Simple Steps for Better Health and Why to Avoid Extreme Diets

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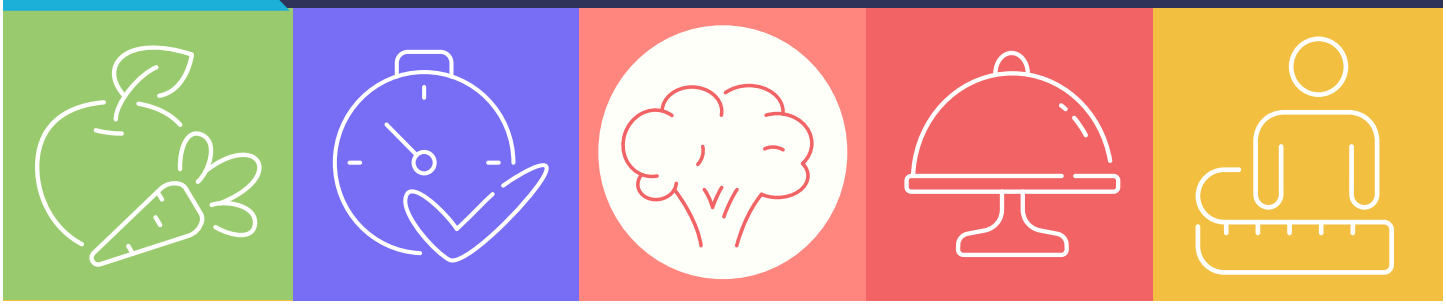

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CHAPTER

01

Foods to Avoid: Protecting Your Gut and Brain Barriers

Foods to Avoid: Protecting Your Gut and Brain Barriers

As I have discussed extensively in the previous eBook, knowing what to eat is only half the equation for gut and brain health. Equally important is understanding what not to eat. Many of the foods most common in modern diets in particular ultra processed foods actively disrupt the gut ecosystem, cause immune system activation, and send harmful signals to your body and the brain. Patients often tell me they feel foggy, irritable, or fatigued after eating heavily processed meals. That is not just psychology, it is physiology. The chemical byproducts of these foods compromise your gut lining, stimulate the immune cells in your gut, and literally travel from the gut to the brain.

The Rise of Ultra-Processed Foods

Ultra-processed foods are products that have been significantly altered from their natural state, often containing excessive sugar (often in the form of high fructose corn syrup) additives, preservatives, artificial flavors, and stabilizers. Think fast food, packaged snacks, soft drinks, frozen dinners, and sugary sodas and cereals.
While convenient and inexpensive, these foods come at a high cost:

- They are stripped of fiber, starving the beneficial microbes in your gut and decreasing the microbial production of anti-inflammatory short chain fatty acids like butyrate.
- They are high in refined sugars (often now replaced by non-nutritive sweeteners) and starches, which feed less desirable microbial strains and trigger blood sugar spikes.
- They often contain industrial oils, emulsifiers, and artificial sweeteners some of which disturb gut barrier function and microbial diversity.

The Gut Barrier Under Attack

The gut lining is often described as the body's "gatekeeper." It allows nutrients in while keeping pathogens and toxins out. But this barrier is delicate, only a single cell layer of cells thick, covered by a thin mucus layer and highly responsive to what you eat.

- Certain food additives called emulsifiers often found in packaged and ultra processed foods can disturb the gut's natural protection. Studies in animals show that emulsifiers like polysorbate 80 and carboxymethylcellulose may thin the gut's mucus layer, which acts as a barrier between your gut microbes and your intestinal wall. When this layer becomes weaker, microbes come in contact with specialized immune cells ("dendritic cells") a process leading to activation of the gut associated immune system, even before the gut becomes more permeable, a condition sometimes known as "leaky gut".
- Popular artificial sweeteners like saccharin, sucralose, and aspartame may alter microbial composition, favoring inflammatory species. In some studies, they impair glucose tolerance, paradoxically increasing the risk of metabolic disease.
- Refined oils high in omega-6 fatty acids (such as soybean or corn oil) promote a pro-inflammatory environment, especially when consumed in high amounts relative to anti-inflammatory omega-3s.

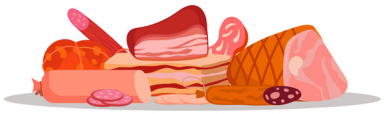
When the gut barrier weakens as a result of a compromised mucus layer and inflammation induced changes in the permeability of the gut epithelium, cell wall fragments of gram-negative bacteria like lipopolysaccharides (LPS) can leak into the gut based immune system, triggering local inflammation. These inflammatory signals do not always stay in the gut, they can travel to the liver, the heart and the brain. In the brain they activate glial cells (the brain's immune cells) disrupt neurotransmitter balance and contribute to symptoms of depression, impaired memory and brain fog and ultimately neurodegeneration.

The Inflammation Connection

Low-grade, chronic inflammation is now recognized as a major risk factor for many chronic diseases, including both digestive and mental health disorders. Diets high in ultra-processed foods amplify this inflammatory state. Studies consistently show that people who consume more ultra processed foods have a higher risk of depression, while those who eat more whole, plant-based foods have a lower risk. For example, one large cohort study in Spain (the SUN Project) found that individuals who consumed the most ultra-processed foods were 33% more likely to develop depression compared to those who consumed the least. This was independent of other lifestyle factors.

Processed Meats and Sugary Drinks

Among the worst offenders in the category of ultraprocessed foods are processed meats (like bacon, sausages, and deli meats) and sugar-sweetened beverages.

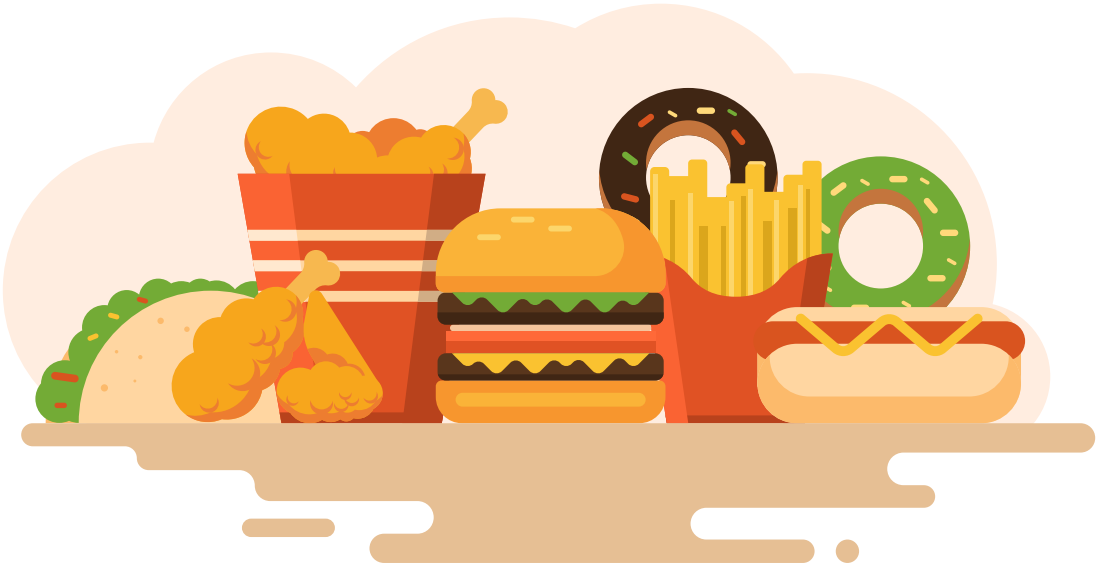


- **Processed or curated meats** often contain nitrates, advanced glycation end-products and other compounds that generate oxidative stress. Their consumption is linked to higher rates of colorectal cancer and cardiovascular disease, and emerging data suggest they may also negatively influence mood.

- **Sugary drinks** provide rapid spikes in blood glucose, followed by crashes that destabilize mood and energy. Frequent consumption alters insulin sensitivity and has been linked to increased risk of depression.

Fried Foods and Trans Fats

Fried foods, particularly those containing industrial trans fats, are another common source of harm. Trans fats not only raise “bad” LDL cholesterol and lower “good” HDL cholesterol, but they also increase markers of systemic inflammation. Diets high in trans fats have been associated with worsened mood and even increased aggression in observational studies. Even though seed oils are often demonized on social media by selfdeclared diet gurus and diet books, seed oils such as safflower oil, canola oil, soybean oil, sunflower oil, corn oil, grapeseed oil, peanut oil, sesame oil, and chia seed oil are healthy, and the negative health effects that have been attributed to them are related to the ultra processed foods they are often incorporated in.



Practical Steps to Minimize Harmful Foods

Incorporating polyphenols into your diet doesn't require exotic superfoods or expensive powders. Everyday foods, consumed consistently in sufficient amounts, can have powerful effects. Here are some strategies:

1 Read the Fine print on Ingredient Labels

Avoid products with long ingredient lists full of words you don't recognize. A simple rule: if your great-grandmother wouldn't know what it is, your microbes probably don't either.

2 Limit Packaged Snacks and Ready Meals

Eliminate or reserve ultra-processed foods like nutrient, protein and energy bars for rare occasions, not daily staples.

3 Watch Out for "Hidden" Sugars

Many products marketed as healthy (granola bars, flavored yogurts, sauces, fruit juices) contain significant added sugars (in particular high fructose corn syrup or non-nutritive sweeteners).

4 Cook More at Home

Even simple home-cooked meals are typically less processed and lower in harmful additives than restaurant or packaged foods.

5 Choose Healthy Fats

Replace refined oils with olive oil, avocado oil, or nuts and seeds, which contain more favorable fat profiles such as a high omega-3 to omega-6 ratio.

6 Moderate Alcohol

Alcohol, particularly in excess, can damage the gut barrier and alter microbial balance. If consumed, greatly limit intake (the latest guidelines state that any amount of alcohol is bad for your health), pair with meals and reserve for special celebratory and social occasions.

A Balanced Perspective

It is unrealistic and unnecessary to eliminate all highly processed foods from your diet. Life includes celebrations, convenience meals, and the occasional indulgence. What matters is the pattern over time. If the foundation of your diet is whole, minimally processed foods and vegetables, fruits, legumes, whole grains, nuts, seeds, and quality proteins then occasional treats will not derail your gut or brain health.

The danger comes when ultra-processed foods are no longer the exception but the rule. In the United States, nearly 60% of calories consumed by children now come from ultra-processed products, and the corresponding number if adults is not much lower (50%). This represents not just a nutritional imbalance, but a profound shift in how we interact with food, microbes, and our own biology.

The Big Picture

Avoiding harmful foods is not about restriction for restriction's sake. It is about protecting the integrity of your gut barrier, preserving microbial diversity and resilience, and reducing inflammatory signals that can erode mental well-being. Every time you choose a whole food over an ultra-processed one, you are reinforcing a feedback loop of resilience that benefits both your digestion and your mood.

CHAPTER

02

Debunking Diet Myths

Debunking Diet Myths

In the age of social media, wellness influencers, and political polarization, diet trends seem to rise and fall almost weekly. Keto, carnivore, vegan, paleo, gluten-free, low FODMAP each has its champions, each promises transformation, and each often dismisses the others as misguided. Patients frequently ask me: "Which diet is the best for my gut and mood?"

The truth is more nuanced. While some of these diets may offer short-term relief or benefits in certain conditions, none is a universal solution. And when misunderstood or misapplied, they can even create new problems. Let's break down the most common diet myths and the science behind them.

The Keto and Carnivore Craze

The ketogenic ("keto") diet, and its stricter cousin the carnivore diet, have gained immense popularity in recent years. By drastically reducing carbohydrates and emphasizing fats and animal proteins, these diets force the body into a state of ketosis, where fat rather than glucose becomes the primary fuel for the body and the brain.

Potential benefits:

- Rapid weight loss, particularly in the short term.
- Reduced blood sugar and insulin levels, helpful in type 2 diabetes management.
- Some people report sharper mental focus during ketosis.
- Studies suggest that it may be beneficial in advanced Alzheimer's disease and in therapy refractory seizure disorders

The drawbacks:

- Overall, the keto diet ignores all current recommendations of a largely plant based diet for optimal health
- Reduced microbial diversity. The lack of fiber starves beneficial bacteria, leading to lower SCFA production. Over time, this may increase inflammation and compromise gut health.
- Nutrient gaps. Strict keto or carnivore diets often lack important micronutrients, plant polyphenols, and antioxidants.
- Cardiovascular risks. Diets high in saturated fat and low in fiber deprive your microbes from generating anti-inflammatory short chain fatty acids, can elevate cholesterol levels and increase long-term risk for heart disease.

I have seen patients improve initially on keto, only to develop digestive discomfort, constipation, or mood instability months later. The problem isn't ketosis itself but the absence of microbial fuel, fiber and phytonutrients from plant-based foods. From a global perspective, a diet largely dependent on animal products not only goes against all environmental and sustainability considerations, but also against science-based recommendations supporting largely plant-based diets for gut health.

The Vegan Advantage and Its Pitfalls

On the opposite end of the spectrum, vegan diets exclude all animal products, focusing entirely on plants. Many vegans choose this diet for spiritual and ethical reasons, which in addition to nutritional benefits, may benefit gut health via the mind-gut connection. Done well, this can be highly beneficial:

Strengths:

- High fiber intake supports microbial richness and diversity and short chain fatty acid production.
- Sufficient intake of protein from plant sources (beans, peas, pees)
- Rich in polyphenols, vitamins, and minerals from a wide variety of plant foods.
- Associated with research supported reduced risk of cardiovascular disease, diabetes, and certain cancers.

Potential weaknesses:

- **Vitamin B12 deficiency.** Since B12 is found naturally only in animal foods, supplementation or fortified foods are essential.
- **Iron, zinc, and omega-3 shortfalls.** Plant-based forms of these nutrients are less bioavailable than animal sources, and vegans may benefit from supplementation.
- **Over-reliance on processed substitutes.** Vegan junk food — sugary cereals, refined grains, plant-based "meats" — can undermine the health benefits of a plant-based diet.

The key to a healthy vegan diet is diversity and planning. A plate filled with legumes, whole grains, nuts, seeds, and colorful vegetables provides the building blocks both microbes and the brain require.

The Low FODMAP Diet

The low FODMAP diet which restricts certain fermentable carbohydrates was originally developed as a therapeutic tool for people with irritable bowel syndrome (IBS). It has been shown in several clinical trials to reduce symptoms like bloating, gas, and abdominal pain in many patients, but is not recommended as long term therapy because of negative health effects.

The upside:

- Highly effective for short-term symptom relief in IBS.

The downside:

- Long-term adherence is unhealthy and can deprive beneficial microbes of prebiotic fibers.
- Likely to reduce microbial diversity and richness if followed indefinitely.

In my practice, I occasionally use low FODMAP as a temporary intervention, never a permanent diet. Once symptoms improve, the goal is gradual personalized reintroduction of foods to rebuild microbial resilience. Unfortunately, many patients discover the diet online and adopt it permanently, not realizing they are starving the very microbes that protect them.

The Gluten-Free Movement

For people with celiac disease (approximately 1% of the US population), avoiding gluten is essential. Gluten triggers an autoimmune reaction that damages the small intestine and can have widespread negative effects on general health. Some individuals without celiac disease but who suffer from wheat allergies may also experience non-celiac gluten sensitivity, with symptoms like bloating, fatigue, and brain fog.

However, for the vast majority of people, whole grains containing gluten (like wheat, barley, and rye) are supportive of gut health, and aversion to gluten containing foods is often a nocebo effect, driven by the media and food gurus. They provide fiber, resistant starches, and important nutrients. Eliminating gluten unnecessarily can reduce dietary diversity and increase reliance on processed gluten-free products, which often contain added starches and sugars.

My advice: Unless you have been diagnosed with celiac disease or a wheat allergy, whole grains should be an important part of a gut-healthy diet.

The Myth of the "One-Size-Fits-All" Diet

Perhaps the most dangerous myth of all is the idea that there is a single "perfect" diet for everyone. Genetics, lifestyle, cultural background, health status, and microbiome composition all influence how a person responds to food. What works wonders for one individual may cause discomfort or deficiencies in another. Personalization and sustainability matter far more than adherence to the latest trend.

Cultural and Historical Context

It's worth remembering that humans living in different parts of the world differ in their genetic makeup and in the composition of their gut microbiome. Humans have thrived on a wide variety of diets throughout history. From the largely plant-based diets of rural Asia to the fish-heavy diets of coastal Mediterranean and Japanese populations to the high-fat, high-protein diets of Arctic peoples, what mattered most was the balance between available foods and lifestyle demands. These traditional diets shared some common themes:

- Minimal processing (other than cooking, fermenting and drying).
- Seasonal and local sourcing.
- A balance of macronutrients shaped by environment.
- Close integration with cultural and spiritual practices, mealtimes, and community.

Modern diet trends often ignore these contexts, reducing nutrition to rigid rules of energy intake. In reality, the most successful dietary patterns for humans, animals and the environment are those that are sustainable, diverse, and culturally meaningful.

Practical Guidelines

1. Beware of Extremes. Diets that cut out entire macronutrients (all carbs, all fats) often create imbalances and often are not sustainable.

2. Focus on Patterns, Not Rules. A diet rich in plants, moderate in animal products, and without ultra-processed foods is consistently linked to better health outcomes. Such diets exist in many parts of the world, and are not limited to the traditional Mediterranean diet.

3. Listen to Your Body. If a diet leaves you constipated, fatigued, or irritable, it may not be right for you even if it's trending online.

4. Personalize. Consider genetics, health conditions, and lifestyle when choosing dietary strategies. Personalizing your diet with the goal to create a highly enjoyable experience without food related fears is key

5. Sustainability Matters. A diet that you cannot maintain for years is unlikely to provide long-term benefits.

In summary: No single diet holds the magic key to gut and mental health. Keto, vegan, gluten-free, and low FODMAP diets all have their place, but they are tools, not solutions. The most consistent predictor of success is balance: plenty of plants, minimal or no ultra-processed foods, and a sustainable, diverse pattern of eating that fits your unique body and lifestyle.

CHAPTER

03

Final Thoughts
Food as Daily Medicine

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Food as Daily Medicine

After decades of working with patients and studying the science of the brain-gut-microbiome system, I remain deeply impressed by one truth: food is not just fuel. Food is information, medicine and a crucial vehicle for social connectedness. Each bite you take is translated by your gut microbes into messages to your immune system, your nervous system, and ultimately your brain. These messages can either engage or calm your immune system, cause unpleasant abdominal symptoms, or promote resilience and calm.

Food as a Daily Choice

Unlike medications, which are prescribed in pills or procedures, food is something you choose every day, multiple times per day. This makes it both a challenge and an opportunity. In the modern food environment, ultra-processed options are everywhere quick, cheap, and tempting. But the very same environment also offers unprecedented access to fresh produce, whole grains, and nutrient-dense foods if we choose them intentionally.

Patients often ask me, “Does one meal really make that much difference?” My answer is no. One unhealthy meal will not transform your microbiome overnight, but each unhealthy choice contributes to a pattern and over time (think of a lifetime), patterns become your biology. Just as repeated psychological stress can wear down the body, repeated dietary stress can increase your risk for chronic diseases.

Beyond the Plate

Food is powerful, but it does not act in isolation. True health emerges from the integration of diet with other lifestyle factors:

- Movement stimulates circulation, improves insulin sensitivity, and supports microbial diversity.
- Sleep restores the brain, repairs the gut lining, and maintains circadian balance.
- Stress management reduces stress-hormone-driven inflammation that disrupts the gut.
- Social and spiritual connections provide emotional support and play a crucial role in overall health.

In my practice, the most successful transformations occur when patients weave healthy dietary habits together with the above threads in a way that I call the Mayer Model©. A fiber-rich, polyphenol-loaded diet sets the foundation, but it is strengthened by movement, rest, calm, and connection.

Small Steps, Big Impact

The prospect of overhauling your diet can feel overwhelming. That's why I encourage patients to start small:

- Swap sugary drinks for sparkling water with natural flavors.
- Add one serving of different beans or lentils every day.
- Try a new vegetable or herb each week and aim for 30 different fruits and vegetables per week. If you put your mind to it, it is easier than it seems.
- Finish dinner earlier to give your gut time to switch to its housekeeping functions (the migrating motor complex) for a least 14 hours.

These changes may seem modest, but together they create momentum. And once people begin to feel the difference, they find to have clearer thinking, steadier digestion, less abdominal discomfort calmer mood motivation to stay with a healthy lifestyle grows naturally. These changes are not only based on a growing body of research, but on personal experience and experimentation.

The Ripple Effect

When you improve your gut and mental health, you are not only helping yourself. You are also creating ripple effects in your family, your workplace, your community and the environment. Children learn by example, colleagues notice your energy, and friends are inspired by your choices. In this way, choosing food as medicine is not a solitary act; it is a contribution to collective well-being. And don't forget: this dietary pattern which is healthy for you, is automatically good for the health and sustainability of the planet!

A Framework for Lifelong Health

If there is one lesson I hope you carry forward, it is this: there is no perfect diet, no magic supplement, no one-size-fits-all prescription. But there are consistent principles that hold true across cultures and scientific studies, which I have incorporated into the Mayer Model:

- Eat mostly whole, minimally processed plant-based foods.
- Prioritize diversity, especially from plants.
- Feed your microbes with sufficient amounts of their favorite foods, e.g. fiber and polyphenols.
- Time your meals in harmony with your body's rhythms.
- Try to avoid refined sugars, non-nutritive sweeteners, industrial oils, and additives that disrupt your gut.

Paired with movement, rest, and connection, these principles form the framework for lifelong resilience. Opposed to the various short-term diets discussed above, food is not a temporary diet or a quick fix, it is daily medicine for you and the planet. Every meal is an opportunity to either promote inflammation or foster resilience against chronic disease. By choosing foods that nourish your microbes and support your brain, you create the foundation for a healthier gut, a sharper mind, and a more joyful, balanced life.

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