

The background of the entire image is a rustic wooden surface. In the upper left corner, there is a piece of burlap sack. Scattered across the surface are several pieces of ginger root. In the center, a small metal bowl is filled with a vibrant orange-yellow turmeric powder. A metal spoon is positioned to the left of the bowl, its handle extending towards the bottom left. The text is overlaid on a dark, semi-transparent band across the upper half of the image.

THE **TURMERIC MIRACLE:** SECRETS OF THE WORLD'S MOST EFFECTIVE HEALING SPICE

The logo consists of a stylized white leaf icon above the brand name.

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THE TURMERIC MIRACLE: SECRETS OF THE WORLD'S MOST EFFECTIVE HEALING SPICE

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Introduction



Introduction

Turmeric's popularity is spreading like wildfire. The incredible array of health benefits offered by this ancient spice has natural health advocates and medical researchers alike spellbound. Store shelves are increasingly well-stocked with turmeric powders, extracts, elixirs, and drinks, and researchers have conducted nearly six thousand studies (and counting) to decipher its healing secrets.

Here's the real question, though: is turmeric the real deal, or just another passing fad? These days, it seems like nearly every moderately functional food gets dubbed a "superfood"—and ancient, exotic foods are especially prone to this spin-doctoring. With all this noise, it can be difficult to discern which foods are actually worthy of being integrated into your diet.

The good news is that the press that turmeric is receiving is unquestionably well-deserved—there seems to be no end to its medical applications. It's no exaggeration to say that turmeric is one of the most healing (and most versatile) foods on the planet.

¹Turmeric's clout is even reflected in its etymology, as the word *turmeric* is believed to come from the Latin phrase *terra merita*, meaning "meritorious earth." In the Sanskrit medical treatises of Ayurvedic doctors—who have included turmeric as an essential plant in their sophisticated system of healing for over four thousand years—it is called by at least fifty-three names (all of which correspond to a different medicinal application). These many names include compliments like "auspicious," "beautiful," "fat killer," "that which gives delight to the heart," "that which enhances bodily complexion," and "that which wins over all disease."

The bottom line is that making turmeric a central part of your diet is a no-brainer. This book provides a comprehensive framework for understanding what makes turmeric so special. It draws on cutting-edge information from both the natural health and medical research communities, and reveals exactly how to receive maximum benefit this incredible plant.

Turmeric is a sorely needed remedy in a world burdened by disease, environmental toxicity, and an ailing mainstream medical system. Read on to discover why it's one of Nature's greatest tools for ensuring optimal health on every level of being—and how to make it work for you.

¹ <http://www.thefreedictionary.com/turmeric>

Chapter 1



Chapter 1: Turmeric's Long and Illustrious History

When Hippocrates urged the world to “let food be thy medicine and medicine be thy food” in the 4th century A.D., the practice had already been a centerpiece of medicine for thousands of years. Notably, the Ayurvedic tradition of India placed (and continues to place) huge emphasis on the power of a properly constructed diet rich in healing foods. One of the keystone foods in the Ayurvedic system is, *you guessed it*, turmeric.

Turmeric, or *curcuma longa*, has a colorful history—both literally and figuratively. It is native to southwest India, where its dietary and medicinal usage thus originated. As mentioned in the Introduction, it was acknowledged and implemented as a medicine by Ayurvedic practitioners nearly four thousand years ago. By 800 A.D., its renown had spread across Asia and Africa, and Marco Polo introduced it to Europe in 1280.

Turmeric's rise to stardom was surely helped along by its brilliant golden-orange color, pleasant aroma, and rich flavor, which made it a dazzling addition to the display stands of spice merchants. It was widely used as a dye before gaining popularity as a cooking ingredient and medicine.²

The real virtue that propelled it across the entire ancient world, however, was its incredible versatility as a healing agent. Practitioners of Ayurveda and Siddha medicine

² <https://en.wikipedia.org/wiki/Turmeric>

(a form of spiritual medicine rooted in yogic doctrine) discovered that turmeric is astoundingly effective for treating a huge variety of ailments and conditions, including fevers, infections, obesity, diabetes, cancer, heart disease, neurological issues, emotional imbalances, and skin conditions (long before many of these health issues were even given scientific names and classifications). In Indian culture, turmeric was (and still is) so closely associated with health maintenance that *haldi*, a traditional Hindu word for turmeric, actually means “healthy.”

A Forgotten Natural Medicine

Fast-forward to modern times. Mainstream medicine has set itself on a crusade to define healing on its own terms—namely as a hierarchically controlled, “scientific” usage of sanctioned techniques, technologies, and substances. Many doctors have even gone so far as to criticize the labeling of food as medicine. They argue that food and medicine should be carefully differentiated from one another, almost as though they’re trying to protect some trademarked product in which they have a vested interest...because, well, they are. To admit the primary importance of diet and lifestyle design in maintaining your health would be to undermine the necessity of our society’s massively profitable, pharmaceutical-driven medical system.

Their secondary criticism is that natural, lifestyle-based medicine lacks rigor and sophistication. This critique is worthy of our concern—after all, the natural health space has its fair share of pundits spouting unsubstantiated claims and hucksters selling the latest and greatest health product. That being said, any attempt to discourage the genuine medicinal merits of healthy, nutrient-dense food is dangerous and unjustified. There’s simply no reason why modern medical science and ancient plant-based healing can’t play nicely together. After all, 61% of all pharmaceutical drugs are made directly from plants, and the remaining synthetic compounds are all inspired by medicinal compounds discovered in plants and animals.³

More and more doctors and researchers are stepping up to heal this schism, and turmeric has become a profoundly important meeting ground for these two camps. It’s fair to say that any supposedly “healing” food should be required to pass the test of medical scrutiny—and turmeric has passed with flying colors.

³ <http://www.ncbi.nlm.nih.gov/books/NBK92752/>

Researchers now have hard data to “prove” the long-celebrated health benefits of turmeric. Because more and more doctors are accepting its legitimacy as a medicine, this multi-talented spice is poised to play a central role in the future of integrative and functional medicine.

Chapter 2



Chapter 2: An Ancient Remedy for the Modern Age

It's no secret that the world is sorely in need of health solutions that really work. Despite the supposed "successes" of modern medicine, nearly all major diseases are on the rise. The society in which we live is one increasingly polluted by industrial toxins, processed foods, and poisonous products of convenience. In many cases, the medical system's own "solutions" are to blame for our health woes—just consider the rise of antibiotic-resistant bacteria, the rampant complications of chemotherapy and radiation treatment for cancer, and the worrying link between vaccines and neurological degeneration.

Fortunately, a small contingent of the medical community understands that big changes are necessary. Even more importantly, they know that this change shouldn't involve forsaking the wisdom of the past, but rather reviving it and refining it through modern medical approaches. The more of turmeric's virtues are revealed through medical research, the more respect researchers gain for its rich, thousands-year-old tradition as a panacea. Studies clearly demonstrate that turmeric—just like traditional healers have been saying for millennia—is all of the following (and more):

Anti-inflammatory—it quells the body's natural inflammation response, which helps alleviate aches and pains, lowers stress, and dramatically increases overall well-being (in the next chapter, we'll talk about why inflammation is the root of all disease).

Antioxidant—it halts the process of oxidation, which would otherwise flood your body with damaging free radicals (preventing this damage before it happens is the key to radiant health and longevity).

Endocrine-balancing—it balances the system that controls all the hormones in your body, thus regulating metabolism, growth and development, sexual health, mood, and sleep (hormonal dysfunction is the cause of countless health issues).

Antibacterial—it intelligently targets and destroys harmful bacteria, without upsetting the delicate balance of beneficial bacteria that make up your microbiome.

Antiviral—it stops the replication of supposedly incurable viruses, including encephalitis and HIV.

Antimicrobial—it protects the body from harmful microbes (sometimes by killing them and sometimes by “deactivating” them on a genetic level).

Anti-parasitic—it rids the body of internal parasites by actively killing them and by increasing the immune system’s ability to fight them on its own.⁴

Anti-fungal—it destroys harmful fungi and restores the body’s yeast balance.

Neuroprotective—it improves brain function and wards off cognitive decline and neurological disease (it holds great promise as an Alzheimer’s treatment of the future).

Antidepressant—it balances brain chemistry and alleviates the symptoms of depression and other mood disorders as effectively (or more so) than leading pharmaceutical antidepressants.

Cardioprotective—it protects the heart (and reduces the overall risk of heart attack and stroke) by improving cholesterol levels, strengthening arteries and blood vessels, and increasing levels of the body’s natural heart-supporting chemicals.

Metabolism-boosting—it encourages lasting weight loss by boosting your body’s metabolism and improving insulin sensitivity.

Anti-diabetic—it combats diabetes by improving insulin and blood sugar levels, and by healing many of the disease’s co-morbidities.

⁴ http://link.springer.com/chapter/10.1007/978-3-642-19382-8_6#page-1

Anti-cancer—it fights an astounding array of cancers on nearly every level (i.e. by actively killing cancer cells, by changing the pattern of cancer growth on a genetic level, and by strengthening the body’s cancer-fighting ability).

Skin-healing—it promotes radiant skin health through its cleansing, tonifying, and brightening properties.

Best of all, turmeric accomplishes all of these feats safely and naturally, without any of the usual side effects of pharmaceutical drugs and invasive procedures—and it does so for a fraction of the cost. How can one little root be so healing?

The Wonders of Curcumin

Turmeric is chock-full of vitamins, nutrients, and healing compounds—but the one that’s gotten the most press is undoubtedly *curcumin*, a polyphenol which accounts for 8% of the root’s weight, and is responsible for its brilliant orange color.

While turmeric contains over 200 different compounds (at last estimate), curcumin is the one that most readily draws the attention of researchers, due to its impressive spectrum of easily demonstrated health benefits. It is a potent anti-inflammatory, antioxidant, and a near-perfect “whole-system modulator”—it leverages its many talents to reorganize and rejuvenate cells and tissues on every level, and actually “teaches” the body how to take better care of itself. New research even demonstrates that it has the ability to induce *epigenetic* changes in the body—meaning that it literally changes the way that genes express themselves in order to create optimal conditions!

The medical research community is so abuzz with curcumin studies that many scientists have jokingly begun to refer to themselves as “curcuminologists.” At any given time, over a hundred in-progress clinical trials are being conducted to evaluate curcumin as a treatment for cancer, gastrointestinal diseases, cognitive disorders, and psychiatric conditions—and that’s only what researchers have uncovered so far.

Curcumin excels at every healing task that researchers throw at it—it seems there’s almost no ailment it can’t benefit in some way. Even the pharmaceutical industry has had their interest piqued—a few companies tried to patent it, but luckily, the U.S. Patent and Trademark Office had enough sense to deny their request.

Turmerones (and Other Undiscovered Treasures)

Recent research has been so centered around curcumin that very little time has been spent examining the other 199+ compounds in turmeric. As much as medical scientists love working with isolated compounds (it makes things like dosage and experimental measurement much more neat and tidy), they know that more secrets lie buried in turmeric's chemistry. When researchers look at the health effects of whole food turmeric (rather than isolated curcumin), a whole new set of benefits comes to light. The treasure hunt continues.

The most recently discovered turmeric compounds are called *tumerones*—these are the molecules responsible for turmeric's alluring aroma and taste. Unsurprisingly, they have superpowers similar to those of curcumin, such as powerful anti-inflammatory activity and anti-cancer properties. One in particular, called *ar-tumerone*, appears to have the incredible ability to regenerate brain stem cells. This finding has exciting implications—researchers believe that this special compound could unlock the secrets to treating diseases of neurological degeneration, like Alzheimer's, dementia, and depression. We'll dive into the details of turmeric's brain-boosting abilities in Chapter 5.

Turmerones also function as an interesting sort of ally to curcumin. It turns out that curcumin, the star of the turmeric show, has an Achilles' heel: a very poor bioavailability (this means that it's not easily absorbed by your body). When combined with turmerones, though, the levels of curcumin absorbed through the intestinal walls increases significantly.⁵ This same increased bioavailability is also conferred to the many nutrients in turmeric, which include vitamins C, E, and B6, as well as niacin, potassium and iron. This interesting role played by tumerones lends credence to the idea that living, whole foods are almost always superior to isolated compounds—after all, Nature made them the way they are for a reason. We'll discuss more tips and tricks for increasing the bioavailability of curcumin and tumerones in Chapter 13.

The Bottom Line

All chemistry aside, the fact of the matter is that turmeric *works*. It's a true gem of a plant, with the rare ability to single-handedly tackle arthritis, immune deficiency, infections of all kinds (viral, fungal, and bacterial—even the antibiotic-resistant variety),

⁵ <http://www.ncbi.nlm.nih.gov/pubmed/22181075>

fatigue, Alzheimer's and dementia, depression and other mood disorders, heart disease, obesity, diabetes, cancer, Candida and other stomach issues, skin problems, and more.

Read on to discover the three simple principles that make turmeric perfectly suited to all of these health issues, and to learn how you can achieve all of these benefits in your own life.

Chapter 3



Chapter 3: The Threefold Secret Behind Turmeric's Healing Abilities

In order to understand truly how turmeric works its magic, we'll need to examine how all that chemistry translates into real action inside the body. Turmeric is a seeming miracle worker because it simultaneously targets three of the top health-depleting factors: inflammation, oxidative stress, and hormonal dysfunction. Nearly every major disease in existence can be traced back to one or more of these imbalances, and addressing them is the key to treating the root causes of disease, rather than simply managing symptoms. This is what makes turmeric such an ideal poster child for the burgeoning movement around “functional medicine” and other related modalities, which seek to resolve the underlying conditions that allow disease to flourish.

Let's take a deeper look at the trifecta of disease factors mentioned above, so that—with a little help from turmeric—you can make your body stronger, younger, more adaptive, and more disease-resistant than ever before...no matter how old you are.

Inflammation: The Root of All Disease

Inflammation isn't an inherently bad thing—rather, it's an evolutionary defense mechanism that's supposed to help your immune system take better care of your body. It's actually a pretty ingenious design. When immune cells detect foreign agents (such as microbes, toxins, and free radicals), they instruct the body to send more blood to

nearby tissues, which inevitably brings more immune cells (such as macrophages) to help battle the invading pathogen. Areas of physical injury also become inflamed in order to prevent further injury, and because increased blood flow helps accelerate the healing process. In both cases, you can think of this process as a sort of trip wire that draws the immune system's attention to problem areas by sounding an alarm.

Here's the problem, though: this alarm gets triggered incredibly easily, and the immune system isn't very good at discerning real threats from false alarms. This poses a huge issue for modern living, because our world is teeming with potential inflammation triggers. Environmental toxins, processed and sugary foods, and even plant molecules can all set your immune system on high alert ("allergies" are really just an excessive immune response to environmental factors that may or may not actually pose a threat).

This imbalanced inflammation response is made even worse by stress (which increases the production of inflammatory chemicals within the body), nutrient deficiencies, and pro-inflammatory dietary habits (e.g. consuming an improper ratio of omega-3 to omega-6 fatty acids). Unfortunately, all of these triggers are deeply woven into the fabric of our way of life.

The result is that your immune system is always reacting to some perceived threat—which means that your body labors under constant inflammation. Acute inflammation is worth its negative effects (because it helps protect your body in the ways mentioned above), but chronic inflammation is immensely harmful to your health. It saps your energy, weakens your immune system's ability to fight illness, directly accelerates aging through a process called *DNA de-methylation*, increases the risk of physical injury, leads to weight gain and obesity (by messing with your body's levels of *leptin*, the hormone that regulates fat storage and tells you that you're full), impairs brain functioning, and just generally makes your body feel achy and unpleasant. And if all that doesn't sound bad enough, chronic inflammation is also strongly linked to the development of cancer, depression, diabetes, Alzheimer's disease, heart disease, and many other serious health conditions.

Oxidative Stress

If you've ever seen a car or metal appliance rust after falling into disuse, you know the effects of oxidation. This process adversely affects your cells and tissues in quite the

same way—which is why your body has evolved a sophisticated antioxidant defense system to combat *free radicals*—which cause oxidative stress if not kept in check.

Like inflammation, free radicals are not intrinsically harmful. They're simply unstable molecules, and in many cases, they're created within your own body for specific uses—for example, your liver uses them for detoxification purposes, and your white blood cells use them for fighting pathogens. They can also be created, however, when your body is bombarded with environmental toxins, pro-oxidative foods (like sugar), and excess stress hormones. This is when things spin out of control, because the delicate balance between free radicals, reactive oxygen species (ROS) and reactive nitrogen species (RNS) is upset, and free radicals run amok. In a desperate attempt to restore balance, your immune system launches a vicious attack against the free radicals, causing systemic inflammation and harming healthy cells in the process.

For this reason, oxidative stress affects every organ and system in the body. It damages cells, mutates DNA, and leaves you feeling constantly depleted. It contributes strongly to chronic illness, and has been linked by many studies to cancer, Alzheimer's disease, atherosclerosis, heart disease, asthma, and drastically accelerated aging.

Hormonal Dysfunction

Hormones, which are regulated by the endocrine system, are your body's chemical messengers—they keep a staggering array of complex somatic processes in balance, including growth and development, fertility and reproduction, metabolism, energy maintenance, nutrient absorption, immune function, sleep and other circadian rhythms, mood, and even overall behavioral patterns.

Hormones tend to be thought of in very narrow contexts, like testosterone deficiency in men and the estrogen fluctuations that women experience during menstruation and menopause. But the reality is that hormone imbalance underlies a vast majority of all serious health conditions.

This is because our society is a veritable endocrine-disrupting obstacle course. Stress, caffeine, and environmental toxins tax our adrenals to the edge of their capabilities, fluoride calcifies the pineal and pituitary glands, nutrient deficiencies (especially iodine) cause long-term thyroid issues, and prevalent poisons like *bisphenol-A* (BPA) damage and disrupt your entire endocrine system. Studies have demonstrated that chronic endocrine dysfunction can lead to cancer, birth defects, infertility, depression and other

mood disorders, blood abnormalities, frequent illness, chronic fatigue, and severe immune suppression.

Turmeric Covers All Bases

While disease is obviously a wildly complex phenomenon, its underlying causes really can (to a large degree) be traced back to the three factors discussed above. A simple understanding of inflammation, oxidative stress, and hormonal dysfunction will allow you to grasp the fundamentals of optimizing your health.

While most mainstream approaches to health and disease fail to address these issues (hence the serious shortcomings of modern medicine), turmeric tackles all three of them effortlessly. Throughout the rest of this book, you'll see how this threefold healing capacity allows turmeric to treat an astounding variety of ailments safely and effectively.

Chapter 4



Chapter 4: Nature's Perfect Antidote to Disease, Pain, and Fatigue

If there's any way in which you'd like to improve your health, chances are that turmeric's got you covered. Nearly all of us battle with some kind of health challenge; more often than not, we're tired, sick, or in pain (perhaps even all of the above). Caffeine keeps us propped up, antibiotics act as a seeming miracle solution for defeating pathogens, and painkillers numb us for a little while—but you probably already know that all of these modern “solutions” are temporary and grossly unsustainable. None of them address the underlying causes of our malaise, and they almost always just make things worse in the long run.

This is where turmeric comes in. This amazing little root offers a perfectly crafted solution that targets all three of these concerns at once—it reminds us that (surprise, surprise) they stem from the same underlying problems, and reminds us that Nature has quite a bit of practice with evolving perfect solutions.

Natural Pain Relief (With Extra Benefits)

Turmeric just happens to be one of the world's most perfect anti-inflammatories. Most anti-inflammatory substances take care of inflammation in one of the following ways: by neutralizing the free radicals that cause inflammation (most “anti-inflammatory” foods work through this kind of antioxidant activity), or by stopping the endogenous production of inflammatory chemicals (this is how ibuprofen, aspirin, and other *non-steroidal anti-inflammatory drugs* (NSAID's) work). Turmeric accomplishes both of these tasks at once, so its inflammation-fighting power is uniquely effective and long-lasting.

This two-pronged approach allows turmeric to give the immune system an antioxidant boost while curbing inflammation. The same can't be said for NSAID's, which can sometimes hamper immune function by inhibiting the release of inflammatory chemicals (inflammation is, after all, an immune response). These drugs can also cause ulcers, bleeding in the stomach and intestines, and other related gastrointestinal issues—particularly with long-term use. Turmeric carries almost no side effects whatsoever, and its health benefits only become more and more pronounced with long-term use. And because a 2014 study demonstrated that turmeric works just as well as (or better than) ibuprofen at relieving aches, pains, and other effects of inflammation, choosing it over NSAID's is a no-brainer.⁶

As mentioned in Chapter 2, curcumin accounts for most of turmeric's anti-inflammatory power, but tumerones and other undiscovered compounds play an important synergistic role. Scientists are coming to terms with the fact that isolated compounds rarely function as “intelligently” as full-spectrum plants—the former have a sort of tunnel vision and can usually only focus on one target at a time, while whole turmeric (or a full-spectrum extract) can continuously adapt to the exact needs of the entire body.

In effect, this means that turmeric handles both acute and systemic inflammation (see Chapter 3 for an explanation of the difference). And because systemic inflammation is strongly linked not only to pain, but also to disease and fatigue, turmeric takes care of all three in one fell swoop. Many people begin using turmeric to alleviate their aches, pains, and arthritis symptoms, only to find that it also raises their energy levels dramatically, improves their mood, and decreases their frequency of illness. A body that

⁶ <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3964021/>

is free of chronic inflammation feels better precisely because it is functioning better on every level.

Teach Your Body How to Resist Disease

As was discussed in Chapter 3, turmeric is a perfect tool for both preventing and combatting disease, because of its multi-talented nature as an anti-inflammatory, antioxidant, and endocrine balancer. These three properties allow it to provide your body with a nearly unbeatable defense against illness. Decreased inflammation takes stress off the immune system, so that it has more time to help neutralize damaging free radicals; decreased oxidative stress ensures that the immune system doesn't become overactive in an attempt to control free radicals; and proper hormone balance also gives the immune system one less thing to worry about, and maintains optimal communication between all aspects of this defense system.

It gets even better too. Not only does turmeric acutely boost the immune system and help to ward off disease—it also *trains* your body how to adapt to all stressful stimuli, so that it can continually improve its disease-resisting prowess. For example, turmeric doesn't just act as an *exogenous* antioxidant (that is, an external substance that exerts antioxidant activity within the body); it also jumpstarts the body's production of its own *endogenous* antioxidants, including *superoxide dismutase*, *glutathione*, *glutathione reductase*, and *glutathione-S-transferase*. These antioxidant enzymes have been shown to be orders of magnitude more adept at eliminating inflammation and fortifying your body's self-healing abilities than any food-based antioxidants.

For this reason and many more, turmeric is central to the Ayurvedic practice of *rasayana*, which is known as “the science of lengthening lifespan.” In Western medicine, turmeric is similarly considered an *adaptogen*, which could literally be translated as “adaptation-generating.” Studies have shown that the medicinal properties of adaptogens are “two-directional,” meaning that they effect the body in whichever way is contextually best. For example, if the immune system is suppressed, turmeric will boost it; if it is overactive (as is the case with allergies, rheumatoid arthritis, and other immune-related conditions), turmeric will suppress it. As mentioned earlier, research has shown that one of the ways in which turmeric performs so intelligently is by exerting an epigenetic effect—that is, by positively changing the way your genes express themselves. Curcumin has been shown to influence over 700 genes, many of which control inflammation response in the body.

The longer turmeric is integrated into your diet, the more it “teaches” your body how to achieve this genetic balancing act all the time—which leads to unparalleled disease resistance and longevity.

Sustainable Energy

Turmeric deals with fatigue and low energy in a similarly holistic way. Caffeine and other central nervous system stimulants provide a short-lived buzz at a high price: the high is inevitably followed by a nasty crash. In the process, your adrenals (an essential part of the endocrine system) can be severely taxed, especially from daily and long-term intake. Too much adrenal stimulation causes an excess buildup of stress hormones like cortisol in the body, which leaves you and your body inflamed, depleted from oxidative stress, and anxiety-ridden.

Once again, we find an intimate connection between endocrine dysfunction, oxidative stress, and inflammation. And once again, turmeric leaves stimulants and other providers of illusory energy in the dust. By speeding up metabolism, controlling inflammation, and intelligently optimizing every system in the body, it delivers a natural, long-lasting energy boost—with no crash and no side effects. It also won’t prevent you from sleeping well if taken at night (many people actually report that it improves sleep quality).

This clarity and boosted performance extends to the brain, as well, which also benefits immensely from decreased inflammation. Because “brain fog” can make us feel dramatically more fatigued, getting rid of it will bring an incredible clarity and energy into your everyday life. We’ll talk in more detail about turmeric’s unmatched brain-boosting properties in the next chapter.

Chapter 5



Chapter 5: The Brain's Best Friend

Neurological degeneration is a serious health problem. More than 5.3 million Americans are suffering from Alzheimer's disease and other forms of cognitive dysfunction, and this number is increasing at an alarming rate. Alzheimer's is the sixth leading cause of death in the United States, and it's estimated that, within twenty years, a shocking 25% of the U.S. population will be afflicted with it.⁷

Mainstream pundits like to counter that this growth can be explained by increasing life expectancy, but this argument quickly falls apart—even among those of the same age group, the incidence of Alzheimer's disease is increasing far more quickly than can be accounted for by population growth. These alarming statistics support the notion that cognitive decline can be precipitated and accelerated by a myriad of environmental toxins and unhealthy lifestyle choices—heavy metal contamination, pesticide-poisoned food, sedentary habits, and overconsumption of wheat, sugar, and processed foods.

Despite studies demonstrating the connection between brain dysfunction and these environmental factors, mainstream sources still maintain that Alzheimer's is a simple byproduct of growing old. They claim that it cannot be prevented, slowed, or cured.

⁷ <http://www.alz.org/facts/overview.asp>

Turmeric to the Rescue

⁸An effective Alzheimer's treatment is a coveted prize sought by pharmaceutical companies, but none have had any success so far. Those that have made it to market operate by a specific mechanism: the reduction of amyloid-beta proteins, which build up as plaque in the brain. This plaque formation is really just the end of a sequence of symptoms—starting with the formation of clumps called *oligomers*—that can be traced back to, that's right, inflammation. All Alzheimer's drugs have failed because they simply don't pay any attention to the foundational cause of the disease. When will drug companies learn?

Luckily, turmeric has quite a contribution to make in the field of neurological healing—and brain researchers are starting to take its brain-boosting abilities very seriously.

Here's how it works. All of turmeric's superpowers that we've mentioned before—its anti-inflammatory, antioxidant, and endocrine-balancing actions—benefit the brain just as much as the rest of the body. As was mentioned above, inflammation and oxidative stress is the root cause of neurodegeneration (even if the formation of oligomers and amyloid-beta plaques physically signal the onset of the decline). So, by reducing cerebral inflammation and flooding the brain with antioxidants, turmeric can reverse dysfunction *and* offer protection against future damage.⁹

Further, research has shown that ar-tumerone, one of the turmeric compounds that we introduced in Chapter 2, has the ability to regenerate *neural stem cells* (NSC's). Researchers from the Institute of Neuroscience and Medicine in Julich, Germany reported in 2014 that, in both *in vitro* and animal trials, ar-tumerone increased the proliferation of NSC's by an astounding 50-80%.¹⁰

This finding has profound implications for the future treatment of neurological disorders. Specifically, the presence of NSC's has been shown to increase the rate and strength of a process called *myelination*, which locks in the connection between neurons. These connections are essential for learning, memory, and motor function, the loss of

⁸ <http://dailyheal.com/meditation-news/healing-your-body-and-resaping-your-brain-with-meditation/>

⁹ <http://www.ijppr.com/PDF%20all%20editions%20IJPPR/Vol6/Issue1/IJPPR,Vol6,Issue1,Article23.pdf>

¹⁰ <http://www.stemcellres.com/content/5/4/100>

which during various brain disorders is accompanied by a breakdown of myelin sheaths.

The Future of Alzheimer's Treatment

We still have a long way to go before turmeric is successfully assimilated into medical society as an accepted Alzheimer's treatment—but the results so far are incredibly promising. Researchers have already begun to study turmeric's effects as a functional treatment for neurodegenerative disorders (as opposed to simply looking at NSC regeneration in animals and Petri dishes).

One well-received study reported that Alzheimer's and dementia patients who took 764 milligrams of turmeric per day for twelve weeks "improved remarkably." These subjects improved their cognitive functioning test scores, *and* were given relief from a wide variety of dementia-associated symptoms, including irritability, anxiety, agitation, apathy, urinary incontinence, and what the researchers called "wonderings."¹¹ After a year of treatment, many patients enjoyed nearly total freedom from these secondary symptoms, their memory and overall brain function had improved significantly, and they even were able to recognize their loved ones. The patients' families also reported that their caretaking burden had been greatly decreased.

These results are absolutely remarkable—they far surpass any success that conventional Alzheimer's drugs have achieved, and offer hope to turmeric enthusiasts and Alzheimer's researchers alike. Integrative specialists look forward to even greater successes, which they believe will be found by combining daily turmeric intake with a custom-designed brain-healing diet and lifestyle.

Brain Healing for Everyone

Remember: the promising findings discussed above all concern the *treatment* of Alzheimer's and dementia—many cases of which had already progressed to levels of marked severity. Major diseases—especially those that are degenerative in nature—are notoriously harder to treat than they are to prevent. Let's ignore, for a moment, the Alzheimer's Association's claim that the disease cannot be prevented, which is almost laughable in light of current research. If turmeric can successfully reverse this supposedly irreversible disease, just imagine then how effectively it can *prevent* it!

¹¹ <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3665200/>

Here's the moral of the story: don't wait until you're experiencing symptoms of cognitive decline to start using turmeric. As you'll remember from the earlier chapters of this book, turmeric is a powerful, whole-system supporter that can do a world of good for anyone, regardless of his or her age and health background. By integrating turmeric into your diet and supplement regimen *now*—even if you're not suffering from Alzheimer's or dementia—you can ensure that your brain (along with the rest of your body) stays in optimal shape.

While there are no studies that document that long-term turmeric consumption can prevent brain disease (it just hasn't been in vogue for long enough), there's still strong evidence to support this claim. We know that brain inflammation, the resulting oxidative stress, and plaque buildup lead to brain disease—and consistent use of turmeric has been shown to offer profound neuroprotection against all of these risk factors.^{12 13}

So, you heard it first: turmeric could very well be our greatest defense (and offense) against cognitive decline. Don't wait for pharmaceutical companies to formulate some fancy, synthetic version of curcumin—the natural, whole plant offers all the benefits you'll need. See Chapter 13 for tips on how you can maximize turmeric's healing benefits.

For now, let's continue on with our exploration of turmeric's many benefits; in the next chapter, you'll learn that Alzheimer's drugs aren't the only kind of pharmaceuticals that turmeric outperforms.

¹² <http://www.jimmunol.org/content/171/11/6072.short>

¹³ <http://www.sciencedirect.com/science/article/pii/S1567576912001725>

Chapter 6



Chapter 6: Turmeric vs. Prozac: A Natural Solution to Depression

Even in ancient times, turmeric was celebrated as a powerful mood stabilizer and treatment for depression. As I mentioned in this book's introduction, it was given many emotionally descriptive titles by Ayurvedic practitioners, including "that which delights the heart" and adjectives like "beautiful," "auspicious," and "greatly capable." While it's been ignored by laboratory-loving medical scientists for some time, it's still one of the natural world's greatest solutions to depression, anxiety, and other mood disorders.

This is welcome news for a world plagued by these debilitating conditions. An estimated 13% of all Americans take antidepressants every day—and this figure jumps to 25% among women between ages 50 to 64. Worst of all, these drugs just don't seem to be working. Diagnosis rates for depression and other mood disorders are still steadily rising, and the success rates for leading drugs like Prozac are dismal at best.

To make matters even worse, the use of Prozac and other antidepressants comes with a long list of nearly inevitable side effects, including weight gain, diabetes, nausea, fatigue, apathy, anxiety, insomnia, vision problems, and sexual dysfunction.

Furthermore, the number of people that relapse into depression after taking antidepressants is so high that depression is now considered an official side effect of taking them! One study clearly demonstrated this phenomenon, which even has a medical name: *tardive dysphoria* or *tardive dysphrenia*. Researchers have found that the use of pharmaceutical antidepressants can actually cause the brain to "overcompensate"

for what it considers to be foreign chemical agents—over time, this leads to chronic depression, because the brain literally forgets how to keep its chemistry in balance.

So why is pharmaceutical treatment of depression yielding such terrible results? Same old story again: antidepressants target incidental markers and symptoms instead of underlying causes. Many researchers are beginning to question even our basic understanding of brain chemistry used by drug formulators.

Back to Nature

¹⁴As drug companies rack up failure after failure, the health community is turning its attention to turmeric, which is a wonderfully effective treatment for depression and related conditions. Researchers from the Government Medical College in India pitted turmeric against Prozac in a controlled setting, in order to examine the plant's ability to manage depression.

They discovered something very exciting: turmeric is as effective (or more so) than Prozac at alleviating the symptoms of depression. Within six weeks, 80% of the participants taking turmeric reported a significant or complete elimination of symptoms, and not one of them complained of side effects.¹⁵ Participants who were given Prozac weren't so lucky: even those whose symptoms were relieved still suffered from all the usual side effects. No follow-up study was conducted to determine the relapse rate of participants given Prozac, but historical precedent suggests that their reprieve may have been a temporary one. Turmeric, on the other hand, offers long-lasting relief, and certainly doesn't lead to tardive dysphoria or other drug-associated problems.

How Does Turmeric Do It?

In the study cited above, patients were administered pure curcumin—turmeric's famous anti-inflammatory compound—so the assumption is that this is what accounts for the plant's action as a natural antidepressant. Anecdotal evidence suggests that full-spectrum turmeric extracts and raw turmeric root could be even more effective, though

¹⁴ <http://www.viralalternativenews.com/2015/08/turmeric-more-effective-than-prozac-at.html>

¹⁵ <http://www.ncbi.nlm.nih.gov/pubmed/23832433>

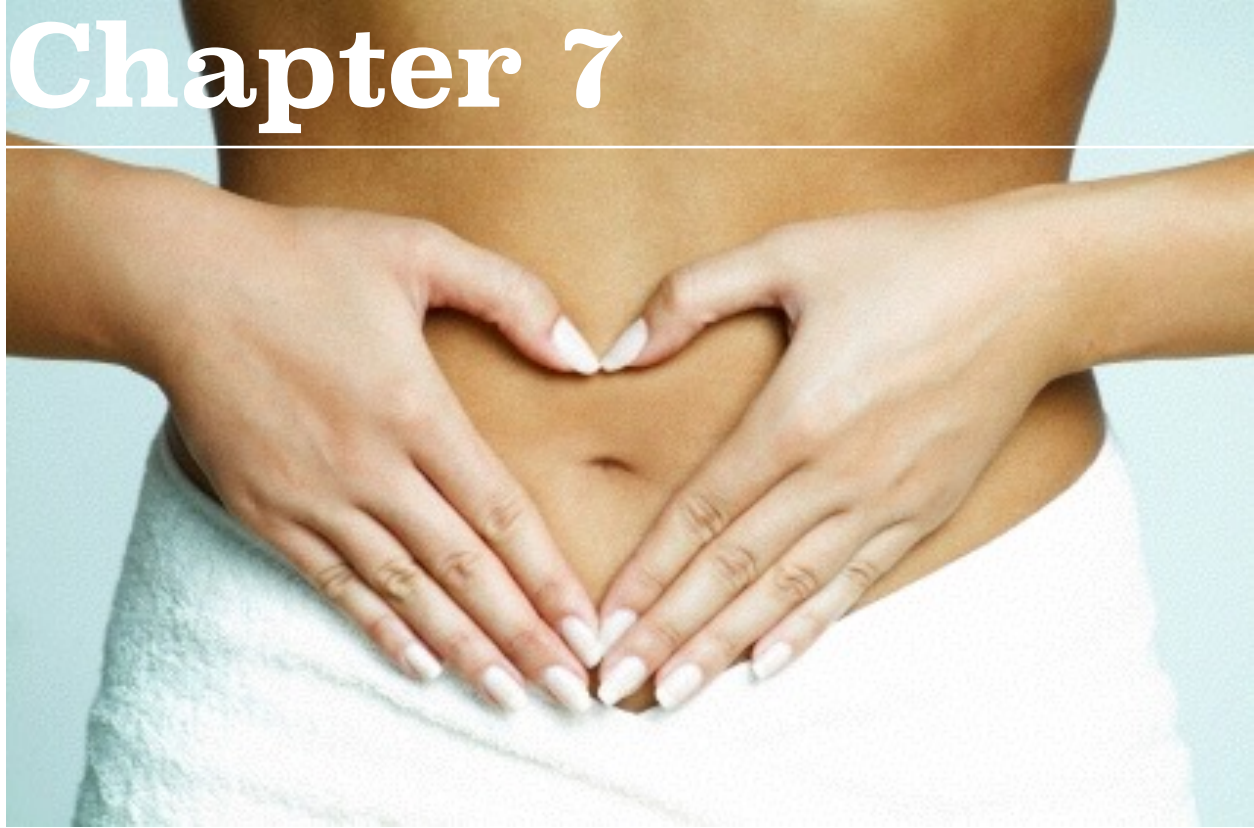
(remember that ar-tumerone has the ability to regenerate brain cells, and that's just one of hundreds of other compounds that make up turmeric).

It's not altogether surprising that turmeric is such a potent depression treatment, given the increasing number of studies linking depression to inflammation (like I've said many times already, inflammation is one of the root causes of nearly *all* major diseases). Researchers have noticed that depressive states mirror those of acute illness and infection, which are characterized by increased levels of *pro-inflammatory cytokines* in the blood. Cytokines are the messenger molecules of your immune system—they play an essential role in keeping the body balanced, but when inflammation gets out of control (for all the reasons we discussed in Chapter 3), excess pro-inflammatory cytokines can cause all sorts of trouble. From this perspective, depression can almost be viewed as a kind of autoimmune dysfunction—which would explain why many patients can't point to any experiential reason for being depressed.

In this way, drug companies are correct that physiological chemistry imbalance contributes greatly to the development of depression—but not quite in the way they suspect. It turns out that it may not be brain chemistry that needs to be tinkered with in order to restore balance, but rather the body's fundamental immune function (which controls inflammation levels). Thus, by combatting inflammation and scavenging the free radicals created by oxidative stress, turmeric gets right to the heart of the issue.

Doesn't taking health into your own hands feel so much simpler when you understand the foundational imbalances shared by diseases and conditions (especially when a single plant offers solutions to all of them)? In the next chapter, we'll take a look at the connection between brain dysfunction, inflammation, and stomach issues—and how turmeric can be a lifesaver for those suffering from gastrointestinal problems.

Chapter 7



Chapter 7: A Balm for Stomach Issues

Digestive and stomach conditions are some of the most confounding of all for Western doctors. Diseases like irritable bowel syndrome, Crohn's disease, and ulcerative colitis are notoriously difficult to treat—people suffering from them are usually in for a long haul. This is because the digestive system is fantastically complex, and because of its central role in providing the body with nutrients, its function is closely interwoven with many other systems in the body.

¹⁶The digestive tract is also home to a large portion of your *microbiome*, the vast community of bacterial microorganisms that inhabit your body. These beneficial bacteria are crucially important role in a huge number of bodily processes—we've only just begun to uncover how much they do for us. All we know for sure is that our "bacteria are enemies" viewpoint is due for a complete overhaul, because we quite simply can't live without these ingenious little organisms. After inflammation, oxidative stress, and endocrine dysfunction, microbiome imbalance is perhaps the greatest marker of ill health and disease.

¹⁶ Image source: <http://www.youngerhealthierwealthier.com/fermented-vegetables-and-our-microbiome/>

Because we still have much to learn about this aspect of our biology, treatments for digestive issues are often a shot in the dark. What we do know is that, as usual, stomach issues are linked with systemic inflammation.

Another Win for Turmeric

Turmeric's unparalleled anti-inflammatory activity makes it an ideal choice for stomach issues. Golden Milk, an ancient elixir recipe that combines turmeric root and coconut milk into one seriously healing brew, has been used for ages as a stomach tonic. Some recipes also include ginger, cinnamon, and honey (all healing foods in their own right), as well as black pepper, which increases the bioavailability of turmeric (see Chapter 13 for the full scoop on how this works).

As we learned in previous chapters, turmeric often outshines conventional drugs, but its advantage is especially pronounced in the case of treating stomach ailments. Mainstream doctors often use corticosteroids to treat stomach inflammation and the diseases it causes, but this treatment method is fraught with dangers and limitations. Many patients quickly become intolerant to corticosteroids and other medical interventions, because their gut flora has already been decimated by their condition. Without these beneficial bacteria to keep things in check, drugs can tear up the mucosal lining of the stomach, causing intense and painful side effects and worsening the ailment. Even people who respond well to corticosteroids find that the treatment offers only temporary relief, and that its efficacy decreases with continued use.

Turmeric, on the other hand, knocks out inflammation *and* heals the digestive tract in the process. It protects and regenerates the sensitive lining of the stomach, and even supports the growth of new beneficial bacteria (by combatting harmful bacteria, and by creating a favorable, oxidation-free environment in which good flora can flourish). It's been shown to be so effective that many patients suffering from IBS, Crohn's disease, and other stomach issues have been able to stop taking corticosteroids altogether after starting a daily curcumin regimen.

This is excellent news not just for your stomach, but also for your whole body and brain. Researchers are slowly uncovering the secrets of what they call "the gut-brain connection"—it turns out that unhappy gut flora (and the resulting stomach issues) can lead decreased brain function, mood disorders, and a whole host of other diseases that are seemingly unrelated to the stomach.

Your “Second Brain”

This fact isn't as surprising once you learn how crucial the gastrointestinal tract is to the integrity of your entire body. It actually controls a “second nervous system,” namely the *enteric nervous system*, which communicates with the central nervous system (controlled by the brain) via the vagus nerve. Just like the brain, your stomach sends its own electrical and chemical signals, and even houses its own neurotransmitters (which you might call “gastrotransmitters”). In fact, you actually have a greater concentration of serotonin (the chemical that modulates mood) in your intestines than in your brain. And perhaps even more amazingly, the stomach sends more signals to the brain than the brain sends to the stomach—almost as if your stomach is *really* the one running the show!

So, by healing the stomach and helping to repopulate it with beneficial bacteria, turmeric balances one of the most centrally important systems of your body. It thereby not only alleviates stomach issues and other related conditions—like acid reflux, indigestion, heartburn, constipation, Candida, IBS, yeast infections, gallstones, Crohn's, ulcerative colitis, and more—but also improves brain function, insulin sensitivity, metabolism, and immune function.

Chapter 8



Chapter 8: Lose Weight (And Keep It Off) With Turmeric

One of the most loathed of consequences that stem from imbalanced health is *weight gain*. As with the other conditions that we've looked at so far, weight gain and obesity can be traced back to systemic inflammation and oxidative stress. These conditions are often the result of the more unfortunate aspects of modern living, including poor nutrition (too many processed foods, sugar, polyunsaturated fats, and other health-sapping staples of the American diet), ever-present environmental toxins, and sedentary lifestyle practices.

In our glamor-laden culture, the desire to maintain an optimal weight approaches the intensity of a biological imperative. Nevertheless, more than one third of all U.S. adults are obese, and a whopping 69% of Americans are either overweight or obese.¹⁷

And weight problems carry more than just self-image issues—those who are obese (or even just overweight) are at higher risk for type 2 diabetes, heart disease, stroke, gallbladder disease, cancer, depression, anxiety, and other mental disorders, sleep apnea and breathing problems, osteoarthritis and bodily pain, high blood pressure, bad cholesterol, and *all causes of death*. Obesity has been correlated with an overall lower

¹⁷ <http://jama.jamanetwork.com/article.aspx?articleid=1832542>

quality of life, as those laboring under it often struggle with the high medical costs and physiological suffering that accompany prevalent health problems.

While proper diet and exercise are the keys to shedding pounds and keeping a healthy weight, there are some foods and natural substances that make the task a bit easier—and turmeric happens to be one of them.

Break the Cycle with Turmeric

If you've ever struggled with weight management, you've probably noticed that it's quite a bit more difficult to lose weight than it is to maintain a healthy weight (provided that you live a healthy lifestyle). This is primarily because, when you're overweight or obese, the body gets stuck in a vicious cycle of inflammation, hindered metabolism, and hormonal imbalance. Even if you're taking all the right steps, it can take a little while to get your body out of its rut—exercise doesn't burn as many calories as it would if your metabolism were functioning optimally, cravings thwart attempts at healthy eating, and cholesterol or glucose problems can complicate the process of designing your ideal weight loss plan.

Turmeric breaks this cycle by balancing all of these aspects of the body—and studies prove it. In one study, participants who consumed turmeric twice daily for six months (without making any other lifestyle changes) experienced a reasonable reduction in body weight, body mass index (BMI), and waist circumference. Their cholesterol and glucose levels also improved beyond what could be attributed to simple weight loss, meaning that turmeric can also directly improve the secondary ailments associated with obesity.¹⁸

¹⁹By lowering inflammation and oxidative stress, improving metabolism, and correcting issues with cholesterol and glucose, turmeric effectively allows your body to function at its full fat-burning potential. Keep in mind that the study mentioned above included no supplemental diet or exercise plan—if turmeric is that effective on its own, imagine how quickly the pounds can melt away when you *combine* daily turmeric intake with proper weight loss strategies!

¹⁸ <http://www.ncbi.nlm.nih.gov/pubmed/24445038>

¹⁹ Image source: <https://www.homesogood.com/10-health-benefits-of-turmeric/>

Your Personal “Trainer”

As we discussed in Chapter 4, turmeric functions as a powerful adaptogen—it literally trains your body how to function at its highest potential. At least thirteen peer-reviewed studies suggest that this conditioning extends to weight management, as well.

While further research is necessary to clarify exactly how turmeric is able to transform your body into a lean, mean, fat-burning machine, what researchers have found so far is fascinating. Turmeric’s weight loss mechanism focuses on a type of adipose tissue called *brown fat*, which expends excess energy through heat (this type of fat doesn’t lead to obesity). *White fat*, on the other hand, is intended for insulation and energy storage (this is the type of fat that you want to get rid of if you’re overweight or obese). Under the right circumstances—usually strenuous exercise or exposure to cold—brown fat initiates a process called *thermogenesis* (heat generation), which helps burn white fat.

So, remember turmeric’s epigenetic effect on the body that was mentioned in Chapter 4? It turns out that, through a process called *methylation*, turmeric is able to “switch on” one of the genes associated with thermogenesis.²⁰ Simply by consuming turmeric, you’re kickstarting your brown fat’s ability to burn white fat at an increased rate (and, in some cases, even increasing the amount of brown fat in your body). When combined with exercise (and cold showers, if you’re up to the challenge), this effect is dramatically accelerated.

Thus, turmeric greatly facilitates weight loss from *every* angle: it aids your body’s natural fat-burning ability by reducing inflammation, combatting oxidative stress, and removing hindrances created by cholesterol and glucose issues, and it accelerates the process even further by triggering more efficient fat-burning on a *genetic* level. It even helps you stick to healthy eating habits by encouraging healthy levels of leptin, the chemical that tells you that you’re full and staves off cravings. So whether you’re struggling with obesity or just trying to lose a few pounds, turmeric is a wonderful ally.

²⁰ <http://www.life-enhancement.com/magazine/article/3107-increasing-thermogenesis-of-brown-fat-with-a-supplement>

Chapter 9



Chapter 9: Diabetes Doesn't Stand a Chance

The incidence of diabetes has reached epidemic levels. The CDC lists it as the seventh leading cause of death in the United States, effecting nearly 10% of the total population (and over 25% of all Americans seniors). Diagnoses are increasing at a staggering rate, and an even more frightening percentage of the population is living with undiagnosed diabetes or prediabetes—up to 40% of all people between the ages of 40 and 74, according to some estimates.

These unsettling numbers can be attributed, in large part, to the American diet, which makes avoiding diabetes a much more difficult task. Sugar, simple carbohydrates, and processed foods all send blood sugar through the roof and mess with insulin and other hormone levels (like ghrelin and leptin, which tell your body when it's hungry and full). At this point in the book, you shouldn't be surprised to hear that, once again, systemic inflammation and oxidative stress are prevalent markers of diabetes and its related conditions. These conditions and ailments to which diabetics are far more prone—including hypertension, cholesterol problems, heart disease, fatty liver disease, kidney disease, sleep apnea, fractures and other physical injuries, neuropathy, hearing loss, blindness, dementia, testosterone deficiency, and periodontal disease—are called *co-morbidities*, perhaps as a chilling reminder of how dangerous living with diabetes can

be. Diabetes often goes hand in hand with obesity, as well, which makes the risk of these simultaneous conditions even higher.

And the unfortunate truth is that you can easily be at risk for developing type 2 diabetes, despite eating a reasonably healthy diet. Many cases occur in otherwise healthy individuals who have slowly worn down their pancreas's sensitivity by years of slight overconsumption of insulin-spiking foods and beverages. If you suffer from fatigue, erratic energy levels, high blood pressure, or accumulated belly fat, you should be on the lookout for the development of prediabetes.

Sadly, mainstream medicine has a rather unsatisfying answer for this grave health issue. As usual, it can offer only symptom management strategies, which only bring temporary, incomplete relief and come with a host of dangerous side effects. Diabetes medications often *create* as many complications as they address, and they do nothing to improve insulin sensitivity and deal with inflammation in the body.

Truly healing diabetes requires more than simply taking a pill—it requires your active participation in the creation of a diabetes-healing lifestyle, as well as knowledge about the plants and natural substances that Nature has given us to make the process quite a bit easier.

How to Protect Yourself (Hint: Turmeric Plays An Important Role)

Don't believe what you've heard from mainstream medicine—type 2 diabetes is fully preventable *and* reversible. The notion that diabetes is incurable stems from the misguided thought process on which conventional treatment methods rest; the fact of the matter is that no disease can be cured through symptom management. As with the other diseases we've discussed so far, the key to sustainable diabetes treatment lies in targeting its root causes—and there's no better way to do so than through healing foods. A diet low in sugars and carbs and rich in healthy fats and anti-inflammatory foods works wonders—some patients have even reported a complete reversal of their diabetes symptoms within thirty days of adopting such a diet. And this healing process can be dramatically amplified and accelerated by turmeric.

²¹As was mentioned in the previous chapter, turmeric is excellent at improving insulin sensitivity, so it's no surprise that it's a great boon to those suffering from diabetes.

²¹ <http://naturalsociety.com/turmeric-and-diabetes-curcumin-protect/>

Ayurvedic practitioners used turmeric even in ancient times to treat blood sugar issues, but mainstream medicine wasn't sure quite *how* diabetes-healing it really is until recently. An important study revealed what is perhaps one of turmeric's most incredible healing feats: it is 100% effective at preventing type 2 diabetes. You read that number right: 250 mg of turmeric extract taken daily for nine months prevented *every single one* of the prediabetic study participants from becoming diabetic.

Furthermore, this same regimen also improved the function of β -cells (which produce insulin in the pancreas) and (surprise, surprise) significantly decreased markers of inflammation throughout the body. Turmeric's dynamic anti-inflammatory activity allows it to heal and balance many of the complications and comorbidities mentioned above, including liver dysfunction, cardiovascular disease, cognitive decline, cataracts, kidney dysfunction, obesity, and neuropathy. And further research has demonstrated that these healing actions allow turmeric to benefit diabetics just as readily as prediabetics.

Keep in mind that participants in this study did not change anything about their diet and lifestyle—this incredible diabetes prevention and reversal can be attributed entirely to the patients' daily consumption of turmeric. *Combined* with the proper diet and exercise, turmeric is the ultimate tool for combatting diabetes. It's not only vastly more effective than drugs and invasive procedures, but also safer and much more affordable. The "diabetes industry" rakes in more than \$175 *billion* every year by managing the symptoms of type 2 diabetes, so of course they'd rather keep consumers in the dark about turmeric's time-tested virtues (if they cure you, they lose you as a *customer*). The numbers don't lie, though—it's getting harder and harder for mainstream doctors to deny that turmeric offers great hope for diabetics, even if it puts a damper on the drug revenues.

In the next chapter, we'll explore another hugely prevalent disease, the industry around which turmeric is beginning to revolutionize: cancer.

Chapter 10



Chapter 10: A “Universal” Cancer Treatment

Cancer is one of the leading causes of death in the United States, second only to heart disease (we’ll look at turmeric’s profound heart-supporting benefits in the next chapter). Nearly 600,000 Americans will die from some form of cancer *this year alone*, and almost 40% of all men and women in the U.S. will be diagnosed with cancer at some point during their lifetime.²²

The crusade against cancer is another sad story of misguided practice and greedy intentions. Diagnosis rates continue to increase precipitously, and our conventional treatment methods just aren’t working as well as we need them to. While there are obviously some mainstream doctors and organizations who genuinely have our best interests in mind, the overall landscape of modern cancer treatment is characterized by a close-minded clinging to immensely profitable treatment strategies that are insufficiently effective at best and barbaric at worst. As though battling cancer isn’t enough of a personal trial on its own, patients are forced to endure exorbitant costs, bureaucratic hassles, and a mindfield of health risks and complications.

Pharmaceutical companies and industrial medical supply manufacturers have maintained a stranglehold on cancer treatment for some time—and they preserve this *status quo* by buying doctors’ loyalty, funding only research that supports their interests, and lobbying to keep governmental policies in place that restrict alternative cancer research and treatment. In over thirty states, it’s actually *illegal* for doctors to treat

²² <http://www.cancer.gov/about-cancer/what-is-cancer/statistics>

cancer using any product, substance, or practice that hasn't been expressly approved for such use by the FDA. Medicare and Medicaid label an increasing number of natural health treatments as "fraudulent," so by requesting insurance payments for their practices, natural health practitioners run the risk of being denied compensation or even ending up in prison!

This oppressive atmosphere stifles innovation around safer, more natural cancer treatments. Even more sadly, it draws attention away from the incredible anti-cancer compounds that Nature has laid right in front of us—like turmeric.

²³Too Effective to Ignore

Despite the vehemence with which natural cancer treatments are still discouraged by mainstream medicine, turmeric is starting to turn quite a few heads. Some of the most well-trained and highly regarded cancer specialists in the world are acknowledging that turmeric is one of the most remarkable anti-cancer substances ever discovered. Here's a few of the reasons why it's such an invaluable tool in the fight against cancer.

It addresses the root causes of cancer. Rather than only attacking cancer cells directly (which it also does with great facility), turmeric improves the health of your entire internal environment by its potent anti-inflammatory, antioxidant, and endocrine-balancing mechanisms. This equilibrium makes the body an inhospitable place for cancer, and also strengthens the body's own cancer-fighting ability (turmeric's ability to optimize the internal production of antioxidant enzymes, which we discussed in Chapter 4, plays a central role in this defense process).

It takes a multi-pronged approach. Turmeric hits cancer from nearly every possible angle. It directly kills cancer cells, causes a form of cancer cell suicide called *apoptosis* or *programmed cell death*, inhibits the further growth of cancer colonies, and strategically prevents the transport of blood to growing tumors (almost as if it can discern between healthy, blood-deserving cells and cancerous cells). As we also discussed in Chapter 4, it even manages cancer epigenetically by modulating the genes that control inflammatory pathways, tumor growth, and even a person's sensitivity to conventional cancer

²³ Image source: <http://www.epibeat.com/aging-environment-disease/digging-for-answers-the-potential-of-curcumin-as-an-epigenetic-therapeutic-drug-to-treat-cancer/661/>

treatment methods. No other substance or treatment method targets cancer on this many levels at once.

It's a "universal" cancer treatment. Doctors and researchers have been thrilled to find that turmeric's anti-cancer properties seem to hold true for *any* type of cancer. This finding provides further proof of turmeric's "adaptogenic" qualities. Different types of cancer have such drastically different molecular pathologies; so, in order for turmeric to be effective against *all* of them, it needs to have a hugely diverse mechanism of action *and* be able to "adapt" its mechanism according to what is needed in every context. Renowned cancer research Dr. William DaValley has found that this is exactly what's going on—turmeric exerts activity across a wide spectrum of "molecular targets," and is able to "increase or decrease traffic" to these targets to whatever degree is necessary to optimize the body's battle against cancer (recall the "two-directional" action that was mentioned in Chapter 4).²⁴

It's side effect-free. The horrid side effects of chemotherapy and radiation treatment are well-known. Even the World Health Organization classifies chemo drugs as "human carcinogens," and their use is viewed with growing reticence. These treatment methods use an unsophisticated "shotgun" approach: in the process of killing cancer cells, they also destroy countless healthy cells and severely suppress the immune system, which leaves the body vulnerable to cancer recurrence. Chemo and radiation are also notoriously ineffective at targeting cancer stem cells (CSC's), which can easily regenerate and differentiate into new, better-adapted cancer cells as soon as the old ones are killed off—which is why recurrence after conventional treatment is much more common than doctors would like to admit. Turmeric, on the other hand, destroys both cancer cells and cancer stem cells, strengthens the entire body in the process, and carries almost no side effects. A small percentage of people exhibit an allergy to turmeric, and an equally small percentage experience mild side effects, but they pale in comparison to those that usually accompany cancer treatment.

Taking Health into Your Own Hands

It could be some time before turmeric and other anti-cancer functional foods are accepted as substitutes for conventional cancer treatments but don't let that stop you

²⁴ <http://articles.mercola.com/sites/articles/archive/2014/03/02/curcumin-benefits.aspx>

from making use of them. While some discretion (and support from a properly open-minded physician) is a necessity, using turmeric to treat cancer is easy, affordable, and effective.

Turmeric also improves the effectiveness of chemotherapy and radiation therapy, and lessens their side effects, according to many studies. And, for the reasons that we've been referring to over and over again throughout this book, turmeric is powerfully cancer-preventative too (a body free of inflammation and full of potent antioxidants is not a place where cancer tends to crop up in the first place). This marvelous little root offers something for everyone!

Chapter 11



Chapter 11: A Heart-Healthy Powerhouse

Heart disease is the leading cause of death worldwide. According to CDC and WHO estimates, one out of every two people you know will die of heart disease or stroke—and incidence is still on the rise.

After decades of tireless research, it seems that we’ve barely gotten any closer to unraveling the secrets to optimal heart health. Despite huge expenditures of time and money, the mainstream approach to preventing and treating heart problems is still misguided in many ways. For example, we’re still recovering from the incorrect belief that saturated fats cause heart disease. In reality, it’s pro-inflammatory polyunsaturated fats and carbs—the very things that were being recommended as “heart healthy” for decades—that undermine heart health and lead to a number of other serious conditions. We now know that healthy fats like coconut oil, avocados, and grass-fed butter are profoundly heart healthy, especially when consumed as part of a low-carb, low-sugar diet.

Many medical experts also believe that our ideas about the relationship between cholesterol and heart disease are backwards. They warn that artificially messing with

blood cholesterol levels (rather than naturally balancing LDL/HDL levels with heart-healthy foods and substances) is asking for trouble, and that doing so can lead to numerous complications. This is certainly the case for a good percentage of the forty million people who take prescription statins to lower LDL cholesterol. Many of these patients associate a wide range of health problems with statins—including chronic fatigue, extreme memory loss, depression, eye problems, and muscle pain—and report that these symptoms vanish when they go off of their prescriptions. Some researchers believe that these side effects occur because statins interrupt cholesterol's ability to transport CoQ-10, beta-carotene, and vitamin E to the mitochondria of your cells—these nutrients (plus cholesterol itself) are essential for hormonal balance and optimal functioning across the entire body and brain.

Unfortunately, these ill-suited medical approaches to heart disease often can't be chalked up to innocent ignorance. Any disease that has a high rate of incidence has a hugely profitable “treatment” industry built up around it, as we saw with diabetes and cancer. Industries leverage these opportunities by skewing medical thinking toward the solution that they're able to offer. This is especially true with heart disease: aggressive lobbying by the corn and sugar industries kept all the blame on saturated fats for years (so that people would continue to buy lots of vegetable oil and sugary carbohydrates), and drug companies legitimize statins by funding trials and studies with hugely skewed numbers.

It's hard enough to stay healthy in today's polluted world without having to sort through blatant disinformation!

Turmeric and the Truth about Heart Disease

Research reveals that optimal heart health comes from eating a low-sugar, naturally cholesterol-balancing diet, exercising regularly, and maintaining a low level of systemic inflammation in the body. Because the heart can also be damaged by free radicals and infections, low oxidative stress, low psychological stress, and high immune functioning are also of paramount importance.

Turmeric takes care of *all* these bodily needs. Its anti-inflammatory and antioxidant powers maintain an optimal internal environment, supercharge the immune system, and protect the heart by discouraging buildup of arterial plaque and scar tissue. And, as was mentioned in Chapter 9, turmeric directly balances cholesterol levels in an

intelligent, “two-directional” manner (as opposed to statins, which operate by only a single mechanism, and cause considerable chaos in the process).

Turmeric Is As Heart-Healthy As Moderate Exercise

Three recent studies compared the effects of consuming curcumin to vigorous exercise, the gold standard of cardioprotection. The conclusion that was reached is quite astounding: the simple act of taking curcumin on a daily basis can improve heart health just as effectively as aerobic exercise.

Researchers from the University of Tsukuba in Japan used randomized, double-blind, placebo-controlled trials to measure turmeric’s effect upon three different markers of good heart health: *vascular endothelial function* (that is, the sensitivity of blood vessel lining), *arterial compliance* (that is, the responsiveness of arteries to changes in blood pressure), and age-related degeneration of the heart’s left ventricle.

Here’s what they found: curcumin (on its own) improves both vascular endothelial function and arterial compliance just as well as exercise (the numbers used to measure the quantitative improvements were *identical*). Quantifying overall heart health and left ventricle degeneration over time is quite a bit less straightforward, so things got more complicated with the third trial. Exercise still proved to be the best way to improve *systolic blood pressure* (SBP), but two other important markers—*aortic augmentation index* (AIx) and *aortic SBP*—both improved significantly only in participants who exercised *and* consumed curcumin.²⁵

The moral of the story is that turmeric is a powerful preventative measure against (and treatment for) cardiovascular disease, especially when combined with moderate exercise. While nothing should ever fully take the place of frequent exercise and activity, turmeric can help you keep your heart healthy even when exercise isn’t possible.

²⁵ http://www.naturalnews.com/040330_turmeric_heart_health_curcumin.html

Chapter 12



Chapter 12: The World's Most Multi-Talented Spice (Even More Benefits and Uses)

We've covered a lot of ground, and it should be clear by now that turmeric is one seriously healing spice. Here's the most amazing thing, though: while we've taken a deep dive into many of turmeric's most impressive and medically applicable abilities, we still haven't even scratched the surface of its total potential!

Studies have conclusively demonstrated that turmeric can act as an effective treatment for *over 600 different conditions*—and researchers are just getting started. The rule of thumb is that, if a condition is linked to inflammation or cellular imbalance (which nearly all of them are), chances are that turmeric can help you fix it. Here's a partial list of turmeric's other talents, just to get your imagination going.

Beautiful, radiant skin. Turmeric has been used as a natural cosmetic for centuries. It's still used today in India as a face paint that beautifies its wearer while simultaneously toning and bronzing the skin. Try using turmeric powder for all your beauty and hygiene needs: as a makeup foundation, face wash, exfoliator (mix it with honey), skin toner, skin bronzer, homemade soap ingredient, a scalp conditioner, and for reducing facial wrinkles and dark circles under the eyes. It also works great as an acne, psoriasis, and blemish treatment, or as a moisturizer (mixed with coconut oil).

Less stress and better sleep. Turmeric calms the body's release of stress hormones and modulates overall hormonal function, so it makes a great sleep and stress relief tea (it

doesn't depress or stimulate the central nervous system, so it's fine to drink morning or night, depending on your needs).

Eye support. By improving blood pressure in the eyes and relieving them of oxidative stress, turmeric has been shown to prevent and improve various conditions, including cataracts and *retinitis pigmentosa*. Some evidence even suggests that consuming turmeric on a regular basis improves and sharpens eyesight.

Healthy teeth. Turmeric powder even makes a great natural toothpaste ingredient. It's been shown to improve gum health greatly, and despite its bright yellow-orange hue, it actually can whiten teeth too.

Improved liver function. By taking some of the load off the body's natural detoxification system and increasing endogenous production of glutathione and other natural antioxidants, turmeric helps keep the liver functioning cleanly and efficiently. It is thus an excellent preventative measure against jaundice and other conditions linked with liver dysfunction. For this reason, it's an absolute must-have during any detox regimen or cleanse (it even protects against heavy metal toxicity).

Versatile cooking. Turmeric's rich, spicy taste makes it a heavenly addition to a wide variety of dishes, ranging from soups, stews, and vegetable dishes to smoothies, juices, salad dressings, and baked goods.

Be sure to check our companion guide to this book, *Turmeric Recipes for Radiant Health*, for lots of great recipes!

Endless Possibilities...With One Catch

Everything has its Achilles' heel, right? Before you make turmeric your new best friend, remember that it has one weakness: *poor bioavailability* (that is, the difficulty with which its active constituents are absorbed by the body). Curcumin, the miracle molecule that is the most widely studied of all the healing *curcuminoids*, is greatly hindered by this disadvantage. Functionally speaking, this means that a lot of the good stuff is excreted unmetabolized before it has time to go to work in the body.

Not to worry, though. The next chapter reveals exactly how to increase turmeric's absorption by over 2600%, so that you easily experience *all* the benefits it has to offer.

Chapter 13



Chapter 13: How to Get the Most Out of Turmeric

Are you ready to experience the incredible wealth of health benefits that turmeric has to offer? This wonderful root has the capacity to revolutionize your health—it's not every day that the world discovers a veritable panacea, the merits of which are vetted by both ancient wisdom and modern scientific research. Turmeric is delicious, versatile, affordable, and safe to use (some people do experience infrequent, mild side effects, so be sure to speak with a doctor before using turmeric as a therapeutic treatment).

Once you incorporate turmeric into your life, you'll wonder why you didn't do so sooner—as your energy levels soar, your aches and pains melt away, and your body is transformed into a disease-fighting dynamo, you'll begin to understand why it was called “holy powder” in ancient India (among many other names).

How to Get Started

As turmeric continues its meteoric ascent to health food stardom, it becomes easier and easier to find in just about any well-stocked grocery store, health food store, or pharmacy. You've probably noticed that there's a *plethora* of available product choices, in all shapes and sizes—raw root, powders, extracts, drinks, elixirs, and other fancy concoctions. How can you possibly know which to choose?

This chapter contains a breakdown of the choices available to you—and it reveals *exactly* which ones will enable you to get the most healing bang for your buck. As was mentioned at the end of the last chapter, the trick is to increase turmeric's bioavailability as much as possible; doing so will ensure that you're able to squeeze every last healing

drop out of it, so that you receive more benefits at a lower cost. Let's look at the three ways you can increase turmeric's absorption in the body.

Get the Full Spectrum

Because isolated curcumin has a particularly low absorption rate, studies have shown that it's much more effective when taken via raw root or a *full-spectrum extract*, which contains as many of turmeric's beneficial components as possible. Many of these other compounds (tumerones, as well as many that remain unstudied) greatly aid absorption of curcumin and other curcuminoids.

Some high-quality extracts offer greatly concentrated levels of these synergistic compounds, and thus are far superior to raw root or powder (though raw root is still better than isolated curcumin, and cooking with fresh turmeric root is definitely an experience worth having on a regular basis). Look for extractions with a non-toxic solvent, or others that are specifically advertised as full-spectrum. Beware of using turmeric powders for therapeutic purposes (like the kind that comes in spice bottles), as they're not as fresh or potent as raw root and extracts. Powder works great for the cosmetic uses outlined in the previous chapter, though.

Make It Fatty

A cutting-edge process called *liposomalization* works wonders for increasing turmeric's bioavailability. It may sound complicated, but here's the basic idea: through a few different actions (such as agitating a solution of turmeric and a fatty substance with high-frequency sound waves), the lipids in the solution bind to the turmeric molecules to form *liposomes*. These "fat bodies" (the literal translation) increase the uptake of turmeric 6-fold over non-liposomal turmeric.²⁶

While true liposomalization is a somewhat advanced technique that requires specific tools, you can approximate the effect simply by combining turmeric root or powder with the right foods. Emulsifying it with egg yolks and melted coconut oil does the trick—and it's a delicious combination. Powder obviously works better than raw root in this case, but again, just make sure that you're sourcing organic, high-quality powder that's as fresh as possible.

²⁶ <http://www.hindawi.com/journals/bmri/2014/394264/>

Minimize Its Breakdown

One of the main reasons why turmeric is so poorly absorbed by the body is that your digestive tract breaks down all the healing compounds before your body can put them to good use. You can slow down this process, however, by combining turmeric with foods that inhibit digestive juices like *CYP enzymes*—doing so allows turmeric's compounds to hang around for long enough that the intestinal walls can absorb them.

By far the best food for inhibiting CYP enzymes is black pepper (specifically *piperine*, its active component). When prepared as a high-quality extract, black pepper fruit can increase the absorption of turmeric by up to 2000%.²⁷ *Capsaicin*, a compound in cayenne pepper, works in a similar but less pronounced manner. Try combining turmeric, black pepper, and cayenne when cooking; for therapeutic uses, find a high-piperine black pepper fruit extract to combine with your turmeric dose.

It's Always a Good Time for Turmeric

Ideally, just try to integrate as many different forms of turmeric as you can into your life. Cook with turmeric powder and root, include the raw root in juices and smoothies, and use high-quality extracts (especially liposomal ones) for an extra boost. Your body will thank you!

Best of luck on your journey to radiant health! Remember to check out [NaturalMentor.com](http://www.naturalmentor.com) every week for high-quality articles about cutting-edge natural cures, natural health news, and tips for taking health into your own hands.

²⁷ <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3918523/>

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