
MICROBIOME DIET
uninflamed
SELECT CHAPTERS FROM UNINFLAMED: PRIMAL HABITS
to heal, sleep better, intermittent fast, detox, lose weight, feel great, & crush your life goals with a kickass microbiome
CATE STILLMAN

THE MICROBIOME DIET

CHAPTERS FROM UNINFLAMED… 21 PRIMAL HABITS

CATE STILLMAN

CONTENTS

MICROBIOME

> Every part of our body surface, in communication with the environment, is colonized.
>
> — LEBBA ET AL: *EUBIOSIS AND DYSBIOSIS*

WHAT IS YOUR MICROBIOME?

Your microbiome is made up of mutualistic ecological communities of beneficial, symbiotic, and pathogenic microorganisms that set up colonies throughout your body. They mitigate how human DNA cells function, receive nourishment, and adapt to the changing world. The health of your microbiome determines whether you are sick, diseased, or healthy.

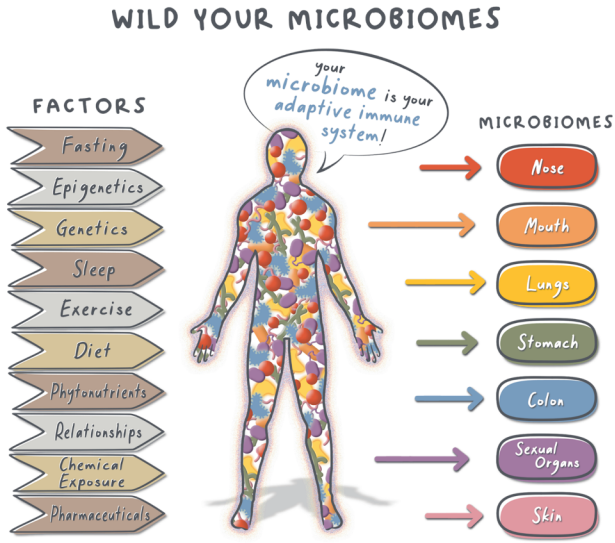
The microbiome came to be recognized in the 1960s, as scientists incorporated pathogen-free animal models into labs for control groups. In 1986, Linda Hegstrand and Roberta Hine published a study proving microbes influence brain chemistry—which was the beginning of the gut-brain axis.[1] In 2012, the NIH Human Microbiome Project mapped the entire microbiome—or genetic microbial makeup—in healthy human bodies.

HOW YOUR MICROBIOME WORKS

Microbiota—the oldest living cells on Earth—continue to co-evolve with all current life forms, including us mammals. These complex micro-biotic communities are the deep roots of the evolutionary past, yet their species are also constantly changing.[2] The human genes that have survived, and mutualistic microbiota genes, both exist today because they thrived together. "Health" is, in fact, the outcome of your bodily systems integrating with evolving bacteria and viruses in the ecosystem and ecology where you source nourishment.

The host (you) and your terrain (your microbiome) are interdependent and, therefore, they "cross-talk." This cross-talk strengthens immune function and uplevels homeostasis by adapting to new species. A healthy microbiome nourishes your genetic intelligence so your cells don't degenerate or mutate.

Factors that affect outside-inside homeostasis affect specific microbiomes: from soaps that affect the skin microbiome, to smoking that affects the lung microbiome, to junk food and pharmaceuticals that degenerate the gut lining and allow pathogens to breed.



Your microbiomes are healthy if you have diverse and mostly beneficial species of microbiota in your stomach, colon, lungs, skin; even nerves. Your organs and systems depend on specific and diverse species. The number of microbiota in the human organism is tenfold that of our cells; with a coding capacity a hundred times higher than that of our cells. The gut microbiome alone has over 1000 species, due to the complexity of metabolizing food into essential nutrients and vitamins while killing ingested pathogens. The diversity of organisms signifies the complexity of the terrain's functions.

Rumor has it among terrain theorists that, following a series of strokes, Louis Pasteur made a final proclamation from his deathbed: "Bernard was correct. I was wrong. The germ is nothing. The milieu is everything."[3]

The milieu—the terrain—is the zone of the microbiome and the epithelial cells. Bernard—Claude Bernard, that is—learned the terrain theory from Antoine Béchamp. These nineteenth-century Frenchmen were innovative researchers in fermentation, microbes, and contagious diseases.

In the 1960s, scientists thought all bacteria were dangerous to the human body. The media projects a similar misconception of viruses today. Just as bacteria within you determine your adaptability and resilience, the same goes for viruses.

While we've made progress in understanding the bacteria part of the microbiome, we have little understanding of the virome and its genome, which has earned it the nickname "dark matter," an unexplored viral frontier. It's life, Jim, but not as we know it (yet).

VIROME

Viruses are believed to be the most abundant and diverse biological entities on our planet, with an estimated 10 to the 31st power of individual viruses on Earth. Humans have existed, evolved, and co-adapted alongside viruses since our origins, and before even that. A "virome" is an assemblage of viruses existing within an environment or ecosystem,

considered collectively; the "human virome" is the totality of viruses in and on the human body. Healthy bacteria depend on the virome. Hominids had many of the same viruses that we have in our bodies today.[4]

In an effort to understand all the genetic information we know about viruses, just in the gut, a compendium was created in 2021. The findings?

> Remarkably little is known about the functional potential of human gut viruses.[5]

We know that the virome shapes the structure and function of bacteria in the microbiome. A healthy virome is the foundation of a healthy microbiome's functionality, the foundation of your health.

Mic drop.

By nature, the virome is highly genetically diverse and rapidly evolving. We share viromes in households and geographical communities. The virome colonizes immediately after birth. You want substantial virome genetic diversity for immune health, just like you need significant bacterial diversity. Diversity is much higher in natural childbirth and nursing, over C-sections and formula feeding. Virome studies link birth mode and long-term health outcomes in relation to obesity, asthma, diabetes, and common inflammation diseases.

A healthy virome seems to be all about exposure and healthy food. With food, viruses on the outside become viruses on the inside; and with diversity, the virome mediates the balance between long-term stability and dynamic response.

Fun facts on the virome:

- The gastrointestinal tract is the most abundant site of viral colonization.

- Human feces, one of the richest human samples of the human virome, contain at least 10 to the 9th power (one billion) of virus-like particles per gram (SARS-CoV-2 viral RNA shows up in poop).
- Dysbiosis of the virome is associated with multiple diseases. It was recently implicated in research on the condition of the immune system (autoimmune disease) and state of the gut (inflammatory bowel disease).
- Viruses can move DNA between cells and introduce new functionality to bacterial genomes. Think of the virome nourishing and evolving the microbiome.
- Immune cells may take up viruses and trigger immune responses without the mediation of bacteria, including interferon-producing T cells.
- A healthy adaptive virome based on host mutuality protects you from infections. Dysbiosis of the virome is a cause of new viral infections and poor immune function.[6]

HOW THE MICROBIOME GETS SICK: DYSBIOSIS + LOMD

Like all organs, the microbiome has physiology and pathology, named "eubiosis" and "dysbiosis" respectively.

"Eubiosis" is the interspecies balance within the microbiota community. "Dysbiosis" is the imbalance that occurs when microbial diversity decreases, with an attendant loss of necessary bacteria for health.

If *omes* are whole communities or functional homes, then *osis* is the community in action.

Biosis is the living community in action, or "*is-ing.*"

The human microbiome is experiencing a devastating loss in genetic diversity. Evidence has mounted that we moderns have become sub-par in microbiome biodiversity. The causes are many: the industrialization of food, which has not only introduced chemical killers of microbiota into the food chain, but has also separated the human gut from soil and manure; increased hygiene, including use of cleaning products and

personal hygiene products; the widespread use of antibiotics; even modern methods of childbirth, such as Caesarian section, has had an impact. The die-off is worse in those living in big cities. Despite the mounting evidence, the microbiome has been mostly ignored by modern medical practice. When was the last time your doctor tested your microbiome for species diversity?

The microbiome works in tandem with the immune system to respond to pathogens. For example, healthier people experienced fewer symptoms when infected with COVID-19, while they built antibodies and their immune system expanded its genetic intelligence. Dysbiosis substantially lowers the endurance and efficacy of vaccines.[7]

Today, dysbiosis is occurring at epidemic levels, due to the causes just mentioned: pro-inflammatory modern farming practices; diet and lifestyle; the prevalence of microbiota-destroying medications, from antibiotics, chemotherapy and immunotherapy, to SSRIs for anxiety and depression.[8] Our "life-saving" drugs are killing our microbiome, turning acute health crises into chronic disease (see HEAL). As dysbiosis triggers inflammation production, the immune system *at large* becomes dysregulated.

> Germs seek their natural habitat—diseased tissue—rather than being the cause of diseased tissue.[9]
>
> — ANTOINE BÉCHAMP, TERRAIN THEORIST (1911)

Dysbiosis means that, because the microbiome is diseased, the body is becoming sicker. Introducing specific beneficial microbes is at the forefront of immunobiology, known as "damage-control therapeutics." One approach uses bacteriophages, which are viruses that replicate within bacteria. Used in phage therapy, they target pathogenic bacteria, such as antibiotic-resistant bacterial infections. Oh, the irony!

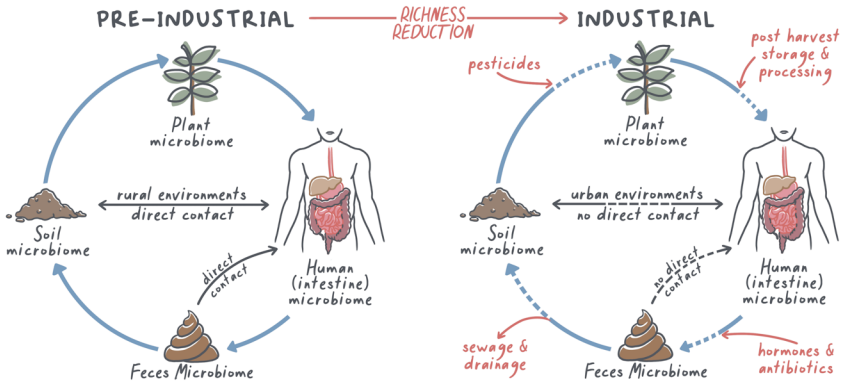
Lack of microbiota diversity (LOMD) is the first indicator of disease.

The "disappearing microbiome" theory states that the radical destruction seen outwardly in our industrialized, urbanized ecosystems is reflected in the extreme loss of diversity in the human microbiome. Some estimate that 30% of microbiome diversity has been lost in contemporary populations, compared to our primal ancestors. This has given rise to microbiome conservancy efforts to preserve our internal "indigenous cultures".[10]

An unhealthy microbiome is both a reflection of dysbiosis *and* a generator of chronic inflammation. Chicken? Egg? Dysbiosis generates chronic disease in stages. First, pathogens overgrow. This causes infection or chronic inflammation. As pathogens gain function, symbiotic microbiota lose function, then diversity. LOMD messes with all systems but can isolate in a specific tissue, organ, or system. Dysbiosis disrupts metabolic and immune protective functions. As systems fail you get a diagnosable disease.[11]

With dysbiosis, the *omes* are dying.

To recap, modern farming practices (which destroy soil microbes and decrease our contact with soil and feces) and diet and lifestyle trigger circadian rhythm disruption, which leads to LOMD, which leads to gut dysbiosis, which then generates chronic inflammation.



I live part time in Mexico. My friend Reme is a curandera, an indigenous healer, and her mother was the real deal. Reme's mother, Bloza, was part of the Zitacuaru tribe in Michoacan.[12] Bloza would sing to Reme as a girl:

Reme, en el mundo hay
mucha caca de pero
mucha caca de vaca
mucha caca de humanos
y ahi nace una hermosa flor, y esa flor eres tu.

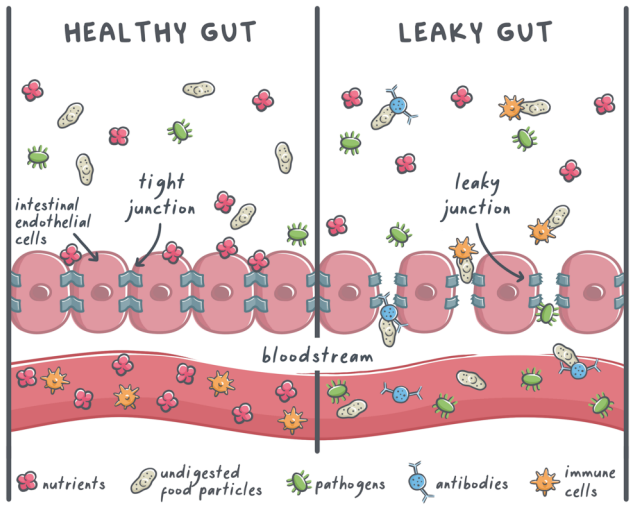
Reme, in the world
is a lot of dog poop
a lot of cow manure
a lot of human poop
and out of it grows a beautiful flower, and that flower is you.

Terence McKenna's theory on humans following cows for what grew in their poop— insects, psilocybins, seeds—left out the all-important microbiome. His theory was that foraging around poop led us straight to the mushrooms growing in it (see TRIP). (As an aside, when I asked Reme if her mother accessed any psychotropic indigenous plants, she answered peyote, without hesitation.)

Not enough access to poop and soil, and the cumulative year-over-year effects of a nutrient-deprived microbiome, produce deadly inflammation quantities. "Inflammaging" is an increase in the body's pro-inflammatory status with advancing age. Think of "inflammaging" and "metaflammation" as a starving microbiome, desperate for fasting, prebiotic fiber, probiotic fermented foods, and deep hydration (see EAT DIRTY, FERMENT, SIP).

Because the microbiome is an integral part of the immune system, the immune system itself degrades into chaos as the microbiome dies away. A few harmful microbes replicate out of control, causing tissue damage. Good gut microbes lose the battle. The human degenerates, developing, at first, one chronic disease, then two, then three.

If, for example, the oralome—your mouth's microbiome—is not diverse, and is therefore unhealthy, your chance of cancer elsewhere in the body skyrockets (see SWISH, HUM, FERMENT, URINE). Notably, bloating, chronic incomplete bowel movements, and bad breath are strong indicators of an unhealthy gut microbiome, and this eventually turns into diseases like metabolic disorder, colorectal cancer, or irritable bowel disease (IBS). You can see below how dysbiosis causes the gut lining to break in IBS:[13]



Eventually, dysbiosis permeates the blood-brain barrier, causing neurodegenerative diseases, from Parkinson's to dementia. The influence of gut flora on the brain is remarkable: microbial populations in the gut are responsible for the manufacture of hundreds of neurochemicals needed by the brain. This is called the microbiome-gut-brain axis. Gut bacteria produce about 95% of your serotonin, the happy hormone. Notably, in Ayurveda, the gut is the primary seat of the nervous system (which includes the brain). If there aren't enough beneficial gut bacteria (or they lack sufficient diversity) to help regulate the brain's delicate neurochemical processes, then coordination, cognition, learning, memory, and mood suffer. [14]

HOW TO HEAL YOUR MICROBIOME

How do you turn dysbiosis into eubiosis? See: EAT DIRTY, FERMENT, FAST, URINE, SWISH, SIP, NITRIC OXIDE, AUTOPHAGY.

Eubiosis is your co-evolution with the ancient and ever-changing ecosystem. Linda van Blerkom's article "The Role of Viruses in Human Evolution" states:

> Coevolution is the reciprocal evolutionary change in species that interact to evolve, from host to parasite, predator to prey, from plant to herbivore. In a relationship of mutualism the two species change due to mutual pressures.[15]

When you update your germ perspective, from war-like to cooperative, from "soil is dirty" to "soil is the root of health," you become interested in nourishing and expanding the intelligence of your terrain.

You become interested in the current status of your microbiome. This, in part, is what is making microbiome testing and supplementation popular. If you want to map your microbiome, testing companies like VIOME are at the forefront of pee and blood home testing. You catch dysbiosis before a health crisis.

You may become less afraid of viruses. You become interested in updating antibodies from new viruses so that your cells adapt with viral mutations in your evolving ecosystem (see SWISH, URINE).

The acute immune response is one of assimilation, where the appropriate "attack" is actually "let's get to know you." The ancient Chinese military strategist Sun Tzu advised: "Keep your friends close; keep your enemies closer" and "if you know the enemy and yourself, you need not fear the result of a hundred battles."

The microbiome does this by keeping genetic material around. In a healthy body, symbiotic communities tolerate some dysbiosis *at all*

times. For example, healthy skin and sinuses may have some staph (staphylococcus aureus). Like the yin-yang symbol, the balance of allostasis-homeostasis is dynamic. Opposing forces propel health. Life pulsates between chaos and order, other and self.

The perspective of co-arising mutuality with your various microbiomes and viromes within creates a relaxation response in your nervous system, which is key to both a high-functioning innate immune system and a high-functioning adaptive immune system.

Your perspective of who you are shifts to that of a cooperative, interdependent community. You are not one, you are many. As you build your microbiome you build immune resilience. With a robust microbiome, you won't feel safer in isolation or surrounded by microbe-destroying sanitation.

Who are you? You are viruses, bacteria, and a few human DNA cells intermingling. You are the terrain and its microbes, encompassing friendly and pathogenic microbiota. The primal habits are mutual selective pressures to co-evolve your DNA as host and your microbiota.

You are interdependent, and mutualistic, in the ecosystem you inhabit. Through EAT DIRTY, FERMENT, and FAST, you orient towards thriving.

A healthy gut microbiome relies on a healthy fasting rhythm. During fasting, pathogenic microbes starve and die off faster than beneficial bacteria.[16] Notably, fasting optimizes SCFA production and optimizes immune cells. Good microbiota get a rest, can repopulate, and can again coordinate diurnal rhythms with the circadian clock. Innate immunity recovers. Mood-enhancing chemicals are produced. Digestion, absorption, and elimination all improve.

You get happier as you get healthier.[17]

When you fast, you will then feast with integrity. Fasters eventually stop putting inflammation-inducers into their body. Fasters become more aware of food grown organically in microbe-rich soil, which means they stop buying conventional foods grown with their accompa-

nying toxic pesticides that generate chronic inflammation (see ALLOSTASIS).

Seasonal, local foods grown in organic soil pack the most nourishment and microbiota. You can afford better food because you're eating less, and less frequently. Cheap calories cause disease—it's easy to remember—so break your fast with foods that feed your microbiome (see EAT DIRTY).

PEE + POOP

Urine and feces are historical examples of medicines that both demolish dysbiosis and nourish eubiosis. In Ayurvedic texts dating back approximately two thousand years, urine from animals and humans is highlighted to fight pathogens and restore healthy tissue. Today, ingesting cow urine and manure is extensively studied by Indian scientists and pharmacologists.[18]

The Journal of Intercultural Ethnopharmacology published an aggregate study on cow urine. Various studies found that cow urine kills pathogenic bacteria, or dysbiosis, even when they are multi-drug resistant. Simultaneously, cow urine prevents the development of resistance to antibiotics while making them more effective. Its antifungal capability is comparable to pharmaceuticals. Its anti-neoplastic capacity is helpful in turning an on-the-fence cancer cell. Additionally, cow urine is an antioxidant that prevents damage to DNA caused by dysbiosis, and is an overall immune enhancer.[19]

Who knew the organic, biodynamic dairy farmers were sitting on a side income stream? There's a pot of gold in cow's urine. Many benefits, without toxicity. Cow urine, *gomutra*, is referred to as "Amrita" or "divine nectar" in ancient Ayurveda. Divine nectar. Even better than human urine for all-around gut and microbiome health.[20]

Cow poop was used historically as a microbiome restoration medicine to "sterilize" a home (see Panchagavya recipe in EAT DIRTY). By volume, over 5% of manure is living microbiome, surrounded by prebi-

otic fiber and water, in an alkaline pH mixture, packed with minerals, including iron, sulfur, and calcium.

Before modern homes, watered-down manure was used on the floor and yard when a baby was born, and to clean utensils at religious ceremonies. The effect was an environment architected for an integrated microbiome. Our human ancestors—who respected the cow as a mobile pharmacy—intuited the microbiome before we in the West had the word for it.

I know. It's bizarre. I couldn't make this up.

OME SWEET OM

You have many omes that we've investigated in this book: home, biome, microbiome, virome, genome, chromosome, lysosome, exosome, oralome. Sounds like a Vedic chant.[21]

Optimizing your human DNA, bacteria DNA, and virome DNA, only happens when you stack enough positive stressors into your daily life.

A healthy, nourished, and hydrated microbiome protects you from pathogenic overgrowth... through quickly adapting and getting to know the genetic codes of new pathogens.

Bottom line?

Cooperate.

Coevolve.

For more, listen to this podcast episode: Your Microbiome Is Your Virus Protection Program.[22] You can also find it in our interactive resources—> clubthrive.global/uninflamed-you

CHECK YOUR SYMPTOMS

These are all symptoms of dysbiosis and inflammation. If you have a lot, fear not! I'll walk you step by step through the habits that heal inflammation and dysbiosis.

- Chronic low-grade stress, anxiety
- Depression, hopelessness, feeling trapped
- Irritability, frustration
- Overwhelm
- Brain fog, mental confusion, poor memory
- Difficulty making decisions, concentrating or focusing
- Poor willpower, unmotivated, low ambition

- Fatigue
- Poor sleep
- Joint pain, stiffness upon rising
- Feeling heavy, stagnant, stuck
- Poor digestion: bloating, irregular or loose stools, constipation, indigestion, bad breath, coated tongue
- Puffiness, water retention, sinus congestion
- Belly fat, cellulite, man boobs, spare tires, excess body weight
- Emotional eating: cravings for crappy foods, overeating
- Skin issues: rashes, hives, acne, psoriasis, eczema

- Allergies or asthma
- PMS, fibrocystic breasts, hard periods
- Headaches
- Susceptibility to illness, infection, or fungus
- High blood pressure
- Lack of sex drive

- Disconnect from purpose in daily life
- Unclear about purpose, direction, or strategy
- Lack of creativity and unique expression

EAT DIRTY

God lives in cow dung.

— KESARI GUMAT, SUPPLEMENT SCIENTIST
(AHMEDABAD RESEARCH CENTER, INDIA)

Humans as a species have been around for roughly 200,000 years. Rubber gloves were invented in 1894. Synthetic nitrogen fertilizers and chemical insecticides for agriculture were invented in chemistry labs in the 1900s. Hand-sanitizing patents started appearing in the 1930s. The vegetable peeler was patented in 1947. Bottle-feeding newborns was popularized around the same time.Post-WW2, grains became processed, denatured, enriched, and packaged. In the last 100 years, humans' direct contact with soil, manure, and night soil (feces) through growing food and wildcrafting has plummeted.

What is common in all this "progress"? Humans have lost microbiome diversity at disastrous levels.

A *microbiome* is the essential collective of microorganisms within an organism or an organism's particular environment. Microbiome species are bacteria, fungi, viruses, and archaea.

Ome in cellular biology means "all constituents considered as a collective whole"—a body, a community. The Greek root *bios* means "relating to life."

A *biome*, then, is a body of life, and a human being can be seen as its own biome.

As a biome, you are a dynamic interdependent community. Throughout your life, a healthy microbiome requires a diversity of species to regulate the development of the immune system, and is inseparable from a healthy innate and adaptive immune system. Microbiome researcher Devinder Toor summarizes: "An organism is not just an organism but a niche of a large number of communities." Chronic inflammation is the telltale sign your healthy microbe community, aka your eubiotic microbiome, is losing diversity and dying.[1]

Experts estimate that 30% of microbiome diversity has been lost in contemporary populations compared to our primal ancestors. The microbiome, also named "the second genome," is the latest human organ under research, the next horizon of undiscovered functions central to survival. Perhaps we should go further and call it the *first* genome, because these microscopic critters are far older than mammals.

The microbiota (the microbiome and its environment) is the genetic predecessor of humans. Not cultivating a healthy microbiome, either by destroying organisms through the use of antibiotics or not paying attention to their specific diet and lifestyle requirements, can result in "dysbiosis." This is a state of imbalance in the microflora populations: beneficial species decline and harmful ones take over. The result is an unhealthy microbiome and disease.

In 2012 two scientists used strong language in the journal *Clinical Microbiology and Infection*. They simply stated, "The microbiome is a human organ."[2] An organ. Hmm. That's a new frame.

When we kill the bacteria that surround us and live with us symbiotically, we not only diminish our microbiome, we invite truly harmful bacteria to take over. This is what happens when we ingest antibiotics

for surgery and end up in the ICU with C. difficile infection. The cure, up till now, has been more and stronger antibiotics. Overuse of antibiotics can give rise to resistant species, and the cycle continues. It's high time to find a better cure.

This organ is dying due to pro-inflammatory modern farming practices, diet and lifestyle, and the microbiota-destroying medications that are so prevalent, from antibiotics and chemotherapy to immunotherapy and SSRIs for anxiety and depression.[3]

Eating dirty is about redefining who you are as an ecosystem. You are the microcosm and the macrocosm, the chaos and the cosmos in an edgy process of unfolding. You rely at the molecular level on the past intelligence of mutualism.

Eating dirty puts the microbes back in our soil, our food, and thus, our bodies. Eat dirty is about eating organic, tuning into farms with healthy soil, and unplugging from the food industry that wipes out your gut microbes. Eating dirty is about taking off the gloves, putting away the hand sanitizer, petting the dog at the dinner table, getting your hands in soil, and letting the vegetable peeler drift to the back of the drawer.

And if you're into biohacking or ancient wisdom, eating dirty is about redefining what pee and poop can do for your microbiome, and for the ecosystem that grows your food.

TERRAIN = MICROBIOME

In ancient and indigenous holistic medicine systems, the concepts of the microbiome and human cells were present in the ideas of "seed and soil." "Soil" is the microbiome. "Seed" corresponds to the human genome. You want to plant the best of your seeds in the best soil for the best outcome.

The communities of microbiomes occur where the outside becomes the inside, and inside becomes the outside: your mouth-to-anus tract for digestion; your nostrils; sinuses and lungs for processing air; your skin for absorbing and resorbing whatever you put on it; your sex

organs for mingling with other people's bodily fluids; your urinary tract (urobiota) which is your water cycle's personal filtration system. As Baquero and Nombela state, the microbiome as an organ can be understood as the "terrain organ" mediating outside to inside, inside to outside, the intersection of DNA communities in a co-evolutionary process.[4]

Think of the "terrain" as nitrogen-rich soil in which human DNA can thrive. Terrain is the zone of the microbiome, where it generates the environment within which the human DNA epithelial cells operate. This focus on environment is known as "terrain theory." The epigenetic environment—literally, the environment at a higher order than the cells—is the atmosphere the terrain generates.

If the terrain is off, your human cells don't function as designed, so the intelligence within your DNA can be altered rather than preserved. Good gut microbiome diversity generates diurnal rhythms that synchronize eating and develop innate immunity. Plus, if you're not aligned to circadian rhythm, your microbiome can't produce the molecules or send the messages your DNA cells need. The microbiome is the critical information hub.[5]

Terrain theory states that the more depleted a person's terrain—the microbial environments that support hundreds of bodily processes—the more out of balance, and the more susceptible to illness they will be. This leads to people with poor terrain health becoming sicker when they come into contact with germs or viruses. Germ theory emphasizes that viruses or germs are the foundation of illness and does not include the state of the individual's microbiome, or terrain. Given drug-resistant superbugs, it's worth considering that both schools were correct (see MICROBIOME).

If you were raised on the beliefs of germ theory, you might fear germs, bacteria and viruses. And for good reason, as acute infections from new pathogens have wiped out entire civilizations. Antibiotics and vaccines have worked miracles, but they come with a price and they are not the only game in town.

Terrain theory recognizes the importance of individual resilience to fight potential disease. Healthy terrain means a healthy immune system. You partner with your microbiome to strengthen the terrain on which your DNA cells rely. The health of your microbiome determines biological aging, cellular health, immune resilience, and stress response.[6] So, looking after your terrain means you won't need so many antibiotics, pills or vaccines, because your natural defenses are powered up and equal to the challenges that would put weaker individuals—weaker terrains—in bed, or worse.

A healthy microbiome is the critical factor of your healthspan. By nature, it should be dynamic, evolving with our mutually changing ecosystem microbes. Microbiome diversity decreases inflammation by creating a healthy ecosystem for epithelial cells (see NITRIC OXIDE). Chronic inflammation is the key indicator that the terrain is diseased, the microbiome is losing species diversity, and the immune system is operating under duress.

A healthy gut microbiota is essential for performing these tasks: extracting energy from food; producing vitamins; processing an environment that doesn't trigger but rather informs the immune system; protecting from infectious agents; maintaining gut barrier integrity; and guiding metabolic and neurologic development. The microbiome as an organ is the soil your body depends on.

Overeat, eat too frequently, eat processed or fried foods, take pharmaceuticals regularly, and your microbiome diversity becomes depleted. The bad guys thrive, the good guys die. You generate inflammation continuously, with the cascading effect of damaging tissue and accelerating aging. Dysbiotic microbes breed cravings; indulging cravings feeds dysbiotic flora; your problem becomes more of a problem (see MICROBIOME).[7]

If you are in dysbiosis... your cells can't get the right messages to line up with the circadian rhythm, which means there's no way your hormones, neurotransmitters, or signal cells can send the right messages. Distress feeds dysbiosis, which feeds inflammation. The problem is vast. The problem makes "taking probiotics" seem like

taking aspirin for a hip replacement. Without "eating dirty," restoration isn't near possible.

So, how is this communal organ, your second genome, bountifully replenished and invigorated?

FEED YOUR GUT COMMUNITY

Prebiotics are substances, found mostly in plant-based foods, which provide a living terrain for the beneficial bacteria in your gut. Probiotics are the actual beneficial microbes—primarily bacteria and viruses—that make up your microbiota (see MICROBIOME). Prebiotic dietary fibers, resistant starches, polyphenols (a type of phytonutrient), ferments, and foods that promote nitric oxide production, are essential for a robust microbiome.

Let's start with fiber.

Your poop is fiber fermented by gut bacteria. This makes poop prebiotic and probiotic. If the colon microbiota feeds off fiber, the fiber is prebiotic. Resistant starches make up the majority of prebiotic fiber. While most starch gets broken down into glucose, resistant starch is a carbohydrate that is not digested but instead gets fermented by microbes in the colon. (Chocolate lovers—cacao is, notably, one of the few prebiotics that isn't a starch!) Fiber slowly moves the food bolus towards the exit without getting broken down in the small intestine. Ancient agrarian diets could reach 100 grams of fiber per day, while urban Western populations eat only 15 grams.[8]

Prebiotic fiber is the specific food for the gut microbes to produce short-chain fatty acids (SCFAs) from. SCFAs nourish the cells that maintain the gut barrier into the blood, which optimizes immune function by generating an anti-inflammatory and anti-carcinogenic atmosphere.

There are two main types of fiber: soluble and insoluble. Insoluble fiber cannot be dissolved in water and therefore adds bulk to the bowel. Examples of this kind of fiber are cellulose from whole grains, bran, nuts, vegetables—especially cruciferous—and fruit skins. Soluble

fiber dissolves to form a gel-like viscous substance. Soluble fiber regulates bowel transit time and can lower the glycemic index of foods to regulate blood sugar. Soluble fiber is found in high concentrations in legumes, grains, fruits high in pectin (like apples), citrus fruits, avocados, and chia seeds.

What prebiotics should I eat this week?

Add a few of these to your grocery list:

- Legumes, such as chickpeas, beans, lentils, and dried peas
- Unprocessed whole grains, like oats, barley, brown rice, and quinoa
- Starchy roots, like yams, potatoes, tubers
- Plantains and green bananas
- Dandelion greens, cabbage, asparagus, snow peas
- Garlic, onions, leeks, shallots
- Apples, grapefruit, pomegranate, nectarines
- Cashews, flaxseeds, pistachios
- Jerusalem artichokes, burdock, yacon root
- Seaweed

Notably, the skin of vegetables has more prebiotic fiber than the insides. Organic microbes in the skin of root vegetables are picked up from the soil (probiotic). The microbial community within the soil determines the communities in the peel that colonize the gut. And vegetable skins exhibit higher microbe diversity—more species—than their insides. So don't peel organic vegetables; buy from organic farms that replenish the soil with manure. And, as you'll see below, leaving a little dirt on the carrot isn't a bad idea.

Microbes are also in the leaves of organic plants that replicate when fermented, such as the four lactic acid species on cabbage leaves (see FERMENT).

When grains or beans are soaked overnight in water with a bit of whey or pickle juice, the microbes from the ferment grow the grains into

probiotics. Plus, when grains are soaked, they start to sprout, which makes them rich in enzymes (the proteins that digest nutrients). Asian cultures ferment their legumes in foods like miso, tofu, bean pastes, and tempeh (see FERMENT).

Polyphenols in food enable gut bacteria to produce neurotransmitters, bioactive metabolites, and antioxidants. What foods are high in polyphenols?

- Berries
- Herbs and spices
- Nuts
- Vegetables
- Olives
- Coffee, tea, cacao
- Red wine

Many of these plant-based foods stimulate the microbiome in the mouth—the oralome—to make nitric oxide available for homeostasis. Also, the body converts foods high in nitrates into nitric oxide in the nitrate–nitrite–nitric oxide pathway (see NITRIC OXIDE). Here are the top foods that increase nitric oxide levels:

- Beets
- Garlic
- Leafy greens
- Dark chocolate
- Citrus fruits
- Pomegranates
- Nuts and seeds
- Watermelon
- Red wine

Note the repetitive nature of these lists. Which of these are missing from your diet?

Note also, as your fasting rhythm advances, you'll have more money for better food. You'll stop investing in inflammation. You'll make your own food more, and eat out less. You'll get your hands involved. You'll slowly stop buying convenient foods, or buying alcohol to numb some pattern, etc. You'll simply have more money to invest in better nourishment (see MONEY). It's important to pause and notice your progress in this.

And notice. Once you're one your way, You'll probably be craving phytonutrient-rich foods, nutrient-dense proteins, and fats. As you cook from scratch and buy bulk whole foods you'll have more money for organic vegetables, nuts, meats, or bones for bone broth.

You're probably preferring organic, local food. You're probably craving to mix your food with your hands. Factory food isn't really food for you, now, is it?

You're going primal.

Eating dirty is cheap. Dirt is cheap... and priceless.

Before we turn to eating dirt, let's get more involved in food prep.

FEASTING IS SACRED

> We evolved for sacredness.[9]
>
> — JONATHAN HAIDT

Mix the microbes from your hands into your food as you cook. Pinch spices. Measure bellyfulls with handfuls. Receive the vibrations of the foods. Why not scoop out pumpkin seeds from a pumpkin with your fingers? Add ferments—living microbes—into your food prep process as a matter of habit. By design, you are highly attuned to deep nourishment.

Your sensory and sensual involvement with food grounds you, calming your nerves. Your intuition and intention get turned on through making food. In food prep, you mix your heart and your ecosystem into nourishment.

Shop with your nose and eyes. Notice nutrients in colors and shapes. Seasonal local organic foods are superfoods. Cook with your senses, undistracted. Be there. Feel textures. See colors. Your senses are nourished and provide insight long before the meal is ready. Kindle your digestion with aromatic seeds and spices. Taste as you cook. Is it sweet, sour, salty, bitter, pungent, astringent? A handful of this and a pinch of that. Aim for delight! The joy of the modern kitchen and provisions by nature!

Light the candle. Feel your hunger. Express gratitude. EXHALE.

Sanctify the sacrament.

Cooking is not a hassle; cooking is the art that elevates your senses, an act of self-creation.

My parents objected when restaurant waitstaff started asking, "Are you still working on that?" Feasting is never work. Feasting is pure pleasure. Fasting makes feasting sacred, a sacrament. Feasting nourishes your potential.

Humans like to imagine what we're going to eat next. Humans like to share, and boy, do we enjoy sharing food. Every cook knows it's easy to double a recipe. The time goes into the dish, not the doubling. Sharing food is how we share microbiomes and our ingenuity.

DIRTY MEDICINE

Our ancestors lived in constant contact with soil. Soil biodiversity correlates with gut microbiome diversity. Research on baboons has shown that soil is the most dominant predictor for shaping their gut microbiota, having a 15 times stronger effect than the baboon's genetics.

Manure from organic cows reintroduces gut microbiota into the soil microbial ecosystem. Passing grass through four stomachs (think resistant starches) acts as a fermentation vat for microbe proliferation.

"Soil" is a word meaning both "dirt" and "feces." (To soil yourself means you pooped your pants.) The major loss of beneficial microbes is attributed to our modern hygienic measures disrupting contact with soil and its microbial ecosystem. While antibiotic use is also high on the list, it's not getting our hands dirty and modern farming techniques that are mainly behind the destruction of our microbiomes. Genetic manipulation of seeds and chemical destruction of the soil microbiome, alongside poisoning livestock with drugs, have all taken their toll. Even peeling our carrots got us in trouble.[10]

Soil is by far the most extensive natural microbial gene reservoir on earth.[11] Ingestion of rich microbial diversity from soil protects against allergies and autoimmune disorders. Since prehistoric times, humans have eaten soil as a supplement, called "geophagy." Primates evolved completely integrated with soil, surviving by digging and eating roots, bulbs, and tubers. To put it into perspective, agriculture only became mechanized within the last 100 years.

When microbiome diversity is sufficiently bankrupt and the gut immune system fails, fecal implants are a solution. Since the fourth century, the Chinese have used "yellow soup" enemas, injecting a healthy person's poop into a sick person's anus. Fecal implants are rescue medicine for those with severe dysbiosis. Sick baby cows raised on antibiotics and hormones are also getting fecal implants. The injected probiotic microbiome adheres and proliferates within the colon, re-establishing a healthy microbiome. Similarly, C-section babies are directly being swabbed with vaginal microbiome fluids to restore the essential microbes to build their innate immune system.[12]

From the cow-worshiping culture of yoga's origins comes perhaps a more accessible model ecosystem for implanting a robust and diverse microbiome. "Cowpathy" is the ancient therapeutic use of a healthy, biodynamic cow companion as a living biodynamic pharmacy, a symbiotic microbiome replenisher, with over four hundred bacteria species.

Also known as *panchagavya* therapy in the ancient Ayurvedic texts, a healthy cow's microbiome is used medicinally in the form of cow dung, cow urine, milk, yogurt, and clarified butter (ghee). In India, *panchagavya* is manufactured as nasal drops for chronic sinusitis, allergic rhinitis, and migraine, alongside a host of other uses.

Drumroll please... for the microbiome enhancer recipe of the past two millennia...

Once prepared it can be used to repair tooth or gum decay: rub or brush a little into the gums. Then, swish with pee. For dementia, anxiety, or sleep apnea, snort a tiny bit up your nostrils... and see what happens. Take small amounts, like 1/2 tsp a day, with hot water, during your fasting time, if you need to replenish your microbiome. And if you're curious about a colon implant overnight, dilute a little (10 ml syringe) mixed into urine and shoot it up your butt before bed (wear underwear with a pad to protect your bedding from leakage).

Panchagavya Recipe

You will need about one cup each of cow milk, cow dung juice, cow urine, cow curd, and cow ghee. *Pancha* means five, and *gavya* means mix... thus the big five mix.)

First, make cow dung juice:

- Get fresh cow dung from an organic, preferably biodynamic, A2 cow (A2 breeds are older, the heirloom seed of cow genetics).
- Mix 1 part cow dung to 1 part water. Stir into an even liquid.
- Strain out the fiber through a nut milk bag or cheesecloth. Keep the liquid.

Mix one cup each of cow milk, cow dung juice, cow urine, cow curd, and cow ghee. Slowly cook on low heat until the water has evaporated, leaving a dirty, curd-like ghee. Ensure not to cook past when the water has evaporated or the ghee burns. Allow cooling. Then store in a glass jar, out of sunlight. It lasts for years.

When I asked my farmer how it could work after the urine and water from the dung juice are boiled out of the ghee, he reminded me that boiled isn't sterilized. Sterilization requires a much higher temperature. Some bacteria survive boiling. At the time of publication of this book, my next experiments are around fermenting then dehydrating the panchagavya, and seeing which I like better. I'm riskier than the average gal.

Medicine becomes intuitive with primal habits. Once I got my hands on some cow dung, and made the panchagavya, I found myself with abundance on my hands. First, the shovel of cow manure was more than I needed—you can see from the recipe, you only need one cup of cow dung and one cup of water to make your cow dung juice. And in a shovelful are worlds of microbes. I had extra cow poop juice. I let it sit on the counter to see what happened. It fermented. Ok. No surprise there. So I swished a small amount. Surprisingly, it tasted good—earthy, sour, a little pungent like all ferments are. Swallow. Surprisingly acceptable.

I dried an extra scoop of cow dung, first outside, then sucked all remaining moisture out in my food dehydrator. Then, in a coffee grinder, I ground cow dung powder. Once I had that in my kitchen, I found myself adding a homeopathic-size pinch to raw cacao superfood balls, to my herbal toothpaste, to hot milky tea. I noticed the cow dung cleaned up my diet by making my cravings intelligent. My gums felt cleaner.

Then, I got curious. I left another mix of panchagavya goop, uncooked, in my greenhouse. It's still there and will ferment into something I'm super curious to experience. With my cooked panchagavya, I massage my gums and nostrils. I swish my mouth with pee. I swallow. And I like it.

Intuitive healing leads to intuitive medicines. I pack my belly button with panchagavya—it's a location of absorption second to none. The umbilicus. How you connect to the cosmos.

My Top 10 Foods for Microbiome Restoration

For me, these foods became staples when rewilding my microbiome. In order of effectiveness, they are:

1. Cow dung juice or powder
2. Nopales (cactus leaves) (raw or sauteed)
3. Fermented garlic juice
4. Sauerkraut
5. Kimchi
6. Chia pudding
7. Fermented soup
8. Roasted thin sliced beets with yogurt sauce
9. Raw coconut meat
10. Sprouted oat granola

You can google any of these for an array of recipes. Explore. Experiment. I'll leave you with my latest experiment—fermented soup. If you want my recipes, find them here:

—> clubthrive.global/uninflamed-you

Ok, one recipe for the road:

Fast Fermented Soup

- 1/2 cup sauerkraut
- 1/2 cup kimchi
- 1 tbsp. miso paste
- 1 cup bone broth
- 1 cup hot water

Mix together on stove top with your finger. Just when it gets too hot, it's ready.

In summary, maintaining a healthy microbiome is pivotal to maintaining good health. A healthy microbiome is one that is colonized by a

diverse and robust bacterial population. This protects against inflammation. Once diversity is lost through too much modern living, with antibiotics, pizza, and hamburgers, you are fighting an uphill battle. Dysbiosis sets, in degenerating the terrain, attracting disease.

Eating dirty is key. Prebiotic fiber and probiotic foods are essential to maintaining a balanced microbiota. You are the soil and the seed. To nourish one, you must feed the other. Eating dirty orients us toward thriving.

FERMENT

> Wild fermentation is the opposite of homogenization and uniformity, a small antidote you can undertake in your home, using the extremely localized populations of microbial cultures present there to produce your own unique fermented foods.
>
> — SANDOR KATZ: *WILD FERMENTATION*

Just as shit happens, fermentation happens.

Your poop is a fermented functional anaerobic microbiome, feeding off the fiber. Poop as compost is the microbiotic fertilizer that rejuvenates soil for growing more food. Feces are the remains of food that billions of bacteria have fermented in the gut; per gram of feces contains 100 billion bacteria, 100 million to 1 billion viruses, and about 100 million archaea.[1]

Milk a cow, and in a few days you'll have curds and whey. Both are full of bacteria that convert lactose into lactic acid. Soak your grains in water with whey, and the bacteria inoculate the grains. Life blooms.

Fermentation is the antithesis of entropy. Nature upcycles utility into higher order. Good poop is the result of a functional microbiome.

Negentropy—the opposite of randomness or chaos—is where actions that limit or reverse energy loss are taken to uplevel order according to organization, structure, and function. Life at large and the microbiome within you are negentropic because both convert matter into higher order.

You mix cabbage into saltwater, and in a few days, you have a more complex food with higher nutrient availability rather than ending up with something moldy. The enzymatic action of bacteria naturally occurring on cabbage leaves needed the anaerobic environment provided by the saltwater to grow. FERMENTed foods breed healthy gut microbes, which make up the genetic diversity of your microbiome (see MICROBIOME, EPIGENETICS).

SYNTHESIZERS

In 1907, German chemist Eduard Buechner won the Nobel Prize for discovering how enzymes produced by microorganisms cause fermentation. During fermentation, "good" bacteria synthesize vitamins and minerals, producing biologically active peptides with enzymes that nourish tissue development while removing non-nutrients.

Enzyme means leavening or sparking an action.

Enzymes are proteins that metabolize by digesting nutrients, breaking down and removing toxicity, purifying the blood, delivering hormones, balancing cholesterol and triglyceride levels, energizing the brain, building protein into muscle, and feeding and fortifying the endocrine system.

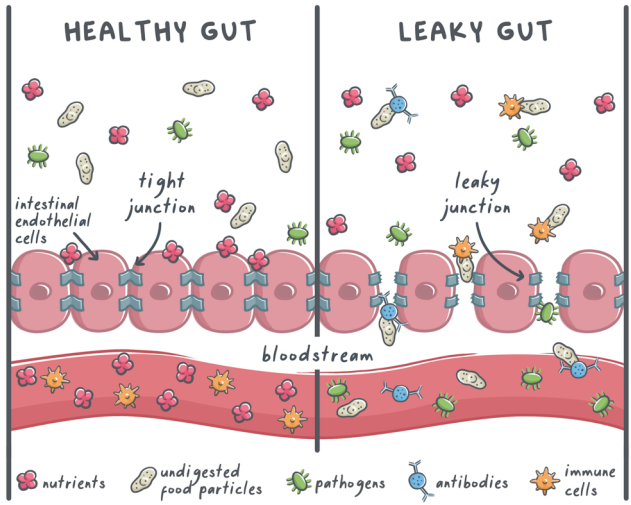
Enzymes are digestion. Plentiful enzymes mean strong digestion, which is high functioning digestion, absorption and elimination. High functioning absorption provides your cells with nutrition in the right components to work towards negentropy, a higher-order system.

Negentropy is negative entropy, or preserving order in a system, taking actions to limit or reverse energy loss, generating higher order and intelligence.

Go enzymes! Go beneficial bacteria! Go team!

Processed foods don't have enzymes.

Enzyme deficiency leads first to digestive discomfort and then to disease. First, it feels like this: constipation, gas, heartburn, bloating, and stool problems, which look like this at the micro-level across the gut/blood barrier:



Chronically consuming poor-quality foods, alcohol, eating late, frequently or overeating, degenerates gut or colon microbiomes into "dysbiosis." This is a state of imbalance in the microflora populations: beneficial species decline and harmful ones take over. Dysbiosis develops when there is a dramatic shortage of enzymes. Downstream of dysbiosis lie major diseases of inflammation, such as cardiovascular disease, cancer, or Crohn's.

Fermented foods are both living microbes and the nourishment for the diaspora of the healthy microbiomes.

Fermented foods nourish the diaspora of microbiomes throughout your body. A variety of fermented foods feed the distinct microbes in the body's various microbiomes.

A recent study on gut-microbiota-targeted diets in humans upgrading their immune status proved that which is time-tested. Yogurt, kefir, fermented cottage cheese, kimchi, fermented vegetables, vegetable brine drinks, and kombucha tea increased overall microbial diversity, with more potent effects from larger servings. "This is a stunning finding," said Justin Sonnenburg, Ph.D., a professor of microbiology and immunology. "It provides one of the first examples of how a simple change in diet can reproducibly remodel the microbiota across a cohort of healthy adults."[2]

Fermented foods kill the bad guys, from free radicals which cause oxidative stress to carcinogens, thus earning the following heavyweight titles:

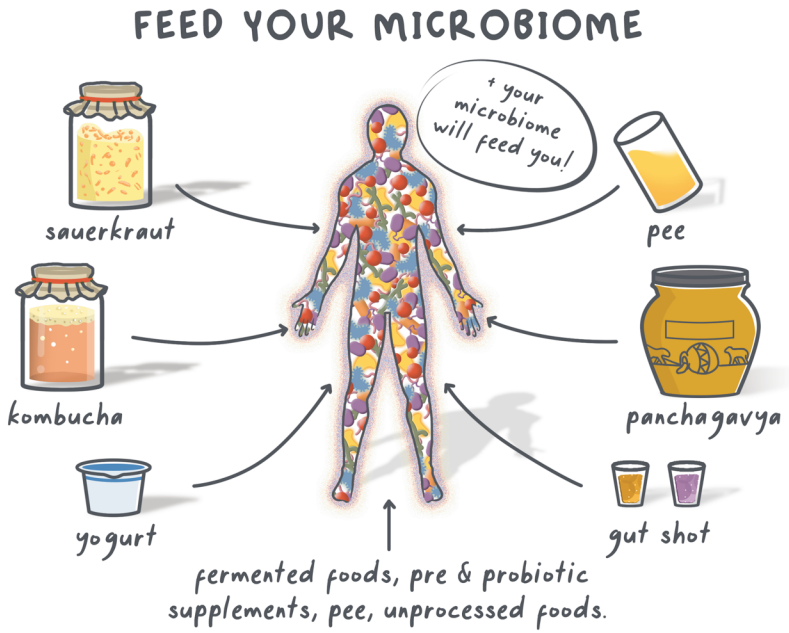
1. Anti-oxidant
2. Anti-inflammatory
3. Anti-microbial
4. Anti-carcinogenic
5. Anti-fungal
6. Anti-diabetic
7. Anti-allergenic
8. Anti-atherosclerotic

Those eight anti-pathogenic effects point to how fermented foods benefit you, the host.[3] As the host, your diversity of beneficial microbes, from bacteria, and viruses to archaea, makes you resilient to pathogens and even cancer and disease at large. Poor microbiome populations and poor microbiome genetic diversity is *the* key indicator of poor health.

You have an effective regeneration strategy when you digest all the bad guys (FAST) and then feed all the good guys (FERMENT). You're nourishing the microbiomes that, in turn, nourish human DNA cells.

PEE is also a prebiotic and probiotic cure-all for microbiome hydration and performance. Used with pre and probiotic supplements that replenish the specific missing microbiota diversity is at the forefront for biohackers who use UT. (See microbiome testing and supplement

suppliers like VIOME.) Plus, the properties concentrate when fermented, which urine does once it exits the body.



Gut Shots

The fastest fermented microbiome-building inflammation-eating concoction I've found is the gut shot. Think sauerkraut juice or pickled vegetable brine.

Make them at home or splurge on gourmet ferments in the organic refrigerated section. Small batch fermented foods have living cultures. Big batch-processed brands don't have the enzymes you are after. And you need that living culture to digest your waste and feed your microbiome.

You can find me making gut shots on Youtube.[4] Otherwise, read the instructions below. Get a sense of the flavor you would like your batch to be, which determines the vegetables and spices you'll add to the cabbage and saltwater. It keeps for many moons.

Ingredients

- ½ head of a large cabbage (red or green)
- 7 cups water
- 2 tsp. sea salt

Tools

- ½ gallon glass jar
- Fine mesh strainer or cheesecloth
- Sterilized glass bottles for storage: 3 16 oz. bottles with lids are preferable

Prep the Brew

1. Chop the cabbage into chunks.
2. Place cabbage in a blender.
3. Add salt.
4. Blend on low speed for 1 minute.
5. Pour the liquid mix into a ½ gallon glass jar.
6. Place beeswax cloth or plastic wrap directly on the surface of the liquid mix to create an anaerobic environment.
7. Add a weight—like a small jar or rock—on top of the cloth.
8. Cover with a dish towel.
9. Store in a cool dark place for 3-7 days. The longer it brews, the stronger it gets.

Stir the Pot

Daily stir the brew with a wooden or plastic spoon.

1. Stir out the bubbles.
2. Scrape off any browned material from the top, and do a better job keeping the liquid covered so air doesn't get in.
3. After day 3, taste daily until you like the strength. Ferment up to 7 days.
4. Strain the liquid (a nut milk bag is the best).
5. Pour through a funnel into glass jars. Store in fridge.

Fancy Gut Shots

Add a few tablespoons of an existing ferment (pickled beets, sauerkraut, gut shots, etc.).

1. Create colorful healing brews with beetroot and/or turmeric root.
2. Mixed vegetables (cabbage alone, or add carrots, beets, dandelions, asparagus, celery).
3. 1-2 fresh spices (turmeric, ginger, chives, cilantro, basil, lemongrass, cinnamon stick).

4. 1-2 dried spices (caraway, cinnamon, bay leaf, cloves, peppers, turmeric, ginger, cardamom, fennel, etc.).

Do not delay. Start fermenting at home. Indeed, it's the most fun and easiest way to make your own medicine outside of upcycling your pee. Put what you need on your list. Move this to priority.

It's not just another thing to take care of... it's feeding your microbiome.

Ralph Moss, the author of Cancer Incorporated, reported to me after his 30 years of research uncovering corruption in the cancer industry that if one wanted to prevent cancer, one should eat a little bit of fermented foods daily.[5] Common fermented foods include sauerkraut, kimchee, pickles, pickled beets, fermented dairy, fermented soy, or gut shots.

Condiments

Make or purchase sauerkraut, kimchi, pickles, and pickled vegetables. Have an assortment for a few bites at mealtime.

SIP

If you circled any of the symptoms in CHECK YOUR SYMPTOMS, sip hot water.

Why hot?

Hot water allows deep hydration, which flushes out inflammation faster than cold water. When we are already chronically inflamed, we need to detox through hydration. Hot water aids digestion and is more easily absorbed. Cold—iced is even worse—inhibits digestion, including the digestion of inflammation. Cells that aren't hydrated cannot release toxins.

Sip hot water throughout the day to quickly hydrate your microbiomes, to purify your blood, sweat, urine, and adipose tissue (fat: see ADIPOSE).

Test it yourself.

Hot Water Recipe

- Pour 1 liter of boiled water into a thermos. Distilled or spring is much better than tap water (it's chlorinated).
- A thermos is handy—you'll want to sip hot water every 20 minutes to reverse CHRONIC.

Some people sip for a few days and are then overwhelmed by intense thirst. This is quite normal: it takes days, sometimes weeks, to quench a thirst that's been deprived for so long. Don't be alarmed, and don't give up. Just keep sipping.

Dehydration can be system-wide and goes much deeper than you may think. The Ayurvedic lens is helpful in thinking and feeling in terms of tissue systems. There are seven levels: blood plasma; red blood cells; muscle; fat; bone; bone marrow or nerve; and reproductive.

Think of hydration permeating these levels of tissue—from superficial tissue like blood plasma to deep tissue like your bone marrow. Your pee thickens. Your mouth gets dry. Your GI tract (which requires fluid to stay supple and mobile) slows down and may even halt, causing bloating, gas, and constipation. Eventually, dehydration affects your bone and nerve tissue.

Your cells and microbial communities prefer hydrated-and-dynamic to dry-and-static. Notably, when dysbiotic, these microbiota become anaerobic, acidic, and thrive in dehydrated environments (see MICROBIOME: Biofilms).

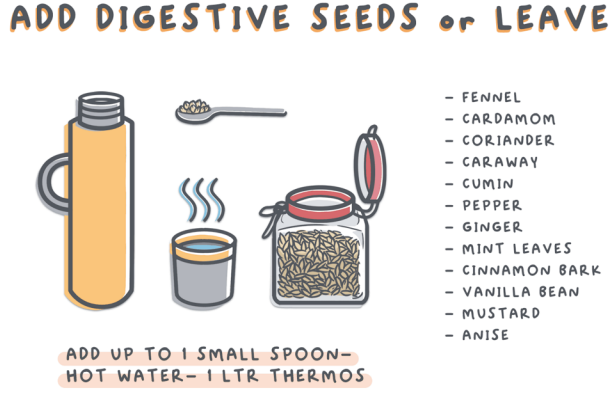
Heated water regularly sipped—to the tune of every 20 minutes—hydrates the microbiome into mobility. The good guys reclaim their dominion and get back to running the ship.

In a hydrated state, appetite decreases along with cravings.

If you can't stand the taste of hot water, then add a slice of fresh lemon or raw ginger root.

Fancy Hot Water Recipe

Add a squeeze of fresh lemon, some seeds or spices. Try coriander, fennel, cardamom, cumin, mustard, ginger, anise stars, cinnamon sticks, or peppercorns.



So, track down a thermos. Get out the kettle. Start sipping. Drink it as hot as is comfortable (without burning your mouth). If you get thirsty, it's working. Sip more. Usually, people don't chew the seeds, but sometimes I do.

Do you get bloated? Sip spice water before your meals. Steep some seeds in hot water for a few minutes. Chew the seeds if you like.

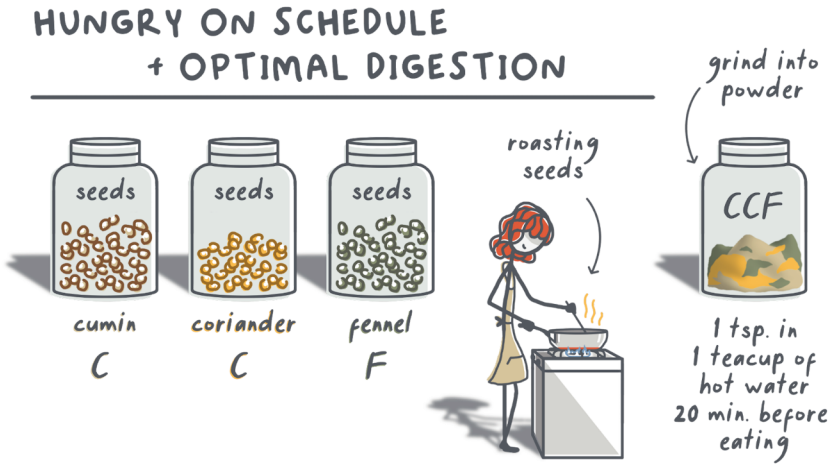
A favorite digestive from Ayurveda is CCF powder:

- Take cumin, coriander, and fennel seeds in equal proportions: 1/4 cup (59ml) each will give you a good supply.
- Roast the seeds gently by heating them dry in a frying pan: 2-3 mins will do it
- Grind into a powder: I use a coffee grinder.
- Drop a teaspoon into hot water 20 minutes before eating.

CCF gets your digestion ready to roll.

Once hydration has worked its magic, once it's got all the way into the system, then things really start happening. Weight loss becomes easier, fasting is a doddle, your mind and mood settles. People find that sipping hot water keeps joints flexible, muscles hydrated, and the mind focused. Perhaps if we weren't inundated with modern distress (see STRESSORS) we wouldn't need to heat our water.

But we are. So sip.



FAST

We cannot feast all the time. It doesn't work.

— DR. JASON FUNG: *THE OBESITY CODE*

Let's find your fasting/feeding rhythm. To start, think about your fasting time, which is the period in the 24-hour cycle when you don't take in calories. Consider the last sip of wine or morsel of dessert at the end of the day, and then your first calories the next day, perhaps milk or sugar in your coffee: that is your fasting time.

Reflect on the past week. Write down your fasting time: ____hours.

Then, calculate your feeding time (subtract fasting time from 24): ____hours.

For example, if your last calories are a bite of dessert at 8 pm, and you add milk to your coffee at 7 am, your fasting window is 11 hours, and your feeding window is 13 hours. In fasting language the fast/feed rhythm is 11/13.

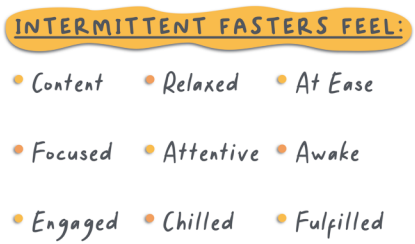
13 HOURS

The scientific truth behind fasting for health is this: it takes 13 hours without food or calorie intake for your body to *start* cleaning itself at the cellular level, which is called AUTOPHAGY. Without autophagy, your body can't rest, recover, clean house and heal.

Critically important is that, when fasting, your body "digests" those parts of itself it no longer needs, or that have been damaged by inflammation. Autophagy is cellular metabolism, which is essential for good health, vitality, and longevity, and it only *starts to happen* at 13 hours without calories. Fasting enables cellular "rest and digest" processes to do their work.

So if your feed/fast rhythm is 14/10, your cells enjoy an hour of clean-up time.

Fasting stabilizes your energy, reorganizing you at the cellular level. Fasting enhances not only your physical energy; it improves mental health, too. As the cellular intelligence of "feeling better" kicks in, people get curious about fasting longer.



"Intermittent Fasting" (or IF) is a free, simple, convenient and flexible way to fast. It can be practiced at a level that suits you: gentle or more profound. IF prevents overthinking about food. This is the *when* part of food in a regenerative lifestyle. When you get the *when* right, *what* to eat becomes intuitive (although I will be giving you plenty of ideas in this book).

As Dr. Jason Fung, a nephrologist (he knows about kidneys) and world-renowned expert on IF says, "Fasting isn't something you do. It's something you *don't* do." When you don't eat as often, you have more time.

Note: The FASTING GUIDE section gives you the details you need to master this habit, no matter where you are starting, and unpacks the science at the cellular level. The BODY TYPE section walks you through fasting for your particular body type; daily, weekly, seasonally.

Fasting is the anti-aging elixir you've been waiting for.

Try This

IF is simple: you eat during a chosen time range—your "feeding time"—and don't take in any calories the rest of the time (water and some drinks are ok).

At the start of this chapter, what did you write down for your usual eating window? How many hours does that leave for your body to rest and digest? For most people today, it will be around 10-12, but it may be as little as 7-9 hours. If you often feel sluggish, heavy and tired, but don't know why, a big part of that will be because you're overloading your body and never giving it time to deal with its burden of food.

To get a taste of fasting, do an experiment—just skip a meal.

Allow your stomach to be empty, and to remain empty, for a spell. How did it feel? Awful? Hard to bear? Or not too bad, kind of OK?

Well done. You've just completed your first fast and lived to tell the tale. You might not think you've learned anything, but in fact you've just told your body (and your mind) that you can choose to withhold food and it will be alright. This is an important first step.

With this embodied knowledge, you are ready to embark on intermittent fasting for real.

REST + DIGEST: AN ANCIENT RHYTHM

Emptiness before fullness is the essential body rhythm (see HUNGER). Your stomach is an organ that should completely contract and rest before expanding into action again; like your lungs. In breathing practices, the EXHALE will always come before the inhale, and the fuller the exhale, the more room for the inhale. The one works better when the other works better.

You return to rhythm. You experience focus, power, rejuvenation.

All from not eating as frequently.

As I mentioned, IF simply means eating in a rhythm that activates your cells to carry out the two crucial activities of **rest** and **digest**.

The "digest" part of this needs very little explanation. When given enough time without extra input, your digestive system is able to fully process the nutrition it's received. This not only means that energy is released and the body has all the substances it needs to thrive; it also means that no excess, undigested particles of food are left behind to become toxic and interfere with the body's optimum functioning.

The "rest" part is subtler but no less essential. It's also surprising and pretty amazing just how much is going on when you are "at rest". Fasting activates fat metabolism, which ignites cells to scavenge obsolete components within and around themselves. AUTOPHAGY only happens when glucose isn't circulating in your blood. This crucial part of your body's physiological cycle mops up dead and dying cells, turns dysbiotic brown fat into beneficial white fat, clears out pre-cancerous cells, decreases inflammation, reverses oxidative stress, produces ketones, and repairs defective DNA. All of this amounts to essential repair work to tune up the engine and reboot the system.

In a word, your body "digests" itself when it's given the chance, and as it does so, it moves into a higher order. This kicks in more cell repair, more stem cell and tissue regeneration. Eat too frequently, and you disrupt your natural ability to regenerate cells, optimize your genetic

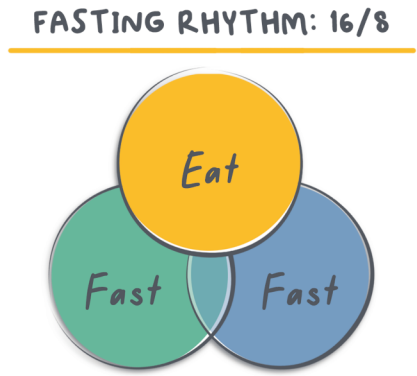
expression and prevent disease. You'll see more details in AUTOPHAGY, ALLOSTASIS, ADIPOSE, NITRIC OXIDE.[1]

When we habitually eat for entertainment or emotion management, that's when we lose (see EMOTIONS). Our cells lose. We lose because we are unwittingly polluting our human body with insulin and leptin resistance. Leptin is the hormone that tells your brain you're full. And leptin doesn't function correctly if you don't fast.

Even fasting between meals—not snacking—strengthens your digestive power, decreases sensitivities to foods (helping allergies too), and builds a hearty, intelligent appetite. Eating every few hours, overeating, eating too late, or eating when emotionally triggered; all of these disrupt digestion and cellular metabolism. This forces your body to be busy digesting food constantly; even when you're asleep, when your body should be doing nothing except repairing itself.

16/8 Rhythm

If you're new to fasting, this is an excellent place to start. It's the baseline daily fasting rhythm.

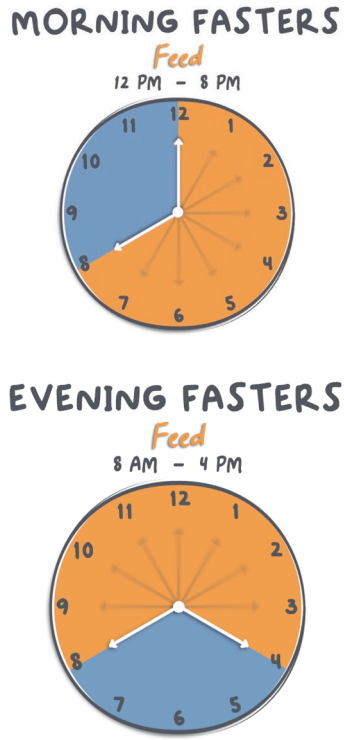


The 16/8 takes our 24-hour day and breaks it into three 8-hour parts. Two parts fasting (one while you are sleeping) and one part eating. The reason this is the recommended baseline rhythm for most days is that you have a long 8-hour eating window, enabling you to keep your daily routines more or less intact, with only modest adjustments. But you

also give your body 3 hours to clean house. This is crucial: autophagy only kicks in after 13 hours of no calories, remember? And day after day, that means you can run a tight ship. (Notably, for children the best rhythm is 14/10: fasting for 14 hours and a 10-hour feed window [see FAMILIES]).

People usually choose to become a morning faster or an evening faster.

Some find it easier to fast in the mornings, some in the evenings. If you'd rather eat dinner, then try fasting in the morning, and eating between noon and 8 pm on a typical day (morning faster). If you have a strong morning appetite and less of an evening social life, try eating between 8 am and 4 pm (evening faster). If you have weak digestion or elimination, fasting in the evening can help.



One-Week Experiment

If you're starting out, run this experiment for the next week.

Fasters find that knowing their fast/feed schedule in advance helps them commit to the habit and plan accordingly. To make your schedule, open your calendar. Look at the next seven days. Write your eating windows for the next week into your calendar. Or, if you'd rather print a schedule and plan what you'll eat each days, use this IF tracker.

MENU

WEEK	EATING HOURS	MEAL 1	MEAL 2
Sunday			
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			

Print your IF Tracker at —> clubthrive.global/uninflamed-you

Here are a few things to consider:

- Schedule your eating time around when you get hungriest.
- Are there any social engagements or work commitments that need to be navigated? Plan your schedule to allow for these.

By doing this, you'll be forewarned, forearmed, and won't stumble. Remember, this is a one-week experiment to find what works best for you. There are no hard and fast rules, and it's OK to change your fast/feed schedule from day to day, as long as you're giving your body that all-important 3-hour period to rest and digest.

Tips For Beginners

- Only drink water, teas, and black coffee during your fast time. No milk. Caffeine is a.o.k. No sugar, no stevia, no sweeteners.
- If you have intense cravings or HUNGER that you can't get over, BUTTER COFFEE will curb your hunger so you can extend your fat-burning time. The fat in butter coffee causes the caffeine to release slowly, while you continue fat burning. While this isn't a clean fast (not calorie-free) it is a very helpful tool to bridge the gap from where you are into clean fasting.
- If you feel heavy, and can manage it, fast longer and WALK more.

My husband is a CLOUD in relation to BODY TYPE: mellow, relaxed, confident, strong. IF came easy to him—here's his advice:

- Keep busy.
- Don't make it a big deal.
- Eat what makes you feel good.
- Mix up your eating window so that it works for your lifestyle.
- Coffee is good.
- Don't be strict about any of it. That's not the point.

- Remove the obvious temptations. Throw out those biscuits and don't buy any more candy. If it's not there, you won't reach for it.

Alex is the daughter of Lori, who runs our team at CLUB THRIVE. Alex is 18, she's on the basketball team and lives in Manila. Despite being a FIRE type, she gained weight from 2 years of lockdowns. She lost weight easily by extending her fasting time. Her advice is:

- Choose your hours
- Keep drinking water
- Eat a larger meal early and a smaller meal later

What Should I Eat?

IF places the emphasis on fasting times. Fasters experience that, over time, they gravitate towards foods that are more nutritious, meaning foods that have higher nutrient density. Fasters also find their "what to eat" intuition improves from fasting. The reason? The hungrier your body is, the more it wants real fuel, not junk (see FEAST for food recommendations). Fasters strengthen their circadian rhythm, and as they do, become more connected to their ecosystems. Many find they want to source food locally, and as they do they eat what is produced seasonally in their location. Over time with this habit, you will start looking for better foods and loving them (see FEAST, DETOX).

These questions will help as you plan your one-week experiment. If you use the IF tracker, add meal ideas:

1. How do you want to feel this week?
2. What do you need to eat to feel the way you want?
3. What is your fasting schedule?

Update your IF tracker or your calendar to make sure you capture your meal ideas for the experiment. Now, you're ready to get going!

Experiment one week at a time, and soon the practice will become an automated habit that makes your life easier, your body trim, and your sleep deeper. You'll find your own way with fasting. Try a fasting app, if you like tracking.

Fasting will awaken your intuition. You may be starting with all kinds of likes and dislikes around food, and you may think you like all the "bad" things and are gonna hate all the "good" things. But, as you fast, you give your body the space and time to return to homeostasis, its natural balance.

When you "pulse" your fat cells (meaning you allow AUTOPHAGY to happen) your cravings and desires change. Your body will tell you which foods to eat. Cravings for crap fall away. Chemical-laden foods, sugar, and processed foods have less appeal. Nutrient-dense foods, including those with the highest quality fats, proteins and complex carbs, will have more appeal. With rhythmic fasting, eventually even the most anxious cravings, feelings and obsessions around food transmute as you forge a new, relaxed mind-body connection. You may not believe that this will happen for you, but trust me, it will.

It may feel strange at first, but that's OK, persevere and keep going. This is a tried-and-tested health technique, and you're in no danger. Remember, fasting is how mammals evolved. It's our shared evolutionary history. We live in a culture that suffers from chronic inflammation, which generates chronic disease because we don't fast long enough for AUTOPHAGY. If you want support or if you have a particular health condition that is concerning you, then get in touch with a fasting practitioner, either here at CLUB THRIVE or with another well-regarded practitioner.

Keep at it! It won't be long before you realize that eating less frequently is no hardship at all. In fact, it's easy, and it gives you more time to do other things. Your mind becomes more relaxed the more hours and days are spent fasting (see DETOX, FMD, CHANNELS). Your nervous system relaxes. Brain function and cognition improve, brainwave states become more flexible, and the mind focuses. Fasting as a habit digests mental confusion, clearing space for the vision of a

brighter life (see TRIP). You become brighter, happier, lighter, and smarter.

Feast. Rest. Digest.

Fasting isn't just a pause.

Fasting is the gate to rhythm.

Eat in rhythm.

Fast in rhythm.

Live in rhythm.

Become the rhythm.

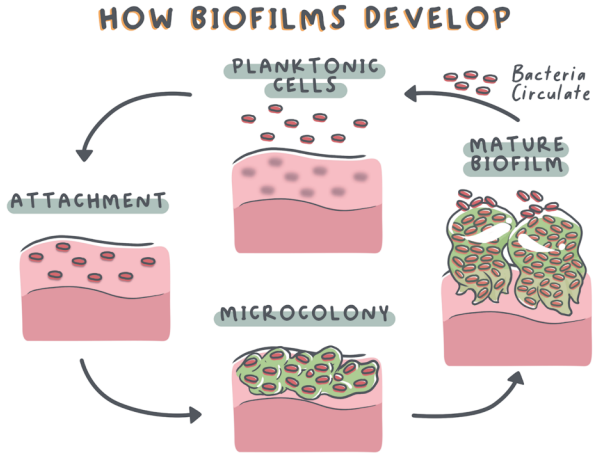
BIOFILMS

Biofilms are colonies of microbiota that live on epithelium and endothelium cells. They can be beneficial (eubiotic) or harmful (dysbiotic).

The epithelium consists of your skin and outer linings of internal organs, as well as the inner surfaces of body cavities. The endothelium consists of the membranes and linings of the blood and lymph pathways, including the heart and the smallest capillaries. All do the same job, managing throughway traffic via secretion, transportation and regulation. These cells are two-way passages between the inside and outside of a deeper tissue layer, and they require tight security and close junctions to function well.

Epithelial cells require biofilms as moss requires an atmosphere. Microbes linger in the spongy epithelial tissue that is the gateway deeper into the organ. A mix of lymph and plasma circulates with microbes around the endothelial cells, as a medium or liquid terrain. From a holistic perspective, this is the primordial soup, the essential platform, which determines how all organs and tissues will function. As a first principle, this first tissue consists of cells that nurture all the others with information, specific molecules, and energy for the whole organism. The goods transfer across endo/epithelial barriers into deeper tissue.

Biofilms, microbiota and the epithelium are the terrain. Functional microbiota live in colonies on these terrains, and they prefer oxygen, alkalinity, and hydration. Terrain can get sick systemically or locally. Biofilms are the best way to take the pulse of the terrain.



When conditions arise that favor those strains of bacteria and viruses that thrive without oxygen and nitric oxide, this becomes the terrain that supports chronic inflammation. Such environments promote a sea change: microbiota opt for the next best life strategy, replacing epizootic biofilms with dysbiotic ones.

This further starves the endothelium (via the interstitial fluid) of oxygen absorption, nitric oxide production, hydration, nutrition, and endocrine protection. The spongy barrier fissures into dysfunction, spreading into the organ and breeding disease, and causing IBS.[1]

The dysbiotic film builds an environment inhospitable to a healthy microbiome population. Sustained oxidative stress confuses endocrine intelligence, through suffocation and cellular dysregulation. Oxidation feeds inflammation, in a feedback loop increasing oxidation. Aging accelerates. If the spigot of habit-driven inflammation isn't turned off, human (host) DNA is eventually disrupted (see EPIGENETICS).[2]

When the following conditions arise, biofilms no longer protect you, but begin protecting themselves against your immune system:

- Dehydration
- Frequent feeding and overeating, usually with foods that lead paradoxically to—
- Malnutrition, or lack of microbe-enhancing food (fibers, phytonutrients, and amino acids)—resulting in underpopulation of essential microbes
- Oxidative stress and negative bias
- Acidity
- Cytokines

Dysbiotic biofilms grow disease into epithelial tissue in the mouth, throat, sinuses, lungs, guts, reproductive cavities, skin, and even the brain. Chronic infections are a common sign.

Over the last 15 years, increasing evidence has implicated biofilms in more than 65% of chronic infections in humans. Biofilms are almost 1000 times more resistant to antibiotics than free-floating bacteria.[3]

CHRONIC INFLAMMATION: AN OVERVIEW

Goyal Pahwa defines chronic inflammation like this:

> The hallmarks of chronic inflammation are the infiltration of the primary inflammatory cells such as macrophages, lymphocytes, and plasma cells in the tissue site, producing inflammatory cytokines, growth factors, enzymes and hence contributing to the progression of tissue damage and secondary repair including fibrosis and granuloma formation, etc.[1]

To talk about how chronic inflammation becomes a disease state, it's necessary to use scientific terms. I'll introduce these terms in alphabetical order for your reference, and then we'll see how chronic inflammation works behind the scenes.

Antioxidants: Molecules which reduce the capacity of free radicals to cause damage, by donating an electron that neutralizes the free radical. Antioxidants mostly come from food sources of vitamin E, vitamin C, and B-carotene.

Biomarkers: Characteristics of the body that you can measure for healthspan, or a measurable substance indicating allostasis via disease,

infection, or chemical toxicity. Biomarkers in the cardiovascular, metabolic, and inflammatory systems indicate how sick you are, which systems are dysregulated, and how compromised your healthspan is. At-home test kits for microbiome species, blood thickness, and allergies can be used as biomarkers for allostatic load.[2]

Chemokines: A group of cytokines that induce cell migration.

Cytokines: Greek for "cell on the move." Cytokines are a large family of cell-signaling molecules going between endothelial cells and immune cells (macrophages and lymphocytes; see NITRIC OXIDE). They can increase almost a thousand-fold in response to infection or inflammation. Every cytokine can be released from many cell types, including endothelial cells.

Cytokine storm: Hyper-inflammation from excessive production of pro-inflammatory cytokines.

Endogenous: Made by the body.

Exogenous: Made outside the body.

Fibroblast: Tissue that heals wounds due to its granularity (which provides structure). Chronic inflammation leads to fibrosis.

Immune cells (mast cells, macrophages, **lymphocytes**, **white blood cells, plasma cells)**: Immune defense cells that sense what is non-self. Mast cells are in the connective tissue, or fascia, and regulate homeostasis, and adaptive and innate immune responses. Once the antigen binds to the receptors on the mast cell, it causes the release of inflammatory mediators, which helps to eliminate the pathogen that activated it. Macrophages engulf, ingest and degrade dead cells, debris, tumor cells, and anything non-self by secreting pro-inflammatory and antimicrobial mediators. During healthspan, these cells enforce innate immunity and tissue homeostasis. Lymphocytes, like mast cells, are made in the bone marrow and found in the blood and lymph tissue. A plasma cell is a white blood cell that makes large amounts of a specific antibody. All are pulled into dysfunction as they become mediators in the chronic inflammation cascade of events.

Inflammatory inducers: The first part of the four-part inflammatory response: inducers; sensors (mast cells and macrophages); mediators (cytokines, chemokines, etc.); and the affected tissues. Inducers may be pollutants, chemicals, cytokines, ROS, pharmaceutical drugs, or by-products of overeating.

Inflammatory mediators: Endogenous chemicals from the circulation system, inflammatory cells, and injured tissue, which actively contribute to and adjust the inflammatory response.

Innate immune system: The first line of defense, responsible for recognizing non-self, producing interferons, proinflammatory cytokines, and chemokines.

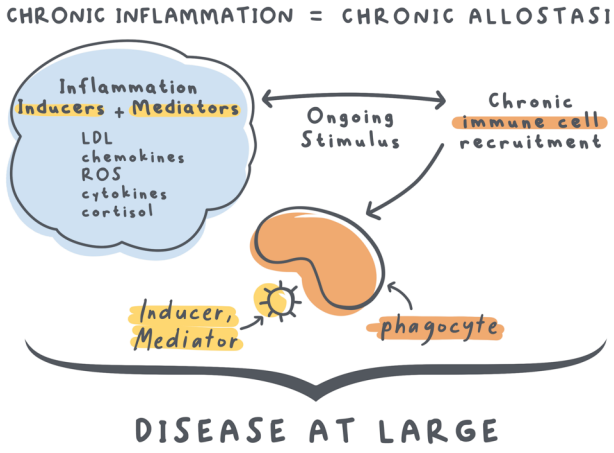
Interferons: proteins that trigger immune cells to fight non-self.

Oxidative stress: As allostasis becomes chronic, ROS are overproduced in cells and tissues faster than antioxidants can detoxify these reactive molecules.

Pollutants, xenotoxins, and chemical drugs: Exogenous toxins increase ROS and lead to cell damage. These range from UV, ionizing radiations, pesticides like glyphosate, pollutants, and heavy metals, to chemical drugs, including antiblastic drugs, such as chemicals in chemotherapy designed to inhibit tumor growth.

ROS: **"**Reactive oxygen species;" namely superoxide radicals, hydrogen peroxide, hydroxyl radicals, and singlet oxygen. Produced by mitochondria as by-products of oxygen metabolism. A sign of chronic allostasis is the high production of ROS, as they damage and degenerate essential cellular structures like proteins, lipids, and nucleic acids.

The more you dive into chronic, the more vocabulary you need. Molecular biology is complicated and quickly becomes biochemistry, with electrons running the show (see NITRIC OXIDE). You'll see this vocabulary in the chronic allostasis feedback loop:



Let's take, for example, the number one global pesticide, glyphosate, found in conventional foods. Glyphosate ruins your ability to absorb necessary minerals and degenerates your gut lining through dysbiosis. Eventually, cells tip into oxidative stress when ROS overtake the cell's ability to anti-oxidize.

Glyphosate is the first inducer, generating an immune response. Mast cells and other immune sensor cells sense "non-self" and generate ROS and cytokines. Chronic inducers create a constant state of cytokine overproduction. ROS is further generated in response to cytokines. Excess cytokines are produced as inflammation becomes chronic, which generates more ROS, which calls in more immune cell recruitment, and the immune cells generate more cytokines.

With chronic, both glyphosate as an exogenous toxic chemical inducer, and ROS, an endogenous inducer, continue a steady state of provoking and maintaining the feedback loop.

The amount of ROS present is also indicative of how sick the internal environment, or epigenome, actually is. High levels of pro-inflammatory cytokines are one of many biomarkers doctors look for when assessing chronic inflammation and chronic disease. Cytokine overproduction leads to infection, tissue degeneration, fibrosis, and autoimmunity issues, where the immune system prompts cells to attack healthy tissues and organs.[3]

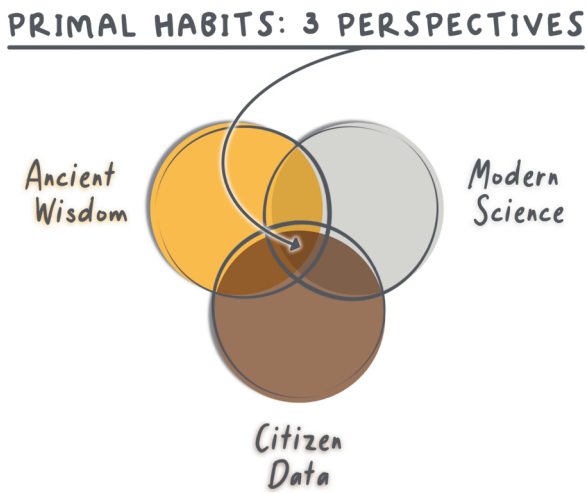
Dysbiotic microbes, which work against human DNA cells, thrive in a high ROS environment. Dysbiotic microbes generate more ROS. Over time, ROS and dysbiotic microbes destroy a functional microbiome. Human DNA cells rely on a functional microbiome for cell replication. If the body has become chronic, cells can't function properly, let alone replicate without degeneration or mutation (see MICROBIOME, NITRIC OXIDE).

The feedback loop of oxidative stress at the cellular level causes tissue damage. The tissue becomes fibrous—called "fibrosis"—to protect the organ system. Chronic fibrosis impairs tissue function.[4]

The chronic situation leads to frequent or severe infections, which are identified as hyper-inflammation or cytokine storms, an easy biomarker to identify the severity of allostatic load. This was highlighted by the correlations between COVID exposure, allostatic load, and severity of infection. The more cytokines you already had in your system, the more likely exposure to COVID would lead to a severe or lethal infection.[5]

If you have chronic allostasis, you need to tend to your microbiomes, as the internal gardens that they are.

DATA



This book draws on a large body of scientific literature.

None of the techniques or claims in this book are unsupported by scientific study.

All sources used in this book are named in the accompanying notes. Alongside scientists, the authors of these sources include user groups from ancient traditions and modern biohackers. All three groups are

better informed by each other's data, and with it they can reinforce inflammation reduction across communities.

Gaps in worldview and wisdom come from not knowing data from other groups.

Humans have fasted, fermented foods, generated internal warmth when exposed to cold, and wielded their breath for mental and physical peak performance, throughout the evolution of our species. People have known how to shift brainwave states to notably positive effect, using their breath, mind, voice, plants, and even urine. Many primal habits we share with mammals from before we were hominids (see FAST, WALK. CRAWL. RUN, OUTSIDE, RUB, PEE).

Laboratory studies shed light on the intricate relationship between inflammation and processes that reduce it, that optimize the microbiome and the endothelial and epigenetic cellular environment (see SCIENCE ADDENDUM).

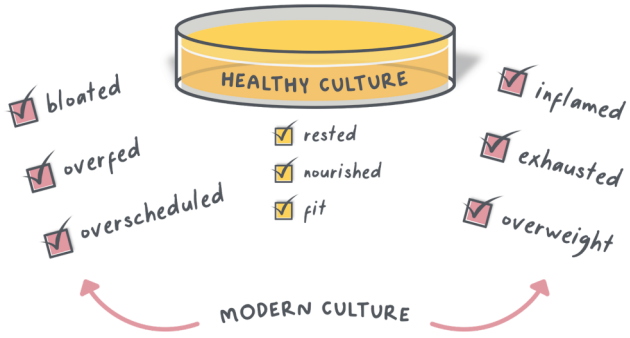
I was raised to respect double-blind studies for their rigorous methodology. Then... I discovered ancient wisdom. Then... I found citizen data.

The three overlapping dimensions reveal insights for understanding pathology and for optimizing physiology and psychology.

ANCIENT WISDOM, CITIZEN DATA, SCIENCE

Recent research focuses on specific diseases and pharmacological solutions; but to study health, you might invest study in the healthiest groups of people and how they live.

Ancient wisdom traditions rely on adversity habits that develop human potential. Mastery of the human design takes decades. From masters in many traditions, we get data on higher consciousness, including the ability to choose brainwave states, control heart rate, body temperature, and immune response. Practices that awaken the subtle physiological human potential have stood the test of time (see EXHALE, FOCUS, TRIP).



If we disregard input from communities historically rich in primal habits, we disregard the thread of ancient wisdom alive and well today in our modern biohackers. Biohackers have popularized citizen data, which testifies that *your experience matters*.

Your power comes from your experience. Your experience and the experiments you choose to run—matter. Your experience generates *your citizen data.* This is the tried and true wisdom of self-study, which assists you in noticing and transcending the norms of degenerative cultural habits (see MEDICINE, COMMUNE).

I've stumbled upon citizen data in fringe communities: biohackers, yoga teachers, urine users, and psychedelic explorers, all of whom have been using primal habits for decades, centuries, millennia. As carriers of ancient wisdom, they report longitudinal data from lived experience over time.

As part of a collective, citizen data has power. Peter Block is an expert on empowered communities. He differentiates between citizens and consumers:

> Citizens have the capacity to create for themselves whatever they require. Citizens have power, customers have needs.[1]

The more interested you get in your habit experiments, the more you think about how good you can feel, the more power you have, and the less comfortable you are with the label "consumer."

By integrating *your experience,* you learn. Dr. Lisa Feldman Barrett describes it like this: the brain learns through prediction. Predictions are confirmed from sense data. If the prediction is off the mark, the brain learns from experience and upcycles insight to improve the internal model, the storehouse of knowledge, into metabolic efficiency.[2]

So, "always be experimenting"—ABX—is our motto.

I've guided members into primal wisdom habits as a global community for 20 years. Our experiments landed us in fasting, seasonal detox, rewilding our palettes, upcycling urine(!), cryotherapy, and timeworn habits like humming, deep breathing, and finding sanctuary in silence, forgiveness, and community.

Primal HABITS is our community update, with myself as leader and scribe. This is the book of our findings, personally and collectively, augmented by scientific literature and indigenous wisdom.

Allopathic research on inflammation is explained in the SCIENCE ADDENDUM. Ancient wisdom concepts are deployed throughout the book—although there isn't room to explore them in anything like the detail they deserve, I offer short descriptions and explanations where needed, which I hope are enough to give you context enough to see how valuable, how current, how urgent they remain, even now. Short definitions of Sanskrit terms can be found in the glossary at the back.

Scientists and biohackers of all sorts: if you catch an error in my reasoning, please alert me, with references.

Stretch yourself to learn from your data, the science, and the people today who live the primal habits, and you'll uninflame faster.

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ABOUT

Over the past two decades, I've guided members in online clubs for those who want to thrive.

CLUB THRIVE—for people who want to thrive in their bodies and their lives
CLUB HERO— for ambitious, innovative people curious to crush their unique life goals, purpose or mission, and becomes masters of identity evolution

Want to connect? Email us: curious@clubthrive.global

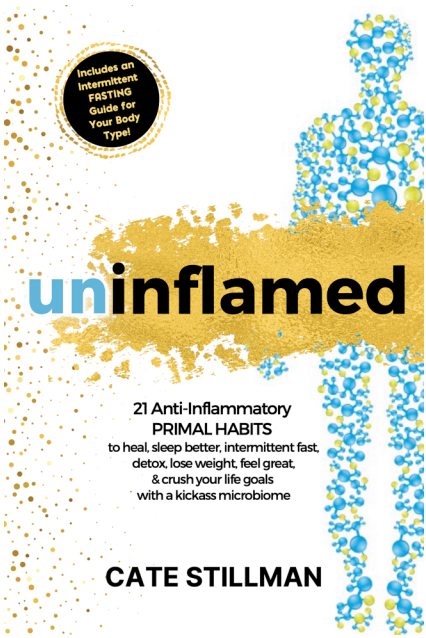
I write from lived experience. I learn from coaching members. I lead by growing leaders. I rally to give truth the mic. *Uninflamed* came out of nowhere and kicked my ass up and down the block, making me smarter as it did, whether I liked it or not. I couldn't release my urine therapy cartoon book until *Uninflamed* appeared for context, and led me to the cow pasture. Then I understood: this book was a FIELD GUIDE for PRIMAL HABITS..., and for a kickass microbiome..., and more than anything for our club members to communicate and lead in their communities.

I also guide wellness pros from all backgrounds at the WELLNESS PRO ACADEMY to lead their own clubs, to lead their communities, from their wellness wisdom and lifestyle.

Curious? Email us: curious@wellnesspro.academy

ABOUT UNINFLAMED

This book is a tome... packed with 21 primal habits, science, politics, and ancient wisdom.



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To contact Cate: curious@wellnesspro.academy