The

TRUTH

about

TYPE II DIABETES

WHAT YOU NEED TO KNOW ABOUT

THE REAL CAUSE OF TYPE II DIABETES

TheMasterKey™
The Truth About Type II Diabetes

What You Need To Know About The Real Cause Of Type II Diabetes
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The Truth About Type II Diabetes

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Introduction

Ignorance is Not Bliss

*Inflammation, your body’s own defense system, will kill you.*

*Dwight Lundell, M.D.*

We live in an unprecedented time of American health.

In a single decade, we made huge advancements in the medical arena – everything from gene sequencing and stem cell research to face transplants and bionic limbs.

Yet, even with these strides, we have managed to become a nation of chronic diseases such as obesity, diabetes, stroke, heart disease and cancers - with very little relief in sight. According to the Centers for Disease Control and Prevention, *obesity alone afflicts 35% of Americans and is linked to every major chronic disease.*

But this is not a book about obesity.

It’s the story of something much more compelling – and many doctors are calling it the root cause of every chronic disease, including type II diabetes…

*Inflammation.*
While it’s true that obesity has become epidemic, which we’ll talk about, not just in America, but in other areas of the world as well, all this attention has had a positive effect on our understanding of the inflammatory process.

And, in this e-book, you’ll learn why inflammation is the one thing that will make you die earlier than you want to.

Along the way, you’ll discover what it is (both for good and for bad), some of its known and suspected causes and effects, and where to look to prevent and resolve it – those things you do have control over.

When it comes to your body and the choices you make each and every day, awareness is king. Simply by reading and understanding the information presented in this e-book, you’ll be better prepared than most to make good decisions about your health and, perhaps, even the health of loved ones.

As you will soon see, when it comes to inflammation, ignorance is not bliss.

Congratulations for taking the most important step in any journey…

The very first one.
Chapter One

What is Inflammation?

The ultimate goal is to start healing, but when inflammation becomes chronic due to disease or prolonged stress, it can become destructive.

David B. Agus, MD

In its original intent, inflammation is a very good thing. This may seem completely contradictory to the statement proposed in the introduction, namely, that inflammation is the one thing that will make you die earlier than you want to, but, still, it’s true.

Inflammation is an immune response – a brilliant defense mechanism designed to protect and safeguard your body from unwelcome intruders, and an integral part of what constitutes your body’s miraculous healing system. Initially its response is positive, involving a sequence of cell events that work to counteract the inflammatory agent.

Its primary function is 3-fold: 1) in neutralizing and diluting whatever is causing the inflammation 2) removing any dead material and 3) re-establishing an environment that allows the body to heal and repair itself.

For example, you’ve probably seen the effects of inflammation at work when you’ve gotten a splinter and either didn’t realize it or get it out right away.
Typically the skin gets red and sore, an indication that your body is doing its job in trying to expel it by sending more blood flowing to the site followed by a rush of white blood cells. If left in there, it could continue to agitate and, later, become infected.

One of the most common misperceptions is that inflammation is the same thing as infection, but it is not. According to the Medical-Surgical Nursing: Assessment and Management of Clinical Problems: “Inflammation is always present with infection, but infection is not always present with inflammation.”

There are degrees of inflammation, of course, because not all injuries are equal. Just as you don’t use a sledgehammer for a thumbtack, the body doesn’t send out a full brigade of cells to take care of every situation, for example, a mosquito bite. (Yes, that causes inflammation, too!) That would be overkill, on a good day anyway.

But, as you’ll soon see, inflammation can sometimes become exactly that… Overkill.

So even though the actual mechanism of the inflammatory response is the same, regardless of the different reasons or causes of it, the intensity of its response is not.

According to the National Library of Medicine (NLM), the most common causes of inflammation are:
• Pathogens (germs) like bacteria, viruses or fungi that don’t normally live in the body

• External injuries like scrapes or foreign objects (for example a splinter or thorn in your finger)

• Effects of chemicals or radiation

When you consider the list above, it seems rather obvious that they are generally harmful to your body. But what about all the things you expose yourself to, or you do (or don’t do), such as the sugary and fatty foods you eat, chemicals on the foods you eat, the exercise you’re still thinking about (and not doing), and any of the myriad of lifestyle choices you make on a daily basis?

That’s a good question and one we’re going to explore here.
Chapter Two

How do You Know?

In addition to the increased risk for heart attack and stroke among those who suffer chronic inflammation, people can also up their risk for cancer as a result of untamed inflammation.

Dr. David B. Agus

There are three basic kinds of inflammation: acute, subacute, and chronic as evidenced by the length of time it takes for healing to occur and whether or not there is any “residual damage,” as shown on the following guideline:

- **Acute Inflammation:** 2 or 3 weeks, usually no residual damage
- **Subacute Inflammation:** Weeks or months
- **Chronic Inflammation:** Weeks, months, or years with potential changes to the immune system

When inflammation is efficient and occurring because its doing its job to aid the body, for example, fighting infection, it “gets in, gets it done, and gets out,” so to speak. The problem becomes when the inflammation comes in to do its job and never leaves.
In its simplest terms, a little inflammation is helpful.

A lot?

Definitely not, as you’ll discover.

**Signs and Symptoms**

Inflammation leaves signs, although they’re often masked and may need more probing and interpretation to decipher its clues.

For example, you might simply have a general and mild sense of not feeling well, a state of non-specific “malaise,” which is defined by Oxford dictionaries as “A general feeling of discomfort, illness, or uneasiness whose exact cause is difficult to identify.”

On the extreme end, it can further degenerate into other diseases.

Here are the five “classic” observable signs of inflammation:

- Redness
- Warmth/heat
- Swelling
- Pain
- Loss of function
Loss of function can include limbs or faculties, all or in part. For example, you could lose the use of a leg, hand, or finger; or, it could affect function by limiting your ability to smell or breathe through your nose during cold season or, in worse cases, through allergy and asthma attacks.

Unless you’re a doctor, you might not think of “inflammation” when you have swollen glands and a sore throat, but that’s what’s behind those outer symptoms. Generally speaking, as long as the signs are observable, the inflammation is helpful and beneficial.

In fact, if you have them, you can count yourself one of the “lucky” ones, because there are other “reactive” symptoms not so easily noticed which may require tests to illuminate. These can range from having a fever to an internal change in blood cell count. In some cases, you may just feel exhausted or sick.

Signs and symptoms can pack a full range of expression, some more nebulous than others such as:

- chronic fatigue
- poor sleep, and lack of energy
- muscle and joint pain
- brain fog (memory/concentration problems)
- depression, anxiety and other mood disorders
There can even be no outward effects as NLM reports: “Some inflammations occur ‘silently’ and do not cause any symptoms.” Now that’s scary, isn’t it? It almost makes a headache sound good.

Biomarkers of Inflammation

Fortunately, when inflammation isn’t readily seen, there are ways to gauge its presence known as “biomarkers,” a form of biologically based evidence that reveals inflammation in your body.

Primary biomarkers include:

- Atherosclerosis
- C-Reactive Proteins
- Oxidative Stress
- Belly Fat

According to Dr. Arthur Agatston, these biomarkers aren’t just gauges of inflammation, but also indicators of “how fast our organs are aging.” And how fast your organs age is a fairly reliable predictor of death, “not only from heart disease but from other chronic diseases like diabetes and cancer as well.”
While there are many ways to test that provide information to the doctor for each of the biomarkers listed above, for our purposes here we’ll focus on the two common ones – C-Reactive Protein (CRP) and Erythrocyte Sedimentation Rate (ESR).

If your doctor suspects you have, for example, inflammatory bowel disease, heart disease, pelvic inflammatory disease, arthritis, or an autoimmune disorder – such as Type 1 Diabetes, Grave’s disease, Celiac disease, Multiple Sclerosis, and Rheumatoid Arthritis. – they’ll most likely send you to the lab for blood tests to determine whether or not you have high levels of protein in the blood.

C-reactive protein is actually produced by the liver and high levels of this protein can be indications of diabetes, high blood pressure, or heart disease. The keyword here is suspects, because the silent nature of some forms of inflammation may not arouse suspicion and, consequently, can be overlooked for years, or perhaps altogether…until it’s too late.

If protein levels warrant it, the following tests may also be necessary to specifically identify location and cause: Fibrinogen, Lipoprotein-associated phospholipase, Interleukin-6, Nuclear factor-κB, and/or Leukocyte count. Each of these tests looks at the individual types of protein or enzyme being produced as a source indicator.
Other inflammatory immune disorders include Fibromyalgia, Lyme disease, Chronic Fatigue Syndrome. Unfortunately, the blood tests in these cases are not so reliable or easily pinpointed, even though these disorders run rampant. It can take years and much angst to figure out what’s really going on and attribute symptoms to the right diagnosis.

Just ask any of the people who have suffered from Fibromyalgia, Lyme disease, or Chronic Fatigue. Most of them will share a sad tale of doctors insisting “in your head”, misdiagnosing, and hosts of expensive prescriptions for unhelpful or even harmful medications.

**Oxidative Stress**

Similar to inflammation, oxidation is also a natural survival mechanism that has the best of intentions in its initial efforts. The problem is when inflammation and oxidation get together like two misguided kids with nothing to do, and, working in tandem, wreak havoc and leave chaos in their wake. When this happens, what started out as a good idea turns south very quickly.

Oxidation is often compared to “rusting,” partly because it is a natural, chemical process, and also because of the visible wear and tear it has on the body,
like a car exposed to salt air at the beach. Two keywords in this process are *

**antioxidants** and **free radicals**.

Ideally, antioxidants found in food nutrients, such as Vitamin C, Vitamin E, and beta carotene, along with enzymes that naturally occur in your body in conjunction with certain micronutrients, keep free radicals in harmonious balance while also neutralizing them to prevent them from damaging the cells. However, when that doesn’t happen, as in the case of oxidative stress, free radicals get out of control and attack healthy cells, overloading the body’s system and creating imbalance.

Free radicals are like single people out searching for a marriage partner, except in this case they’re single, rogue electrons looking for another one to pair up with in order to create stability – in essence, a more perfect union.

As a matter of course, the body routinely produces free radicals, so a certain amount of this is normal. But, when too many free radicals start roaming around, it can cause serious disruption and damage to the cells. And it’s not hard for this to occur in a world where you’re exposed to so many environmental factors that produce them, i.e. contaminants such as herbicides, pollution, smoking, alcohol, poor diet, medication, and radiation.
Further, in cases where inflammation becomes chronic, it invites greater production of these free radicals. During this bombardment, the body gets doused in chemicals that lead to even higher levels of oxidative stress.

Here’s a sampling of some of the ways oxidation shows up both internally and externally:

- wrinkles
- premature aging
- cell membrane damage
- muscle soreness
- stiff blood vessels
- DNA alteration

As long as you breathe, you’re making free radicals. They’re a by-product of our own respiration and an inherent part of the process of being alive. The issues arise when you make more than your share, so to speak – or at least more than your body can assimilate well – often through dietary and lifestyle choices.

The fact is there are more than 1100 different families of them that come from, in addition to those you make simply by breathing, sources such as sunlight, air, food, the personal care products you use, and emotional stress.
So, while you can’t outrun them, you can keep enough antioxidants in your body through the right kind of food and diet, particularly, to outsmart them.

**Insulin Resistance**

Insulin resistance, like inflammation and oxidation, is another survival mechanism and an example of a good idea gone awry. Where once it acted to keep starvation at bay, today it has a tendency to go berserk in a world where food – and mostly the wrong kind – is available on demand.

After eating, your pancreas’s job is to produce insulin that moves this energy into the bloodstream for absorption into tissues. Insulin resistance happens when your body stores the *overload* of energy you get from way-too-much food as visceral fat in your belly.

Back when our ancestors roamed the continent, this was a useful and clever way to stay alive during lean times but, today, we have more food than we know what to do with. People have grown accustomed to huge amounts of food on their plates (and seem to feel the need to eat it). For example, if you go to a restaurant, especially family style, how much you get has become a measure of overall value.

Oh, and don’t forget those movies with those big, expensive, buckets of refillable popcorn oozing with some sort of yellow oil they’ve convinced us is
“butter.” This is a perfect example of what’s happened to many of the foods we eat. It’s simply hard to know any more what it is we’re really eating because you practically need a science degree to understand food labels.

Why can’t a butter just be butter?

Or peanut butter just be peanut butter, not “peanut butter spread?”

*What is all that junk we’re ingesting?*

This idea, combined with the fact that much of it is full of nothing – empty calories and few nutrients – plus the widespread belief that you shouldn’t do anything less than eat everything on your plate, has turned something beneficial into something extremely harmful.

If not deadly…

When your body has had enough and simply can’t handle all the excess energy you pour into it, subsequent insulin resistance sets in causing visceral fat – what is referred to as “belly fat” – to attach to your organs (*under* all that fatty surface level of skin), along with blood sugar swings to add fuel to the fire. This type of fat deposit on your body has been linked to Type-2 diabetes, which affects nearly 30 million people in the U.S. alone, and another 86 million on the waiting list with prediabetes.

What’s interesting is that most people attribute this “middle-age spread” to aging and it’s the butt of many jokes. But when you consider that it’s also
suspected as a culprit for breast cancer in women, it’s not only not funny, aging is not the point. Fortunately, as Harvard Medical School reports, “The good news is that visceral fat yields fairly easily to exercise and diet….”

In addition to insulin resistance increasing the risk of diabetes, according to Dr. Agatston, fat that waits around longer than it should (before insulin can do its job) “undergoes chemical and physical changes” of the kind that leads directly to a buildup of atherosclerotic plaque, clogging blood vessels. These, in turn, create the conditions ripe for strokes and heart attacks.

Heart surgeon Dr. Dwight Lundell, in his book, *The Cure for Heart Disease*, has a similar conviction, stating that, “Excessive body fat…isn’t just a statistic that says that overweight people have a higher tendency to have heart disease. We have the science that shows the biology – body fat increases inflammation.”

As you can see, slimmer bodies don’t just look better on the outside; they function far better on the inside. And it’s not just because a skinny body has less fat, it’s also because a skinny body is typically eating less (and better).
Chapter Two

It’s Not about Good Genes

It’s often said in the cardiology community that you are only as old as your arteries. If your arteries age, it wears out your brain, heart, and even kidneys.

John Day, Cardiologist

Until fairly recently, genes were blamed for just about anything that went “wrong” with your body. It was as if there was an underlying assumption that when someone looked good for their age or stayed healthy and lived a long life, it was because they had “good genes.”

That was until in 2003 this myth was dispelled due to the Human Genome Project, an international effort to map and code all the genes that constituted a human being. According to researcher Bruce Lipton, author of The Biology of Belief, the results of that project shocked the community. As he explains, “It was thought the completed human blueprint would provide science with all the necessary information to ‘cure’ all of mankind’s ills.”

What they discovered, however, was that, essentially, there aren’t enough genes to account for the complexity of a human being. In other words, there must be more to the story. And while the full scope of it is beyond this book, the
important takeaway here is that you can’t blame your momma or your poppa for your health.

At least not entirely.

Yes, it’s true that growing up and watching the way they live undoubtedly had an influence on you, both for good and bad. If your idea of breakfast growing up was donuts and Twinkies and coffee by the buckets came from your parents who were overweight “couch potatoes,” it would have had some effect on you, initially anyway. But then some people just go ahead and adopt similar beliefs and lifestyle for the rest of their time on the planet, while others run in the opposite direction and make new choices.

Still, your parents are just one factor when it comes to the ideas and beliefs you hold. For example, it doesn’t help that we live in a culture fast taking over the world, which extols the virtues of just about anything that can be boxed, including food conveniences shipped all over the globe, only to sit on grocery store shelves as long as possible.

And, if that weren’t enough…

We have entire generations of kids who’ve grown up on fast food, empty calories, and pesticides.
The Obesity Legacy

As a result of the poor nutrition attributable to this type of lifestyle and the many issues linked to it, are now seen in children and adults much earlier than ever before in history. Along with obesity and complications associated with it such as a type 2 diabetes, pediatricians are routinely seeing cases of “eczema, asthma, various stomach issues, and behavior problems” in high numbers.

And it gets much worse.

Dr. Agatston cites a study of overweight children from the Kansas City School of Medicine at the University of Missouri, where researchers found that:

...the arteries of overweight children showed signs of premature aging (rusting), and in some cases, children as young as 10 years old had arteries with the thickness of 45-year-olds.

According to Dr. Agatston, in addition to being highly prone to heart disease or diabetes, overweight children are also susceptible to conditions and ailments linked to obesity, such as:

- Sleep apnea
- Arthritis
- Gallstones
- High Blood Pressure
- High Cholesterol
- Constipation
- Infertility
- Headaches

The linkage between diet and obesity is so great that it has evolved an entirely new category of disease – “Metabolic Syndrome.”

Dr. Lundell says that this disease, also known as Syndrome X, is found in 40% of middle-aged adults, and that “Metabolic Syndrome is characterized by an increase in abdominal fat, blood fat disorders, insulin resistance, and elevated blood pressure.”

And here’s the real game-changer…

“In fact, most diseases are linked to diet,” he says.

By association then, inflammation, the culprit behind disease, is also linked to diet. But why stop there when we can go one step further?
Chapter Three

What’s Age Got to Do with It?

What you put on your plate every day can have a huge impact on the health of your brain tomorrow.

Dr. David Perlmutter

You didn’t really believe that all those frequent aches and pains, chronic joint stiffness, bloating and indigestion were just inevitable complaints of the senior set, some sort of version of “That’s just the way it is.”

Or did you?

Well, for many they are, but not for the reasons you think. Getting older doesn’t necessarily have a prescribed list of ailments to be assumed after a certain age – like a kind of “fait accompli.” It’s only that they’re common symptoms associated with inflammation, and inflammation and disease both have a subsequent impact on longevity.

And, as you might have guessed, your life span and the quality of that life are linked to diet, as well.

In many ways, this concept is just starting to take hold in the medical community. Until fairly recently, rare was the doctor who spent time poring over
nutritional literature. In fact, medical school students get, on average, only 20 hours of nutrition instruction over the course of four years of studies.

And what about you?

When was the last time you got together with your friends and talked about nutrition? (Note: talking about calories is not the same as talking about nutrition, although it’s a start…)

So, if you can’t look to our own culture and food industry best practices, where can you look? Well, you could go to China where there are at least five hot spots full of clues.

Jennifer J. Brown, in an article *100 Years of Healthy Habits: Secrets of Chinese Centenarian*, suggests that Longevity Village doesn’t get its name by accident. It has one of the largest communities of centenarians in the world. Thousands of visitors come each year to learn its secrets of long life. In fact, you might be surprised to learn that one of those “secrets” is that they eat vegetables at every meal, including breakfast.

Remember those antioxidants we talked about?

Many vegetables are full of them and, if you’re overlooking them in favor of something sweet, you’re missing out on all the goodies they offer – namely, a longer, healthier, more vibrant life.

Oh, and how about a much better brain while you’re at it?
The longer you live, the more damage accumulates in your brain from free radicals and inflammation, which leads to a decline in mental functioning. According to Dr. David Perlmutter and Carol Colman in *The Better Brain Book*, “The downward spiral begins with the typical mild memory problems or brain fog so common in midlife and can accelerate exponentially with each decade.” This downward spiral includes:

- Dementia
- Confusion
- Severe forgetfulness
- Inability to manage on their own

Worse, they say, is that you not only may not remember where you put something, but how to use it...even if you had it.

Alzheimer’s disease, which was brought to the forefront of the news when President Ronald Reagan was diagnosed with it, is a part of this picture of brain deterioration. Considered a cause of dementia, its influence in affecting your work and social life is far and wide – everything from memory loss, emotional withdrawal, apathy, depression, confusion, poor judgment, and difficulty in solving problems or completing even familiar tasks. The Alzheimer’s Association website states it “is the sixth-leading cause of death in the United States and the only cause
of death among the top 10 in the United States that cannot be prevented, cured or even slowed.”

Precisely because it is so common, most people just assume that memory loss is “just the way it is” – something that “naturally” happens to you as you get older.

But there’s plenty of evidence that this is not the case because, if it were, everyone would exhibit it by and large the same way. Look around you. Do you know of people – either whom you’ve met or read about – who stayed sharp and were able to focus even into their 80s, 90s, and 100s?

Certainly there are plenty of them in Longevity Village and why we’re so fascinated with their secrets. Brown writes that one visitor who has studied the habits of the people in Longevity Village, Dr. John Day, a cardiologist, says, “Most people think it’s their genes, but the data don’t support it,” further laying bare the mythology of genes, the conversation we started in the previous chapter.

So, if we can’t blame our genes for disease and short life span…then what?

Where’s all that inflammation coming from?

The answer is found in another well-known longevity study in Denmark tracking nearly 3,000 twins, in which researchers came to the conclusion that only a small percentage (25%) of their life span was attributed to genes – 75% to lifestyle choices.
In other words, it’s not about good genes, or simply “health issues” – it’s about the way you live and the choices you make day in and day out. That’s the real conversation.

Fortunately, major attention is being placed on inflammation in both research and the medical community.

Needless to say, we’re learning a lot!
Chapter Four

So What Choices Are You Making?

You can extinguish the flames of chronic inflammation before they grow out of control.

Karlyn Grimes, MS, RD, LDN

It seems that, no matter where you turn, from the tiniest blurb to a big, beefy article in a fitness, food, or lifestyle magazine, you’ll come across a nod toward the subject of inflammation.

Clearly, it’s the central piece of health conversations!

Take a look at these three separate references sprinkled throughout different articles/sections of just one recent fitness magazine (Shape Magazine (July/August 2015):

While NSAIDS (like aspirin and ibuprofen) reduce postworkout inflammation, scientists note that they can irritate your gastrointestinal tract’s lining, especially in combination with exercise...In “Get Fit News”
The term inflamm-aging was created because inflammation is seen as a key driver of aging,” says Frauke Neuser, Ph.D., the principal scientist for Olay Skin Care... In “Look Great Skin Smart”

A new study found that low magnesium levels can increase your body’s amount of c-reactive protein, which is a marker for the chronic inflammation associated with heart disease and metabolic syndrome...

In “Eat Right News”

With this kind of press, you’d think the whole world would know about it and be racing to make adjustments, but sadly, this isn’t the case.

Just look at the statistics.

For example, Dr. Lundell says that not only is heart disease the leading cause of death in the U.S., but that a person dies of a heart attack “every 34 seconds.”

Overweight and obesity statistics aren’t much better – a full two-thirds of the population falls into this category.

Type 2 Diabetes is growing off the chart.

And we won’t even touch hypertension…(Oh, okay, it’s 90%!) Need we say more? (Yes, there is more, but you get the picture…)
The point is that the jury is definitely in on this: From a national health perspective, more people need to be making better, healthier choices, not just in the short term but over the long haul. But sometimes that’s not so easy to do, especially if, like most, you’re attached to your routines – you like to get up, have a cup or two (or three) of coffee to get going, run out the door with no time for breakfast, stop at McDonalds on your way to work, or grab a muffin at the morning meeting.

The problem is that this sort of lifestyle can lead to inflammation – the kind that can silently smolder inside.

**Considering the Choices**

Inflammation is often compared to fire, which can be a slow burn, a steady blaze, or a furious one. Like a house struck by lightning causing a small, slow burning fire, it may not get anyone’s attention until the house is up in flames. In such cases, you hope your smoke detector is working because they can make the critical difference.

Similarly, there are some things that can make the critical difference for you when it comes to your own inflammatory response.

And you *can* make a difference.
For example, according to Dr. William Sears in his book, *Prime-Time Health*, “Music reduces circulating inflammatory substances in the body.”

It definitely changes the way you think about music, doesn’t it?

If we do, indeed, live in a “pro-inflammatory world,” where “toxins...pervade the environment, processed foods are taking over the grocery store shelves, and you are probably on the go 24-7, which promotes stress and robs you of adequate sleep,” as Karlyn Grimes suggests in her book, *The Everything Anti-Inflammation Diet Book*, then you’d better understand how to work with your body to reduce all the negative factors that prey upon it.

It really boils down to lifestyle choices much of the time – for example, choices about how you live in regards to some of the following:

- Work life
- Relationships
- Environmental
- Dental
- Sleep
- Exercise
- Mindset
- Stress
• Food and diet

Part of the reason these areas can cause so many issues is that they’re *always* with you. It’s not like you can say, “Well, I just won’t be in relationships,” or “I’ll just not worry about sleeping.” And, not only do you have to deal with them every day, if you *don’t* attend to them in pro-active, self-caring ways, it can easily morph into a chronic, long-term type of pattern that invites inflammation.

The way you handle yourself in life, how you go about your days in terms of the people you interact with, the foods you eat, when you eat, whether or not you exercise, your motivation, the work environment – these don’t always get much flux or change unless something negative shows up and your doctor has to help you make new decisions before it’s too late.

If anything, they often pick up speed and snowball out of control.

For many people, it isn’t that hard to find yourself overdrinking, over working, sleeping too little, missing the gym, or having so much going on in your personal life (even the good things, like family and kids) that finding time to take care of yourself simply feels like another stressful burden.

Let’s look at some of this in greater detail and the role these play in the dramatic story of inflammation.
Chapter Five

It’s Just the Little Things

Unhappy with the job, unhappy with the spouse, unhappy that the TV remote is lost again. These unhappy moments stress us and cause inflammation.

Drs. Oz and Roizen

There’s no doubt that the way we live influences, if not determines, both the quality and quantity of the days of our lives. What’s a bit intimidating is just how much it matters, but the research supports it.

Things past, things present, and things future all figure in.

Traumatic events and injuries that happened long ago, the fight you’re currently having with someone, even the expectations you hold for the future enter in to the inflammation conversation. It is no defender of persons either. For example, Dr. David Agus, in his book, The End of Illness, “Long after a football player has hung up his helmut, his body is trying to heal itself, and that pathway back to health likely entails some inflammation.”

There’s just no area where it will not go.

Work Life & Relationships
The old adage, “Can’t live with ‘em, can’t live without ‘em” clearly applies here. Even if you had all the money you’d ever want, humans need to express themselves in some creative fashion, and most of us do that through some sort of work life. Whether you work outside or inside your home, you’re going to bump into a few people. Relationships are nothing less than challenging – which can spell stress – even the best of them.

Environmental

Even if you’re taking conscious care of yourself in every possible way, you still have to live in the same environment we all do. For example, just flying in an airplane can expose you to a plethora of potential pathogens – unless you’re one of the relatively few who keeps a private jet parked nearby. Yes, the airlines do an admirable job of keeping spreading germs to a minimum by using hospital-type HEPA filters, but it can only go so far. Even hospitals have their problems.

"It's not 100% air exchange all the time, just as it is not in any of our buildings. The fresh air intake is incremental over time, so there's a fair amount of air sharing over time in the airplane," says William Schaffner, MD.

Aside from germs and other pathogens, in a world of plastics, plumbing, chemicals, and cosmetic creams, one way or another, you’re in constant contact with toxicity and those pesky free radicals.
Dental

A little mercury, anyone? Maybe not, suggests Dr. Jonathon Levine in his article, *Toxic Teeth: Are Amalgam Fillings Safe?* He states, “Mercury is a powerful neurotoxin and, at certain levels, can cause neurological issues, autoimmune disease, chronic illnesses and mental disorders.”

Needless to say, it’s a hot debate as to whether this practice is safe or toxic, but if you insist your dentist on it, as a consumer, you have other choices until they figure it out.

Sleep

Sleep has been getting a lot of study over the past few years, and research indicates that lack of it is linked to an increase in immune activity and inflammation. Of course, we know where this is going as Dr. Eric Cohen says in his article, *Think Sleep Deprivation Won’t Affect Your Immune System? Think Again,* “The longer a person goes without adequate sleep, the more at risk they are for other chronic diseases.”

Exercise
Just as exercise burns fat, it also decreases the levels of proinflammatories in your body and stabilizes insulin. The amount and type of exercise, as well as how much you sit and how lean you are to begin with, plays a role in the amount of inflammatory response and even acts to block its production.

Mindset

Your attitude – the combination of how you think and talk to yourself – about life, the world and, particularly, how you see your life, carries weight in the mind/body connection. The degree to which you perceive yourself as in control or out of control, and whether you perceive you have choices, possibilities, or opportunities to do something about all of it, matters.

Bad moods, pessimistic attitudes, and brooding about unhappy events in the past, cause a chemical reaction in your body, namely an increase in the secretion of cortisol and adrenaline and, at the same time, a decrease in serotonin production.

When you’re faced with too many negative emotions, both in your body and in your mind, staying in the present moment can be challenging. The good news is that although the ideas you hold determine the amount of internal stress you’ll feel, on the flip side, they can go a long way to healing your body.

As Therese Borchard writes in “Mind Your Health: Using Mindfulness to Heal Your Body,” there’s evidence that “The practice of mindfulness, in
particular — moment-to-moment awareness and cultivating an attitude of non-striving and non-doing — can bolster our immune system, determine which genes in our chromosomes get turned on, lower blood pressure, regulate emotions under stress, reduce pain, increase our stamina, and make us much more fun to be around.”

Stress

In a real way, all of the above, if not taken care for, can place stress both within and without the body. How you handle each area of your life determines how you feel emotionally, and these factors play a role in whether or not – and the degree to which – you’ll incur chronic inflammation.

Even the goals you set for yourself potentially have a biological connection depending on the level of stress or worry you may feel about them, especially when they’re so great to be “unattainable.” As Dr. Oz and Dr. Roizen in You Being Beautiful: The Owner’s Manual to Inner and Outer Beauty state, “Your levels of C-reactive protein (a marker for damaging inflammation) have been shown to be higher when you have expectations that are unattainable.”

If you have come to accept stress as a normal part of life, you may want to rethink it, if only make sure that this belief prevents you from being proactive in the how much stress you allow or how you handle that stress.
It matters.

**Stress/Cortisol Connection**

When you’re faced with stress, your body has a few tricks up its sleeve in the form of hormones – cortisol, endorphins, prolactin, and glucagon – in order to give you the fuel you need to survive it. For our purposes here, we’ll focus on cortisol, a major player because of its prime role in sponsoring inflammation – and another example of “too much of a good thing” over prolonged periods of time.

While cortisol is necessary and normal for regulating fuel in your body, it’s often referred to as the “stress hormone” (think flight-or-fight) because it’s produced when your body experiences any type of stress – even the good kind. For example, research has shown that athletes have chronically higher levels of cortisol due to the physical and mental demands they place on themselves, yet most people wouldn’t think of this as a bad thing.

Unfortunately, the body can’t tell the difference.

Whether the initiating factor is intense running for pleasure, drinking a cup of coffee, staying up late for a party, commuting to a high paying job, or falling off your bicycle and hitting your head – it’s all stress and cortisol is the answer, as far as it’s concerned.
When the stress response is triggered, the adrenal glands send out cortisol to the rescue, and once this is triggered, blood sugar levels rise (and waists are known to expand). Chronic levels of cortisol can have deleterious effects including premature aging, increased risk for diabetes, weight gain, poor sleep, sexual dysfunction, memory loss, and cancer cell growth.

**Food and Diet**

What you put in your body is one of the most important factors in determining your health risks. A steady diet of processed foods – the typical Western diet – just cannot provide the nutrients and fuel your body needs to function.

Its implications travel far beyond obesity to chronic inflammation and disease, in part by offsetting the balance of gut flora, the bacteria housed in your intestinal tract. The degree to which your body stores fat, balances levels of glucose in the blood, even how it responds to hormones that make you feel full or hungry, are all dependent on this internal phenomenon.

**Gut Flora connection**
Got gut? Well, ain’t you cool…at least so says the American Gut Project launched in 2008 between researchers at the University of Colorado and the Human Food Project, with other participating scientists and collaborators from all over the globe, as well, to study the human “gut ecosystem.”

Home to over 100 trillion microbes, you might say it’s the new frontier. These little critters – in the form of good and bad bacteria – live inside your body with a large percentage of them right within the walls of your intestinal tract.

Thousands of people across the world have joined – and you can, too – this research project to contribute to the community of information and knowledge – sharing the poop, you might say (pun intended). Each person who participates is sent a kit to collect a sample, fill out a diet and lifestyle questionnaire, and send back so that their gut microbiome can be analyzed.

The idea behind all this is that by studying the relationship between diet, lifestyle, and what’s in your gut, we’ll be better prepared to understand how to best maintain the delicate and complex balance of bacteria in what is sometime referred to as your “inner rain forest.”

One group of researchers put it this way in their landmark review article, *From Structure to Function: the Ecology of Host-Associated Microbial Communities*, on PubMed, the website of the National Center for Biotechnology Information and part of the National Institutes of Health (NIH):
As we gain an increased understanding of how complex, host-associated microbial communities assemble and maintain structure and function, it is likely that a new paradigm for the prevention and treatment of microbe-associated diseases will arise. In certain cases, the war metaphor will be replaced by a paradigm where management is the key concept. With this new paradigm, the human body can be considered akin to a national park. The management of the ecology of the human microbiota becomes the focus of both prevention and therapeutics.

In sum, a healthy balance is the first line of defense against chronic inflammation and disease and a primary mode of accomplishing that is through your dietary and lifestyle choices.

In considering changes you might make in regards to any of these, it’s important to note that you can’t really do one thing without affecting all the others.

More sleep → Feeling better → Improved mindset → Brighter outlook
→ Better interactions → Enhanced relationships → Less stress →
Happier spirits → Higher self-esteem → Healthier self-care, i.e. food, diet, teeth and gums, and exercise → Greater self-worth → ???
Obviously, you could add a whole lot more to this dynamic spiral upwards.

But one thing’s for certain…

As your state of health and well-being changes toward the positive, you’ll naturally reach for more abundance and fulfillment – overall wealth – in every area of your life (including work and money).
Conclusion

Your Healing System

Et d’abord, ne pas nuire! (First, do no harm!)

French Proverb

Hopefully, by now, you’ve learned a lot about the role inflammation plays in your life, starting with the choices you make now and how those choices take you towards inflammation or towards an inflammation-free life.

But here’s the deal…

When it comes to inflammation, you’ll sometimes hear the terms “managing inflammation,” but that may not be the best way to phrase it. It’s not so much about managing inflammation or the things that can induce it, such as food and other lifestyle decisions. Like the notion of “time,” you can’t really manage it – you can only manage yourself and what you do or don’t do.

But, semantics aside, something’s got to be managed when it comes to inflammation and the role it plays in your body.

Fortunately, you can continually improve in this area of self-management and learn to make thoughtful decisions with a view to your future self. The words of Eubie Blake are particularly apt here:
If I'd known I was going to live this long,
I'd have taken better care of myself.

In traditional Chinese healing practices, the first principle to follow is that it’s better to prevent than to heal. In fact, this is the literal meaning of the well-loved, and well-used, French proverb, “Mieux vaut prévenir que guérir.”

The French, like so many other European cultures, regard their health as a “first priority.” The sad thing is that the American food industry has become a global endeavor and they will now have to work harder than ever to stay true to those roots. With the rise of McDonald’s and other big chains tethered to every corner of the world, we’re starting to see the same widening effects spread to these other cultures – literally.

Americans are known for their sweet tooth, even for breakfast. Look at popular food choices like muffins, pancakes or waffles with lots of syrup, and sugar-laden cereals. Small children (and some big ones!) regularly down Pop Tarts or donuts in cellophane wrappers. Other cultures, however, generally eat small breakfasts resembling something closer to lunch meals – boiled eggs, lean meats, rice, soup, vegetables and fruits.

When it gets down to it, then…

Do you treat your own health as a first priority?
Going forward, you’ll want to think proactively along the lines of preventative health maintenance. Health and well-being are more within your grasp than you realize and often require little more than small and doable tweaks, especially in the areas that make the most difference.

Just doing few things differently everyday can change the game.

Remember, you’re not powerless as long as you have choice – and there are a lot of good choices available to you. In the final analysis, your body is uniquely designed to heal, restore, repair, and sustain wholeness and you can learn to work with it, not against it.

You can feel better, perform better, and prevent disease and ailments – so why not enjoy life to the very last breath?
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