecutive hours of fasting**, and **consecutive days of ketosis**. We don't scatter cheat meals or random carbs throughout the week. We cluster them at the end, giving your body time to go deep into fat-burning mode and stay there. Fewer interruptions. Longer adaptation. More control.

Every clean hour, every clean day, is like stacking bricks. Keep stacking. Don't knock them over midweek—build your wall, then step back and enjoy the view.

your first extended fast

How Low Can You Go?

This is a **personal challenge** to enter deep ketosis and **unlock the healing power** of a multi-day fast. Not to lose weight (you will). Not to impress anyone (well, maybe a little). But to see how far you can push your body—and your mind—into a state of deep healing. This is about testing your limits, tapping into ancient biology, and using one simple number as your guide: the **Glucose Ketone Index (GKI)**.

Your goal: Get your GKI into the therapeutic zone—a metabolic sweet spot where powerful anti-inflammatory, immune-regulating, and even cancer-suppressing processes begin to activate. This is not just about skipping meals—this is about transforming your internal environment.

You'll be hungry. You'll be tempted. But you'll also be curious. What happens when your body switches over to its cleanest, most efficient fuel? What does it feel like to run on ketones instead of sugar? Let's find out.

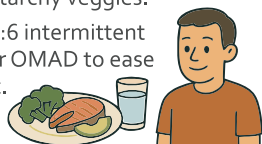
Your Mission: Fast for multiple days—consuming only water, electrolytes, and black coffee or tea if needed—and **track your GKI** as it drops.

The Mind Game: The hardest part is not physical. It's psychological. You'll face boredom, cravings, even fear. But this is where the transformation begins. Every hour you fast, you're telling your body, "I've got this." And every GKI reading is proof that something extraordinary is happening under the surface.

Step-by-step guide to crushing this fast

1. Prep the Battlefield (1–3 Days Before)

- Eliminate sugar, starches, grains, and alcohol.
- Eat fatty meals with protein & non-starchy veggies.
- Do 18:6 intermittent fast or OMAD to ease into it.



2. Stock your Arsenal

- Water (lots of it)
- Electrolytes (sodium, potassium, magnesium)
- Blood glucose/ketone meter
- A notebook or app to track readings and symptoms
- Light activity only.



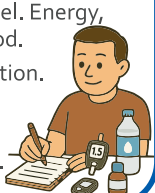
3. Launch the Fast (Day 1)

- Start your timer. You're officially fasting.
- Take baseline GKI readings
- Hydrate and rest. Ride out the first hunger wave.
- Watch YouTube fasting videos



4. Track and adapt (Day 2+)

- Morning and evening GKI readings.
- Journal how you feel. Energy, focus, hunger, mood.
- Don't chase perfection. Chase progress.
- Stay in touch with friends for support.



5. Hit the Zone (Day 3+)

- Watch for the magic: higher ketones, lower glucose.
- Enjoy the euphoria.
- If your GKI hits below 3, you're already in deep ketosis.
- You're in elite territory.



6. Know when to land

- Listen to your body. If you're weak or dizzy despite electrolytes, it may be time to refeed.
- When you're ready to break the fast, do it gently: Bone broth, lean meat & eggs.
- You did it!!



Refer to Page 20 to evaluate your GKI

supplements

Supplements alone won't solve insulin resistance, but with fasting and diet, they can enhance your efforts.

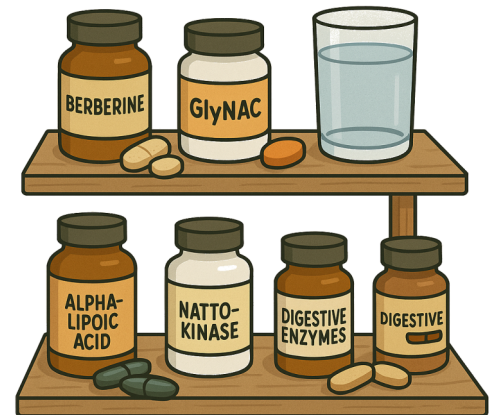
Get tested for Vitamins

Before throwing a bunch of supplement at the problem, it's a good idea to get tested for deficiencies. Most critical for insulin resistance is vitamin D. But you might as well check your B12 and all the other vitamins while you are at it. If you haven't been tested recently, get an updated blood analysis.

Supplements to consider...

1. Berberine

- **What it is:** A plant alkaloid found in several herbs (e.g., *Berberis* species).
- **Mechanism:** Activates AMPK (like metformin), reduces hepatic glucose production, improves insulin sensitivity.
- **Evidence:** Shown to reduce HbA1c by ~0.9–.5% in T2D patients. Comparable glucose-lowering effect to **metformin**, with fewer side effects in some trials.
- **Typical Dose:** 500 mg **2–x/day** (with meals).
- **Caution:** May cause GI upset; avoid with cyclosporine or anticoagulants.



2. GlyNAC (Glycine + N-Acetylcysteine)

- **What it is:** A combination that boosts intracellular **glutathione**, a key antioxidant.
- **Mechanism:** Reduces oxidative stress, mitochondrial dysfunction, and insulin resistance.
- **Evidence:** Small human studies showed **improved insulin sensitivity, mitochondrial function, and body composition** in older adults and people with metabolic syndrome.
- **Typical Dose:** Glycine 1.2–g + NAC 600–200 mg, **1–x/day**.
- **Caution:** NAC may thin mucus and affect clotting; use with caution in those on blood thinners.

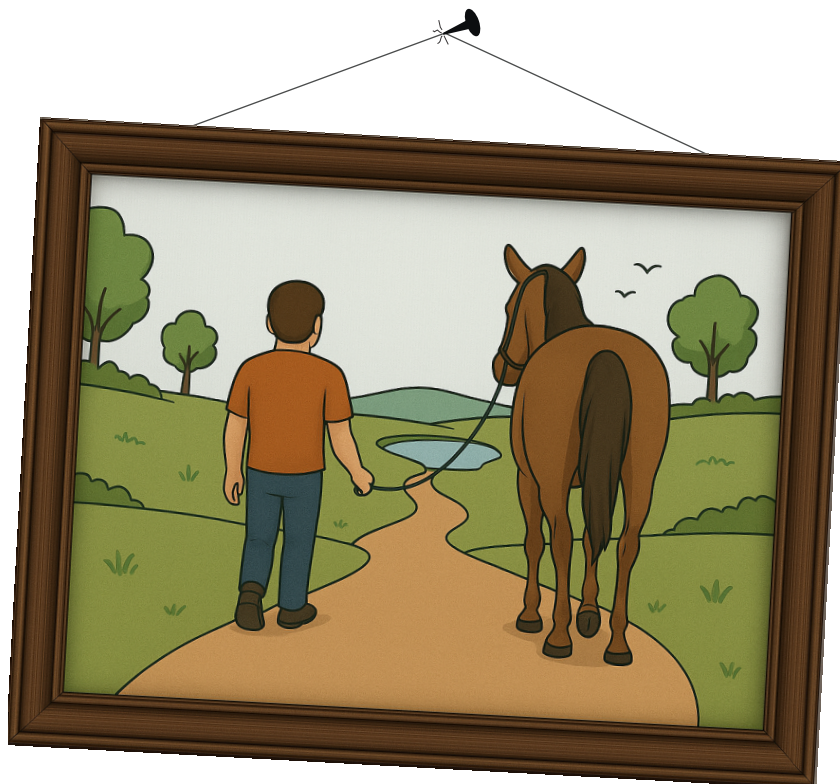
3. Alpha-Lipoic Acid (ALA)

- **What it is:** An antioxidant involved in mitochondrial energy metabolism.
- **Mechanism:** Improves insulin sensitivity, reduces oxidative stress, and enhances glucose uptake in cells.
- **Evidence:** Reduces fasting glucose and improves insulin sensitivity in T2D and metabolic syndrome. Shown to reduce symptoms of diabetic neuropathy.
- **Typical Dose:** 300–600 mg/day (R-ALA form is more bioavailable).
- **Caution:** May lower blood sugar too much in combination with meds.

5. Resveratrol

- **What it is:** A polyphenol found in red wine, grapes, etc.
- **Mechanism:** Activates sirtuins and AMPK, improves insulin sensitivity.
- **Evidence:** Shown to improve glucose metabolism in some trials.
- **Typical Dose:** 100–500 mg/day.
- **Caution:** Limited bioavailability. Mild effect—may be better as a longevity compound than a glucose-regulator.

to be continued



They say you can lead a horse to water...

Well, I found an awesome water hole and I'm dying to show you the way. Human behavior is ruled by inertia. Changing direction takes energy and resolve and some support. The body craves comfort, especially in the moment. There's a part of the brain that whispers when we're most vulnerable - telling us to wait, to delay, to try again tomorrow.

But there's another part - the rational, forward thinking mind - that can win. It takes practice and persistence. And even a little faith. One day at a time.

Take the first step today. Your body will respond faster than you think. It's wired to adapt when given a reason. Push it - gently, consistently - and it will change. Don't let another day pass you by.

And expect failure. Don't fear it. It's the best way to grow and evolve. Learn, adapt and try again. Every day.

This guide is a first draft. And the science of human health evolves daily. I'll probably never stop futzing with it. But I don't want to let perfect be the enemy of good enough. So use it to get started and start browsing the accompanying Youtube list to do your own deep dives.

I hope you can connect with someone who can walk this path with you. Join our under-used Facebook group or just stay in touch with people who care and will support you. Don't hesitate to contact me if you need anything.

Your friend always...

- Jack



About the Author

Jack Coletti is not a doctor, nutritionist, or certified anything (unless you count certifiably obsessed with metabolic health). By day, he creates and installs artful boat names and by night, he plays obscure folk tunes on a ukulele while trying to convince his friends that skipping breakfast is a legitimate lifestyle.

Jack decided the world needed a metabolic health guide written by someone with absolutely no medical credentials, but plenty of enthusiasm and a love of learning. This book is his attempt to encapsulate years of study into a low resolution, yet well rounded health guide with clear explanations of the problem and actionable "how to" examples to get you going in the right direction.

Project Contributions:

Venmo: @Midnight-Oil-Workshop
Zelle: Midnightoilworkshop@gmail.com
Cash App: \$MidnightOilWorkshop