

THE BIG IDEAS



Ketotarian: Defined

A ketogenic plant-based rock star.

Sugar vs. Fat

One is a much better fuel source.

Mitochondria

Making or breaking.

Plants

They do a body good!

Ketotarian Land

Your road map to awesome.



Ketotarian

The (Mostly) Plant-Based Plan to Burn Fat, Boost Your Energy, Crush Your Cravings, and Calm Inflammation

BY WILL COLE · AVERY © 2018 · 304 PAGES

"Ketotarian will show you the clear path of exactly how to use food as medicine and optimize every system in your body. Your brain, hormones, and metabolism will thrive in the Ketotarian state.

You may be thinking that's a bold statement, but as a leading functional medicine practitioner, rated as one of the top in the country, I have seen thousands of patients from around the world. I have seen what works and what doesn't when it comes to the foods we eat. And I've distilled my years of clinical experience, using the power of delicious food medicine, in the pages of this book. ...

It's time to dump diet dogma and food fads for good. What really works—and what really doesn't—for your health?

Ketotarian marries the best of low-carb diets and a plant-based way of eating, while avoiding the common pitfalls that I have seen countless well-intentioned people make with both these diets. The Ketotarian way of eating brings together healthy plant-based fats, clean proteins, and the rich, vibrant colors of nutrient-dense vegetables."

~ Will Cole from *Ketotarian*

Will Cole is a functional medicine practitioner who has helped thousands of clients from around the world. He's also the Cohost of *Keto Talk* and a popular contributor to MindBodyGreen. (Find him online [here](#).)

In this book, he asks: "Curious about a ketogenic diet but turned off by all the meat and dairy?"

If so, he says, perhaps you'd like to become a "Ketotarian." :)

We'll define what it means to be Ketotarian in the first Big Idea but imagine combining the best of a low-carb approach with the best of a plant-based approach—while dropping the things that *don't* work in both approaches.

Or, as Will puts it, think of "a plant-based program that provides all the health and weight-loss benefits of keto diets" while welcoming "vegetarians, vegans and pescatarians to the table."

If that sounds like fun, I think you'll dig the book. In many ways, it's kinda like a plant-based version of Mark Sisson's *The Keto Reset Diet*. (Get a copy [here](#).)

It's packed with Big Ideas and I'm excited to share some of my favorites so let's jump straight in!

KETOTARIAN: DEFINED

"Ketotarian [kee-toe-tair-ee-uhn]

noun

A ketogenic plant-based rock star.

"It's time to dump diet dogma and food fads for good. What really works—and what really doesn't—for your health?"

~ Will Cole

" Around 99 percent of our genes were formed before the development of agriculture and the consumption of grains like wheat, around ten thousand years ago."

~ Will Cole

adjective

1. The amalgamation of delicious healthy fats and vegetable meals to optimize your metabolism, brain, hormones and overall health.
2. Switching your metabolism from burning sugar to burning fat—that is, freedom from food cravings."

There ya go.

Ketotarian defined. :)

Note: Lots of healthy fats and veggies + switching your metabolism from burning sugar to burning fat. Let's take a deeper look at that, shall we?

SUGAR VS. FAT

"Bottom line: making our brain and body work properly requires a lot of energy. And from a biological perspective, the most sustainable form of energy for optimal brain health is good fats.

A ketogenic state is the true natural state for the human body. In the pages that follow, you will learn how to reprogram your metabolism. Like a factory reset, you can shift from sugar-burning back to fat-burning, the way your body was designed to operate.

Fat, in terms of energy to your body, is like a log in the fire, slow-burning and long-lasting. The typical pick-me-up foods of grains and sugar are like kindling, a quick burst of intense flame that dies out, leaving behind nothing but smoke. This means that becoming fat- or keto-adapted not only gives you sustainable energy throughout the day for your brain and metabolism but also crushes food cravings. Insatiable, intense food cravings are one of the top reasons that most diets fail. This is not an issue for the Ketotarian."

Some quick questions.

Are you kinda sorta always hungry? Do your energy levels fluctuate throughout the day and do you get a bit *hangry* when you're hungry? (lol)

That was the story of my life when I followed a low-fat diet. It was astonishing how my energy levels (and afternoon moods!) stabilized when I introduced more fat into my diet and then progressively shifted from burning sugar for fuel to fat for fuel.

(Side note: Will was a low-fat vegan for years as well.)

David Ludwig wrote a whole book on the subject called *Always Hungry?* (Check out those Notes for more.)

All the "burn fat for fuel!"/ketogenic advocates tell us that a) we didn't evolve to have food at our fingertips every second of every day and, therefore, *had* to have a source of energy independent of a constant drip of carbs (aka ketones!) and b) we DEFINITELY didn't used to have so much sugar and processed carbs (Will says that most vegans and vegetarians could more accurately be called "carbatarians" who live on "bread, pasta, beans, and vegan sweets all in the name of living green"). As a result, we're inefficiently producing energy for our bodies.

Enter, Chapter #1 which is focused on: "*Keto principle #1: shift from sugar to fat to fuel your body more powerfully.*"

Will tells us: "*Most people walking around today are burning carbohydrates (sugar) for their energy. Breaking down carbs into glucose is the simplest energy source, and insulin is there to help carry away the glucose around your bloodstream throughout your body. And because high blood sugar is toxic, it is your body's priority to use the sugar 'kindling' whenever it is around. The sugar your body doesn't burn is stored as fat around your liver and stomach and as circulating fat (triglycerides).*"

" Today the average American eats and drinks around 130 pounds of added sugar every year, adding up to an astounding 3,550 pounds in a lifetime. That's equal to eating 1.7 million Skittles or an industrial-sized Dumpster full of sugar. Dang, that's a lot of sugar, y'all"

~ Will Cole

"The keto diet isn't about starving your body of food—it's about allowing your body to be in a better metabolic state. Think of ketosis as converting your metabolism from a gasoline-burning to a hybrid engine, using fuel more efficiently."

~ Will Cole

But as proponents of keto eating can attest, there is another way. Instead of burning sugar, burning fat is a more efficient fuel source for your metabolism. When you lower your carbohydrates, it lowers your blood sugar and insulin levels. As insulin levels normalize and energy is needed, fatty acids flow from the fat cells into the bloodstream and are metabolized by your body in a process called beta-oxidation."

As I mentioned in the intro, in many ways this book reminds me of a super-simple vegetarian/vegan version of Mark Sisson's *The Keto Reset Diet*.

Here's how Mark uses a similar metaphor of logs to sticks to compare fats and sugars for fuel: *"The reason glucose burning generates more free radicals is that, unlike fat and ketones, glucose doesn't require oxygen to burn. When you burn glucose without oxygen, you bypass the protective benefits of mitochondria, the energy-producing power plants located inside each cell. The more mitochondria you have and the better they work, the more protection you have against free radicals when you burn calories. You can consider fat and ketones the big logs in a campfire. Heat them up carefully and they keep you warm for hours—not much smoke. Glucose is like kindling—burning quickly with lots of smoke. Thus, if your metabolic machinery is carbohydrate dependent (because you consume too many carbs and produce too much insulin—which keeps body fat locked away in storage), you don't have the big logs to burn, instead having to continually stoke your fire with twigs—that is, eating regular high-carbohydrate meals and snacks to prop sagging blood sugar levels."*

So...

Again, how's your energy?

Are you burning fat for fuel or sugar for fuel?

If you're currently a sugar/carb burning machine and you have a feeling you can Optimize your energy a bit more, are you open to making a switch?

MITOCHONDRIA: MAKING OR BREAKING

"Your body needs some form of fuel in order to produce energy. Most people are used to all the carbs with big plates of pasta or munching on granola bars to get that boost. No one will argue that sugar doesn't give a quick boost, but it will also leave you crashing later.

Ketosis takes us back to our cellular DNA roots—back to what our natural state is supposed to be. As babies, we relied on fat in the form of breast milk for energy and development, with no refined grain sugar or in sight. We begin life in ketosis and slowly move away from it, influenced by our culture's highly processed, sugary offerings.

Mitochondria are the powerhouses of your body's cells. Their main responsibility is cellular respiration—that is, they take in nutrients, such as glucose, and break them down to turn into energy.

Adenosine triphosphate (ATP) is a molecule used by your cells for energy, and it is produced by metabolizing food. One unit of sugar produces thirty-six ATP molecules, whereas one unit of fat produces forty-eight ATP molecules. In short, fat provides us with more energy than sugar. In fact, a ketogenic diet has been shown to increase mitochondria biogenesis, or the making of new mitochondria."

Want great, sustainable energy? Take care of your mitochondria.

As we've discussed, these little energy-making powerhouses are SUPER important.

Let's make a note of the fact that *"a ketogenic diet has been shown to increase mitochondria biogenesis, or the making of new mitochondria"* <- THAT, is a very good thing.

"Healthy fat is essential for optimal brain health, as your brain itself is composed of about 60 percent fat, so depriving your body of fat can contribute to brain fog, fatigue, depression, and anxiety."

~ Will Cole

"Exciting emerging science is showing that a ketogenic diet can be more powerful than some of the strongest medications for brain-related problems."

~ Will Cole

You know what else builds up your mitochondria? Aerobic exercise.

Here's how Phil Maffetone puts it in [The Big Book of Endurance Training and Racing](#): "In the human body, most muscles are made of a combination of aerobic and anaerobic fibers (the exceptions are some of the jaw muscles that are all anaerobic). The aerobic fibers are uniquely different from their anaerobic counterparts. Aerobic fibers are sometimes called 'red' because they contain structures called mitochondria, which contains the iron-protein, red-pigmented compound myoglobin. It is here, through myoglobin's action in the mitochondria, that oxygen is successfully used in the energy-generating process. The more these muscles are trained, the more mitochondria and myoglobin is produced, and the more oxygen will be utilized to help produce energy. The fuel for the mitochondria's powerful endurance energy is fat."

Fascinating.

Aerobic muscles are where we find all of our mitochondria and aerobic muscles use FAT for fuel. (I love it when Ideas come together. :)

As we discussed on our series of Notes on Phil's endurance wisdom, he's ALL about switching from sugar to fat for fuel. Get this: "If you want to achieve optimal endurance, then you need to burn more fat. It's that simple. Your body has plenty of fat stores, where most of the fat you eat is first deposited. This stored fat, even the small amounts in super-lean athletes, represents a tremendous reserve of potential energy. For example, an endurance runner who is six feet tall and weighs 150 pounds has enough potential energy stores from his fat stores to power a run for over 100 hours. Trying to obtain more energy from sugar won't come close to that feat."

Phil has a handy-dandy [2-Week Test](#) to help us make the switch. And, if you're not quite ready to go all in on the fat-burning experiment, how about following his #1 tip: "Of all the patients I've treated for serious illness, all the fitness problems encountered in a wide variety of athletes, couch potatoes and everyone in between, the single recommendation that helped more people the most—probably more than all other therapies combined—has been the elimination of sugar. In fact, this seemingly simple, single recommendation can dramatically improve your health, reduce body fat, and increase performance literally overnight. Eliminate sugar today and you can be significantly better tomorrow."

Why would eliminating sugar TODAY help you feel significantly better TOMORROW?

Well... One big reason is that your little energy powerhouses (mitochondria!!!) will be able to do their jobs better.

P.S. That's from a chapter on the pros (and cons!) of the ketogenic diet.

Super quick recap: Ketogenic diets have been shown to do a lot of good. But you've gotta do it right. Will does a great job of balancing what works and what doesn't.

The "potential problems" with the ketogenic diet?

First: Emphasizing "macronutrients over quality." In the quest to make sure the fat/carb/protein balance is leading to ketosis, it's easy to ignore the QUALITY of the food one eats. Enter: conventional (aka factory-farmed!) dairy and meat products as well as artificial sweeteners and other junk food that isn't healthy.

Plus: Will says that it's easy to consume too much dairy and actually avoid plant foods—which is not a good idea and the focus of our next Idea...

PLANTS: THEY DO A BODY GOOD!

"The last thing we need is another quick-fix detox. Instead, we need to make our lives a cleanse—and plants are just what your body ordered. Plants have developed powerful detoxification mechanisms of their own. Certain antioxidant phytonutrients, phytochelatins, and

"Studies have shown that intermittent fasting could significantly bring down markers of inflammation. In fact, research is showing a few fascinating ways that intermittent fasting calms different types of inflammation and mTOR (a pro-cancer pathway) while increasing autophagy (cell cleaning and recycling) and the AMPK and Nrf2 pathways (disease-fighting pathways)."

~ Will Cole

"The last thing we need is another quick-fix detox. Instead, we need to make our lives a cleanse-and plants are just what the doctor ordered."
~ Will Cole

metallothioneins are considered heavy-metal binders that help to protect plants from the effects of these toxins, and by consuming these plant sources they can protect you as well. One study found a dramatic increase in metallothioneins (a powerful detoxifier) production in women who increased their consumption of phytonutrient-dense foods, such as the green leafy vegetable watercress.

Some of the most powerful phytochelatin antioxidants are sea vegetables like chlorella and spirulina and herbs such as parsley and cilantro (as if you need another reason to indulge in a cilantro-topped taco bowl! Pass some healthy-fat-loaded guacamole as well!).

Onions, broccoli, broccoli sprouts, Brussels sprouts, cabbage, cauliflower, and mushrooms all support methylation detox pathways. By bringing these foods into your diet on a regular basis, you are supporting detox and naturally making your life a cleanse.

Folate, another essential vitamin needed for healthy methylation pathways, can be found in dark leafy greens like kale, collards, spinach, and chard."

Now that we've covered the pros (and cons!) of ketogenic diets, it's time to talk about plants!!

Again, what makes this book so great is the fact that it takes a really smart, non-dogmatic (!!!) look at the best of BOTH the ketogenic and plant-based worlds.

And, very importantly, Will gives us a really smart, non-dogmatic (!!!) look at the WORST of both the ketogenic and plant-based worlds. :)

So...

Plants.

From reducing inflammation, enhancing microbiome health, reducing asthma, lowering blood sugar, preventing and fighting cancer, they do a body good!! Like, a lot of good.

Where do plant-based diets go wrong?

Will makes the important distinction that a lot of passionate plant-based people become "carbatarians" and "inflammatarians."

He says: *"The average vegan or vegetarian often fills up with carbohydrates and packaged processed food. Sadly, the food industry has taken the plant out of the plant-based diet."*

All those grains could be doing our body bad—from gluten sensitivities to lectins and phytates (mild toxins/antinutrients paper cutting your gut all day every day if you're eating a ton of grains).

"Ninety-five percent of your happy neurotransmitter serotonin is produced and stored in your gut, so you can't argue that your gut doesn't influence the health of your brain."

~ Will Cole

More wisdom from Will: *"It's important to remember that grains today are not what they were in the past. With crossbreeding and genetic modification, grains are chemically different today than they were even a few decades ago. A common argument for eating grains is to get in an adequate amount of fiber. However, vegetables offer ample amounts of fiber (not to mention a whole slew of other nutrients) without the number of offenses to your gut, brain, immune system, and hormones."*

One more time, enter: Ketotarian.

The best of both the ketogenic and plant-based worlds. :)

WELCOME TO KETOTARIAN LAND

"Welcome to Ketotarian Land. This is where we dig into all the delicious, nutrient-dense, filling foods you get to eat on your plant-centric ketogenic plan. Forget survival—this is your thrival guide.

Remember:

"Ketotarianism transcends dogma, beyond shame and dieting rules and fine print. This is the new age of eating."

~ Will Cole

60-75 percent of your calories should come from fat (but it can be more!)

15-30 percent of your calories from protein

5-15 percent of your calories from carbohydrates

In the beginning of your Ketotarian journey, as the body is becoming fat-adapted, most people do best by eating somewhere between 25 and 55 grams of net carbs daily. Net carbs are just total carbs minus fiber and sugar alcohols like xylitol."

There's the roadmap to Ketotarian Land.

Mostly (healthy) fat. Moderate protein. Limited carbs.

You can do that vegan or vegetarian or with a little bit of animal protein. (Will provides some super-helpful tips on how to make sure you're getting all the nutrients you need if you go vegan.)

The first tip on what to eat? A reminder: *"Fat is your fuel. Focusing on healthy fats and cutting unhealthy carbs to curb your cravings is the secret to becoming fat-adapted. This will make you a fat-burning, anti-inflammatory, anti-aging, brain-fueling powerhouse. Have some fat with every meal. Depending on your size and amount of activity, your fat intake should be about 20 to 60 grams per meal."*

As I've said and will continue to say: Nutrition is a highly-individualized thing. And... I'm sold on the basic ideas of this kind of approach.

If you have (or anyone in your life has) been struggling with your energy levels, varying moods, mental clarity, excess weight, etc., I say: GIVE IT A TRY! (Ahem. :)

Here's to transcending dogma and having fun experimenting as we Optimize!

B

Brian Johnson,
Chief Philosopher

If you liked this Note, you'll probably like...

[The Keto Reset Diet](#)

[Brain Maker](#)

[Grain Brain](#)

[Always Hungry?](#)

[Fat for Fuel](#)

[The Happiness Diet](#)

[Overfat](#)

[Clean](#)

About the Author of "Ketotarian"

WILL COLE



Dr. Will Cole is a leading functional medicine expert specializing in thyroid issues, autoimmune conditions, hormonal dysfunctions, digestive disorders, and brain issues. Dr. Cole graduated from Southern California University of Health Sciences as a doctor of chiropractic, and his extensive post-doctorate education and training is in functional medicine and clinical nutrition. Dr. Cole consults people around the world via webcam at www.drwillcole.com and locally in Pittsburgh. He lives in Pittsburgh, Pennsylvania.

About the Author of This Note

BRIAN JOHNSON



Brian Johnson loves helping people optimize their lives so they can actualize their potential as he studies, embodies and teaches the fundamentals of optimal living—integrating ancient wisdom + modern science + practical tools. Learn more and optimize your life at optimize.me.