

## The Platform

The low-to no-fiber ultraprocessed foods (UPFs) dominating modern diets are starving people's gut microbiomes of the nourishment they need to fulfill their ancient role supporting our physical and mental well-being via the gut-metabolic-immune-brain axis. Rates of chronic illness have soared as a result. If nothing is done, microbial species in our guts integral to our holistic health may wither and die, depriving us of an essential ally in our struggle to thrive. one.bio's patented fiber discovery, personalization, and delivery platform aims to prevent this disaster and help people feel their best without unrealistic alterations to their diets.

### CONTENTS

- Diet-driven chronic illness
- Microbial starvation
- Solutions
- Glycopedia
- Depolymerization
- Products
- Evidence

### Diet-driven chronic illness

Sickness is a cage. When you're struggling with an ailment, fatigue, discomfort, pain, and sadness can rise up like bars around you. Simple joys, once effortless and invisible daily companions, lie on the other side of the locked structure. Even if you manage to tame some symptoms to a level of tolerability, you still wonder: What more could I do if I felt my best?

Today, more than Americans are struggling with feeling their worst or, at a minimum, not feeling their best. In 2023, a stunning 76.4% of US adults reported they were dealing with one or more chronic conditions, and 51.4% said they were subjected to multiple chronic conditions (Preventing Chronic Disease, 2025). Those numbers are up from 2017, when 60% of Americans were dealing with at least one chronic condition and 42% were dealing with more than one (RAND, 2017).

Much of this suffering is familiar and often deeply connected to our diets: obesity, diabetes and prediabetes, cardiovascular disease, colon cancer, and high blood pressure. When it comes to cardiometabolic killers – heart disease, stroke, or type 2 diabetes – a full 45.4% of the deaths they cause are associated with a failure to acquire optimal nutrition (JAMA, 2017).

Some of the blame for this falls on sugar. This is understandable, but not fully accurate. Sugar and other forms of carbohydrates are essential for life. They fuel biological processes. The problems we're seeing today arise from sugar stripped of the fiber that nature normally delivers it with. A couple of apples may contain 39 grams of sugar, but they're packaged with 13 grams of fiber that help manage the impact of that sugar on our body. A Coke has 39 grams of sugar and no fiber. It has no metabolic brake. Our metabolism wasn't meant to handle **fiberless sugar**. And our microbial allies and our health are suffering.

## Microbial starvation

Science has long called out the importance of protein, vitamins, and minerals. Fiber – the tough plant material that we cannot digest – has been on the list, too. When our understanding of it and our gut was simpler, fiber was praised mostly for its role in bowel movements. But as we've learned more about the gut microbiome and its remarkable influence on our physical and mental health, fiber has taken on a much more prominent role and gotten a new nickname: microbiota-accessible carbohydrates (MACs).

MACs, which human digestive enzymes cannot break down, can be broken down by the thousands of species of microbes that make up the gut microbiome in our large intestine. As our microbial companions dine on MACs, they produce many beneficial metabolites. Among them are compounds called short-chain fatty acids (SCFAs, such as butyrate) that aid our metabolic, mental, and cardiovascular health. They help tame our blood sugar responses, lower cholesterol, and make us feel full. And when our microbes are served up their MAC meals, there's also something they don't do that is important: start to eat the intestinal barrier that keeps toxins and bacteria from entering our bloodstream.

Today's food system – dedicated to convenience, pleasure and profit – is starving our microbial allies of MACs. People in industrialized societies eat about 15 grams of fiber a day, according to [Dr. Justin Sonnenburg](#), a scientific advisor to one.bio and leading microbiome researcher and professor at Stanford University whose [2016 study](#) explored the dangers of such a diet. That's far short of the USDA-recommended and fairly outdated daily amount of 25 grams for women and 38 grams for men. Not to mention the 50 daily grams or so that many experts are recommending now ([PCRM](#); [Nature](#); [Nutrition Reviews](#)), or the 150 grams that our hunter-gather ancestors consumed ([LA Times, 1988](#); [NEJM, 1985](#)).

The modern food system is not up for solving this problem. A 2025 report showed that ultra-processed foods (UPFs) made up 55% of the calories in Americans' diets ([National Center for Health Statistics, 2025](#)). Added sugars – that is, fiberless sugars – make up 21.1% of the calories in those UPFs ([BMJ Open, 2016](#)). These chips, cereals, and snacks are easily chewed, rapidly converted into blood sugar spikes because there's little or no fiber to slow digestion down, rendered ineffective at making us feel full, and made irresistible with just-right doses of salty and sweet.

As our starving gut microbes start snacking on the gut lining and stop producing SCFAs and other beneficial metabolites, poisons percolate and beneficial biochemical processes fade. The immune system kicks in to respond to the breakdown, spreading inflammation throughout the body.

Fiberless sugar has laid a foundation for common chronic diseases to flourish. An onslaught of obesity, diabetes, cardiovascular ailments, depression, brain fog and anxiety is here. It is a warning: Nourish your microbiome, or else.

If we let the modern Western diet push our microbes into extinction ([Nature, 2016](#)), what will happen to us?

## CONTENTS

- [Diet-driven chronic illness](#)
- [Microbial starvation](#)
- [Solutions](#)
- [Glyclopedia](#)
- [Depolymerization](#)
- [Products](#)
- [Evidence](#)

## Solutions

"Eat more fruit and vegetables," your doctor says.

This solution to the fiber crisis has not gone well: Americans as a whole are 2.1 billion kilograms (the weight of about 400,000 African bush elephants) away from getting the USDA-recommended midpoint of 32 grams of fiber a day. They'd need another 2.8 billion kilograms (that's 530,000 elephants) to reach an optimal daily level of 50 grams.

It's a worthwhile goal. Extrapolating from the findings of a 2019 meta-analysis, 50 grams of fiber a day is associated with a significant drop in deaths from all causes, cardiovascular-related deaths, and some cancer-related deaths (Lancet, 2019).

It's also an extremely challenging goal: Getting just 28 grams of fiber would entail eating 5.3 pounds of tomatoes, 2.6 pounds of potatoes, or 1.5 pounds of kale. While one.bio would love to see the fiber gap bridged by a transition to eating massively larger volumes of different foods, we also recognize the difficulty of this. We want to help people understand, design, and achieve their fiber goal to maximize its practicality and positive impacts on their health.

That doesn't mean replacing all the fiber in your diet or every fiber supplement in your cupboard with one.bio. It means using our proprietary technology to identify, optimize, and deliver the precise fiber structures needed to power up the specific gut microbes required for achieving your unique health goals.

This is a sea change made apparent in our proprietary Glyclopedia. This catalog identifies the thousands of fiber molecules found within thousands of natural fiber sources, measures how well a particular fiber structure nourishes a particular species of gut microbe, and then connects the activity of that particular microbe to a health impact, such as improved blood glucose levels, better satiety, or improved focus. The Glyclopedia is a one-stop method to identify the fiber structure (and natural sources of that structure) that maximize the microbial activity connected to specific health impacts.

By building the Glyclopedia—which encompasses nature's immense fiber diversity and maps fiber's impact on diverse microbial communities—we can uniquely understand how each person's unique microbiome responds to different fibers. This is the basis of a delivery platform that accelerates nutrition personalized to each individual, microbiome, and their health goal. As we build out a series of biological levers to pull, and we identify an optimal fiber that is not yet commercially available, we can produce it. On top of that, we can make fibers that are easy to work into meals due to their "invisibility" – flavorless, odorless, colorless, gentle and healing on the gut, and water-soluble. No more doctor-ordered and off-putting viscous jellies.

## CONTENTS

- Diet-driven chronic illness
- Microbial starvation
- Solutions
- Glyclopedia
- Depolymerization
- Products
- Evidence

## Solutions, cont.

one.bio overcomes the barriers between people and the fiber they need to not just prevent illness, but also feel their best. It discovers and delivers specific fiber structures – or points people to where they can find them – that make it easy and pleasurable to overcome the poor grocery store options, time constraints, and organoleptic preferences that can make it difficult to include adequate amounts of this essential nutrient in contemporary diets. A few pillars of the one.bio platform make this possible:

### Glyclopedia

We're constantly expanding the world's first and largest catalog of the molecular structure of fibers and their impact on health via the gut microbiome: the **Glyclopedia**. We've analyzed more than 4,000 natural sources of fiber, and we will be analyzing thousands more. This catalog also identifies which microbes are enriched by which molecular fiber structure, and then measures how much of a beneficial metabolite the microbe produces in response. For example, it is now possible to name the numerous fibers that help the gut microbiome generate butyrate – and also to identify the one triggering the release of the most butyrate for the most people. The Glyclopedia offers unique, unprecedented, and actionable insight into gut-mediated health by combining **depth, breadth, and function**: It classifies thousands of fiber structures down to the molecule from thousands of sources, and maps how each fiber structure impacts the gut microbiome, which plays a huge role in human health via its generation of metabolites. We eventually expect to profile a customer's individual microbiome and recommend the best specific fibers to help them enlist their gut allies in achieving short- and long-term health goals.

### Depolymerization

Behind the **Glyclopedia** is our patented method to precisely "cut" long-chain plant fibers into short-chain versions without compromising the fiber's bioactive functionality. This depolymerization technology is used as an analytical tool that allows us to precisely identify the fiber structures of thousands of plants and other fiber sources straight from nature.

This tech has another benefit: It can be used to produce, at scale, a flavorless, scentless, colorless, gut-gentle, and fully water-soluble fiber powder from any original natural source. Think of it as molecular scissors, gently clipping and shortening each fiber, without altering its structure. This process results in

## CONTENTS

- Diet-driven chronic illness
- Microbial starvation
- Solutions
- Glyclopedia
- Depolymerization
- Products
- Evidence

*Depolymerization, cont.*

fibers, from virtually any source becoming easily formulated into food and beverage products in a way that has never been possible before. Without one.bio's transformation of the fiber experience, people may struggle to get enough of it to protect and unlock the full powers of their gut microbiomes.

**Products**

In today's fast-paced world, the convenience, taste and texture of food play a massive role in its uptake. If they didn't, we likely wouldn't have the fiber gap we have today. One.bio is embracing this challenge by releasing the first of many delicious-first applications of its fiber discovery, personalization, and delivery platform: the GoodVice brand. GoodVice drinks are powered by one.bio's first "invisible" fiber, 01, from oats, and are clinically validated to reduce gastrointestinal symptoms and to improve metabolic health by lowering blood glucose levels.

These beverages come in three flavors and contain high-quality ingredients, significant protein, and an array of vitamins. They also avoid chemical sweeteners and embrace an important energy source for our bodies: real sugar. In other ready-to-drink products, this might be a cause for alarm. But one.bio recognizes that sugar is an essential fuel for biological processes. It's when sugar is stripped of fiber that it becomes problematic. With the addition of our 01 fiber, these decadent drinks transform into a nutrition-packed, gut-friendly, and natural energy source that feeds people and their microbial allies.

We see GoodVice products as a way to connect the joy of an undeniably delicious meal to the deep and under-appreciated health benefits of fiber as optimized by one.bio's unique depolymerization technology and the insights it organizes in the **Glyclopedia**. The GoodVice drinks and other products in development embrace sugar the way nature intended it: an essential and desirable energy source that comes with "fiber brakes" to ensure it does not throw our metabolic systems into chaos, while enabling the best-tasting products in the category.

In the near term, GoodVice products will be the only way for everyday consumers to acquire one.bio fiber. One.bio is currently working with several large supplement and food CPG companies to integrate optimized fibers into products and brands that consumers already love, enhancing the health profile of their offerings while protecting their sensory qualities.

**CONTENTS**

- **Diet-driven chronic illness**
- **Microbial starvation**
- **Solutions**
- **Glyclopedia**
- **Depolymerization**
- **Products**
- **Evidence**

## Evidence

To ensure our customers of the benefits of the one.bio 01 oat-based fiber, we conducted a 14-day clinical trial in 2025. The study involved 63 healthy adults taking 5, 10 or 20 gram daily doses of one.bio's optimized oat fiber, 01. A fuller breakdown of the results can be read in the clinical data section of this press kit, but some highlights of participants' experiences include: less pronounced spikes in blood sugar; an increase in the amount of time blood sugar levels were within healthy ranges all day; indications of improvements in some mental health factors. Unlike many fiber ingredients on the market, we found that the one.bio 01 oat fiber was extremely gut-friendly. There was no increase in gastrointestinal symptoms even at the highest tested dose, 20g/day. Another benefit of one.bio's 01 fiber is how it feeds the microbes that go on to release beneficial metabolites. Most well-known among these metabolites are SCFAs, which stimulate the body's production of GLP-1, or glucagon-like peptide-1. GLP-1 is a natural hormone that suppresses the appetite and has been in the headlines due to drugs like Wegovy and Ozempic.

Since emerging from the University of California, Davis, in 2019, one.bio and its co-founder, Dr. Matt Amicucci, have transformed the world's understanding of dietary fiber. Much like the 100-year-old concept "vital-amine" was abandoned for the varied vitamins we know today, so too is our definition of fiber being corrected. There is not one fiber. Fibers are made up of thousands of unique molecules that interact with our microbiomes and bodies in distinct ways. As one.bio continues to map the connections between fiber structure, microbiome nourishment, metabolites, and health outcome, overcoming the debilitating fiber gap may be as easy as taking a sip from a safely sweet drink. In the future we are designing, the 95% percent of Americans failing to get enough fiber will be an anomaly of the past, and our well-fed microbial allies may end up naturally providing us the healing we seek in pharmaceuticals today.

## CONTENTS

- Diet-driven chronic illness
- Microbial starvation
- Solutions
- Glycopedia
- Depolymerization
- Products
- Evidence