

REVERSING CHRONIC INFLAMMATION

Why Almost Every Chronic Disease Can Be Healed
by Fixing Your Body's Inflammatory Response



 **Be Herbal**

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Introduction – All About Be Herbal

Be herbal was created with the intent of providing natural, organic, high quality herbal supplements and alternative health remedies to the world. Our goal is to facilitate an individual's ability to take their health back by offering sound advice, holistic dietary support, and inspiration to maintain an active, stress-free lifestyle with help from nutrient-dense supplementation.

We understand that health is a natural state of being, and that sickness is unnatural. We aim to help the body discover its own birthright – one of vital, glowing health, and abundant energy.

You can find our money-back-guaranteed, natural supplements, inspiring health advice, and motivation to become the best 'you' ever at BeHerbal.com

Preface

You may have had a health condition caused by inflammation for years now, and not even realized it. In this book, BeHerbal aims to educate you about chronic inflammation so that you can take empowered action to change it.



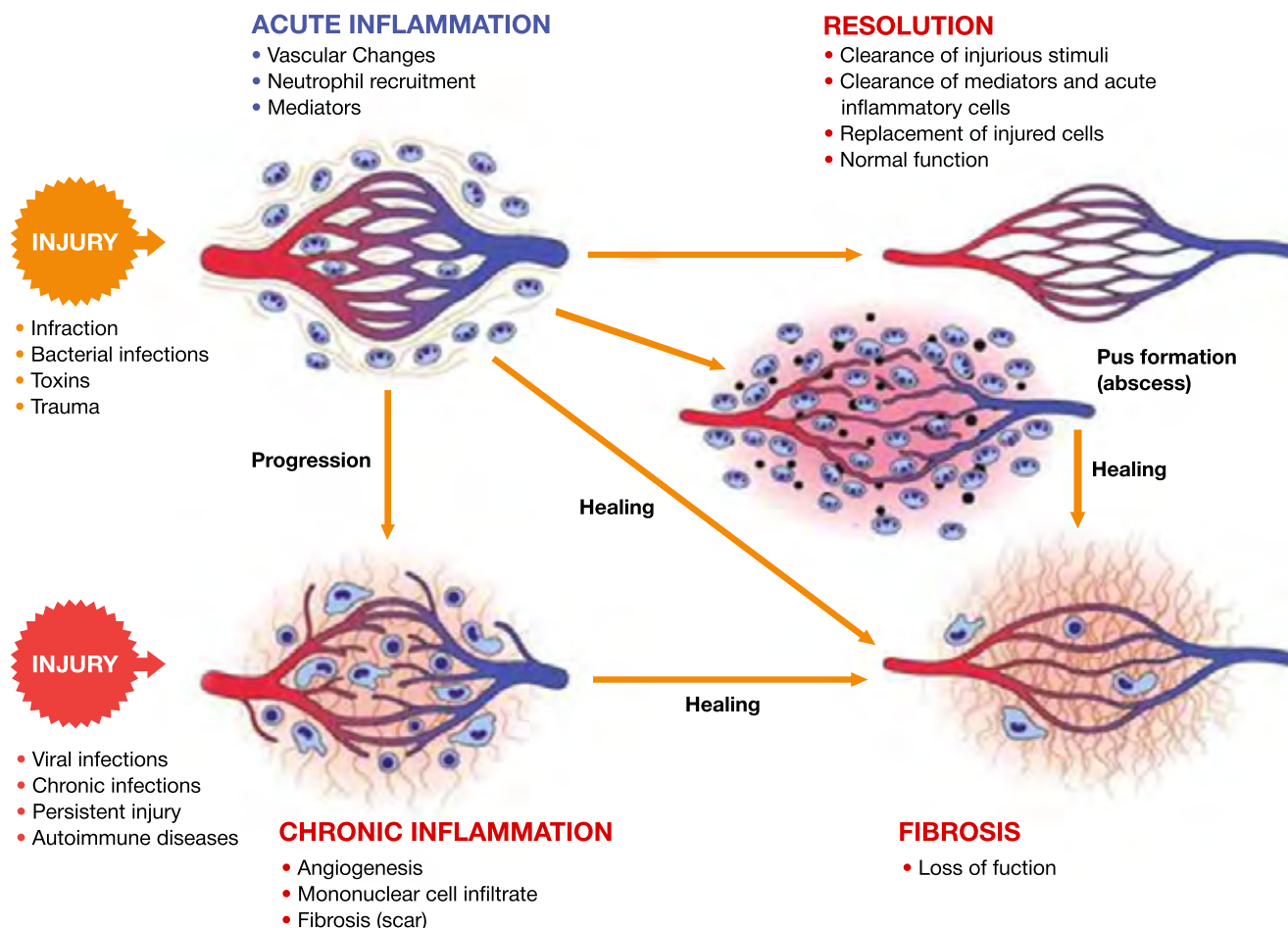
What is Inflammation?

What is inflammation? In a nutshell, it's the body's response to threats like stress, infection (virus and bacteria), or toxic chemicals. When the immune system senses one of these dangers, it responds by activating proteins called cytokines meant to protect cells and tissues.

Inflammation is part of our innate immunological response that is present even when we are babies. Though this response matures over time, we begin our very first days on this planet with a very intelligent way of defending ourselves from foreign bacteria, viruses, and toxins. Inflammation starts out as part of that incredible intelligence.

So why does inflammation seem to be part of the new set of ‘mystery’ symptoms that everyone is experiencing? If it’s a natural, good thing, why don’t we want inflammation in our bodies?

With new research coming out pointing to **inflammation as a contributor to almost every known disease**, from the common cold to cancer, it is important to know how inflammation works, and what makes a usually desirable reaction in the body start to go wrong.



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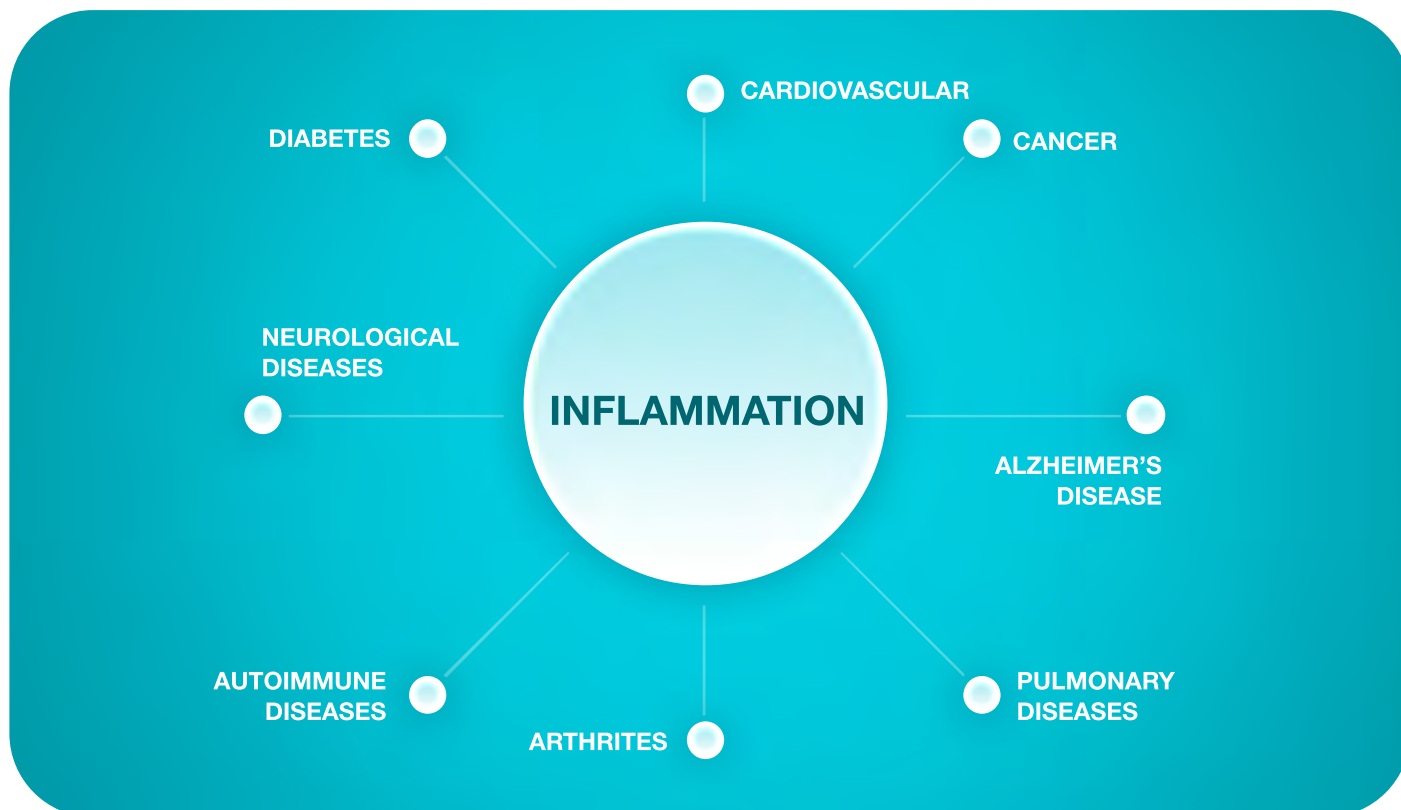
“In a healthy situation, inflammation serves as a good friend to our body,” says Mansour Mohamadzadeh, PhD, director of the Center for Inflammation and Mucosal Immunology at the University of Florida.

However, because we are constantly stressed with modern living, and subjected to an onslaught of environmental toxins, our inflammatory response starts to go haywire.

Our cells begin to over-react, eventually leading to a host of health issues including autoimmune disorders, an impaired ability to handle stress and even long-term neurological damage.

We seem to get anxious more easily. Inflammation can also cause stroke, fibromyalgia, severe depression, asthma, tuberculosis, hepatitis, sinusitis, PMS, moodiness, brain clouding, fatigue, dermatitis, arthritis, heart disease, and even cancer, among a host of other health conditions.

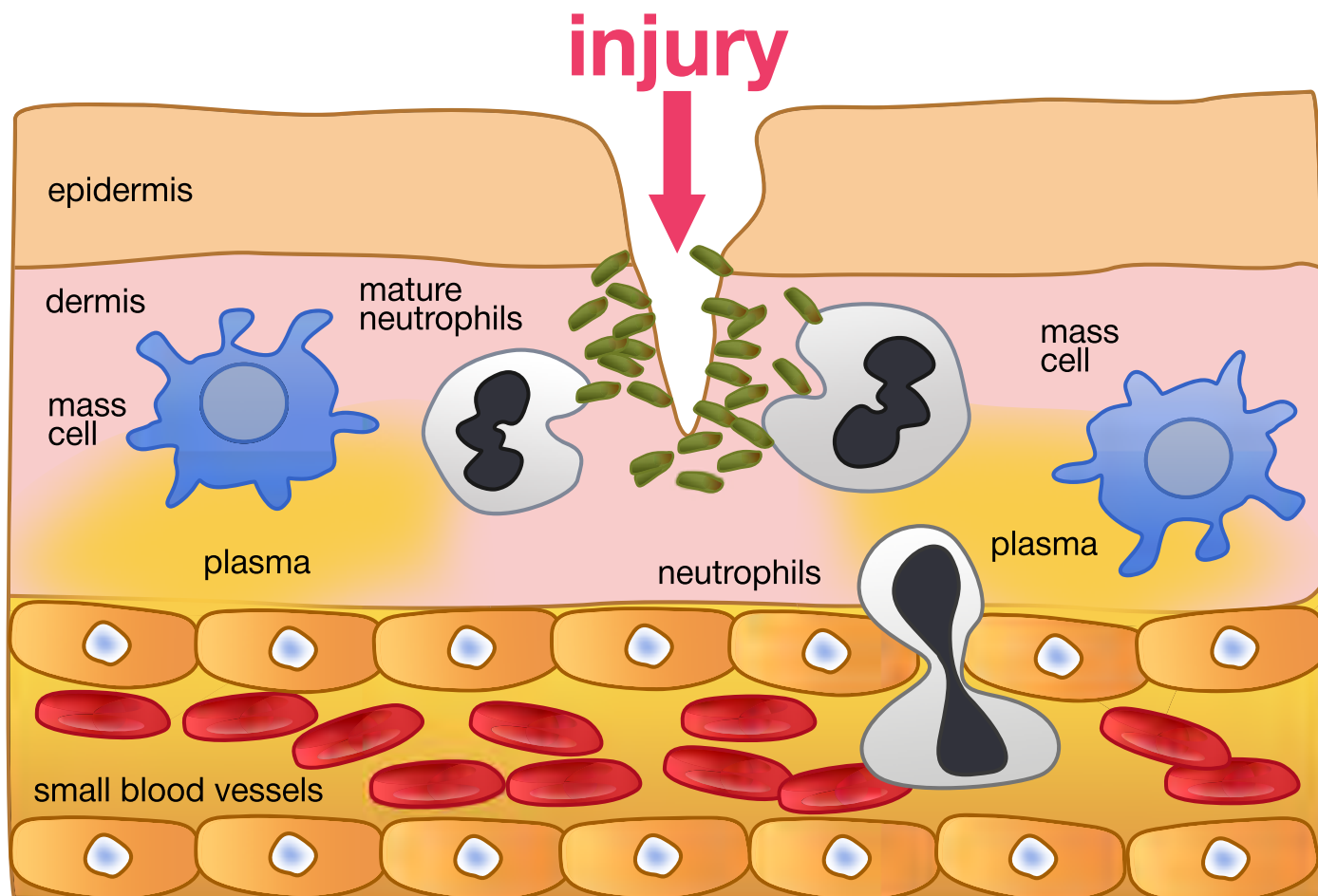
In fact, every chronic disease is said to be caused by inflammation. From osteoporosis, to allergies, vaginitis to diabetes, the “inflammatory cascade” that happens in our bodies makes us sick, and keeps us that way.



To handle this over-reaction, we start to crave sugary and salty foods. We over eat. We get tired a lot because our body thinks it must constantly fight ‘invaders.’ We can’t handle simple tasks and our memory starts to fail. We get sick more often than we’d like and in drastic cases, our cells start to mutate, forming cancerous ones.

What starts as a purely natural, desirable response in the body, turns out to be like a group of soldiers running amuck. Instead of fighting the ‘bad’ guys, the body’s soldiers, or white blood cells, start fighting our own bodies.

We can think of it this way — when we get a splinter in our foot, if it isn't removed quickly then the area will start to get red and puffy. That's our immune system at work — doing what it ought to do. It's sending T-cells and other immune-boosting nutrients through the blood to the area so that an infection doesn't start.



Or, when we go to the gym. This is another good example of the inflammatory response doing what it should do. When we work out, our body's inflammatory response is triggered. Our body starts to heal tiny tears and strains in our muscles that make us better than we were before — bigger muscles result after that trip to the gym, and the healthy inflammatory response that helps to create them. The small tears in our muscles make way for greater strength and lean mass.

In these cases - of the splinter and the gym visit - we want our immune system working in top form, initiating that inflammatory response. What we don't want is the inflammatory response working on over-drive, unable to turn itself off once the injury has been healed.

How Does Inflammation Start?

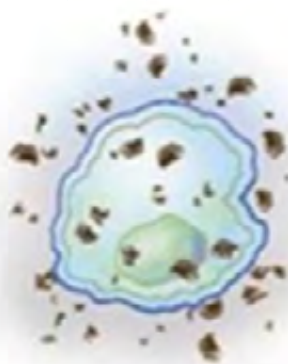
Inflammation begins when our cells don't function correctly any longer. This cellular dysfunction comes from oxidative stress and resulting over-active inflammation. The inflammation, in its 'bad' form is a hallmark of the modern American and European lifestyles.

Exposure to chemical toxins, our high-sugar, low-nutrient diets, chronic stress, sedentary habits, and even pharmaceutical medications all contribute to inflammation.

These apples demonstrate how oxidative stress breaks down your cells, causing premature aging and disease



Normal Cell



Cell Attacked Free Radicals



Cell with Oxidative Stress

Diet

Most of us never intended to create an environment in our bodies that supports chronic inflammation, but many of us eat foods daily that lack anti-inflammatory nutrients. We fill up on highly processed foods created by a food manufacturing industry that is in cahoots with the pharmaceutical industry and industrial agricultural industry to make us sick, fat, and addicted to the very foods that made us that way.

According to Mark Hyman, M.D., a whopping third of our entire world economy is based on making people sick with sugary sodas, unhealthy fats, high fructose corn syrup made from genetically modified corn, and more.



Even more shocking is the fact that these industries are subsidized heavily with tax payer money – to the tune of over \$288 billion a year.

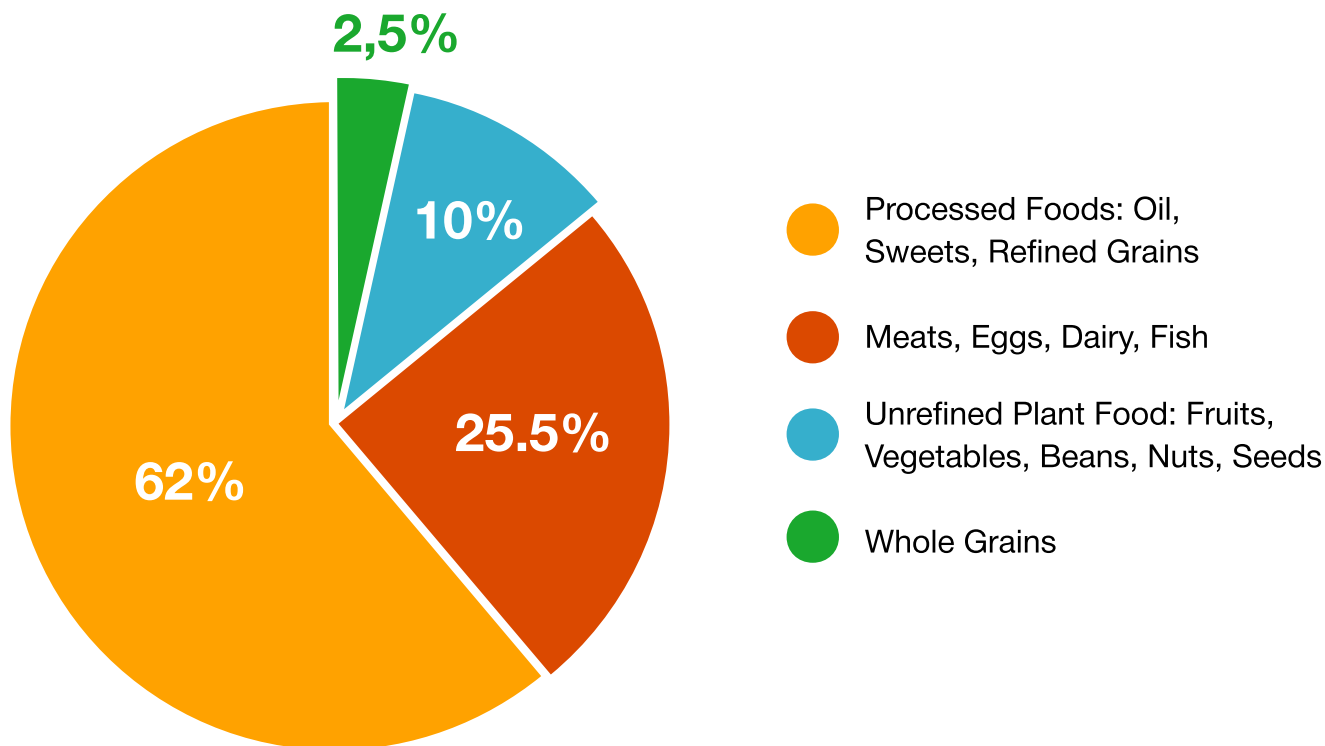
Then we unknowingly pay out again when we become sick from chronic inflammatory diseases caused by this triad of industries working against our health – when we seek medications for diabetes, heart disease, obesity, and cancer – all big-ticket items for a handful of companies that may have intended to make us sick all along – we feed the very industries that are keeping us ill.

By 2050, one in ten Americans will have diabetes. A new case of Alzheimer’s disease is now happening every 68 seconds, with the disease likely to triple by 2050. Obesity rates by the same year will include almost half the entire population. Clearly, there’s something awry here – causing chronic inflammation, and chronic illness.

The good news is that once we understand why our bodies are chronically inflamed we can absolutely, positively change it, and reclaim our new-and improved selves that are overflowing with health and energy.

The Standard American Diet (SAD)

Promotes Chronic Disease and Suppresses Immune Function



Acidity

To understand how our diet causes inflammation, we need to start with our pH levels. Certain foods create an acidic environment in the body that contributes to inflammation. If we do not keep a balanced pH, one that is approximately 7.4 on the acid/alkaline scale, then our body starts to work very hard to bring us back to a more alkaline state.



The most acidic foods are a zero on the pH scale, and the most alkaline foods will be closer to 14, the highest number on the scale. Acid forming foods, just happen to also be the ones that cause inflammation in the body, including dairy, sugar, gluten, and red meat.

Most of us lack the proper amount of alkalizing foods in our diets like fruits, vegetables, seeds, and legumes.

Dairy

Dairy is second only to gluten in forming a chronic inflammatory response in the body. There are two components of dairy that tend to cause this inflammation:

1. Sugars



2. Proteins



People who are lactose intolerant don't have the correct enzymes to break down the sugar that is most common in dairy products. People who do have lactase in sufficient amounts to break down the sugars still often react poorly to the animal proteins in dairy: casein and whey.

Casein is very similar to whey in its molecular structure. This is why many people who are gluten intolerant also notice they are lactose intolerant as well.

Dairy is also acid-forming, which means it alters our balanced pH levels, again leading to inflammation. Milk, cheese, ice cream, and other dairy products can also contain rBGH, a bovine growth hormone, antibiotics, and additional chemicals that interfere with our hormonal system, and add to the breakdown of our cells, causing an over-active inflammatory response.

Some people will substitute cow's milk with goat or sheep's milk and find they tolerate it much better because the proteins are better metabolized by the body, however, if you know that you are suffering from chronic inflammation it is best to remove dairy from your diet completely.

Imbalance of Omega 3 and Omega 6 Fatty Acids

The food industry hasn't done us any favors with their advertisements on fat, either. How many times have you picked up a package in the grocery store and thought you were doing the right thing because it said, "low fat"?

The standard modern diet is completely off when it comes to fats, too. Throughout more than 5 million years of hominid development we ate plenty of Omega 3 fatty acids, a long-chain fat that is critical to our health. We got these healthy fatty acids from seafood, nuts, and other foods that were prominent in a hunter-gatherer's diet.

Somehow in the last hundred years, primarily due to the advent of the industrial revolution and the influx of convenience foods, we started to eat many more Omega 6 fatty acids.

In proper balance, these should be at a ratio of about 1:1 minimally, with the Omega 3s being just as prominent in our foods as the Omega 6s. In some super healthy cultures where inflammation is almost non-existent, the ratio of Omega 3s to Omega 6s is more like 4:1.



The two critical Omega 3 fatty acids that we need: eicosapentaenoic acid, called EPA, and docosahexaenoic acid, also called DHA, along with Omega 6 fatty acids became highly distorted in the American diet compared with millions of years ago.

Omega 3 fatty acids are called polyunsaturated fats because they have many (poly) bonds. Our bodies don't have the enzymes to make them on our own so we have to get them from food or supplements. They are called "essential" fatty acids for this reason.

Omega 6 fatty acids are not the same as Omega 3s. They cause inflammation in the body, whereas Omega 3s suppress chronic inflammation.

Omega 6s are predominately in highly processed vegetable oils, also called hydrogenated oils, like soybean oil. The way that food manufacturers make these oils alters the chemical composition so that our bodies cannot metabolize them properly.

Some research suggests that our consumption of inflammation-causing Omega 6s has increased by as much as 200 percent in the past fifty years.

When we eat these unnatural fats, our cells change. This is not the case with Omega 3 fatty acids. The cell membranes become stressed and they tend to hold onto fat stores. Needless to say, this isn't something we want to happen.

LACK OF SLEEP

In addition to a poor diet, many of us don't get enough sleep. This is a sneaky creator of inflammation in the body. Who knew?!

A single night of poor quality sleep causes inflammation in the body. Just like eating poorly, being exposed to too many toxins, and other inflammation-causing factors, losing sleep triggers the key cellular pathway that produces tissue-damaging inflammation.

One study found that after a few hours of lost sleep in just one night, the activation of (NF)-kB signaling was significantly greater than in base line people who received good sleep, or recovery sleep. (NF)-kB signaling prompts an increase in the inflammatory response, especially in women.



A good night's rest is vital to reducing heart disease, autoimmune diseases, and just about every other disease linked to chronic inflammation.

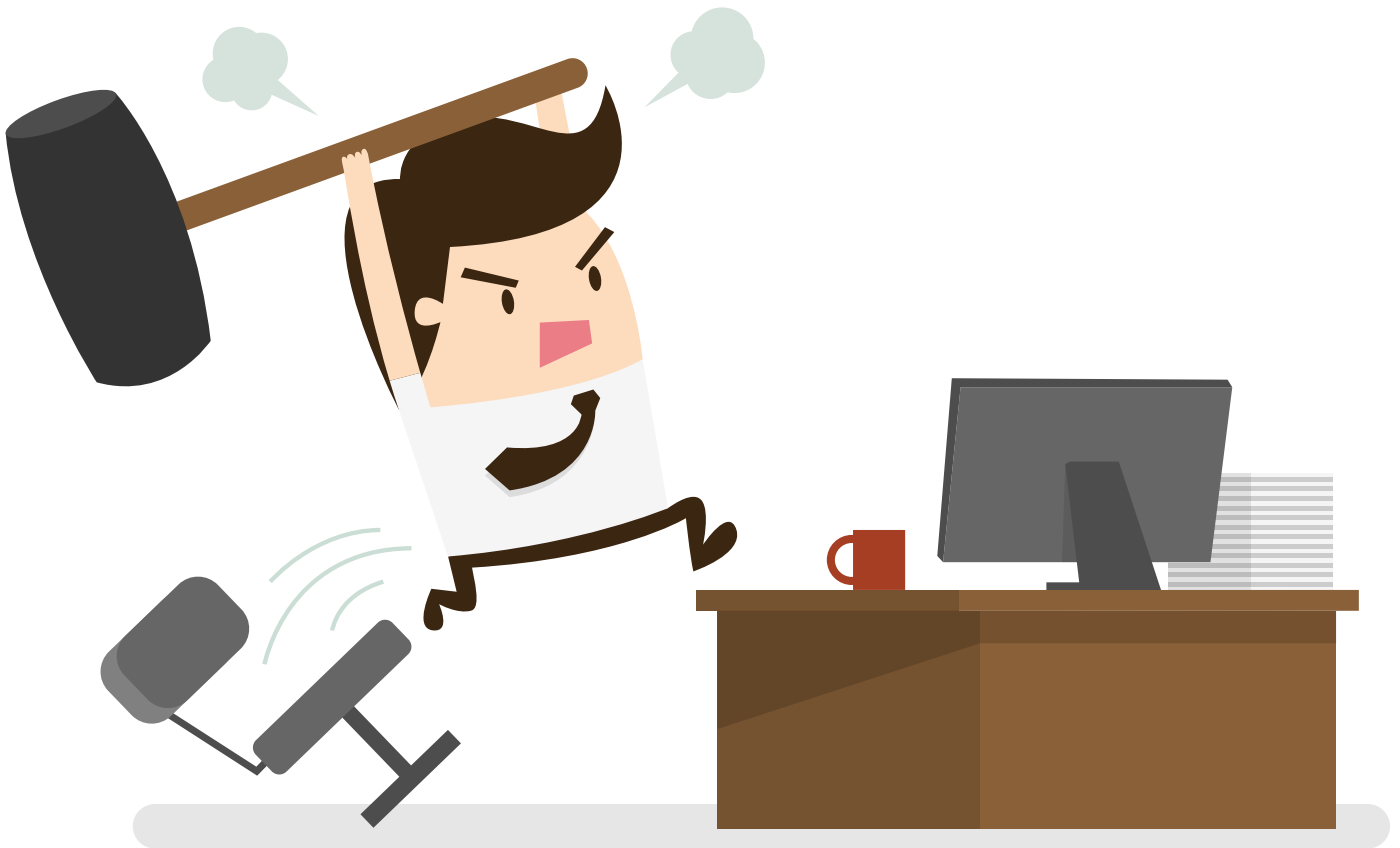
“Physical and psychological stress brought on in part by grinding work, school and social schedules is keeping millions of Americans up at night,” says Dr. Irwin, lead author and director of the Cousins Center for Psychoneuroimmunology at the Semel Institute. “America’s sleep habits are simply not healthy. Our findings suggest even modest sleep loss may play a role in common disorders that affect sweeping segments of the population.”

Without proper sleep, there is no way we can recover from chronic inflammation, but once we start to slow down, turn off our computers and cell phones a little earlier, make our rooms darker, so that our natural biological clocks can reset themselves, and get ample, high quality sleep. Inflammation starts to subside.

STRESS

Doctors didn't make the connection between stress and inflammation for a long time, but they are starting to figure it out.

Deadlines. Divorce. Marriage. The death of a loved one. Financial obligations. Child rearing choices. Job responsibilities. Handling a chronic illness. All these situations lead to stress.



Chronic psychological stress is associated with the body losing its ability to regulate the inflammatory response.

When we are constantly anxious, depressed, afraid, or apprehensive, the inflammatory response becomes ineffective. Cortisol, a hormone which is released by the endocrine system when we are under stress causes our immune cells to start to ignore cortisol's normal regulatory effect.

Cortisol is used by the body as a signaling mechanism, but when we are stressed constantly it becomes like the boy who cried wolf. Cells just turn off the distress signal that cortisol is sending out.

Our nervous systems were designed to be under temporary, infrequent stress. All the cortisol, adrenaline and other stress hormones that are normally dumped into the blood stream used to act as a way to keep us out of danger – like when we had to run from a tiger so we wouldn't become its next meal.

We haven't evolved to handle stress day-in, day-out. This constant 'red flag' sent out by our hormonal system is ignored then, and runaway inflammation starts to overtake our bodies.

This over-active inflammatory response is evidenced in a recent study conducted by Sheldon Cohen and Robert E. Doherty, Professor of Psychology at CMU's Dietrich College of Humanities and Sciences. 79 healthy participants were assessed for their ability to regulate the inflammatory response when they were exposed to a simple cold virus. Researchers monitored the body's production of cytokines, a chemical messenger that triggers inflammation.

Participants who were exposed to stress at the same time as the cold virus produced many more cytokines than those who were exposed to the cold virus alone. It seems the body went into overtime creating inflammation more due to the stress than the actual sickness!

CHEMICAL EXPOSURE

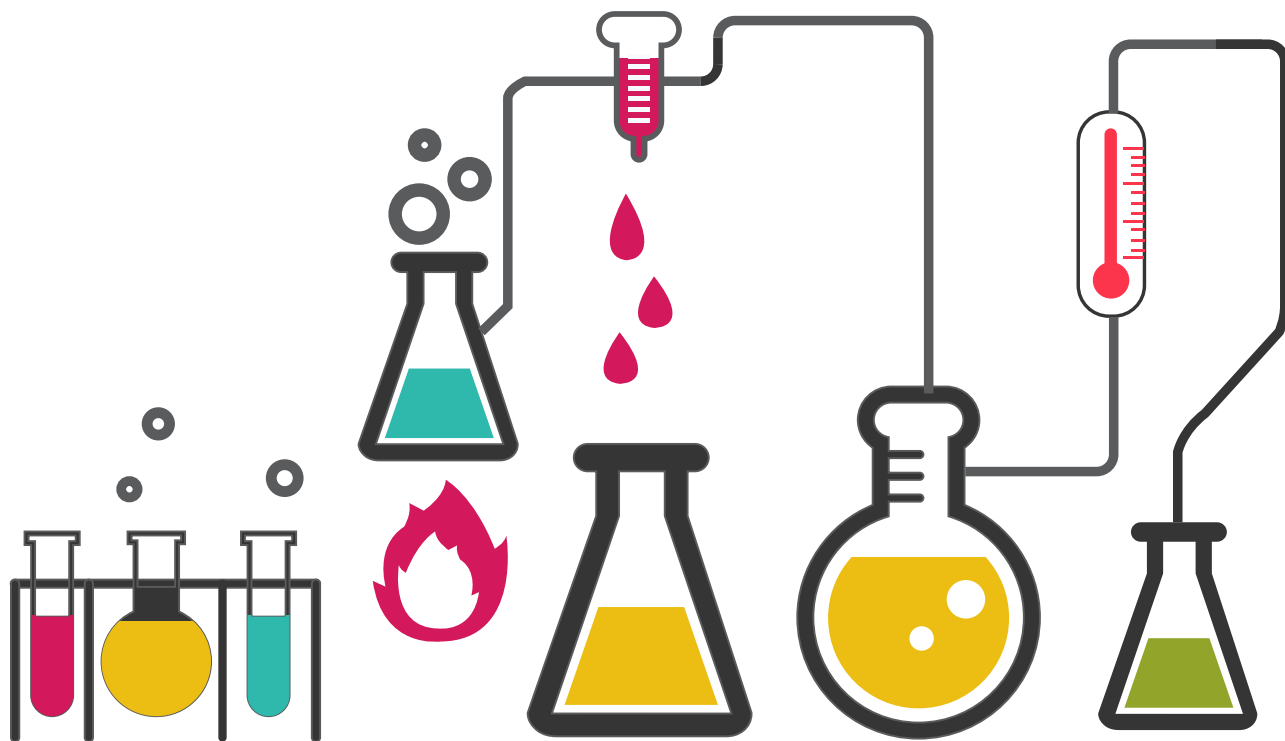
Another thing most of us would never imagine caused inflammation in the body comes from our environments.

We are exposed to a veritable onslaught of chemicals every single day that dampen our bodies' ability to regulate inflammation and stay healthy – pesticides, plastics, adhesives, glues, second-hand smoke, traffic exhaust, cleaning products, benzene, halocarbons, ketones, nitrosamines, and more that are in industrial waste.

In the U.S. alone, more than 80,000 chemicals are registered under the Toxic Substances Control Act, and industry adds about 700 to 1,000 new chemicals every year.

Many of these endocrine-disrupting toxins cause huge increases in cytokine production, and the activity of the immune system, making us hyper-sensitive.

Other chemicals cause an actual leak of toxic fluid into our tissues, resulting in swelling and an inflammatory response which stimulates the nerves, and causes pain.



PHARMACEUTICAL MEDICATIONS

Antibiotics and NSAIDs (non-steroidal anti-inflammatory drugs), as well as hormones prescribed by obsolete physicians greatly contribute to inflammation.

We are a world of over-prescribed people. The pain medications, antibiotics we are given, even for viral infections that can't be touched by an anti-biotic, and numerous pharmaceutical medications are altering our gut flora.

Antibiotics kill off not only the harmful bacteria in our guts, but also the healthy gut bacteria that helps our immune system fight against disease and keep chronic inflammation at bay.

Other medications like NSAIDS can cause leaky gut syndrome – where the contents of our guts (poop) leaks into the blood stream. YUCK! Though we may sometimes have no choice but to resort to a pharmaceutical medication, using quality supplements, changing our diets, getting good sleep, and making sure we exercise can help prevent us from getting sick in the first place, while also lessening chronic inflammation.



A SEDENTARY LIFESTYLE

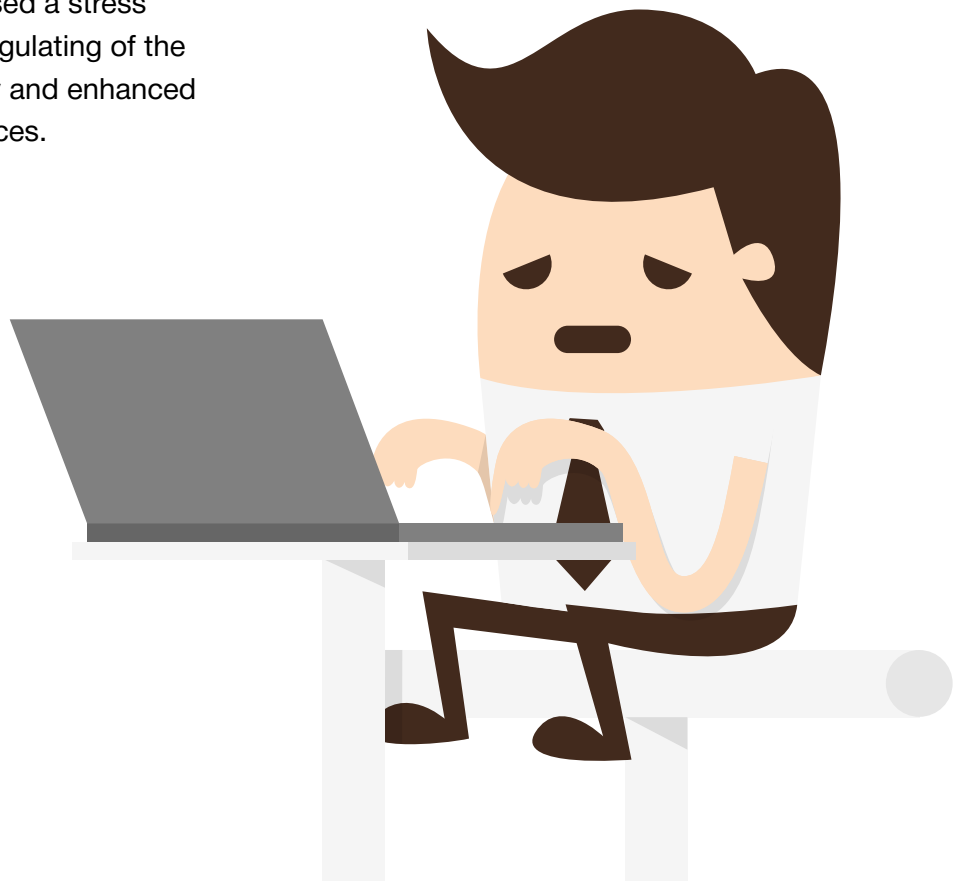
Not only are we fed bad food, expected to endure high levels of stress, a lack of sleep, and given health-harming drugs, then made to live in a chemically toxic environment, but we also don't move.

So many of us are too tired from all the stress and wacked-out hormones caused by unhealthy living, that we add yet another inflammation creator – a sedentary lifestyle.

Sitting at a computer all day, instead of taking short walks in fresh air surrounded by nature has created an environment where depression, heart disease, and even early death are the norm.

In a study published by the British journal Integrative Psychiatry people who spent even 32 minutes daily of extra sedentary time than they normally did experienced increases in a negative mood and psychological distress as well as a greater stress-induced inflammatory interleukin-6 (IL-6) response.

The researchers speculated that the additional depression and negative moods experienced by the study's participants caused a stress response which lead to an upregulating of the inflammatory signaling pathway and enhanced vulnerability to mood disturbances.



TOXIC OVERLOAD

With our unhealthy diets, environmental toxins, crazy levels of stress, Big Pharma's medications, no sleep, and a lack of exercise, we've created a toxic burden so immense, it's a wonder we can function at all. Though this may sound depressing, it is better to see the big picture, and look for positive ways to change the current reality, rather than deny what is truly happening. We have the power to make change, and we always did! The only thing that might have been stopping us was the knowledge and motivation to make different choices. Now, we have it, and we can start to unravel the conditions in the body that caused chronic inflammation so it never returns.

When our bodies become overloaded with substances which should never have been present in them in the first place, we become gummed up like a set of gears that can't turn properly.

Our intestines start to get back logged with fecal matter, our liver can no longer process toxins as it should, and we start to show the symptoms of toxicity – including having highly-inflammatory cells. We become more prone to infections, even sub-clinical infections, sometimes called “stealth infections” that the body is constantly fighting. Many experts believe this is the true cause of autoimmune disorders and fibromyalgia.

Our adrenal glands start to fail, and with adrenal fatigue syndrome doctors start to diagnose Epstein-bar, Lyme and Candida infections, when the root cause is over-toxicity and inflammation.



What Happens When the Inflammatory Response Goes Wrong?

There are certain chemical signals that happen in the body when the inflammatory response starts to go wrong.

Chronic inflammation generates a constant supply of free radicals that start to overwhelm the body. Our normal defenses meant to take care of oxidation and prevent our DNA from damage begin to fail.

This is when diseases of every description start to become a common occurrence. Strangely, doctors don't always pin all the "mystery" symptoms on inflammation, but this is indeed what is happening.

We may experience the initial symptoms of inflammation like swelling, joint pain, and stiffness, or we can even start to have flu-like symptoms too, which include a fever, chills, headaches, a loss of energy, and a loss of appetite.

These symptoms are the early warning system of the body telling us that things are NOT o.k. Most of us ignore these signs of inflammation though, as we are unaware of what is causing them, and we've become so used to feeling tired and sick.

What happens next is the onslaught of 'mystery' symptoms and chronic disease until the underlying cause – inflammation – is cured.

Inflammation and the Gut-Brain Axis

The gut has its own brain. This recent revelation of modern medicine is critical in understanding why we have to cure inflammation in the body – because as the inflammatory response affects all of our cells, including the gastrointestinal tract – without recourse, one of our most important strongholds against disease is infiltrated.

Our guts do much more than just process food, though this is an important task in its own right. This mass of tissues contains billions of neuronal cells that communicate not just with the brain, but with the entire nervous system.



Though this “second brain” as it has been called doesn’t read poetry or decide where you will dine tonight, it does influence a host of other important decisions in your body, on a cellular level. When the gut is overtaken by intestinal inflammation, caused by diet, stress, toxic build up, etc., the neurons can no longer communicate properly with the brain and nervous system.

Intestinal inflammation is a secret killer. It causes a host of pathogens to take over our immune system, leading to diseases as varied as Parkinsons’ to clinical depression.

This is because a large source of our immunity comes from the gastrointestinal tract. Within this area of our bodies an entire microbiota – trillions of microscopic organisms – live and carry out important functions that protect us from disease.

Coupled with antigens provided by a healthy diet, these tiny organisms provide a way to fight the constant threat of pathogens which cause disease. Antigens are a toxic or foreign substance which causes an immune response in the body, particularly the production of antibodies (immunoglobulins which are proteins which help to fight against antigens).

In fact, the immune system via the intestines is exposed to the largest number of antigens in the body. Jasmine Belkaid and Timothy Hand explain in a scientific paper.

“The microbiota plays a fundamental role on the induction, training and function of the host immune system. In return, the immune system has largely evolved as a means to maintain the symbiotic relationship of the host with these highly diverse and evolving microbes. When operating optimally this immune system–microbiota alliance allows the induction of protective responses to pathogens and the maintenance of regulatory pathways involved in the maintenance of tolerance to innocuous antigens. However, in high-income countries overuse of antibiotics, changes in diet, and elimination of constitutive partners such as nematodes has selected for a microbiota that lack the resilience and diversity required to establish balanced immune responses.

This phenomenon is proposed to account for some of the dramatic rise in autoimmune and inflammatory disorders in parts of the world where our symbiotic relationship with the microbiota has been the most affected.”

Inflammation and Clinical Depression

350 million people around the globe suffer from depression. More than 800,000 people die annually from suicide, and 1 in 5 patients don't respond to one of the pharmaceutical industry's largest selling class of drugs – selective serotonin reuptake inhibitors (SSRIs).

Not only are these drugs often ineffective, but they also contribute to acute anxiety, more depression, weight gain, and sexual dysfunction. Talk about the cure being worse than the disease!

Here's a little secret that pharmaceutical companies likely don't want people to know. **Depression can be cured almost entirely with diet and supplements**, in effect, by getting rid of inflammation.

Our diet, yet again, high in refined foods, sugars, and unhealthy fats interferes with good brain chemistry, and with the gut-brain axis, wherein our intestinal immunity works with the brain to create a balanced mood and positive outlook.

Michael Lesser, a psychiatrist in Berkeley, California and the author of The Brain Chemistry Plan says that it's our diets and lifestyle which largely make us depressed. He states, "Ironically, though we live in a wealthy society, our diets are deficient in crucial nutrients."

The growing field of psychobiotics is just now beginning to understand that an inflamed gut, where the balance between good and bad gut flora is off, causes a profound effect on our brain's functioning – including its ability to keep us happy.

This connection, between gut health and our brains, is so pronounced that in a recent study, it was discovered that people who were feeling antisocial and stressed had the very same gastrointestinal symptoms (inflammation caused by lower levels of the healthy *Bacteroides fragilis*) found in patients with autism.

Without a good diet, proper sleep, exercise, and healthy gut flora, inflammation thrives, causing our mental health to decline. When we change those habits - guess what happens? We get to be healthy and vibrant again!

Neurodegenerative Disease and Inflammation

Just as our mental health is affected by the inflammatory response, and good or bad gut health, so is our cognitive performance. This is particularly true as we age, but without a balanced immune system, and the absence of chronic inflammation, a whole host of neurodegenerative diseases can start to form in the body.

Disease from Alzheimer's to Parkinson's to Autism all have a connection to the body's autoimmune response when it is highly toxic.

Even the brain can become inflamed in response to pathogens in the body. As one study published in the journal *Immunology* explains, "Despite different triggering events [of neurodegenerative diseases] a common feature is chronic immune activation [inflammation]. Apart from the pathogenic role of immune responses, emerging evidence indicates that immune responses are also critical for neurogeneration."

In short, if your brain is subjected to an overactive immune response and chronic inflammation, you are going to lose your memory, have cloudy thinking, and suffer from a few too many "blonde moments" than you'd like.

Gluten Intolerance and Inflammation

Gluten, a protein found in pastas, breads, and even over-the-counter medications is causing an inflammation hey-day. Gluten wasn't always in wheat – in fact, it couldn't be found in any trace of ancient grains, but due to the hybridization of wheat and other food processing, we see gluten everywhere now, not just in bagels and cakes.

The rise of celiac disease (gluten intolerance) is simply shocking. Since our immune systems are largely housed in the gut, and gluten is a known inflammation causing substance, it is no wonder, though.

A study comparing the blood of 10,000 people from 50 years ago to the blood of 10,000 people today found that there has been a 400 percent increase in celiac disease (elevated TTG antibodies). More than three million Americans don't even realize they have a gluten intolerance, yet complain of all the symptoms normally attached to chronic inflammation.

Lupus, Rheumatoid Arthritis, Hashimoto's, Multiple Sclerosis, and almost any other autoimmune disease can be traced to chronic inflammation – and gluten contributes to it.

Inflammation and Cancer

Here's all you need to know about HOW inflammation contributes to the creation of cancer in your body: while the natural inflammatory response is awesome, the dark side of inflammation is that it creates an 'micro' environment in which cancerous cells can thrive.

The first scientist to find a connection between cancer and inflammation was Rudolf Virchow, who discovered immune cells in a cancerous tumor in a lab. This caused him to investigate further. What he found is that when a cancerous tumor starts to grow, it forms rogue cells that scavenge oxygen and other nutrients from its immediate surroundings. As it grows bigger, though, these rogue cells start needing more 'food' and get greedy. They can't find what they need in their immediate environment any longer, and so they begin to get desperate.

They start to 'starve' and in the process they accumulate genetic anomalies – they mutate. As this process of mutation happens they release chemical signals that tell our immune cells "come hither." Our immune cells called macrophages and granulocytes then start to infiltrate the cancerous cells, entering a cancer tumor's inner sanctum.

Once the immune cells are inside the cancerous tumor, they start to excrete cytokines, those proteins we talked about at the very beginning of this book. The cytokines cause the growth of a cellular "pillow" against which the cancerous tumor can rest. It's worn out after all, from looking so hard for food and nutrients.

Meanwhile other inflammatory cells attack the tumor with free radicals that further damage the DNA. As you may have heard, all cancer cells start out as normal cells, but due to all of the factors we've already listed – poor diet, lack of sleep, environmental toxins, lack of exercise, etc. – the inflammatory response starts to attack our own cells and they mutate becoming cancerous cells.

Inflammation, once it's gone wrong, even fuels the growth of cancerous cells by procuring chemicals that help tumors eat through the molecules that surround THEM, trying to keep them from spreading. In essence, cancerous tumors use our bodies' inflammatory response by hijacking it to stay alive.

Many of the cancer drugs on the market today are looking for ways to hotwire cancerous cells' reaction to the inflammatory response, but really what needs to happen is a change in our diet and lifestyle, followed by natural supplementation so that cells never become cancerous in the first place.

In the meantime, doctors keep prescribing drugs to quell this chronic inflammation that is leading to cancer in our bodies, but ironically, many of these very drugs cause the same symptoms that inflammation itself is responsible for.

Using Herbs, Diet & Lifestyle Changes to Heal Inflammation

The bad news is that inflammation has taken over almost half the population, holding the healthiest version of people hostage. The good news is that there are ways to free the hostages from an over-active inflammatory response. Our cells deserve to be healthy.

Our immune system also deserves to have a fighting chance, without having to constantly struggle to keep us healthy. Our bodies can feel alive, strong, and even energetic again when we stop letting three tiny industries run the show. Big Pharma, Big Food, and Big Farming can all take a back seat, because now you know what they are up to – causing an incessant case of chronic inflammation in millions of people across the globe.

When we turn to natural healing – whole foods, lowered stress, exercise, the removal of toxins, drink filtered water that is absent from fluoride, pesticides and industrial toxins, and even just laugh more, as well as spend more time in nature, we give our immune cells a much-needed break. When we support these lifestyle changes with high-quality supplementation, inflammation doesn't stand a chance. Our liver can focus on removing a normal level of toxins instead of an onslaught that would kill even Godzilla.

Our brains can function like they should, without being clouded and begin to lose neuronal functioning when we are barely in our thirties.

Our mental health can flourish. Instead of feeling anxious or clinically depressed. We can feel happiness – joy even.

We no longer need to suffer from obesity, arthritis, diabetes, heart disease, Alzheimer's, fibromyalgia, allergies, PMS, or cancer. The answer to reducing chronic inflammation is in lifestyle changes, diet, and proper supplementation – not more of Big Pharma's medications, toxic food, and toxic farming products.

High Quality Anti-Inflammatory Supplements

Omega-3s, healthy fatty acids, Vitamins A,C,E and B complex (including B6, B12 and folic acid), as well as beta-carotene, CoQ10, curcumin (found in high quality turmeric), quercetin, selenium, N-acetylcysteine, and alpha-lipoic acid are a good place to start. Without enough antioxidants in the body, free radicals run 'free,' causing inflammation.

Prebiotics

When we help to restore the wisdom of our gut – the intestines, stomach, and entire digestive system – we can greatly reduce inflammation. Along with eating foods that help to support 'good' bacteria in the gut, like kefir, organic yogurt, fermented foods, tempeh, miso, apple cider vinegar, and kombucha, we can take a probiotic supplement to make sure the bad bacteria which add to an over-active inflammatory response don't take over our intestinal tracts.

Exercise

You don't have to run a marathon every week to change a chronic inflammatory response. Just three times weekly of 30-60 minutes of medium level exercise can start to reduce inflammation. It doesn't matter if its cardio, weight training, dancing, or cleaning your house. Get moving, and you'll notice you've stopped chronic inflammation in its tracks.

Dietary Changes

You can start by getting rid of the sugar, dairy, and processed foods. Eat organic, and try to consume more 'alive' foods like fruits, vegetables, whole grains (not gluten), seeds, nuts, and legumes. The following foods are also great for reducing inflammation:

- Almonds
- Avocadoes
- Broccoli
- Blueberries
- Carrots
- Wild caught salmon
- Walnuts
- Swiss chard
- Spinach
- Sweet potatoes
- Beans (black, garbanzo, white, kidney, mung, etc.)
- Kale
- Organic olive oil (uncooked)

Also drink plenty of water and get plenty of rest so that the good foods you eat can be digested and assimilated properly.

Cleansing of Toxins

If your body is too toxic, it can't absorb the good nutrients you put into it. It certainly contributes to chronic inflammation, if you are overburdened with toxins, too.

Though there are many more extreme cleansing protocols, following is a list of natural cleanse methods that will help to eliminate toxins from your body:

- Replace one meal with a kale, parsley, cilantro banana smoothie. This drink is known to help flush out toxins from the cells.
- Eat organic. The less toxins in the fewer your body has to try to get out.
- Get a massage. This can help lymph flow as well as move toxins out of places in the body they like to hide, such as in fat deposits.
- Sweat out toxins with a good workout. Get plenty of rest. Sleep is vital to helping your body naturally detoxify.

- Try fasting for a day. This allows your digestive tract a rest so that when it goes back to assimilating nutrients and getting rid of wastes, it can do it much better.
- Try acupuncture. It not only helps with qi or the flow of life force, but can help get rid of stagnation in the blood.
- Drink green tea instead of coffee. Green tea is full of antioxidants that can help detox your liver, skin, and intestinal tract.
- Drink more water. It's one of the easiest ways to detox an overburdened body.

Ayurvedic Medicine (Turmeric) to The Rescue

We've dedicated an entire section to a single Ayurvedic herb because aside from changing a million things about the modern diet, getting 8 hours of sleep every single night, lowering our stress levels, and going to the gym more often, there might not be any one herb that can change our body's over-active immune response as dramatically as turmeric, or *curcuma longa*.

To be honest, Big Pharma rarely talks about this herb, and most doctors are never exposed to it in medical school because it could single handedly wipe out about fifteen different drug classes that the pharmaceutical industry currently makes trillions on annually.

Turmeric is a rhizome or root that is bright orange in color and has been used in Indian cooking and Ayurvedic and Chinese Traditional medicine for more than 5,000 years. It's been called the "Golden Goddess" because its healing powers are astounding – but turmeric accomplishes its miracle work by eliminating the root cause of so many illnesses – inflammation!

Turmeric is anti-inflammatory, anti-oxidant, anti-viral, anti-bacterial, and can even significantly reduce pain, often better than ibuprofen.

The magic ingredient in turmeric is curcumin, an antioxidant compound known to influence over 700 genes. It also helps to lower the synthesis of cyclooxygenase-2 (COX2) and 5-lipoxygenase (5-LOX) along with other enzymes that have been implicated in chronic inflammation.

There are literally tens of thousands of peer-reviewed scientific studies proving that if we did nothing else right, but simply took a good organic turmeric supplement or ate the spice regularly in our food, we could reduce inflammation so profoundly that we would never get heart disease, arthritis, Crohn's, or neurodegenerative disease.

In fact, in India, where the spice is used in almost every meal, Alzheimer's disease is lower than almost anywhere else in the world. They also have the lowest rates of colon, breast, prostate and lung cancer – ten times lower than in the U.S.

Simply adding this "holy powder" as it is called in Ayurvedic medicine to our diets can eliminate muscle degeneration, premature aging, cystic fibrosis, psoriasis, type 2 diabetes, and inflammatory bowel disease, too.

Curcumins found in turmeric:

Block the normal pathways that create cellular inflammation.

Enhance liver function – one of the key organs for detoxing the body.

Destroy mutated cancer cells so that they cannot spread.

Affects over 100 different pathways into a cell, keeping cells healthy.

Are 5 to 10 times stronger as an antioxidant than Vitamins C and E, able to scavenge free radicals that cause inflammation.

To make your turmeric supplement even more powerful, if you aren't going to eat it naturally in curries, soups, or other traditional dishes, you can combine it with piperine, otherwise known as black pepper.

Curcumin in turmeric has low levels of bioavailability, but when you add even a small amount of piperine – 20 mg – the bioavailability of turmeric is boosted by 2000%!

Piperine is also an anti-inflammatory agent, and it can trigger TRPV1 (transient receptor potential vanilloid Type 1) which can reduce pain.

This combination of antioxidants is so effective, it has treated different types of breast cancer, neurodegenerative disease, depression, and much more.

In Closing

Now that you are armed with loads of information that Big Pharma, Big Food, and Big Farming don't want you to know, you can stop inflammation before it ever starts. We, at Be Herbal support you in your quest to take back your natural birth right – vibrant, overflowing, naturally-created and sustained health.

We hope that this book has made you think, created some insightful moments, and most importantly compelled you to jump into action! You can read a book, after all, and while it's great to gain some knowledge, it doesn't truly start to make a difference until you use that new-found knowledge.

We know change can be challenging. Start by changing your lifestyle, step-by-step. Change your diet a little at a time, and find new ways to move and be active. Add some great supplements like the ones we provide at Be Herbal, and you'll be 1,000 percent ahead of millions of people who haven't been educated about the damaging effects of inflammation on their health.

We know you can do it. We've got your back!



References

Amor, S. Inflammation in Neurodegenerative Diseases. Immunology.

<https://www.ncbi.nlm.nih.gov/pubmed/20561356>

About Inflammation. Web MD.

<http://www.webmd.com/arthritis/about-inflammation#1>

Alzheimer's Cases to Triple By 2050. AlzInfo.org

<https://www.alzinfo.org/articles/alzheimers-cases-triple-2050/>

Belkaid, Jasmine, Hand, Timothy. Role of the Microbiota in Immunity and Inflammation.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4056765/>

Borchard, Therese. The Brain Gut Connection: How Gut Bacteria May Treat Depression.

<http://www.everydayhealth.com/columns/therese-borchard-sanity-break/brain-gut-connection-how-gut-bacteria-may-treat-depression/>

Brogan, Kelly. M.D., From Gut to Brain: The Inflammation Connection.

<http://kellybroganmd.com/from-gut-to-brain-the-inflammation-connection/>

Carnegie Mellon University. Science Daily. How Stress Influences Disease: Study Reveals Inflammation as the Culprit.

<https://www.sciencedaily.com/releases/2012/04/120402162546.htm>

Chronic Toxin Overload. <http://originsofhealth.com/articles/chronic-toxin-overload/>

Doheny, Kathleen. U.S. Obesity Rate May Hit 42% by 2050. Consumer Health Daily.

<https://consumer.healthday.com/vitamins-and-nutrition-information-27/obesity-health-news-505/u-s-obesity-rate-may-hit-42-by-2050-645466.html>

Dr. Dave. Sedentary Behavior Linked to Inflammation and Depression. Integrative Psychiatry. <http://www.integrativepsychiatry.net/blog/sedentary-behavior-linked-to-inflammation-and-depression/>

Dr. Hagmeyer, How Infections Cause Adrenal Fatigue.

<https://www.drhagmeyer.com/how-infections-cause-adrenal-fatigue-syndrome/>

Elsevier. Science Daily. Loss of Sleep, Even for a Single Night, Increases Inflammation in the Body.
<https://www.sciencedaily.com/releases/2008/09/080902075211.htm>

Evans, Karin. Brain Food: The Natural Cure for Depression.
<http://www.gmhc.org/files/Wellness/BrainFoodTheNaturalCureforDepression.html>

Feeling the Heat – the Link Between Inflammation and Cancer. Cancer Research UK.
<http://scienceblog.cancerresearchuk.org/2013/02/01/feeling-the-heat-the-link-between-inflammation-and-cancer/>

Goldseker, Ana. The 27 Acidic Foods that Can Cause Inflammation. NavaCenter.
<http://www.navacenter.com/community/blogs/the-27-acidic-foods-that-can-cause-inflammation>

Gundry, Stephen, Dr. Win the War Inside Your Stomach. <http://silenceyourcravings.com/170104A.php>

Health Benefits of Turmeric and Black Pepper. Turmeric for Health.
<http://www.turmericforhealth.com/turmeric-benefits/health-benefits-of-black-pepper-and-turmeric>

Hyman, Dr. Mark. What You Don't Know Might Kill You.
<http://drhyman.com/blog/2011/03/17/gluten-what-you-dont-know-might-kill-you/>

Hyman, Dr. Mark. The Toxic Triad: How Big Food, Big Farming, and Big Pharma, Spread Obesity, Diabetes and Chronic Disease Across the Globe.
<http://drhyman.com/blog/2010/10/22/the-toxic-triad-how-big-food-big-farming-and-big-pharma-spread-obesity-diabetes-and-chronic-disease-across-the-globe/>

Inflammation. Medical News Today.
<http://www.medicalnewstoday.com/articles/248423.php>

Karolinska Institute. When Inflammation Goes Wrong.
<http://ki.se/en/research/when-inflammation-goes-wrong>

M, Dr. John. Could NSAIDs Actually Cause Inflammation?
<http://www.drjohnm.org/2012/12/could-nsaids-actually-cause-inflammation/>

Mercola, Dr. Turmeric, the Spice that Actually Doubles as a Powerful Anti-Inflammatory.
<http://articles.mercola.com/sites/articles/archive/2011/04/26/the-spice-that-actually-doubles-as-a-powerful-antiinflammatory.aspx>

Miller, Andrew H., Raison, Charles. L. The Roll of Inflammation in Depression. in Nature.
<http://www.nature.com/nri/journal/v16/n1/full/nri.2015.5.html>

Myers, Dr. Amy. The Dangers of Dairy. Mind Body Green
<http://www.mindbodygreen.com/0-8646/the-dangers-of-dairy.html>

Myers Dr. Amy. 3 Important Reasons to Give up Gluten if You Have an Autoimmune Disease.
<http://www.amymyersmd.com/2017/02/3-important-reasons-give-gluten-autoimmune-disease/>
O’Conner, Bess. Treating Inflammation with Ayurveda. <http://spiritualityhealth.com/articles/treating-inflammation-ayurveda>

Platt, Andrew W. Glasgow University, Immunity in the Gut.
<http://bitesized.immunology.org/organs-and-tissues/immunity-in-the-gut/>

Park, D.V. Chemical Induced Inflammation and Inflammatory Disease. International Journal of Occupational Medical Environmental Health.
<https://www.ncbi.nlm.nih.gov/pubmed/8972163>

Scientists Rank Thousands of Substances According to Potential Exposure Level. PhysOrg.
<https://phys.org/news/2014-10-scientists-thousands-substances-potential-exposure.html>

The Real Reason the Antidepressant Industry Does Not Want Psychedelics Legalized. Natural Blaze.
<http://www.naturalblaze.com/2016/11/big-pharma-antidepressant-psychedelics-legalized.html>

Toxic Inflammation Overload. Fit Women for Life.
<http://fitwomenforlife.com/1-toxic-inflammation-overload-and-it/>

Yang, San-Nan. The Effects of Environmental Toxins on Allergic Inflammation. Allergy Asthma & Immunology Research.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4214967/>

Image: <http://www.changeyourmindbodyhealth.com/blog/wp-content/uploads/2014/11/StandardAmericanDietChart-2.jpg>

Image: <https://s3.amazonaws.com/concepts.ck12.org/preview/inflamator-response-and-leukocytes.jpg>

Image: <https://corticalchauvinism.files.wordpress.com/2015/08/appleoxidativestress.jpg>