The background of the cover is a light-colored wooden surface. At the top and bottom edges, there are various natural ingredients: fresh mint leaves, sliced oranges, a sprig of thyme, a small glass vial with a cork stopper, and a piece of cheese. The text is centered on the page.

# Heal Your Gut WITH ESSENTIAL OILS

UPDATED & EXPANDED 3RD EDITION

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Dr. Eric L Zielinski

Bestselling Author of *The Healing Power of Essential Oils*

# Heal Your Gut with Essential Oils

3RD ED (UPDATED & EXPANDED)

by Dr. Eric Zielinski

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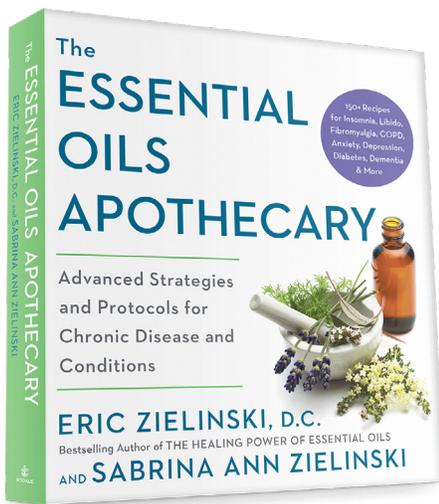
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# Spiritual Disclaimer

Please note that I am a Christian and it is from this perspective that I present the information that is in this book. Amongst other things, this means that I will refer to “God,” not the “Universe.” This also means that I may reference Biblical teaching and ancient proverbs that I have found to be helpful and applicable today.

Sometimes people get offended by the words that I use, or the spiritual references that I make. Please don't fall into this trap.

As a trained public health researcher and world-renowned essential oils educator, you can trust that the information presented in these pages is solid, evidence-based and that it will help you.

I do not judge people that don't share my faith and I am committed to helping everyone (regardless of who they are or what they believe) benefit from my experiences. In fact, I whole-heartedly believe this is my mission in life and why God put me on this planet.

You see, there I go referencing “God” again. ;)

## **A Note About Faith**

Personally, I have found that my faith has been vital to helping me overcome sickness and disease - as it has for the thousands of people that we have helped get well.

Being a Christian, it's impossible for me to separate my personal beliefs from my actions and lifestyle habits. As a researcher, I am intrigued to see how clinical trials and science continues to uncover the role that prayer, positive thinking and faith play in the healing journey.

My dear friend and Integrative Oncologist, Dr. Tony Jimenez often says that “cancer is an emotional disorder.” The same can be said of all chronic, long-standing disease like gut disorders, autoimmunity, arthritis, fatigue and insomnia.

It is with this in mind that I present to you the information in the Introduction and scattered throughout this book where you will discover eternal truths that will provide you with hope, inspiration and may even shed some light on things if you are willing to take a dive into the spiritual side of healing with me.

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# SECTION ONE

## Nutrition & Supplements

### Three Steps to Healing Your Gut

- 1) Avoid Food Triggers
- 2) Use Essential Oils
- 3) Restore Microbiome

*In addition to following our gut-healing, inflammation-soothing essential oil protocols, everyone with leaky gut and inflammatory bowel disorders will benefit from taking high-quality supplements to repair leaky gut and balance their microbiome. The best way to get started is to take LIVE probiotics every day, and...*



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# CHAPTER 1

## Digestive Health Trifecta

I never really had the chance to become healthy as a child because my parents were receiving misguided medical advice that led us right into a medical trap that I refer to as the Digestive Health Trifecta:

1. Gut-Brain-Skin Axis
2. Antibiotics
3. Standard American Diet (SAD)

If the foundation isn't set, then the building will fall. It's as simple as that.

Don't discount the importance of digestive health. It is responsible for up to 80% of your immune function!

### **Gut-Brain-Skin Axis for Digestive Health**

Digestive health is intricately connected to virtually every aspect of your health. It's been nearly 80 years since dermatologists Donald M. Pillsbury and John H. Stokes first proposed the link between digestive health, depression, anxiety, and skin conditions such as acne. Known as the "Gut-Brain-Skin Axis" theory, this connection is understood to be a two-way street: emotional states can alter your normal intestinal microflora, which can increase intestinal permeability (leaky gut) and contribute to systemic inflammation. And vice versa—your microflora can influence your emotional states because these vitally important "good" bacteria produce neurotransmitters, or chemical messengers that play a role in mood and cognitive function.

In my case, lacking the antibody- and probiotic-rich colostrum and breast milk in my diet as a baby, research supports my suspicion that being formula fed was the primary cause of my poor digestive health. According to the *Proceedings of the National Academy of Sciences of the United States of America*,

*"We found that breast milk-derived SIgA [antibodies] promoted intestinal epithelial barrier function in suckling neonates, preventing systemic infection by potential*

*pathogens. Long-term benefits of early exposure to SIgA included maintenance of a healthy gut microbiota and regulation of gene expression in intestinal epithelial cells. These findings suggest that maternal antibodies provide benefits to the intestinal immune system of the breast-fed infant, which persist into adulthood."*

Couple that with the Standard American Diet (SAD) that I consumed being low in naturally fermented foods, my poor digestive health can, thus, be linked to the multitude of maladies that plagued me in my youth:

- Acne,
- Anxiety,
- Childhood dental cavities,
- Depression,
- Gut permeability (leaky gut),
- Stammering (associated with anxiety),
- Suicide ideation (associated with acne),
- and Tonsillitis.

The key takeaway here is that consuming a probiotic-rich diet and breastfeeding are both critical to our physical, mental and emotional health. Eating fermented foods like kimchi, sauerkraut, pickles, natto and yogurt are easy to incorporate into your health regimen. When you slip and don't eat them for a while, that's where probiotic supplements are helpful.

Interestingly, when essential oils are taken with probiotics (beneficial bacteria in supplement form) and probiotic-rich foods they have a synergistic effect! In 2012, a study analyzing the development of a probiotic found that essential oils work well with the formula, creating a synergistic effect of increased benefits. According to the study, "The probiotics retard the growth of the microorganisms, while essential oil kills them. Combining the effect of medicinal plant extract and probiotics may be a new approach due to their complementary antimicrobial effects and practically no side effects. The synergistic effect of the essential oil and probiotics will be necessarily higher than using them alone as health product."

Regarding nursing, it is important to note human breastmilk is the perfect food for infants. Somehow, this minor fact has been omitted by baby formula labels. The fastest growing packaged food source to date, the global infant nutrition industry is a \$50 billion market and their revenue growth is only expected to increase.

The advice that far too many moms-to-be receive—that breast milk isn't necessary and that you're putting your babies at risk of malnutrition if you decide to nurse—is simply not true.

If you're pregnant, want to be, or know someone who is, I implore you to consider these things and make a determined effort to nurse your baby for at least one full year.

## **Antibiotics**

Whether intended to treat a urinary tract, strep, or staph infection, far too many antibiotics are being prescribed when essential oils could be used instead!

According to the Centers for Disease Control and Prevention, "Up to one-third to one-half of antibiotic use in humans is either unnecessary or inappropriate. Each year in the United States, 47 million unnecessary antibiotic prescriptions are written in doctor's offices, emergency rooms, and hospital-based clinics, which makes improving antibiotic prescribing and use a national priority."

Overuse of antibiotics has caused an outbreak of infection and is becoming a main cause of death. Each year in the United States alone, more than two million people become infected with bacteria that are resistant to antibiotics and more than 23,000 people die every year as a direct result of these infections.

If you're thinking of taking an antibiotic, consider using essential oils for all non-serious infections.

## **Cause of Digestion Problems: Standard American Diet**

Eating processed and sugary foods every day and using essential oils is like taking one step forward and three steps back!

My challenge to you is to think, "What would Jesus eat?" If Christ were living on this planet today, would He eat or drink anything that could potentially cause His body harm? What do you honestly think?

As we see in the Bible 2,000 years ago, Christ's life purpose was to honor God in everything that He said, thought and did; even to point of dying on the cross. Although I won't be able to prove it on this side of Heaven, I cannot logically see any way that He would have consumed anything that could possibly have

hindered His ministry. And don't mistake it, everything that we eat and drink directly affects our mental, emotional, social, and physical health.

Sadly, this revelation hasn't reached mainstream Christendom. As one of my preacher friends quipped, "Christians don't drink, they don't smoke, they eat!" An argument can be made that gluttony is the acceptable sin in the church. Or, at least it appears this way because I don't hear too many ministers preaching against it!

I have seen the lives of far too many pastors, missionaries, and church leaders cut short because of disease; many of which could have all but been prevented by lifestyle changes regarding digestive health. This, my friend, is the antithesis of Biblical health: seeing spiritual "giants" fall apart at the hands of poor lifestyle decisions.

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# CHAPTER 2

## Low Stomach Acid Symptoms & Acid Reflux Relief

If you experience regular heartburn or other gastrointestinal issues, there's an excellent chance that your body does not create enough stomach acid which creates low stomach acid symptoms, according to Dr. Jonathon V. Wright.

I know this seems counterintuitive. We've always been told the cause of GERD, acid reflux and other GI problems are because of too much acid production. It is this theory that has prompted doctors to prescribe antacids in droves.

While these drugs can treat low stomach acid symptoms, they do not address the root cause of gut health issues. In fact, drugs such as Nexium, Pepcid, Prevacid, Prilosec, Zantac and others, can actually cause more damage than good over a period of extended use.

In his book, "Why Stomach Acid is Good for You," Dr. Wright goes into a detailed explanation. He says that 50 percent of Americans over 50 are not producing an adequate amount of stomach acid for proper food digestion.

### **The Inner Workings of the Stomach**

The stomach is one of the more fascinating organs which is lined with mucus-secreting cells and two highly important glands:

#### **GASTRIC GLAND**

The gastric gland secretes pepsinogen, mucus, intrinsic factor, and hydrochloric acid.

#### **PYLORIC GLAND**

The pyloric gland secretes mucus and helps to protect the stomach from hydrochloric acid.

There are three stages to the method, which are under constant control of hormones and nervous system signals:

### **Intestinal Phase**

The duodenum yields slight amounts of gastric juices when foods enter the small intestine.

### **Gastric Phase**

Parietal cells in your stomach release extremely acidic hydrochloric acid (0.8 pH). This process is triggered by food in your stomach.

### **Cephalic Phase**

Smelling or even just thinking about food can cause your stomach to begin producing gastric secretions. In fact, 20 percent of these acids are produced before food even enters your mouth.

In the end, the acids in our stomach break down proteins into the crucial nutrients and amino acids. This also explains why patients with reduced stomach acid are susceptible to insufficient neurotransmitter-related illnesses, such as Parkinson's disease, depression and anxiety. One study actually found that as many as 60 percent of Parkinson's sufferers had proven reduced levels of gastric acid production.

## **The Side Effects of Proton Pump Inhibitors**

Keep in mind that several body systems govern this entire process, which can explain why patients using medication to fight acid indigestion can more times than not experience multiple low stomach acid symptoms that, on the surface, appear to be unrelated to stomach acid.

An excellent example is with prescription proton pump inhibitors (PPI). PPIs lower acid production in the stomach by blocking key enzymes that produce acid. We're told that PPIs can help stop ulcers and gastroesophageal reflux disease (GERD) including other low stomach acid symptoms.. We're also told that a reduction in stomach acid gives the body the opportunity to heal itself of these conditions. None of this is true.

Since nearly all GI problems can be attributed to reduced low stomach acid symptoms, Prevacid and other PPIs are virtually useless and have been associated with many side effects of low stomach acid symptoms, including:

- Seizures
- Muscle cramps and muscle weakness
- Spastic muscle movements
- Nausea and stomach pain
- Feelings of being “jittery”
- Headache
- Coughing and a choking sensation
- Constipation and diarrhea
- Confusion and dizziness

More over, patients prescribed PPIs to reduce stomach acid often see other health concerns:

- Leaky gut & food allergies
- Nutrient malabsorption
- Imbalanced gut flora
- Improper protein metabolism

## **How to Fix Low Stomach Acid – Acid Reflux: A True Story**

The truth is that reduced stomach acid has nothing to do with acid reflux. The real culprit behind heartburn and GERD is a leaky valve, which lets acid enter the esophagus. Basically, the door between the esophagus and the stomach – the esophageal valve – cannot shut properly and stomach juices are able to sneak in. Common causes of this include:

### **TOO LITTLE ACID**

Going against everything we’ve been taught over the years, reduced acid production in the stomach is behind a slew of gut health issues that contribute to or directly cause acid reflux.

## SMOKING

Since smoking tobacco is known to damage mucus membranes, increase acid secretion, impair muscle reflexes and lower salivation, smoking is a major cause of acid reflux.

## PREGNANCY

A growing fetus can sometimes put too much pressure on parts of the body, including the esophageal valve.

## HIATAL HERNIA

We all have a diaphragm that helps prevent acid from entering the esophagus. However, if a hernia causes the upper area of the gut to move above the muscle, acid can get through.

## Healing Low Stomach Acid Symptoms: A Step-by-Step Guide

Believe it or not, it's actually not too hard to heal conditions relating to reduced stomach acid, but it does require a little determination and work. Personal experience shows that this systematic guide is a great path to better GI health.

### 1. DIGESTIVE ENZYMES

Taking probiotics and digestive enzymes are a great idea for people suffering from GI-related issues. These two things can help digest food, which takes some of the pressure of the gut while it heals. Since our diets tend to be low in probiotics and high in antibiotics, people have found it to be beneficial to continue to supplement with probiotics and digestive enzymes after the GI system has healed.

### 2. APPLE CIDER VINEGAR

Raw apple cider vinegar (ACV) is my go-to natural remedy for boosting low stomach acid levels. Vinegar is naturally acidic; therefore, it will help to lower the pH in your system. Moreover, ACV can control the growth of candida, which is known to contribute to reduced levels of stomach acid. Start by taking two tablespoons of ACV in a glass of water three times a day.

### 3. HCL WITH PEPSIN

For patients with low stomach acid, try supplementing with hydrochloric acid and pepsin. This combination, in addition to the ACV protocol, works great. But I must warn you, do not combine HCL supplements with corticosteroids or anti-inflammatory drugs such as NSAIDS (Advil or Tylenol). These medications are notorious for damaging the GI lining and can increase your chances of developing stomach ulcers.

### 4. EAT BETTER FOOD

It is important to eat a quality diet when starting a GI healing plan and attempting to restore normal acid levels in the gut. If you want a recommendation, I would suggest the GAPS Diet (make sure to include sauerkraut juice and Manuka honey).

This particular diet was founded by Dr. Natasha Campbell and it was designed specifically to heal the gut, reduce inflammation and heal autoimmune and neurological issues. The diet consists of simple foods that are easy to digest, giving the gut the power it needs to heal completely.

### 5. CHEW

This could be the number-one culprit when it comes to GI problems and the cause of low stomach acid. Simply put, chewing your food sends neurogenic signals from your brain to your gut to begin the digestive process.

If you eat too quickly and don't chew your food thoroughly, you're cutting this process time in half, which can significantly reduce gastric secretions connected to the cephalic stages I mentioned earlier. While there is really no rule, per say, make sure you chew enough to the point in which the food in your mouth becomes soft and pasty.

This also helps prevent overeating and helps with weight loss. In fact, a recent article in The Journal of the Academy of Nutrition and Dietetics said that chewing slowly can not only reduce the amount of food you eat and the energy density, but "Eating slowly led to lower hunger ratings in both groups and increased fullness ratings in the normal-weight group at 60 minutes from when the meal began."

## 6. INTERMITTENT FASTING

We have witnessed the benefits of intermittent fasting since the beginning of time. Unlike it is today, food hasn't always been readily available 24/7. The majority of intermittent fasting routines center on fasting in the morning or evening and require that foods only be eaten during a 4-5 hour window.

Not only has new research been focusing on how fasting can help restore stomach acid levels and help heal acid reflux, but also promote weight loss and help cure a number of other diseases.

In fact, the British Journal of Nutrition published the results of a clinical trial in which 115 overweight women with a genetic predisposition to breast cancer were placed on a diet that included intermittent fasting. These women showed greater improvements in insulin sensitivity and weight control than generic daily calorie restriction.

### How to Fix Low Stomach Acid Problems

Here are a few other tips that can help restore proper levels of acid in the gut:

- Don't eat when you're stressed.
- Avoid highly allergenic foods.
- Stay away from foods high in fiber.
- Limit water consumption to prevent over-hydration.

If you follow these simple steps and are dedicated to healing your GI issues, you should see great results within days, if not a week or two.

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# CHAPTER 3

## 10 Signs You Have A Leaky Gut (And What To Do About It)

Leaky Gut Syndrome is a common gastrointestinal problem that has been gathering a lot of attention lately because research continues to link it to a number of other health issues and diseases. The SAD (Standard American Diet), stress, toxic overload and bacterial imbalance people battle has certainly contributed to the epidemic of leaky gut syndrome symptoms that now affects millions of people globally.

### **Unexplained Symptoms?**

Have you been doing everything you can to feel well, but are still frustrated by your lack of results? Regardless of what modality you implement – healthy diet, exercise, mindset, relaxation techniques – does nothing seem to offer relief? Perhaps you feel:

- Itchy
- Foggy
- Anxious
- Exhausted
- Heavy
- Moody
- Achy
- Bloating...

Maybe even all of the above!

And, more concerningly, does it seem like you're unable to get any traction in feeling better?

If so, the source of your woes may lie somewhere unexpected...

In your gut!

Between 70-80% of your immune response resides in your gut, so it stands to reason that an unhealthy gut can translate to an unhealthy you. One of the main physiological signs that something's intestinally amiss occurs when the delicate lining of your gut gets compromised – A condition known as Leaky Gut. Leaky Gut is the root cause of dozens of health problems and stubborn symptoms... Even ones that seem completely unrelated!

The key to feeling better – and finally getting some positive wellness momentum – starts with supporting your gut and patching up the leaks.

## Leaky Gut Explained

Leaky gut (“intestinal hyperpermeability”) disorder is caused by *intestinal tight junction* malfunction.

Your gut is lined with a protective barrier that lets only friendly substances into your bloodstream. And keeps unwanted substances out! This feature is called selective permeability. The gut barrier is made up of cells that form tight junctions (like interlocking fingers). And those cells get extra protection from a thick layer of mucus (the mucosal layer) that shields them against attackers. When everything is working the right way, the gut barrier allows bloodstream access to only a select few beneficial particles. That's how nutrients pass through your gut and into your bloodstream.

But sometimes troublemakers – like infections or certain medications – chip away at the mucus shield and bust those tight junctions wide open, poking micro tears in the barrier, which results in the gut “leak.”

And when you have a leaky gut, unwanted substances like pathogens, toxins, and undigested food particles can sneak through into the bloodstream, where they absolutely don't belong. Once those particles enter your circulation, they can cause all sorts of damage anywhere in your body.

## What Makes Your Gut Leak

The world we live in is full of threats to the gut barrier. That's why millions of people struggle with leaky gut... even if they don't realize it!

Some of these threats we can try to avoid. Others (like environmental toxins) are nearly impossible to escape completely. All of them can take a toll on your gut barrier, and trigger a leaky gut.

Threats to your gut barrier include:

- Pesticides, like glyphosate
- 24/7 stress
- Inflammatory foods (such as gluten and dairy)
- High sugar diets
- Gut infections (including food poisoning and candida overgrowth)
- Dysbiosis (when bad bacteria in your gut outnumber beneficial bacteria)
- Medications (like antibiotics and NSAIDs)
- Intestinal parasites (more common than you'd think)
- Heavy metals
- BPA and other chemicals found in plastics

And, according to the National Health Services, the following conditions and treatments can also damage your intestinal lining:

- Celiac disease
- Chemotherapy
- Chronic kidney disease
- Complicated surgery
- Cystic fibrosis
- HIV/AIDS
- Immunosuppressants
- Inflammatory bowel diseases – such as Crohn's disease
- Intestinal infection (salmonella, norovirus and giardiasis)
- Radiotherapy to the abdomen

- Sepsis
- Type 1 diabetes

Representing the chief obstacle within the paracellular pathways between intestinal epithelial cells, disturbance of the constricted junctions opens the door for pollutants to be released into the blood.

According to the Norwegian journal *Acta Paediatrica*, this process “is implicated in the pathogenesis of several acute and chronic pediatric disease entities that are likely to have their origin during infancy.”

Leaky gut has specifically been linked to these childhood disorders:

- Cancer
- Autoimmunity
- Asthma
- Chronic inflammatory disorders
- Allergies
- Autism
- Type 1 diabetes

Unfortunately, this is just a partial listing of the many things that can harm your gut barrier, and leave you suffering with leaky gut.

## How Leaky Gut Causes Whole-Body Problems

Once harmful particles escape through the leaky gut barrier and into your bloodstream, they can travel anywhere in your body to cause problems. Your immune system spots these troublemakers and goes on the attack.

That immune response – which almost always involves inflammation – can cause a wide variety of symptoms

In fact, a leaky gut can make your immune system so confused that it starts attacking you by accident. That’s why virtually all autoimmune diseases involve a leaky gut.

## ***ANY OF THESE CONFUSING SYMPTOMS COULD POINT TO LEAKY GUT***

With a leaky gut, you may encounter a number of symptoms that seem completely unrelated. And while they all start in your gut... they don't stop there

Here are 10 signs that could indicate you're dealing with a leaky gut:

1. Gastrointestinal (GI) issues, including bloating, gas, diarrhea, and irritable bowel syndrome (IBS)
2. Any autoimmune disease, including rheumatoid arthritis, lupus, celiac disease, and psoriasis
3. Allergies and asthma
4. Depression, anxiety and other mood disorders
5. Trouble thinking, concentrating, remembering, and learning
6. Inflammatory bowel diseases (IBDs), such as Crohn's disease and ulcerative colitis
7. Blood sugar issues, including type 1 and type 2 diabetes
8. Eczema, acne, and other skin conditions
9. Insomnia and other sleep disorders
10. Obesity and difficulty losing weight

Your health advisor may have given you a few different diagnoses, and you may even be receiving treatment. But until the underlying problem – the leaky gut – gets fixed, true healing will always be just out of arm's reach.

## **Most Common Co-Morbidities Of Leaky Gut**

If you think you may have leaky gut syndrome, here are FIVE co-morbidities to talk to your doctor about.

### **1. SKIN DISORDERS**

First defined more than 70 years ago, the connection between the gut and the skin points to a slew of skin irritations, including acne and psoriasis, in people with intestinal hyper-permeability. While many doctors lean on dangerous creams and other drugs to treat these disorders, they can usually be solved by fixing the gut.

## 2. MOOD DISORDERS (DEPRESSION)

Studies, such as one published in the journal *Neuro Endocrinology Letters*, show that leaky gut can lead to numerous mood disorders. For instance, intestinal hyperpermeability's inflammatory response features activate the release of pro-inflammatory cytokines and other chemicals that induce depression symptoms such as fatigue, gastrointestinal upset, and a variety of so-called "sickness behaviors."

## 3. DIGESTIVE DISORDERS

As you'd expect, if your intestines aren't properly functioning, your digestion will be affected. Such is the case with leaky gut as intestinal permeability has been linked to chronic constipation & microfloral imbalance, which are direct causes of impaired immune function. Researchers discovered that immune cells were disrupted and pathogenic bacteria were allowed to flourish upon prolonged constipation.

For people with intestinal hyperpermeability, the immune system can shift into overdrive when a poisonous assault of toxins is introduced on the bloodstream, dangerously increasing the production of antibodies. This makes them vulnerable to antigens in foods, such as dairy and gluten products.

Leaky gut can also cause various nutritional deficiencies, including deficiencies of vitamin B12, magnesium and other important enzymes that aid in food digestion.

## 4. INFLAMMATORY BOWEL DISEASE

Hungarian scientists recently found that people suffering from irritable bowel syndrome and ulcerative colitis have links to leaky gut syndrome. This is because higher gut permeability is usually localized to the colon.

Another study found that the majority of patients with Crohn's disease also had leaky gut. Furthermore, up to 10% - 20% of their "clinically healthy relatives," also had leaky gut, which is a sign of genetic connection. Studies show that zinc is effective at tightening up intestinal junctions.

## 5. AUTOIMMUNE DISORDERS

Being an inflammatory disease by nature, it's no wonder that so many people with autoimmune conditions suffer from leaky gut syndrome. One specific autoimmune disease that researchers are connecting to gut disorders is

Hashimoto's disease, or "chronic thyroiditis." Thyroid disease can lead to a host of problems, including weight gain, fatigue, depression and impaired metabolism.

Research conducted on a protein called "zonulin" is key to understanding the link between leaky gut and autoimmune diseases. A 2011 paper published in the journal *Physiologic Reviews* says,

*"Zonulin is the only physiological modulator of intercellular tight junctions described so far that is involved in trafficking of macromolecules and, therefore, in tolerance/immune response balance. When the finely tuned zonulin pathway is deregulated in genetically susceptible individuals, both intestinal and extraintestinal autoimmune, inflammatory, and neoplastic disorders can occur."*

This hazardous flow is often triggered by grain consumption. In fact, *University of Maryland School of Medicine* scholars have revealed that gluten "activates zonulin signaling irrespective of the genetic expression of autoimmunity, leading to increased intestinal permeability to macromolecules."

## How To Leak-Proof Your Gut

If after reading this article you think leaky gut may be responsible for your health problems, I have two things to say:

1. Your suffering doesn't have to continue. There is hope.
2. Healing leaky gut syndrome is not only possible, but happens all the time.

With a healthy and intact gut barrier, toxins, pathogens, and other harmful substances will remain locked inside your gut where they belong. Keeping your gut barrier healthy involves:

- Avoiding damaging substances – like gluten, pesticides, and NSAIDs – as much as you can
- Eating a healthy, GMO-free, whole foods diet
- Addressing gut infections (if you have one)
- Supporting your protective mucosal layer
- Keeping your gut junctions tight
- Maintaining a well-balanced gut microbiome where beneficial (probiotic) bacteria outnumber harmful (pathogenic) bacteria

When it comes to supporting your gut microbiome, high quality, spore probiotics are one of your strongest allies. In addition to crowding out harmful bacteria, specific types of spore probiotics help other beneficial bacteria flourish for a healthy well-balanced gut microbiome.

Plus, a groundbreaking human clinical trial [link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5561432/>] found that a blend of 4 targeted strains of spore probiotics significantly addressed leaky gut – and all of the associated immune activation – in just 30 days. Those spore probiotic strains are:

### ***BACILLUS SUBTILIS HU58™***

This strain has been extensively studied in numerous clinical trials, and has been shown to be a hyper-potent fighter of harmful bacteria that seek to negatively impact the gut.

HU58™ is an extremely potent and resilient immune stimulator. In fact, it's so resilient that researchers at California Polytechnic State University reported reviving Bacillus spores from the gut of a 25-million-year-old fossilized bee!

Once absorbed into your gut – where 70-80% of your immune system lives – this strain produces more than two dozen natural compounds that drive optimal health and protection.

### ***BACILLUS INDICUS HU36™***

This particular strain is a total game-changer in the probiotic market. Bacillus indicus HU36™ is a well-studied, highly unique, proprietary spore-forming bacterium that supports the protection of your gut lining by turning your intestines into a free-radical-fighting factory.

Stopping the free radicals that damage the cells in your gut barrier a MUST if you want to feel your best. HU36™ is known to create 15 distinct antioxidants — including 5 of the most protective carotenoids known to science: Lutein, Zeaxanthin, Astaxanthin, Beta-Carotene, and Lycopene.

And HU36™ delivers these protective power plays directly to your gut where they can be best absorbed for optimal gut strength.

## ***BACILLUS CLAUSII***

As we've learned, one of the chief culprits behind leaky gut is the pervasive use of antibiotics. *Bacillus clausii* is the only strain of probiotic known to resist damage from a variety of common antibiotics.

Because of its pathogen-fighting power, this strain is the largest selling probiotic in the world (though it's typically sold as a prescription drug.) Fortunately, it's now available in the U.S. dietary supplement industry, and has been proven effective in supporting gut health and soothing numerous GI issues (gas, bloating, diarrhea.)

## ***BACILLUS COAGULANS***

In a human trial, 90 days of supplementing with *Bacillus coagulans* resulted in significant improvements in gut health, and major reductions in occasional diarrhea, bloating, abdominal pain, and unusual stool frequency.

*Bacillus coagulans* is also known for its potent immune supportive activity due to its unique production of lactic acid – specifically the L+ optical isomer of lactic acid. This has been shown to have a profound impact on immune stimulation and digestion, and drives a healthy gut defense.

## **Our Go-To For Gut Support**

Though probiotics have long been touted as our best gut-optimizing partners, many people find it difficult sourcing a probiotic that actually works. According to research, the body's naturally harsh stomach acid – which is necessary for digesting all types of foods – kills off 99.99% of the probiotic strains available. That means most probiotic products die long before their active strains get to your intestines.

Shockingly, even the \*supposedly\* special “live” probiotics found in the refrigerated section are “dead on arrival” when they reach the areas they're needed most. *(This actually makes a lot of sense – If a probiotic can't survive at room temperature, how can it possibly survive the typical human body temperature of 98.6 degrees?!?)*

While the overall probiotic picture may seem a bit bleak, there is one brand that offers a highly potent product that has been proven effective via dozens of clinical studies. The company is called *Just Thrive*. Their microbiologist-formulated

probiotic boasts a unique, endospore shell (an armor-like coating) that offers complete protection for the strains as they travel from your mouth to your gut. **Studies show this probiotic arrives 100% alive in your gut and ready to go to work.**

*Just Thrive Probiotic's* spore-based formula contains all four necessary strains to properly address leaky gut:

- *Bacillus subtilis HU58™*
- *Bacillus indicus HU36™*
- *Bacillus clausii*
- *Bacillus coagulans*

Also, Just Thrive Probiotic:

- Provides crucial immune support in the gut where it's needed most
- Improves flora balance and cultivates digestive health
- Produces antioxidants at the most bio-available location in your body
- Drives optimal energy, improved sleep, and a brighter mood
- Promotes beautiful skin and encourages healthy weight management
- Is Paleo, Keto, and Vegan-friendly
- Is non-GMO, and made WITHOUT soy, dairy, sugar, salt, corn, tree nuts or gluten
- Is vegan-friendly, non GMO, and made WITHOUT soy, dairy, sugar, salt, corn, tree nuts or gluten

**Ready to get start using a high-quality, LIVE probiotic? Go [HERE](#) to pick up your FREE bottle of Just Thrive Probiotic & Antioxidant Support!**

**GET A DEEP DISCOUNT FOR NATURAL LIVING FAMILY READERS!**

*Maximize your health and boost your immune function with LIVE probiotics. Our Natural Living Family "special" will help you on your way with your first bottle for FREE. [Check out Just Thrive Probiotics & Antioxidant support HERE!](#)*

# CHAPTER 4

## Bioactive Foods & Why You Need Them

Several years ago, we upgraded our diet and focused on eating more *bioactive foods*, and we have found them to be one of the biggest keys to unlocking abundant health for our family. But, if you're like most people, you've never heard of bioactive compounds, so let's start there...

### What Are Bioactive Foods?

Today, as a society, we are more unhealthy and overweight than ever. In pursuit of both weight loss and better health, many people turn to fad diets and multi-vitamin supplementation, which often fails to address either of these issues. People discover that their weight-loss is short-lived and true health gains are not apparent.

What if there were a better way? I believe there is. Rather than turning to these quick fixes, adding foods rich in *bioactive compounds* to your diet along with adding essential oils to your routine can help ensure that you are getting the nourishment your body needs. It may even help you achieve your body's ideal weight.

When I was conducting research for our new book, *The Essential Oils Diet*, the term "bioactive" repeatedly caught my attention.

Assuming you're like me and you haven't heard of them before, bioactive compounds, are phytochemicals (plant-based chemicals) that help boost metabolism, prevent disease and make you feel great! Examples you may be familiar with include:

- **Carotenoids** – tetraterpenoids that gives your carrots, corn, tomatoes and pumpkins their distinct orange, yellow and red pigments.
- **Polyphenols** – a group of more than 8,000 antioxidant-rich phytochemicals such as flavonoids, lignans phenolic acid, which boost the immune system.

- **Fiber** – Dietary “roughage” (such as cellulose, lignin, and pectin) that are resistant to the action of digestive enzymes and help gastric motility (i.e. aids in moving food through your system and makes you “regular”).
- **Essential oils** – volatile organic compounds that are extracted from plants containing powerful antioxidant and healing properties

While you may not have heard of *bioactive* before, you are most likely familiar with the term “antioxidant.” Antioxidants are the main reasons why more people should be talking about bioactives. In addition to fiber – yes, that stuff we all need for regular bowel movements – bioactive compounds are mainly comprised of *polyphenols, flavonoids, carotenoids* and *essential oils*, which are all plant-derived chemicals that contain outstanding antioxidant properties. Science has identified thousands of bioactive compounds including over 8000 polyphenols alone to date.

- One definition states that *bioactive compounds* are “components of food that influence physiological or cellular activities in the animals or humans that consume them.”
- Or, in more practical terms, they are “phytochemicals found in certain foods “are capable of modulating metabolic processes, resulting in the promotion of better health.”
- With these definitions in mind, “bioactive foods,” therefore, would be those foods that are rich in plant-based chemicals that help boost immune function and promote robust health.

“So, why haven’t I heard about bioactive foods before?” you may be asking.

Good question!

Truth be told I don’t really know the reason. Maybe it’s because a diet in bioactive compounds won’t make anybody rich because the best way to get them in your system is through good ol’ fashioned plant-based foods; not supplements, pills or expensive manufactured powders.

In fact, I’m somewhat befuddled by the fact that our diet program is the **FIRST** book ever to usher into the mainstream health and wellness community what researchers have been talking about for years.

## Where Bioactive Compounds Fit in Nutrition

To put bioactive compounds into perspective, it's important to remember that our body requires two kinds of nutrients:

1. **Essential Nutrition** - nutrients that are necessary for life that your body cannot make: carbs, fats, proteins, water, certain vitamins & minerals.
2. **Non-Essential Nutrition** – can be made by the body or obtained from sources other than foods and beverages: vitamin D, cholesterol & amino acids.

**Bioactive compounds**, on the other hand, are considered “extra-nutritional,” meaning they contain no calories (as protein, fat, and carbohydrates do), and they are not vitamins or minerals. They are not required for life, but they make you truly healthy.

Think of it like this: You can live on essential nutrients with a feeding tube but it doesn't mean you are truly alive. Bioactive compounds add spice to your life!

The European Journal of Nutrition published an article in 2013 that put it this way: *“Whereas the absence of essential nutrients from the diet results in overt deficiency often times with moderate to severe physiological decrements, the absence of bioactive substances from the diet results in suboptimal health.”*

Unfortunately, today's trendy low-carb diets focus on “essential nutrition” and ignore bioactive compounds, which are necessary for truly robust health. Interest in these carbohydrate-starvation fad diets means that heavy consumption of meat and animal fat is highly promoted. We should be cautious about the “benefits” of these diets. Research strongly suggests that someone's chance of enjoying optimal health is greatly diminished if his or her diet consists primarily of animal fat and protein.

If you want to improve your health, skip the fad diets and add more bioactive compounds to your plate!

## The Benefits of Bioactive Compounds

These compounds do more than just help us live vibrantly. Antioxidant bioactives like flavonoids, carotenoids, and polyphenols are plant chemicals that protect your body's cells from damage caused by unstable atoms known as free radicals, which cause disease and illness. If your diet is lacking in foods that contain these compounds, you're going to be sick and gain weight.

Research shows that they also protect us from numerous health problems. Studies have shown that bioactive compounds may help:

- Improve vision
- Prevent diabetes and obesity
- Manage blood pressure
- Protect against cardiovascular disease
- Lower cholesterol
- Possibly fight cancer and slow tumor growth

In fact, a study from the American Association for Cancer Research says, "A variety of bioactive food components have been shown to modulate inflammatory responses and to attenuate carcinogenesis," that is, weaken the process of cancer growth."

While researchers are just starting to dive into this topic, the bottom line is that plant foods and herbal remedies, including essential oils, contain bioactive compounds. Some are more robust than others but we can choose to bolster our so-called "nonessential" nutrition by incorporating more of these into our lives.

## Why You Need Bioactive Foods In Your Diet

Every day, we are bombarded by toxins in our food, soil, water, air – in short, all around us. These toxins include:

- Organophosphates and other pesticides used in homes and schools that accumulate in the body.
- Chlorine, pesticides, and preservatives added to or sprayed on foods. These chemicals can cause multiple health problems.

- Overuse of antibiotics, leading to antibiotic resistance. These medications destroy healthy gut bacteria, an important contributor to a healthy immune system. Many are fed to the animals we eat as well.

Currently, scientists are researching the impact of bioactive compounds on the body's detoxification systems, since many studies show that "exposure to an accumulation of toxins play a significant role in cardiovascular disease, type 2 diabetes, and obesity." It's great to see science moving in this direction, however, you can start today with steps to improve your health by adding more bioactive foods to your diet.

## The Essential Eight Bioactive Foods

As mentioned, not all bioactive foods are equal. We have picked out the "Essential Eight" foods that you should be putting into your diet to maximize your health. These are all rich in bioactive compounds that promote overall health or support fat-burning by addressing issues such as inflammation, stress, insulin resistance, and hyperglycemia, all contributors to the most common diseases in American today.

### The Essential Eight are:

#### SEEDS

These embryonic plants contain many life-enhancing properties. Some great examples that you can easily incorporate into smoothies and other dishes include:

- **Hemp seed:** Full of omega-3 and omega-6, hemp seeds contain as much protein as an ounce of beef or lamb. They also provide all the essential amino acids your body requires that it cannot produce on its own and are a good source of Vitamin E and many minerals. They can also reduce inflammation.
- **Cacao seeds:** Cacao is a powerful antioxidant and can help regulate the immune system, protecting against oxidative stress. It can also offset hyperglycemia, improve cellular response, and modulate obesity-related inflammation caused by high-fat diets. Use 72% or more cacao nibs or sugar-free bars.
- **Chia seeds** may help lower total cholesterol and increase "good" cholesterol, reducing your risk of cardiac events.

- **Flaxseed** helps to manage your weight, lowers cholesterol, thereby reducing the risk of cardiovascular disease, and improves insulin resistance which can reduce your risk of developing type 2 diabetes.

## HEALTHY FATS AND OILS

Healthy fats and oils are an important part of a balanced diet, however, not all of them are created equal. Some, such as vegetable oils and margarine, are unhealthy foods even though they are often labeled as healthy choices. Here are some excellent choices:

- **Extra-virgin olive oil** is one of the best overall sources of fat and adding it to a nutritious diet promotes weight loss. It contains oleic acid, which has been shown to reduce inflammation, aiding in diseases such as cancer, autoimmunity, and dementia. It is also rich in antioxidants and may even reduce the risk of a cardiovascular event or stroke. (We get ours fresh-pressed here.)
- **Avocado oil** can lower cholesterol, banish hunger pangs, and spot-reduce fat around the middle. Like olive oil, it's high in monounsaturated fats, which help bioactive compounds get into your bloodstream and to the mitochondria of your cells to fight free radicals.
- **Butter** is an important dietary fat that must be consumed in moderation if you can tolerate it. Conventional butter, however, often comes from cows that are fed hormone-filled feed and administered antibiotics. Always choose non-GMO and organic butter, preferably from grass-fed cows.

## FRUIT

Some fad diets, like Atkins or the ketogenic diet, restrict the consumption of fruit. However, many are rich in antioxidants and appealing to eat.

- **Berries of all varieties** are packed with bioactive compounds and their seeds are a great source of fiber, which can help suppress your appetite.
- **Eating avocados** – not just the oil – can help you absorb bioactive compounds better and can reduce your desire to eat more. They're also a good source of fiber and vitamin K, which helps with weight control.
- **Grapefruit** has been well-researched as a weight loss tool and beneficial in managing diabetes and cardiovascular disorders. Be sure to eat the whole fruit, not just the juice, for the most benefit. However, this fruit can interact with certain pharmaceuticals so ask your doctor before adding to your diet.

## CRUCIFEROUS VEGETABLES

This is one of the healthiest food groups we consume. Cruciferous vegetables are potent anti-inflammatories, cancer fighters, and natural detoxifiers. They are rich in bioactive compounds, vitamins C, E, and K, folate, and minerals. In fact, the National Cancer Institute is studying the impact of cruciferous vegetables because they are known to:

- Protect cells from DNA damage
- Inactivate carcinogens
- Produce antiviral, antibacterial, and anti-inflammatory effects
- Induce cell death (apoptosis)
- Inhibit angiogenesis (tumor blood vessel formation) and tumor cell migration (which is needed for metastasis)

### **Best choices include:**

- Broccoli, which has been shown to counteract nonalcoholic fatty liver disease that can progress to a deadly cancer. Buy it fresh as the prepackaged type may have reduce levels of bioactive compounds.
- Bok choy contains sulforaphane, which improves blood pressure and kidney function. It also has lutein and other anti-inflammatory cancer-protective compounds, vitamins A, B, and C. It's very low in calories and high in fiber!

## NUTS

While they are calorie-dense, nuts are nutritional powerhouses full of protein, unsaturated fat, and fiber. A handful of nuts a day can help prevent obesity, type 2 diabetes, and heart disease. See our Fill-in-the-Gap Nut Snack Recipe for a delicious way of using nuts.

- **Almonds:** Research shows that daily consumption of small or large amounts of almonds does not result in weight gain! Even small amounts can improve health, including improving fat metabolism and moderating the rise in blood sugar after meals as well as increasing a pleasant feeling of fullness.
- **Walnuts** offer much of the same benefits as almonds but they contain higher amounts of both omega-3 and omega-6. This makes them particularly effective in reducing the risk of type 2 diabetes.

## LEGUMES

Legumes contain bioactive components that may reduce the risk of developing cardiovascular disease and type 2 diabetes. They are also packed with fiber and antioxidants that together combat high blood sugar and excessive lipids in the blood, common for people who follow a typical American diet. (Note: we do not recommend soybeans or unfermented soy products as a legume choice as they are almost invariably GMO.)

- **Black beans** contain bioactive compounds known as anthocyanidins that give a fruit or vegetable its color. These help to lower blood sugar after a meal, which is particularly important in preventing the onset of heart disease and type 2 diabetes.
- **Lentils** may be green, black, red or yellow, and all varieties of lentils contain numerous bioactive components as well as prebiotic carbohydrates that help your healthy gut bacteria to survive. Prebiotic carbohydrates and dietary fiber have the potential to reduce the risks of becoming obese or developing cancer, heart disease, and diabetes.

## WILD-CAUGHT COLD-WATER SALMON

Fish is an important protein food to include in your diet if you are not a vegetarian or vegan. Avoid farmed fish, which are fed grains and other unnatural ingredients that change their fat makeup. Cold-water fish are rich in omega-3 fats, making their consumption conducive to cardiovascular health. Avoid fish species that are endangered from overfishing. (Check [SeafoodWatch.org](http://SeafoodWatch.org) to find a list.)

Cold-water salmon is harvested in the waters of Alaska, the Pacific Northwest or Northern Europe among other sources. Avoid Atlantic salmon. Omega-3 fatty acids provided by consuming these fish can help moderate inflammation. Along with caloric restriction, eating wild salmon has shown the best results in effecting weight loss and decreasing concentrations of some inflammation markers.

## TEAS

Purified or distilled water is a necessary drink but when you need flavor, tea is your go-to solution.

- **Matcha green tea** is one of the best sources of catechins, bioactive compounds that act as antioxidants. The National Cancer Institute acknowledges that matcha could even help with cancer, partially by

protecting DNA. It's also effective at burning body fat. Our favorite brand of matcha is Ujido. Learn why we love this brand.

- **Rooibos and holy basil tea:** This blend combines rooibos, which can help you lose weight and achieve your body's ideal weight (66) with holy basil (tulsi), an herb that increases energy and relieves stress. Combined, they form a tea that revs you up when you're feeling sluggish. One of our metabolism-boosting favorites is the Republic of Tea's Get Burning blend.
- **Senna tea** stimulates the intestines, aiding in the natural process of elimination. Traditional Medicinal's Smooth Move tea is a natural, gentle bowel cleanser best taken at bedtime.

## Essential Oils are Also Bioactive Compounds

Foods are not the only way to access important bioactive compounds. Essential oils are also inherently bioactive but, unlike bioactive-rich foods, they are not a source of nutrition. For example, both the fruit of a lemon and lemon essential oil, which is extracted from the rind, contain bioactive compounds, but the latter doesn't provide any energy in the form of calories, vitamins, or minerals. However, together they become far more than the sum of their parts.

Essential oils offer a more concentrated form of bioactivity than food does. These minute but highly concentrated compounds are able to heal the body (and soul) with metabolic effects that can assist in weight loss – or weight gain, if that is your concern. Certain oils can also boost your energy so you can be more active and burn more body fat.

However, you need to use caution when using essential oils. The scientific term for essential oils is volatile organic compound. The volatile components of a plant are the parts that are quickly released into the air. Essential oils are why you smell lavender when you lean down to sniff the blooms.

When using essential oils, proper dilution is always recommended. The 3 basic ways to use them include: inhaling them, applying them to your skin, or consuming them. Inhalation from a diffuser is the safest and most popular way to use them. There are few risks to diffusing 4-5 drops of essentials oils in water as directed. Be sure that your room is well-ventilated especially if you have children or pets. Run it for a few minutes only at first, to gauge your reaction.

When applying topically, make sure that you use a carrier oil and dilute properly. Read more about the benefits of different carrier oils and proper dilution rates, or learn how to consume essential oils safely.

## THE PHYSICAL BENEFITS OF USING ESSENTIAL OILS

How can essential oils help you reach your ideal weight? Essential oils have a host of healthy applications, supported by research. Grapefruit, lime, peppermint, and cinnamon oils support appetite reduction, fat-burning, and other processes key to weight loss. Orange oil is one of the most versatile and affordable essential oils and is an effective mood booster. Bergamot, another citrus oil, enhances weight loss, provides stress relief, and reduces anxiety. Topical applications of both peppermint and lavender oils are proven pain relievers. And peppermint can help you get moving when you start a fitness routine as well as improving performance, endurance, and respiration rate. Several oils are known for the blood-sugar balancing prowess, including clove, lavender, melissa (lemon balm), and lemongrass. They can help relieve stress, tame inflammation, and help heal your gut. This is just a small sampling of how the bioactive compounds in essential oils can help you achieve greater health. Learn more do's and don'ts on using essential oils safely with our free Essential Oils for Abundant Living Masterclass Video Series.

## WHAT YOU CAN EXPECT WHEN YOU MAKE THE SWITCH

Your health is either robust or poor, depending on your diet's proportion of bioactive foods. Many of these compounds are present in foods that you are probably already eating, but taking the time and effort to include more of them into your diet can have a real impact on your life. These benefits include:

- You will burn calories more efficiently, helping you lose weight and attain your ideal weight.
- Your cells will be better protected against free radicals, reducing illness and slowing down aging.
- A diet filled with bioactive compounds fine-tunes your metabolism so that your energy level remains high throughout the day.
- This also enables peak mental and physical performance.
- Since you are not tied to any "fad diet," you will have more food freedom as you integrate the many colors and flavors of bioactive-rich foods into your diet.

As you can see, bioactive compounds provide a wealth of health benefits. Adding them to your diet and your diffuser can help with many goals including achieving your body's ideal weight. With so many varieties and options, you have the freedom to create a healthy diet that you will enjoy while losing weight.

It's not that difficult to get started but here's a good place to start: with our fat-burning matcha latte recipe. This is just one example of the many life-changing recipes you can use to reach your ideal weight with [The Essential Oils Diet](#) program. After you've grabbed a copy of the book for yourself, be sure you sign up for the bonuses and join the private group coaching community.

**GET A DEEP DISCOUNT FOR NATURAL LIVING FAMILY READERS!**

*Maximize your health and boost your immune function with LIVE probiotics. Our Natural Living Family "special" will help you on your way with your first bottle for FREE. Check out [Just Thrive Probiotics & Antioxidant support HERE!](#)*

# CHAPTER 5

## 10 Surprising Benefits of Probiotic Supplements

*"All disease begins in the gut."*  
– Hippocrates

More than 2000 years ago, Hippocrates – the ancient Greek physician widely renowned as the father of modern medicine – identified the gut as being the focal point of health for the entire body.

This is fascinating because until very recently (just over a decade ago), science didn't fully understand just how impactful the gut – specifically, the bacteria in your gut (collectively known as your "microbiome") – was to our overall health.

### **About Your Microbiome**

Launched in 2007, *The Human Microbiome Project* sought to fully identify the connection between the microorganisms (bacteria, viruses, etc) living in your body and their impact on health and disease.

Here's what we now know: You are more bacteria than you are human. The number of bacteria found in your gut is roughly 10x more than the number of cells in your body. You have a total of about 1000 more bacterial genes than human genes.

You have good and bad bacteria. Bacteria often get a reputation for being a strictly nefarious substance. As it turns out, we have beneficial microbes too, and they're crucial to the health of just about every bodily system.

These good bacteria are called probiotics. The term "probiotic" is derived from the Latin preposition "pro," which means "for" and the Greek word "biotic" meaning "for life." Probiotics help us by producing important nutrients that we do not have the human genes to make. These nutrients help break down food, teach our immune system how to recognize threats, and even create helpful compounds that fight off illness.

There's an ever-growing number of studies that have demonstrated that changes in the composition and balance of your gut microbes correlate with numerous disease states. What that means is your ratio of good to bad gut bacteria will dictate your ability to be healthy and feel your best. What's more, it's possible to positively influence your microbiome by simply topping up your bacterial stocks with a proven probiotic supplement.

## History Of Probiotics & Fermenting Foods

Almost since the beginning of time, people have been fermenting and pickling food. In doing this, our ancestors were simply planning to preserve their foods as fermentation and pickling were the primary ways in which people kept their food around longer than just a few days.

But by pickling and preserving, they also unknowingly created many superfoods that are rich in some of the best nutrients known to man! These foods were jam-packed with probiotics for weight loss (healthy microorganisms). Because of this, they regularly enjoyed long and healthy lives.

Those foods that are rich in probiotics are alive and full of helpful microorganisms and nutrition. But those wonderful days of longevity and health didn't last forever. Soon came the Industrial Revolution. And the Industrial Revolution also brought the "Industrial Society." During this time, food manufacturers were trying to figure out new ways to genetically modify foods to preserve them for even longer. Two great examples of what they came up with are white flour and white sugar. Naturally speaking, both white flour and white sugar are actually alive.

This means that they will naturally decompose over time (which is good), but it also means that they have a limited shelf life. In other words, they won't last very long. The problem is that to make these foods, they have to be bleached by dangerous chemicals like chlorine. And in going through with these processes, they become essentially dead. In turn, this means that they have almost no nutritional value.

So here's the point of all this: If your food won't decompose (rot), it is dead, and this means it lacks healthy bacteria (probiotics). You may be surprised by this — as we live in a super clean culture — but humans were made to live in harmony with microorganisms. To see all the antibacterial soaps and antibiotics around, you'd think the opposite was true.

So, when you destroy good microorganisms, harmful ones can enter the picture. Here's why...

An imbalance of your microflora can wreak havoc on your immune system because your immune system is almost entirely in your gut (80 percent is there). Your digestive system essentially houses billions and billions of good fungus and bacteria. Their biggest job is to find bad microorganisms and destroy them. Another one of their jobs is to help you metabolize your food. All of this keeps you healthy. This is why many people who are sick have issues in their digestive tract.

In fact, improper digestion and leaky gut have been linked to neurological issues like autism and many chronic diseases. In the end, the fact is that you need a proper probiotic balance within your gut so that you can fully absorb your food's nutrients. This will help your organs and body systems be adequately fed with good nutrients, and it will make you overall more healthy.

Your body is designed to break down the food you eat into micro pieces. This allows your intestines to absorb the essential nutrients from your food. The rest is expelled as fecal matter. If you have the right balance of gut probiotics, your digestive tract will be able to absorb the nutrients your body needs or sort through what can be turned into waste. However, if you don't have the right balance, you will have waste accumulation, backed-up lines, infrequent bowel movements, body odor, bad breath, and an overload of toxins.

## **Soil Based Organisms & Eating Dirt**

So, what's the traditional way to ensure that you maintain the right supply of bacteria in your GI tract?

*Eating dirt!*

No, I'm not kidding. To properly reestablish your gut ecosystem you need to regularly consume soil based organisms (SBO). These are the probiotics that you've never heard of before. Yet, people have eaten SBO's every meal since the beginning of time.

Soil based organisms benefits include probiotics ("good" bacteria) that normally live in dirt. They provide our GI tracts much needed support for digestion, food assimilation and nutrient absorption. To date, approximately 30 different strains

that have been successfully isolated and are commonly put into the probiotic supplements that we see on the market today.

Some of the most beneficial SBOs include:

- *Lactobacillus acidophilus*
- *Lactobacillus casei*
- *Lactobacillus rhamnosus*
- *Lactobacillus salivarius*
- *Lactobacillus plantarum*
- *Lactobacillus paracasei*
- *Lactobacillus brevis*
- *Bifidobacterium bifidum*
- *Bifidobacterium breve*
- *Bifidobacterium lactis*
- *Bifidobacterium longum*
- *Bacillus subtilis*
- *Saccharomyces boulardii*

## SBO PROBIOTICS BENEFITS & RESEARCH

More than 800 research studies referencing soil based organisms exist in the scientific literature, which link SBO's (Soil based organisms benefits) to successfully treating a wide variety of health conditions:

- Allergies
- Asthma
- Irritable bowel syndrome
- Ulcerative colitis
- Flatulence
- Nausea
- Indigestion
- Malabsorption
- Nutrient deficiency
- Autoimmune disease

- Inflammatory disease
- Bacterial, fungal, and viral infections
- *And the list goes on and on...*

## 5 Ways Eating More Probiotics

Consuming probiotics for weight loss can easily be added to your diet through a soil-based organism supplement or with food from your own garden or a farmer's market. Here are a few of my favorite probiotics-rich foods that you should try!

### 1. KEFIR

When researching probiotics for weight loss, you'll find foods like kefir top the list. Made of a special combination of yeast (kefir grains), bacteria, and milk, the name comes from the word "keif," which means "good feeling" in Turkish. It was 3,000 years ago that kefir was first described in Russia in the Northern Caucasus Mountains.

Some studies also say that kefir can be helpful for those who are lactose intolerant. However, coconut milk from a health food store might be just as good of a dairy milk substitute.

### 2. KIMCHI AND SAUERKRAUT

Kimchi comes from Korea, and sauerkraut comes from Germany. Kimchi is bok choy, cabbage, and other veggies that are fermented, and sauerkraut is only fermented cabbage. Both of these foods are rich in enzymes digestion and probiotics for weight loss. They also support good bacteria growth because of their high amount of sour tasting organic acids.

### 3. KOMBUCHA

Kombucha is a blend of cane sugar and black tea that is carbonated. It is rich in probiotics, enzymes, and B vitamins. *The Journal of Medicinal Food* says that kombucha "harmonizes and balances metabolism in general and abolishes or limits fat accumulation." It's been popular in the Far East for over 2,000 years. Who knew this trendy healthy drink was loaded with probiotics for weight loss?

#### 4. NATTO

This is a dish of fermented soybeans that is popular in Japan. It contains a strong probiotic for weight loss called *Bacillus subtilis*. This has been known to enhance your body's digestion of vitamin K2, improve your immune system, and support heart health. It also contains nattokinase, an enzyme with anti-inflammatory powers that can also help cancer.

#### 5. APPLE CIDER VINEGAR (ACV)

An honorable mention, technically not a probiotics for weight loss, apple cider vinegar is great metabolism booster. It's also been known to control diabetes, blood pressure, and cholesterol. To start drinking this, mix one cup of ACV with organic raw honey and a squeezed fresh lemon. You can mix it with another fat burner, coconut oil, as well. It makes a great vinaigrette.

### How To Find A Good Probiotic Supplement

Without probiotics, your body's complex system of digestive organs would be unable to properly digest food or absorb nutrients, vitamins and minerals. Probiotics also inhibit harmful microbes and drive a strong immune system.

But there's no shortage of probiotic products to choose from... To that, there's no shortage of marketing hype and misinformation in the gut health industry. Stroll down your local supplement aisle and you'll be confronted with the following product options:

- Refrigerated vs room temperature
- 50 billion cells vs 4 billion cells
- Lactobacillus vs Bacillus strains
- And so on...

Fortunately, when it comes to probiotic supplement effectiveness, there's ONE easy way to cut to the chase:

A probiotic is ONLY a "true probiotic" if it arrives in the intestines alive.

Why? Because if beneficial bacteria can't survive the trip from your mouth to your gut, arriving fully intact and alive, then they can't provide any benefit. PRO TIP: This is why probiotics that have to be refrigerated aren't true probiotics. If a

strain can't survive at room temperature, how can it possibly survive past your stomach acid.

A live, active probiotic is your key to balanced gut health and feeling your absolute best! And, you may be surprised to discover that the benefits of a strong and supported gut go way past digestive and immune health...

## **10 Surprising Benefits of a Good Probiotic Supplement**

Probiotics clean your colon, make sure it doesn't get backed up, and free it from obstructions. Your metabolism can almost shut down if you get "clogged pipes." This is because your body will be trying to target and expel the waste instead of using its energy to break down calories. Those who don't have enough probiotics often gain weight. Here are the 10 most evidence-based benefits of consuming probiotic supplements.

### **1. PROBIOTICS BOOST YOUR MOOD**

Serotonin, sometimes referred to as "the happy chemical," is a key hormone that stabilizes our mood and encourages feelings of well-being. This hormone impacts your entire body by enabling communication between your brain cells and the rest of your body.

We now know that as much as 95% of your serotonin is produced in the gut, so it's fair to say that good gut health is truly your fastest path to feeling your best (and brightest!)

### **2. PROBIOTICS PROMOTE RESTORATIVE SLEEP**

If you've been tossing and turning, waking up grumpy, and feeling less than refreshed in the morning, the answer could lie in your gut.

In order to effectively transition through all 5 stages of sleep, your body needs the perfect amount of specific hormones and neurotransmitters (like serotonin). And, as we just learned, some of the most important neurotransmitters are produced and/or controlled by the beneficial bacteria – probiotics – in your gut.

### **3. PROBIOTICS ARE GREAT FOR YOUR SEX LIFE**

Fun fact: In both animals and humans, serotonin is found in the genitals. Seriously!

In the central nervous system, serotonin is primarily a neurotransmitter, but in other parts of your system (specifically the genitals), serotonin promotes vasodilation (the widening of blood vessels.)

And blood flow is crucial for sexual arousal and intimacy.

### **4. PROBIOTICS SUPPORT STRONG ATHLETIC PERFORMANCE**

Two major concerns for athletes in training are 1) recovery from workouts and 2) staying healthy. Why? Because slow recovery hinders progress and getting sick interrupts training AND can affect performance.

A study released in 2016 demonstrated that high-intensity training increases inflammation. This systemic inflammation can compromise the gut barrier and allow toxins to “leak” into the bloodstream (a condition known as “leaky gut.”)

By supporting strong gut health, you’re helping drive the strength of your gut barrier which also promotes a healthy inflammatory response (and therefore faster recovery times.)

### **5. PROBIOTICS HELP YOU AVOID “TRAVELER’S DIARRHEA”**

When travelling, you might not want to tempt fate by drinking the local water... But, your most effective protection will come from having a robust gut microbiome (preferably before ever getting on that airplane.)

Best way to do that? Look to bacterial strains that have been proven to colonize the gut and, once there, neutralize unwanted pathogens in the intestinal environment.

### **6. PROBIOTICS DRIVE OPTIMAL URINARY HEALTH**

Urinary issues (like UTIs) are commonly caused by bad bacteria like E. Coli that live in the gut, and manage to find their way into the urinary system.

If your natural bacterial balance gets disrupted as a result of stress, antibiotics, or poor food choices, bad microbes are able to gain a stronger foothold and run rampant.

However, when your beneficial bacteria outnumber the bad guys, pathogens are less likely to grow. This positively impacts your entire body, including your urinary system.

## **7. PROBIOTICS ENCOURAGE BEAUTIFUL SKIN**

Your skin is your largest organ, so naturally, any signs of a bodily imbalance will show up on your skin first.

When you have ideal populations of beneficial bacteria in your body, you're better able to promote a healthy inflammatory response and support the immune system's ability to detox.

This in turn helps your skin to detox, creating the conditions for a blemish-free, radiant glow.

## **8. PROBIOTICS BOOST NUTRIENT ABSORPTION**

If health is important to you, it's likely you've already started making smart food choices at the supermarket.

But even if you're choosing the most nutrient-dense foods, if your gut can't properly absorb nutrients, you can't use them in your body.

A proven probiotic can support a thriving population of good bacteria in your gut, which has been shown to help your system absorb nutrients effectively.

## **9. PROBIOTICS ARE A BOON TO CARDIOVASCULAR HEALTH**

When allergies or a nasty chest cold make it hard to breathe freely, a popular option is to turn to decongestants, vapor rubs, and inhalers.

Here's another option for you to consider: Support your gut!

The latest research confirms that a direct connection exists between your gut microbiome and your lungs. That means the health of your gut bacteria can play a big part in your respiratory health.

## 10. PROBIOTICS = EASIER WEIGHT MANAGEMENT

Weight gain isn't just a matter of willpower – It's also driven by the bad bacteria in your gut

Pathogenic bacteria can:

- “Hijack” your food preferences so you end up choosing foods you know are bad for you
- Turn off the “I’m full” response so you continue to eat even when you aren’t hungry
- Manipulate your emotions so the unhealthy treats give you a momentary mood boost

This is why supporting your beneficial bacteria is so important... For strong health and ideal body composition!

### Our Go-To Probiotic For Optimal Gut Health

Though probiotics have long been touted as our best gut-optimizing partners, many people find it difficult to find a probiotic that actually works.

Here's why:

According to research, the body's naturally harsh stomach acid – which is necessary for digesting all types of foods – kills off 99.99% of the probiotic strains available. That means most probiotic products die long before their active strains get to your intestines.

While the overall probiotic picture may seem a bit bleak, there is one brand that offers a highly potent product that's been proven effective via dozens of clinical studies.

The company is called Just Thrive. Their microbiologist-formulated Probiotic is truly unique for two reasons:

**First**, the proprietary strains are designed (by nature) to erect an endospore shell (an armor-like coating) when travelling through harsh conditions. This shell offers complete protection for the beneficial bacteria as they go from your mouth to your gut. In fact, studies show this probiotic arrives 100% alive and ready to go to work.

**Second**, Just Thrive Probiotic is the only retail-available product that features the strain *Bacillus indicus* HU36™. This particular, clinically-verified strain is a total game-changer in the probiotic market. It supports the protection of your gut lining by turning your intestines into a free-radical-fighting factory.

Stopping free radical damage is a MUST if you want to feel your best. HU36™ is known to create 15 distinct antioxidants — including 5 of the most protective carotenoids known to science: Lutein, Zeaxanthin, Astaxanthin, Beta-Carotene, and Lycopene. And HU36™ delivers these protective power plays directly to your gut where they can be best absorbed for optimal gut strength and health.

Furthermore, Just Thrive Probiotic:

- Provides crucial immune support all year long
- Improves flora balance and cultivates digestive health
- Drives optimal energy, better sleep, and a brighter mood
- Promotes beautiful skin and encourages healthy weight management
- Is Paleo, Keto, and Vegan-friendly
- Is non-GMO, and made WITHOUT soy, dairy, sugar, salt, corn, tree nuts or gluten

-> [Head HERE now to find out more about the gut-supporting, health-powering benefits of Just Thrive Probiotic](#)

## **Bonus: How To Get The Most Out of Your Probiotic**

Now that you understand the incredible and exhaustive benefits probiotics provide, here's a pro tip for getting the most out of whatever supplement brand you choose. In the same way that you require fuel to work hard and feel your best, so too do the beneficial bacteria in your probiotic.

With a good probiotic product, you'll be feeding the beneficial microbes every time you eat something healthy. But to really supercharge the strength of your strains, you'll want to pair your probiotic supplement with a proven PREbiotic.

PREbiotics are uniquely designed fibers that act like a fertilizer for your probiotic garden, helping your newly planted, good bacteria thrive! Unfortunately, the problem with most PREbiotics is that they feed BOTH the bad bacteria and good bacteria. This can really disrupt your microbial balance, and negate all the health-

supportive work of your probiotic. That's why we like to pair our probiotic with Precision PREbiotic (also from Just Thrive).

It's been intelligently designed to steer clear of the pathogenic bugs and target ONLY the good guys. In fact, it's been shown to more than DOUBLE the population of beneficial bacteria created by your probiotic! Like their Probiotic, Just Thrive Precision PREbiotic is all-natural, non-GMO, and made without soy, sugar, salt, tree nuts or gluten.

And, as with all Just Thrive products, their PREbiotic comes with a "bottom of the bottle" guarantee: If you're not 100% satisfied with your purchase, you can return it to us for a full refund – even if the bottle is empty!

Ready to get start using a high-quality, LIVE probiotic? Go [HERE](#) to pick up your FREE bottle of Just Thrive Probiotic & Antioxidant Support!

### **GET A DEEP DISCOUNT FOR NATURAL LIVING FAMILY READERS!**

*Maximize your health and boost your immune function with LIVE probiotics. Our Natural Living Family "special" will help you on your way with your first bottle for FREE. [Check out Just Thrive Probiotics & Antioxidant support HERE!](#)*

# CHAPTER 6

## Why We Need Digestive Enzymes & Their Benefits

What are digestive enzymes? Believe it or not, we have had very little information on the inner workings of the digestive system until just recently. Now, illnesses linked to malabsorption are growing in frequency and have been linked to lack of digestive enzymes.

I am reminded of a Chinese proverb that says, “He that takes medicine and neglects diet, wastes the skill of the physician.” While this saying makes sense, it may not be as true as we would like to believe. A proper, nutritious diet is not all we need to maintain our health and fight off illness.

### **A Look at Digestive Enzymes**

Digestive enzymes exist primarily to promote our body’s life preserving chemical reactions. These enzymes break down larger molecules so that our bodies can more easily absorb them, which is essential to our survival.

There is a lot going on in the initial section of the small intestine, also known as the duodenum. It is here where simple sugars are extracted from carbohydrates, amino acids are extracted from proteins, and fatty acids are extracted from fats and cholesterol.

To ensure the metabolism stays running strong, macronutrients are broken down into small molecules that can then travel through our blood stream. Also, micronutrients that haven’t been split by the stomach acid are absorbed into the bloodstream as well.

From there, the pancreas creates bile salts or acids that are made up of acids, cholesterol, water, fats, electrolytes, and bilirubin. These are all sourced from the liver by way of the gallbladder. It is when the cholic and chenodeoxycholic acids mix with glycine or taurine, that these bile salts are produced. Our body uses the bile salts to break down foods and allows the lipase enzyme to further reproduce.

**Intestinal enzymes, that specifically affect sugar metabolism, include:**

- Maltase which transforms maltose to glucose
- Lactase, a dairy sugar, which transforms lactose to glucose
- Sucrase which transforms sucrose to disaccharides and monosaccharides
- Cholecystinin which aids digestion of proteins and fats
- Aminopeptidases which degrade peptides into amino acids
- Secretin which manages the secretion of the duodenum

When talking specifically about fats and amino acids, pancreatic enzymes include:

- Phospholipase which transforms phospholipids into fatty acids
- Nucleases which transform nucleic acids to nucleotides and nucleosides
- Trypsin which transforms proteins to amino acids
- Lipase which transforms triglycerides into both fatty acids and glycerol
- Amylase which transforms carbohydrates into simple sugars
- Elastases which degrades the protein elastin
- Chymotrypsin which transforms proteins to amino acids

This is why digestive enzymes are not just beneficial, they are essential to life. The work to dissolve the foods we eat into good cholesterol, amino acids, fatty acids, simple sugars and nucleic acids, help in forming our DNA.

There's a six-step process that starts with the chewing of food and kicks off a biological domino effect:

1. **Saliva (Salivary amylase) is produced in the mouth.** This enzyme instantly aids in breaking down the food while we chew, a process that continues once the food makes its way to the stomach.
2. **Pepsin, acids and other enzymes** are released by the parietal cells in the stomach which starts the procedure of debasing the partially digested food into "chyme."
3. **Gastric amylase** takes over from the acid-neutralized salivary amylase.
4. About an hour into the digestion process, **the chyme is sent to the duodenum**, or the upper small intestine, where the hormone secretin is released. This is triggered by the acidity from the stomach.

5. That process then tells the pancreas to **release the hormones**, numerous enzymes, including lipase, trypsin, amylase and nuclease; bicarbonate, and bile.
6. The acidity of the chyme **transforms from acid to alkaline** due to bicarbonate changes. This process allows the enzymes to digest food and helps bacteria that survived the stomach's acidic environment to break down further.

This is the point at which most of the work is done, unless you are suffering from insufficient digestive enzymes. If that's the case, supplements are needed.

## Supplementing with Digestive Enzymes

The approach we take to supplementing with digestive enzymes will either be proactive or reactive. And this basically comes down to how we look at nutrition today. I know many of you take the view that "if it ain't broke, don't fit it." Am I right?

When you look at it that way, you're basically telling yourself that since I don't have any noticeable gut health issues, there's no need for enzyme supplementation. But a little extra help is not necessarily a bad thing, especially considering the declining nutrient supply in our food and the increase in chronic diseases, such as diabetes and heart disease.

However you decide to look at it, the truth remains that more and more people are turning to digestive enzyme supplements for specific health conditions.

## The Impact of Age & Disease

The older we get, the more alkaline the acid in our stomach becomes. When it comes to our enzyme production, this means the likelihood that the acids triggered by chyme entering our intestine could fail.

This is bad because when the acid triggers fail, it starts a chain reaction and secretin isn't released, which in turn stops pancreatic secretions. In fact, the more we age, the more likely digestive issues can result from enzyme deficiency or low levels of stomach acid.

## A LACK OF STOMACH ACID (HYPOCHLORHYDRIA)

Unfortunately, the lack of stomach acid, a condition known as hypochlorhydria, doesn't pertain solely to the elderly. Not only does the limited stomach acid fail to trigger its intended reactions, but also it is not enough to break down foods that release the nutrients, vitamins and minerals our bodies desperately need.

The majority of the micronutrients in foods are released in the stomach. When this process doesn't work as intended, an automatic enzyme deficiency is created.

## DIGESTIVE ENZYMES AND LIVER DISEASE

People suffering from liver disease are most likely suffering from an enzyme deficiency at the same time. Alpha-1 antitrypsin, a more common condition, is a genetic disease that impacts about 1 in 1,500 people around the world. This usually affects adults between the ages of 20 and 50 with breathing and other respiratory issues, and nearly 15 percent of adults will develop some sort of liver condition.

There are also other illnesses, which at first may not appear to be related to an enzyme deficiency, that need to be explored.

For instance, Crohn's disease could be a direct result of insufficient digestive enzymes. Deficiencies of Iron and Vitamin B12 could be signs that the digestive system is failing to remove the proper nutrients from the food you eat. The same goes for Vitamin D deficiencies, which indicate malabsorption, and Vitamin A, which can cause blindness.

But you don't have to wait until you have a diagnosed sickness to determine whether you enzyme deficient. Other, minor, conditions can be a warning sign, such as:

1. **Gastrointestinal Complaints** – One gauge, which is paired with stomach distention around an hour after eating, is diarrhea. Flatulence and indigestion can be indicators of an enzyme deficiency.
2. **Stool Changes** – When your stool is pale and floats in the toilet bowl, this is a sign that your pancreatic enzymes are not performing the way they should. This is because fat is not being broken down properly and fat floats. One more sign can be greasy or fatty deposits left floating in the toilet bowl.

3. **Fluoridated Water** – Recent research proposes that fluoride in our drinking water may be responsible for the decreased activity of both pancreatic lipase and protease. The report, which was conducted on pigs, has major repercussions relative to increased numbers of free radicals and loss of mitochondria production. (Might be a good reason to look into a water purification system like AquaTru.)

So the answer to “who should be taking digestive enzyme supplements,” as it turns out, is more than we first thought.

## Best Digestive Enzymes & Their Benefits

There are many benefits to taking supplements of digestive enzymes. As we know from above, we simply cannot process food without them. But going a bit further, there are three important reason for taking digestive enzyme supplements:

- They promote gut health by reducing the amount of stress in the gastrointestinal tracts.
- They improve the absorption of nutrients into the body, helping to stop malnutrition.
- They act as a counter measure against naturally occurring enzyme inhibitors, such as those found in peanuts, nuts, seeds, egg whites, wheat germ, beans and potatoes.

There are three sources from which digestive enzymes are sourced:

- **Plants** – Especially from fungi and certain fruits.
- **Animals** – Mainly from the pancreatin from hogs or oxen.
- **Fruit** – Pineapple and papaya are the best.

## OPTIONS FOR VEGETARIANS

While off-the-shelf digestive enzyme products can have a plethora of ingredients, some are limited solely to plant-based contents. These are ones geared toward vegetarians and vegans.

Plant-based supplements will typically contain bromelain, an enzyme most commonly found in the pineapple, and papain, which is found in papaya. Others

will include herbs and spices that complement these enzymes. While it's not an enzymes, but instead an herbal remedy, Amla, or gooseberry, extract is sometimes included for its ability to synergize with other compounds.

Then there are also products built specifically for vegans. For these, the pancreatin source comes from *Aspergillus Niger* (a common fungus), in most cases. This is a fermented product, not an extract such as ox or hog bile.

## FULL SPECTRUM DIGESTIVE ENZYMES

For basic improved digestion, it's important to look for full spectrum blend of digestive enzymes. A few tips include:

- Make sure your blend has herbs, such as ginger and peppermint, which support digestion.
- Look for options with more lipase and bile salts if you suffer gallbladder problems.
- If you see Betain HCl on the list of ingredients, you'll want to make sure pepsin is there, too.

It's important to keep in mind your specific needs because some people will require more pancreatic enzymes than others. Many supplements will hold some level of pancreatin, which is a combination of all three pancreatic enzymes.

When all is said and done, enzyme supplements have great value. Have you improved your gut health with digestive enzyme supplements?

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*Maximize your health and boost your immune function with LIVE probiotics. Our Natural Living Family "special" will help you on your way with your first bottle for FREE. [Check out Just Thrive Probiotics & Antioxidant support HERE!](#)*

# SECTION TWO

## Using Essential Oils Safely & Effectively

### Three Steps to Healing Your Gut

- 1) Avoid Food Triggers
- 2) Use Essential Oils
- 3) Restore Microbiome

*In addition to following our gut-healing, inflammation-soothing essential oil protocols, everyone with leaky gut and inflammatory bowel disorders will benefit from taking high-quality supplements to repair leaky gut and balance their microbiome. The best way to get started is to take LIVE probiotics every day, and...*

*Our friends at Just Thrive want to help you on your journey by blessing you with FREE bottle (no strings attached).*



**Get a Free 14-Day Supply!!**  
*Maximize your gut health and boost your immune function with this special blend of LIVE probiotic & antioxidants.*

**➔ Redeem your FREE bottle here!**

# CHAPTER 7

## Getting You Started with Aromatherapy

Although the use of aromatherapy essential oils isn't new, it has definitely gained a wild fanfare in recent years. More and more people are using essential oils in place of artificial fragrances in the home and on their bodies, for culinary purposes, and for health and healing. The more we use aromatherapy essential oils, the more we fall in love, and it's hard to remember a time when aromatherapy was an unfamiliar term.

Everyone has to start somewhere, though – few of us were born into families who already used aromatherapy essential oils regularly. If you are just starting out and find yourself a bit lost in the jargon, recipes, and excitement, don't worry. You aren't alone. Let's take a little bit of time here and catch you up to speed.

### **Our Favorite Aromatherapy Essential Oils Blends**

I'm not sure about you, but my wife and I utilize aromatherapy essential oils all day long. It enhances our mood, health and virtually every aspect of our lives! We have an essential oil diffuser in nearly every room in our home, and once we gave all those toxic plug-ins and aerosols the boot, we started to notice some pretty cool changes in our health and the health of our children.

These are our favorite blends:

- ***Good Bye Allergy Blend*** – Lavender, lemon, and peppermint
- ***Healthy Digestion Blend*** – Anise, caraway, fennel, ginger, lemon, tarragon
- ***Focus Blend*** – Cedarwood, frankincense, sandalwood and vetiver
- ***Christmas Blend*** – Fir (Balsam, Douglas, white), peppermint and vanilla absolute
- ***Holy Anointing Blend*** – cinnamon, frankincense, myrrh (cinnamon is a hot oil when used topically. Always dilute it appropriately or use in a diffuser instead of topical blend.)
- ***Immune Boosting Blend*** – Cinnamon, clove, eucalyptus, rosemary, orange and lemon

- **Joyful Blend** – Orange, lemon, bergamot, grapefruit and vanilla absolute
- **Deep Breathing Blend** – Cardamom, eucalyptus, lemon, peppermint, rosemary, tea tree
- **Sleepy Time Blend** – Roman chamomile, lavender, and vetiver

*At this point, you may be asking, “How can these aromatherapy blends make a difference in my life?”*

Well, it’s all about the healing power of aromatherapy essential oils...

## What are Aromatherapy Essential Oils?

*“And the leaves of the tree are for the healing of the nations.”*  
~ (Revelation 22:2)

I can think of no other substance on earth that epitomizes this Bible verse than aromatherapy essential oils.

The very first questions a newbie should ask – what is aromatherapy, and what is an essential oil? You might associate aromatherapy with massage therapists and thick massage oil. Or perhaps you picture heavy patchouli incense and a Volkswagen van. Or the base, middle, and high notes of a perfumery’s concoctions.

All of these can be accurate associations with aromatherapy – while at the same time, each of them may or may not be using essential oils.

The term essential oil doesn’t refer to how much we need it (though many of us argue that they are pretty vital parts of our daily lives!). In fact, the original scientific term for these oils is volatile oil, which paints a much better picture of what we’re referring to.

The volatile oil – or essential oil – of a plant is the part that releases quickly from the plant and into the air. The Encyclopedia Britannica describes the naming rationale:

*Essential oil, highly volatile substance isolated by a physical process from an odoriferous plant of a single botanical species...Such oils were called essential because they were thought to represent the very essence of odor and flavor.*

The essential oil is why you smell a rose when you lean down and sniff the blooms. It releases as you walk through the garden and shake up the plants. How many plants can you identify by their scent alone? The scientists who had the privilege of naming this chemical component could think of plenty, as well, and thus believed the oils to be “essential” to the plant as much as it was volatile (quickly released).

We now know that aromatherapy essential oils are more prevalent in some plants than others, and can be found in roots, stems, leaves, and blossoms alike. They aren't necessarily an essential part of the plant – in fact, we don't always know the function the volatile oil serves, and it can vary from plant to plant. But we do know that aromatherapy essential oils are complex, with broad therapeutic actions that vary based on their composition.

Ultimately, the essential oil of a plant is a component of the plant itself, filled with vast amounts of molecules specific to that plant's needs and uses. This is important to remember, because chemical composition (*phytochemistry*, the chemistry of plants), tells us how we can best use a substance.

## History of Aromatherapy

More recently, essential oils have been used under the guise of the aromatherapy profession, although we have records of people using them as far as thousands of years ago. Did they have essential oils like we know them today? Of course not! Modern distillation procedures are relatively new in relation to the Earth timetable. However, Nicander (b.c. 183—135), a Greek poet and physician for example, “Spoke of the extraction of perfumes from plants by what we should now call a process of distillation” and we have other ancient accounts of crude methods to extract the precious oil from plants.

The term aromatherapy is relatively new in our history, coined by a French chemist named Rene-Maurice Gattefosse in the 1930s. His work ultimately led to the modern understanding of essential oils as therapeutic for health and healing benefits.

This shift toward isolating and emphasizing the use of aromatherapy essential oils as a separate and concentrated compound with the goal of therapeutic results has shaped what we know about essential oils today. It gave us the vials of pure essential oils, separate from the other compounds they shared space with in the larger composition of a plant. But it wasn't the first time essential oils were recognized for their healing abilities.

Because essential oils are part of herbs – the aromatic compound that hits your nose right away – they can be part of herbal preparations. The practice of using herbs as medicine dates back to the beginning of human history, and since we have always had noses, the fragrant component of those herbs did not go unnoticed.

Most civilizations utilized fragrant herbs for medicine and rituals, and oil extractions were commonly used to separate the fragrance and medicinal benefits from the bulkier material of the rest of the plant. Many of the oils used in this way were rich in essential oils that we continue to use to this day – myrrh, cinnamon, frankincense, cassia – prized for their fragrances and traded vigorously throughout the ancient world and into the development of the Western world we know today.

The ‘spices’ were burned, infused into carrier oils, and even crudely distilled. This crude distillation produced something similar to what we nowadays call hydrosols, which contain minute amounts of the essential oil from the distillation process.

Today, thanks to pioneers such as Gattefosse, we really do have essential oil extraction down to a science, and we’re learning more all the time.

## **Herbal Preparations vs. Essential Oils**

There is no doubt that the ancients realized the fragrance was something more than just pleasant. Such was the confidence in the therapeutic power of aromas that, at one point, the entire prevailing theory of disease centered around bad and good smells!

So when we talk about aromatherapy essential oils being used from ancient times – for example, in the Bible, when fragrant offerings were commanded and incense was to be burned – it’s true in that the essential oils were present and utilizing the fragrance was the intended result.

Where ancient and modern use differs, however, is that we are now able to isolate the essential oil – not simply include it, but use it exclusively. An herbal oil is herbal matter infused with an oil such as olive, so that it contains the essential oil (albeit in very small amounts) alongside many other compounds from the plant. There are fewer compounds, obviously, since the plant matter is strained away and discarded, but there are still many, creating a highly usable oil infused with a range of medicinal properties.

The essential oils as we know them, on the other hand, take the small amount of volatile oil from part of a plant and concentrate it so that it's the only product of the plant remaining. This is usually accomplished using steam distillation to release the droplets and then catch them. Because it's an "extraction" of a very small facet of a plant, it takes large volumes of each plant to create even a 5ml bottle of essential oil.

It comes down to this: for herbed oils, the oil is now medicinally stronger than it was before, but the herbal matter is more varied and less concentrated than an essential oil.

For aromatherapy essential oils, the oil is concentrated and specific in use, condensed from large amounts of herbal matter that have been isolated for a single component, therefore compressed into much, much smaller volumes of oil.

To break it down further, the herbal oil can contain the essential oil but not vice versa.

## **How Aromatherapy Essential Oils Work**

Let's put this into practical terms. Cinnamon, for example, is a delicious spice. The cinnamon that you sprinkle onto toast is essentially ground-up bark and is the culmination of a combination of many chemical components – yes, including essential oils.

In cinnamon sticks or ground cinnamon, the oils are dispersed amongst the other components, giving you a wide range of substances to stir into tea or add to Christmas pie.

Now, to make cinnamon essential oil, that same bark would be placed through a distillation process, releasing and separating the essential oil. Great amounts of bark would be used in the process, and precious vials of aromatherapy essential oil would be the result.

Same bark, same plant. But would you shake your cinnamon essential oil bottle all over your morning toast, just like you did with the powder?

## Putting Oils in Context of the Plant

When the essential oil – whatever is left after processing, packaging, and then your cooking methods – is part of the whole product, it is in such small and dispersed amounts that it's only a small contribution to the whole. You're enjoying powdered cinnamon for the combination of molecules that create texture, flavor, and varied benefits.

When you use an essential oil, you should use it for the very specific benefits that those specific molecules can provide. In the case of cinnamon bark, it's pretty potent as an antibacterial, moreso than a dessert seasoning.

And while it still does taste great and could be used with proper care in a culinary setting (we'll get to that in a minute), it's also a dermal irritant. In other words, it could really hurt your skin or the tender lining of your mouth and throat if you were to use it just like cinnamon sticks or powder.

To throw another wrench in the works, the essential oil gathered from the bark won't have the same components as that of the essential oil taken from leaves. And it will vary between varieties of the same plant species, growing methods, seasons, and even the way it's harvested. These are volatile oils, remember? They are pretty delicate in their composition and will adapt based on their conditions and use to the plant.

Pretty powerful stuff! The progress that we have made since *Aromatherapie* was first written allows us to choose aromatherapy essential oils for specific uses based on what we know of their composition. Rather than burning whatever smells good and hoping it chases away disease, we can combine the art and science of aromatherapy to be intentional and effective in our use.

## How Aromatherapy Essential Oils are Used

The term *aromatherapy* was coined to combine aroma and *therapy*, indicating therapeutic benefits using fragrance. This is still the heart of aromatherapy, but essential oil use has expanded in many ways and toward many uses. The main categories of use are:

- Inhalation
- Topical
- Internal

## INHALATION

Not only is inhalation the oldest form of aromatherapy essential oil use, it is also arguably the safest. Oils diffused throughout a room are relatively safe for most people in most cases due to the low level of concentration when used correctly.

More direct effects can be obtained by breathing in a steam directly or inhaling right from the bottle, or from a few drops on a cloth. This carries the volatile oil directly into your respiratory system and mucous membranes, diffused throughout the steam or air molecules.

## TOPICAL

Topical use is a step further than traditional inhalation-based aromatherapy, though still familiar in the context of massage therapy, which often utilizes fragrant aromatherapy essential oils for massage applications.

Instead of the broad diffusion through air droplets that inhalation provides, topical use of aromatherapy essential oils is much more direct. But at the same time, the oil is absorbed through the barrier layers of skin, while inhalation moves quickly through the thinner mucous membranes. Knowing your oil and the goal you have in mind can help you determine which application is more appropriate.

In theory and in professional practice, some aromatherapy essential oils can be used on the skin undiluted. However, the safest application is via dilution. Carrier oils like olive, coconut, jojoba and avocado oils usually have benefits of their own, and you can easily combine a couple of drops in a teaspoon to dilute the oils and help bypass potential irritation.

## INTERNAL

Finally, and most controversially, some oils are safe for ingestion. The most basic form of ingestion is in culinary use. Revisiting cinnamon, you could use cinnamon essential oil in a cake batter, but you'd only need one drop for the whole batch vs. a tsp or more of the bark powder.

Another common internal preparation is to combine it into a drink. Do remember that oil and water *do not mix*, so simply adding a drop to water will leave that drop undiluted. Some oils are irritants and all oils are very strong, so it's best to be safe and dilute it into some coconut oil first.

Many aromatherapists believe aromatherapy essential oils are never to be ingested, and most will suggest only trained professionals utilize internal methods. Again, it's better to be safe, and for someone just starting out, this is excellent advice to consider. Additionally, when you are dealing with a specific medical condition, it makes sense to talk to your health care provider about ingestion and dosages.

## Conversions and Dilution of Aromatherapy Essential Oils

Dropper sizes vary and volume varies based on oil, so advanced techniques would include more specific measuring techniques. Most bottles that I've seen contain either 5 ml or 15 ml of oil, which would be 100 drops or 300 drops, respectively. For you math enthusiasts out there, this is how the conversions all pan out:

- $\frac{1}{8}$  oz. = 3.75 ml
- $\frac{1}{4}$  oz. = 7.5 ml
- $\frac{1}{2}$  oz. = 15 ml.
- 1 oz. = 30 ml
- 4 oz. = 120 ml
- 8 oz. = 237 ml
- 16 oz. = 473 ml

The final conversion typically looks like this:

- $\frac{1}{8}$  oz. = 75 drops
- $\frac{1}{4}$  oz. = 150 drops
- $\frac{1}{2}$  oz. = 300 drops
- 1 oz. = 600 drops

Using these conversions:

- 1% dilution: 6 drops of EO per oz of carrier oil (1% of 600 drops is 6)
- 2% dilution: 12 drops of EO per oz of carrier oil (2% of 600 drops is 12)
- 3% dilution: 18 drops of EO per oz of carrier oil (3% of 600 drops is 18)

If working with tablespoons are more comfortable for you, 1 oz. = 2 tablespoons. So, there are 300 drops of EO in a tablespoon.

- 1% dilution: 3 drops of EO per tablespoon of carrier oil (1% of 300 drops is 3)
- 2% dilution: 6 drops of EO per tablespoon of carrier oil (2% of 300 drops is 6)
- 3% dilution: 9 drops of EO per tablespoon of carrier oil (3% of 300 drops is 9)

If working with grams, 1 drop of essential oil = 0.02 to 0.03 grams approximately (depending on your dropper), which converts to 20-30 milligrams or 20000 micrograms (µg).

So 30 mg is about 1 drop.

## Application Methods of Aromatherapy Essential Oils

Within the major types of aromatherapy essential oil use, there are many ways to actually apply them. These suggestions and guidelines can get you rolling, but once you are familiar with your oils and their safe use, you can really start to think outside of the box.

### INHALATION

For inhaled oils, you only need a small amount to create a big impact. Diffusers will use a bit more, but direct inhalation is up close and personal and only requires a couple of drops. Here are some of the methods you might use to inhale essential oils.

- **Diffusion** – Good for blends intended to affect the entire room. Place as few as 2-3 and as many as 6-10 total drops in the diffuser or in a pot of simmering water and let it disperse throughout the room. The benefits should be lasting after the diffusion has ended; there is no need to run it continuously. *Ideally for aromatherapy essential oils that are energizing, antimicrobial, promoting memory and focus, relaxing. Ex: citrus, lavender, rosemary.*
- **Personal inhalation** – Good for portable, direct inhalation for specific benefits to an individual. Fewer drops are needed due to the close proximity of use. Up to 20 drops of an essential oil blend can be used in a commercially made personal diffuser. Or consider jewelry style inhalers such as a piece of porous jewelry, a piece of cloth or handkerchief, or inhalers made of a wick of sorts placed in a glass tube. Place 1-2 drops

of a single oil or a pre-prepared blend of oils on the jewelry inhaler, then hold it close to the nose and breathe in periodically. *Ideally for personal benefit such as clear breathing, focus, anxiety, headaches, and stress relief. Ex: eucalyptus, bergamot, peppermint.*

- **Steam inhalation** – Technically also personal inhalation, “tenting” is more intensive and not very portable. When the aromatherapy essential oils need to be inhaled in greater concentration and affect the respiratory system more directly, 2-3 drops of a single oil or pre-prepared blend can be placed in a bowl of boiling water – usually warmed in and poured from a tea kettle. Place a towel over your head and drape it over the bowl (forming a tent, of sorts), close your eyes, and breathe deeply. Avoid the more hot oils that would irritate mucous membranes. *Ideal for clearing the nasal passages and respiratory system. Ex: eucalyptus, citrus, tea tree.*
- **Sprays** – Aromatic sprays have benefits of both inhalation and, in the case of antimicrobial oils, surface cleaning benefits. Combine 10-20 drops of a combination of oils to ½ oz 190 proof grain alcohol or the 91% isopropyl you can find in the store, then add ½ oz distilled water and shake to combine. Spritz in the air, on linens, or on clothes as desired. *Ideally for air freshening, cleaning, antimicrobial purposes, body sprays, and even topical anti-inflammatory benefits and healing. Ex: tea tree, lemon, thyme.*

## Topical Application

Aromatherapy essential oils placed directly on the skin are able to sink in through the pores and then move through the body, creating both topical benefits as well as systemic. While there is a time and a place for neat application, the smart way to apply oils topically is to first dilute them. Carrier oils are non-volatile oils and are not irritants, so essential oils can be blended into them first and then the mixture applied.

*Popular carrier oils include: coconut, olive, almond, jojoba, avocado, apricot, and sunflower. Most carrier oils have benefits of their own that can be explored to create even more beneficial blends.*

Topical application can be direct in a small area such as for scar healing or broader such as for a massage oil. The important variables here are dilution rates.

- **0.5% dilution** – Strong oils, application on children, and oils that you are testing for sensitization. The heavy dilution allows for greater distribution

throughout the application and less per dose. *Ideal for irritating oils, children, and those who are highly sensitive. Ex: cinnamon, eucalyptus, peppermint.*

- **1% dilution** – Even adults who tolerate oils well will still find some oils too strong for normal applications. A 1% dilution rate protects your skin while still enjoying the benefit of the more powerful essential oils or use on sensitive areas of the skin. *Ideal for facial applications, and treatment of delicate skin. Ex: tea tree for acne, frankincense in a facial toner, etc.*
- **2-3% dilution** – This is the most common dilution range, suitable for massage oils, healing treatments, lotions and creams, and cosmetic applications. It is enough to gain significant benefits of the essential oil without risking sensitization. Unless the oil is particularly potent or you have sensitive skin, this is likely to be the dilution you'll use. *Ideal for most applications – lotions, creams, salves, balms. Ex: geranium, helichrysum, chamomile.*
- **5%+ dilution** – Higher concentrations should be used with care. Or, extremely safe oils can be used in small amounts on small areas of the skin – for example, as a strong acne treatment. Know your oil's safety profile and choose high concentrations with caution. *Ideal for specific situations based on either extreme safety and high potency in a targeted area OR further dilution beyond the initial formula. Ex: lavender, sweet orange, tea tree.*

## Ingestion

Typically reserved for culinary oils or for use by trained aromatherapy professionals, ingestion is used when there is a need for specific dosing or certain areas of the body need to be reached that cannot easily be affected by other application methods. Dosage is important, as does education before use. Some of the more common ways ingestion is used are highlighted here.

- Excellent for digestive oils or simply to enjoy the flavorful concentration, 1-2 drops can be mixed thoroughly into a lipid or syrup portion of the recipe and then added to the rest of the batch. *Ideal for oils that benefit digestive wellness, essential oils of culinary herbs, and oils of culinary spices. Ex: dill, sweet orange, cinnamon.*
- Dispersing an oil into a glass of water is the quickest way to ingest it, but do not miss the importance of both dosage and dilution. One drop is more than sufficient, and remember that oil and water do not mix! Without dilution or dispersion, the drop is likely to make direct contact with

sensitive internal organs. You can use a dispersing agent like Solubol for essential oils taken in water, or you can quickly mix a drop into a teaspoon of honey and take the spoonful. *Ideal for quick and simple use, especially for digestive wellness. Ex: chamomile, ginger, lavender.*

- A truly medicinal application, encapsulated oils are used to get the oil directly to the stomach, or – in the case of enteric-coated capsules – to the intestines. This is used when the oil is to be consumed regularly and when the individual struggles with the taste of it in other forms. Dilute the essential oil into a carrier before making the capsules, or purchase encapsulated oil blends already made. *Ideal for professional guidance, digestive health, and oils that need to make it directly to the intestines. Ex: peppermint, lavender, lemon.*

## Beginners Guide to Aromatherapy Essential Oils

So now that you know what an essential oil is to a plant, how to differentiate between an herbal oil and an essential oil, how the ancients used oils and how that has evolved over time to the modern science of aromatherapy – are you hooked yet?!

Aromatherapy is absolutely incredible. Plants are literally throwing these substances at us (Really! Pay attention the next time you walk past a lavender shrub). And then chemists can isolate those substances and analyze their very molecules. And THEN we can begin to study how these things impact our health? Amazing. If you aren't hooked yet, you will be once you get started.

## 5 Steps to Get Started with Aromatherapy Essential Oils

1. The best place to begin with aromatherapy essential oils is with familiar scents. Lavender is both a familiar scent and a versatile and safe essential oil. The citrus oils are also easy to use on their own or in blends. Choose a few, and then learn all you can about them.
2. Next, locate a source and make your purchase. Remember that it takes large amounts of plant matter to make small amounts of oil, so a cheap bottle of a precious oil is not likely to be high quality. You want real essential oils – nothing synthetic – and always pure, especially if you are going to learn to safely ingest them.
3. Once you have a few oils ready to go, start by diffusing them on their own, and then in combinations of a couple of drops of two or three of them at a time. You can buy a diffuser, or you can simply simmer a pot of water on the stove and add your drops there.

4. When you are familiar and comfortable with the scents, you will start to learn what blends you like. As you learn more about their effects, you can begin to create blends for specific reasons, like energizing your sluggish afternoon or clearing the air after a virus passed through the house.
5. From there, you can begin to experiment with diluted topical applications, like a soothing peppermint rub or a calming massage.

The important thing is to always be learning – never stop learning! The more we learn and grow, the better we can utilize these precious, truly aromatherapy essential oils.

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# CHAPTER 8

## Using Carrier Oils for Double Benefits

When reading about essential oils – whether you are brand new to essential oils or digging for new recipe blends – you’ll often see a carrier or base oil included in the discussion, or see mention of dilution. So what is a carrier oil, and how do you know which carrier oils to get?

The carrier oil is a fatty extract, usually cold pressed from its source. Individual allergies aside, carrier oils are not likely to cause sensitization and therefore make an excellent medium to disperse the more concentrated essential oil across your skin.

Carrier oils are nutritive and have healing properties of their own, so in your discovery of essential oils, don’t forget to take some time to learn about your options for carrier oils, as well.

### **When to Use Carrier Oils**

Before you ask – yes, carrier oils are necessary! Once you get the hang of it, adding your essential oils to a carrier first is hardly any extra work, and in return you are actually amplifying the efficacy of your healing application.

It might seem backwards to say that diluting a substance makes it more effective, but in this case it is true. Essential oil applications without carrier oils (called “neat” applications) put the oil directly onto your skin. A few things of note are happening here:

1. The skin may be sensitized to the concentrated oil, harming the body by creating an allergic response.
2. The essential oil may quickly evaporate off the surface of the skin, whereas the lipids in a carrier can help keep it on the skin longer. Remember, essential oils are “volatile organic compounds,” which means that they are emitted as gas when exposed to open air. This is why you may notice their aroma within seconds of opening the bottle. Carrier oils may decrease the absorption.

3. You can't massage it in or disperse it across wider spaces.
4. An ingested neat oil may cling to the mucous membranes and never make it to the intended site of application.
5. Not to mention, ingesting neat oils can easily burn your mouth and irritate your esophagus!

*Bottom line:* using essential oils undiluted is largely a waste of time, money and can place your body in harm's way. While there are instances when neat is acceptable – gentle oils, or oils under the supervision of a trained aromatherapist – your best bet is to dilute essential oils into a carrier every time.

Without essential oils, you will also use carriers as the base of most DIY herbal preparations, from lotion bars to chapstick to salves. Start with the most accessible carrier oils, then work through others as you learn their benefits and ideal uses.

## **4 Categories of Carrier Oils to Know**

Herbal supply stores, health food stores, and online supply shops will offer you dozens of carrier oils to choose from. Don't get overwhelmed at your options! What is a carrier oil? Carrier oils are relatively simple to understand, and for most preparations, you can't really go wrong.

We'll walk through the more common of the carrier oils here, but if you run into one you aren't sure about that isn't covered here, take the time to look it up and learn what it is and does. Self-education may not teach us everything, but it can take us a long way if we pursue it.

### **1. BEGINNER CARRIER OILS: OLIVE AND COCONUT**

The best place to start is at the beginning, and for DIY aromatic and herbal preparations, that's right in your own kitchen. Really, if we take it back to Hippocrates encouraging us to find our medicine in our food, the kitchen has been the starting point for many generations!

Let's spend a bit of time on these two, as this is likely where you'll start with carrier oils and diluted topical preparations before branching out to other carrier oils.

## Olive Oil

Almost undoubtedly in your kitchen, as it is probably the most commonly used culinary and carrier oil out there. Because it is used so much, however, it may be adulterated with similarly-colored sunflower and corn oils.

Once again, we are reminded to check our product sources carefully! Extra virgin olive oil – which is cold pressed and minimally processed – is the ideal, and it will be a light green color with a thick scent. Sometimes, the scent can be off-putting, so you'll want to choose olive oil when making a highly aromatic blend or preparation. In 2015, a double-blind, randomized study took place in which olive oil was used on diabetic patients with ulcers on their feet. After four weeks of treatment, the patients who'd received olive oil topical treatments had smaller, less pronounced ulcers than those who received placebo or nothing. The use of olive oil as a carrier can add to the soothing, healing effects of your dilutions and preparations.

*Choose this when: Making homemade salves, creams and oil pulling. Good for dry skin.*

## Coconut Oil

A saturated fat taken from coconuts, which are actually giant seeds. The oil spreads over the skin easily with very little greasy residue, taking the oils you've blended in with it. Even without anything blended into it, coconut oil has been shown to enhance the wound healing process. You probably already use coconut oil regularly; its popularity has recently sparked internet jokes about how much you can do with coconut oil: fix your hair, fix your budget, fix your significant other... The jokes, of course are rooted in reality, poking good-natured fun at the almost comical range of things you can do with coconut oil.

*Choose this when: Making most of your DIY projects and is a nice massage oil carrier. Tasty addition to your oil pulling ritual. And is best for oily skin as it leaves little oily residue.*

The way coconut oil is processed will affect its uses. Cold pressed coconut oil (virgin, extra virgin) will retain the coconut scent and will become solid when room temperature or cooler. Heat processed coconut oil will not have the taste and smell of coconut, and fractionated coconut oil (the most processed of the options) will not become solid. The tendency to solidify can be good or bad for your preparations – for quick dilutions, it is sometimes nice to mix up the essential oil into a semi-solid coconut oil and then be able to rub on a quick-melting preparation as it warms to your skin.

## **Fractionated Coconut Oil**

Literally a fraction of the coconut oil – being that all of the long chain triglycerides have been removed – fractionated coconut oil is a lightweight emollient that is a must-have for dry or sensitive skin. Also referred to as FCO, It provides an effective barrier without clogging pores and leaves your skin feeling smooth and never greasy. It is considered to be the most cost-effective oil because it will not go rancid. In fact, some suppliers claim that it can be mixed with other (more expensive) carrier oils to extend their shelf life. However, once you add essential oils that begin oxidation process, the carrier oils will begin to lose their shelf life stability. It is colorless and odorless, and it incorporates perfectly with other oils without altering their scent, appearance or effectiveness.

*Chose this when: Quick dilutions with what you have on hand; enhancing skin healing; perfect to treat health conditions like infections, open wounds and chronic disease.*

## **2. NUT & SEED CARRIER OILS: ALMOND AND JOJOBA**

These oils are probably not in your kitchen for cooking, but they are still very commonly purchased, easy to work with, and rich sources of skin-health nutrients. If you are ready to take a step beyond your pantry, these make a good place to start.

### **Almond Oil**

Very mild in scent and flavor, almond oil is nutrient dense and versatile. Almond oil is a good topical source vitamins A & E, adding to the many nutritional benefits that almonds have simply as a food. Traditional uses indicate almond oil for dry skin conditions, like psoriasis and eczema. As an emollient, almond oil can be soothing for sore skin. It's fabulously nutritious and is a favorite for skin.

### **Jojoba Oil**

If you've not yet heard of jojoba (or heard it pronounced), it's ho-HO-ba that you are looking for. Derived from the seeds, jojoba is actually classified as a liquid wax, which adds another option to your carrier oil choices. It doesn't solidify as quickly as coconut oil does, but the consistency is well suited to deep penetration and moisturizing. Jojoba has an excellent shelf life, which is perfect for storing until you need it for small dilution preparations. It has been studied for anti-inflammatory properties, wound healing ability, and efficacy in face-mask treatments for acne. It's one of Sabrina's favorite and she uses it as a base for her carrier oil blend.

*Choose these when: Skin is dry or inflamed; nutrients are lacking; versatility and ease of use are desired. Good for most DIY projects.*

### **Rosehip Seed Oil**

This is one of Sabrina's favorite carrier oils for skin conditions. You don't have to use it solo, but it can be a great oil to add into any blend you're using to boost the nourishing richness. It's high in Vitamin C and is a soothing emollient for a variety of skin conditions. It can even be part of a skin conditioning lotion bar!

*Choose this when: Whenever you need additional support for your skin or add this into healing skin serum.*

## **3. FRUIT CARRIER OILS: APRICOT, AVOCADO, AND GRAPESEED**

Easy to remember thanks to kitchen staples, these oils typically come from the seeds of their respective fruits, as is the case with the other carrier oils. These choices are as affordable and accessible as they are versatile.

### **Apricot Oil**

Available as expeller pressed, refined, or cold pressed, the difference is simply texture and preference. Apricot oil's nutrient profile includes vitamins E and A as well, or at least the carotenoid precursor to vitamin A. It is edible as well as beneficial topically. Because it is so incredibly gentle as well as nourishing, apricot oil is a good choice for applications that will cover a good deal of skin or that will be applied on children heavily.

### **Avocado Oil**

Avocado as a fruit is one of the best sources of fat and nutrients (and dip!) you can find. The oil itself, as you might imagine, is an emollient, taken from the smooth flesh around the pit. An exception to the typical seed-derived oil, avocado oil is rich in nutrients and excellent at penetrating the skin. In another animal trial, this one occurring in 2008, avocado oil was also found to have good wound healing ability. Before elaborating on the study, the researchers noted that the oil is "rich in nutrient waxes, proteins and minerals, as well as vitamins A, D and E...an excellent source of enrichment for dry, damaged or chapped skin."

## **Grape Seed Oil**

Also a culinary oil, grape seed oil topically is used for its light texture and lack of residue. Once on and in the skin, grape seed is another oil verified for its contributions in wound care and healing. The high levels of fatty acid content and antioxidants in grape seed oil contribute to much of its beneficial composition. Without the heaviness of more saturated oils, grape seed makes a cleaner topical application with less of a greasy film.

*Choose these when: Creating a massage oil; looking for deep hydration; creating chapsticks and balms.*

## **4. ESSENTIAL FATTY ACID CARRIER OILS: BORAGE AND EVENING PRIMROSE**

While most of the carrier oils we've talked about and what is on the market are decent sources of essential fatty acids, some oils are considered good sources of these vital nutrients.

### **Borage Oil**

Taken from the seeds of a flowering perennial herb, borage oil is a potent source of omega-6 essential fatty acids. While we usually take omega-3 to counter the unhealthy balance of essential fatty acids that our diet affords, borage oil as a natural source is a different story. Omega-6, at its root, is actually as anti-inflammatory as omega-3, which likely aids in the topical benefits of borage oil. It's in the overconsumption of junk-food-sources and lack of balance in the omegas that we begin to see trouble. Borage oil has been used for dermatitis and other anti-inflammatory preparations.

### **Evening Primrose Oil**

Named for the flowers that open only in the evenings, evening primrose oil is a more delicate oil that must be cold pressed, refrigerated, and should not be added to any heat preparations. Typically, evening primrose is consumed in supplement or culinary form, and of those uses it is highly researched and evaluated for its benefits as a source of essential fatty acids. For topical use, results seem to be similar to that of borage: anti-inflammatory effects that relieve flare ups such as dermatitis.

Although these are culinary oils, we already get large amounts of omega-6 in the diet. Be cautious with long-term culinary ingestion without professional guidance.

*Choose these when: Resolving topical inflammation; essential fatty acid deficiency/imbalance is a problem. Creating hormone-balancing serums and women's health blends.*

## How to Use a Carrier Oil

For simple dilution purposes, start with small amounts of your carrier oil and work up as you become comfortable and have sanitary ways of storing your blend. Always place blends into heat-sanitized containers, particularly if they will stay there for any amount of time.

Start with 1 tsp of carrier oil, or 5ml of oil. It will vary from 60-150 drops depending on the specific oil. Since it's oil we are dealing with, the assumption is that it will be closer to 60 than 100. You can assume 100 for extra safety and simple dilutions (1% = 1 drop), or you can calculate based on the more generous 60 drops.

Here's a simple dilution guide (Note some oils need a different dilution amount but this is a good starting place.):

- 1% dilution = 6 drops of essential oils per 1 ounce of carrier oil = good for sensitive skin face, genitals, underarms, babies to toddlers
- 2-3% dilution = 12 – 18 drops of essential oil per 1 ounce of carrier oil = standard adult concentration for massage oils, creams and DIY recipes
- 5% – 10% dilution = 30 – 60 drops of essential oil per 1 ounce of carrier oil = more for acute conditions like infections. Don't use for more than a week at a time.
- 25% dilution = 150 drops of essential oils per 1 ounce of carrier = for one-time application like wart removal, skin tags, or areas with localized pain.
- 50% dilution = 1:1 ratio of carrier to essential oils = not recommended unless under the supervision of a trained professional.

Stir the essential oil into the carrier, then apply as indicated. And that's that! You've successfully diluted your essential oil and enjoyed the added benefit of a nourishing carrier oil.

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# CHAPTER 9

## Culinary Dosing & Cooking with Essential Oils

Learn how cooking with essential oils safely (and deliciously!) can help you cook up nutritious concoctions in the kitchen.

Combining nutritious foods with flavorful spices and herbs is a time honored tradition and a beautiful picture of God's design for the Abundant Life. The flowers and herbs that grace our gardens are also delicious sources of wellness. Extending this celebration to cooking with essential oils as well widens our appreciation for creation and all of the goodness available at our fingertips.

### **Cooking with Essential Oils Ingestion Controversy**

Admittedly, the ingestion of essential oils is a hot topic with much controversy. What, if any, oils can be ingested and how do we do it? There are plenty of opinions out there, but past precedent alone tells us that cooking with essential oils is nothing new.

Essential oils and extracts have been used as flavoring agents for years. It's just too easy to add a drop or two of an intensely flavored oil in place of time consuming ingredients with much more volume.

In addition to flavor, cooking with essential oils are regularly tested by researchers for their potential to improve food safety. Antimicrobial oils, the theory goes, may be able to minimize food borne illness if manufacturers added it to packaging.

So the idea of cooking with essential oils or incorporating them into our kitchen process is nothing new. The important thing is to do it safely, appreciating the differences between a whole herb or spice and its essential oil.

You'll also want to note that not every essential oil is a good choice for cooking. Sometimes cooking with essential oils changes the taste and it doesn't taste quite as yummy as the whole herb. Sometimes the oil has too much of a certain component, making it less than ideal or even unsafe in high quantities. Fennel

is a good example, when a woman ate an “undisclosed amount” of fennel cakes with essential oil in them and experienced seizures.

Knowing all about the oil you’d like to use – its safety, profile, and precautions – is important. With proper use, dilution, and amounts, I believe cooking with essential oils can be both safe and fun.

## **Cooking with Essential Oils Basics**

Cooking with essential oils actually helps to make cooking much easier and more flavorful. There’s always a place for herbs and spices – we need the variety of nutrients they offer! But sometimes, it’s just easier to add a drop or two instead of spending time chopping and slicing and preparing. Other times, a yummy essential oil can take the place of a recipe’s artificial flavoring ingredient (think “orange extract” or “lemon flavoring” or vanilla).

For the basics of cooking with essential oils, remember to:

- Convert
- Dilute
- Delay

### **CONVERT THE AMOUNTS WHEN COOKING WITH ESSENTIAL OILS**

Remember that the essential oil is a concentrated portion of its original source. Just like cinnamon sticks take up more space than cinnamon powder, the essential oil should be used in much smaller quantities than the whole substance.

We don’t quite have a hard-and-fast rule for substituting essential oils for whole herbs and spices, but a good rule of thumb is that a drop will replace a teaspoon and that you don’t need more than one or two drops for a full recipe.

### **DILUTE ESSENTIAL OILS FOR COOKING AS NEEDED**

Another thing to remember when cooking with essential oils is that they should still be diluted into a lipid first. This not only keeps us safe, but it helps to ensure the oil (and flavor!) gets dispersed throughout the whole dish. Learn more about the chemistry of dispersing and diluting essential oils here.

For savory recipes, dilute into a bit of olive or coconut oil. Stir, then add to the recipe.

For sweet recipes, honey or a syrup works well; however, this is better done with non-liquid dishes as neither are sufficient to keep the essential oil safely dispersed in water, tea, etc.

## **DELAY ADDING ESSENTIAL OILS**

Finally, for hot recipes, wait until the end of the process before adding the essential oil. These are called “volatile oils” for a reason – they are relatively fragile and will dissipate quickly in high heat!

For stovetop recipes, after the cooking is finished, stir your diluted essential oil into the dish. For baking, you’ll simply expect to lose a bit of the properties in the process. Dilution throughout the recipe will help, and you’ll still be able to enjoy the flavors of cooking with essential oils, no matter what!

## **Does Cooking With Essential Oils Damage Their Beneficial Properties ?**

This point is worth expanding a bit more before we move on to the best essential oils for cooking. After all, it’s important to understand why we’re doing it and what the benefits and drawbacks may be.

The two concerns with cooking essential oils seem to be:

1. Alteration of chemical structure
2. Evaporation

Both of these concerns are valid, but that shouldn’t stop us from enjoying the culinary use of cooking with essential oils. Minimize exposure to high heat by adding essential oils last, and minimize evaporation by proper dilution and dispersion throughout the recipe.

While one would think boiling would eliminate the beneficial properties, but at least one study found that some properties were better retained during boiling than baking. Go figure!

Because these oils are going to be ingested and some of the properties are indeed retained, it’s important to get high quality, certified organic oils for the absolute best in safety and flavor.

Finally, remember that cooking with essential oils is largely to enjoy the flavors and fragrance, with a dash of potential health benefits on the side. For direct and potent health effects, other remedies or applications are ideal.

## 10 Great Oils to Include in Your Recipes

It doesn't take much essential oil to flavor your dish when using essential oils. Remember you typically need just a drop or two at most. Here are some of the best essential oils for cooking.

### 1. LAVENDER

As one of the most gentle oils, lavender essential oil is a great oil to start with as you learn to cook with essential oils. Its flavor is delicate and floral, excellent for a variety of culinary options.

Try lavender in dessert recipes like scones or even savory dishes like fish bakes. Just a couple of drops for the whole recipe will add just a touch of that unique floral flavor to take your recipe from bland to gourmet.

*Lavender essential oil properties are linked with relaxing, calming, anti-anxiety effects.*

### 2. PEPPERMINT

Cool and refreshing, peppermint essential oil is another easy one to start out with. A drop of peppermint essential oil added to honey turns an ordinary mug of tea into a stimulating, energizing jump start. Peppermint also blends well in lemonade, and for the adventurous – go for a lavender, peppermint, lemonade mix! It's yet another case where the big-three essential oils and flavors work together well when cooking with essential oils.

Use peppermint oil in candies and chocolates for your own mint treats. And while it's not actually cooking, don't forget to use peppermint to make your own oral health treatments.

*Peppermint essential oil properties are linked to energizing stimulation, relief of aches and pains, and even athletic performance.*

### 3. CITRUS

There's just no way around it – all of the citrus oils are great for cooking! Citrus oils are unique in that they are pressed directly from the peel of the fruit, so while you're getting the oddball composition of roots and leaves and bark with other oils, you are much closer to the familiar fruit in citrus.

That also means they aren't steam distilled – which means they've yet to undergo heat. This makes citrus potentially more sensitive to heat applications. Don't avoid it, really, just be aware of that when you set your expectations.

Use citrus oils properly emulsified in drinks, smoothies (orange-cream, anyone?), and treats. Add to stir-fries and casseroles, one-pot wonders, and even in dips. The sky's the limit with these delicious, fruity oils.

*Citrus essential oils are linked to energizing, antimicrobial properties and may even contribute to weight loss efforts.*

### 4. BERGAMOT

While bergamot is technically citrus, it deserves special mention. First, it's not a fruit that we eat so we don't readily relate to the flavor. And second, it is a stand-out anxiety reliever.

Bergamot's flavor is mildly citrus-like. Try bergamot in scone recipes and other treats to take advantage of its excellent pairing with mild flavors.

*Bergamot essential oil is a cold-pressed citrus oil that is associated with stress relieving, anti-anxiety benefits.*

### 5. CINNAMON

Now we're stepping into the meat and potatoes (though, I'm not sure I'd use that literally for cinnamon!). Cinnamon essential oil is strong in both flavor and effects. It's more important than ever to dilute properly to protect sensitive membranes, and to only use a drop or two for a recipe.

Cinnamon essential oil works very well in sweet dishes, particularly cinnamon bark oil to replace powdered cinnamon bark. Think cinnamon French toast, you could add a drop into the eggs before dipping the toast into it, or to give an extra cinnamon boost in cinnamon rolls.

*Cinnamon essential oil is associated with antimicrobial and antioxidant effects, as well as being a stimulating, energizing oil.*

## 6. CARDAMOM

An excellent pairing with cinnamon oil, cardamom is known as a strong antioxidant with potential digestive benefits. Use cardamom and cinnamon as part of a chai flavor blend or in any spice-flavored dessert or treat.

Cardamom powder is also included in some savory recipes, adding a warm flavor touch to meat dishes and main courses. Adding cardamom essential oil in place of the powder may add digestive benefits to the recipe as well as tons of flavor.

*Cardamom essential oil is associated with digestive wellness such as nausea relief, as well as potent antioxidant composition.*

## 7. GINGER

Another digestive substance, ginger root has long been used to relieve nausea and protect the stomach. Ginger essential oil can be used in similar ways, and it is great for cooking.

Add ginger to sweet treats like ginger snaps, gingerbread, and spiced drinks, without a doubt. But also try it in sauces for savory dishes like stir fries and marinades. Fresh ginger has to be peeled and grated, so ginger essential oil can be a quick and easy addition when time is short but flavor is needed.

*Ginger essential oil is linked to digestive wellness, nausea prevention, and anti-inflammatory benefits.*

## 8. THYME

Typically used in cleaning blends, thyme essential oil is best known for its frontline effects against the microbes that cause illness. But it's also an immune stimulant and part of a flavorful culinary herb.

As a savory flavor, add thyme to main course dishes, especially when meat is involved. The herbaceous flavor blends well into soups, stews, and bakes as well. Add to marinades to add an herbaceous touch without being limited to dry rubs. For a surprising twist, experiment with thyme in desserts and treats to offset the sweetness.

*Thyme essential oil is known as an antimicrobial immune stimulant and may help to improve food safety.*

## 9. ANISE

With a licorice flavor, anise essential oil is fun to experiment with as a unique and absolutely delicious addition to nearly any kind of recipe. Anise as a whole herb is used in cookies and treats, mild biscotti, savory marinades, soups, sausages, and various ethnic recipes.

Anise is similar to fennel in flavor and digestive benefits. Replace anise in recipes with a drop or two of the essential oil. But, like fennel, it can be counterproductive and even dangerous if used in excess. Use it cautiously – not daily and not in excess – to enjoy the flavor and digestive benefits of anise essential oil.

*Anise essential oil is associated with digestive benefits, as well as the risks associated with estragole content. Use appropriately.*

## 10. CORIANDER/CILANTRO

Coriander is the seed of the plant and cilantro is the leaf of the same – but their flavors and applications are much different. Their essential oils work in a similar way. While the benefits are somewhat similar, the flavors are different and their best uses are different.

Use cilantro essential oil where you would use cilantro, in salsas, dips, and savory cuisine. Coriander essential oil works well in sauces, vegetable dishes, pickling, and other savory recipes that use herbs.

*Coriander and cilantro essential oils are associated with digestive benefits and antioxidant properties.*

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# CHAPTER 10

## Top Essential Oils for Gut Health

When we say *you are what you eat*, it's not just a quip or playful admonition. What enters your digestive system quite literally shapes your gut health. The digestive tract is a center of nutrition, of course, but also immunity and even neural processes. If the intestinal tract is faltering, the whole body suffers.

So, when we say that essential oils are good for gut health, it means they are good for whole body health, by proxy.

The tides of natural health could not have turned toward natural health at a more important time in our cultural history. Everything about our society is moving us further away from optimal health, shifting the balance of bacteria toward processed foods, dangerous antibiotic-resistant strains, and damaging our bodies from the inside out.

Protecting the core of our body is paramount to natural health, and essential oils are a key partner.

### **Gut Health is The Cornerstone of Wellness**

Raised on the belief that microbes are inherently bad, with products that proudly claim to kill "99.9%" of bacteria, our society seems to struggle with the idea that bacteria can be – and usually are – good for you. We house bacteria on our skin and all throughout our bodies. In fact, the NIH Human Microbiome Project has proven that the human body actually contains trillions of microorganisms; literally outnumbering human cells 10 to 1! And what most people don't realize is that a major hub of microbial focus is in the gut.

It's important to understand that bacteria are most frequently our allies, because the way we approach bacteria ultimately determines how successful our attempts at wellness can be. Without beneficial bacteria to balance the deleterious strains, we are susceptible to intestinal damage, illness, mental and emotional stress, and so much more.

Be sure you don't discount the importance of gut health because it is responsible for a vast majority of your immune function! From a seminal 2008 report:

*The gastrointestinal system plays a central role in immune system homeostasis. It is the main route of contact with the external environment and is overloaded every day with external stimuli, sometimes dangerous as pathogens (bacteria, protozoa, fungi, viruses) or toxic substances, in other cases very useful as food or commensal flora. The crucial position of the gastrointestinal system is testified by the huge amount of immune cells that reside within it. Indeed, gut-associated lymphoid tissue (GALT) is the prominent part of mucosal-associated lymphoid tissue (MALT) and represents almost 70% of the entire immune system; moreover, about 80% of plasma cells [mainly immunoglobulin A (IgA)-bearing cells] reside in GALT. GALT interacts strictly with gastrointestinal functions in a dynamic manner; for instance, by increasing intestinal permeability in replay to particular stimulations, or orientating the immune response towards luminal content, allowing either tolerance or elimination/degradation of luminal antigens, or sometimes provoking damage to the intestinal mucosa, such as in coeliac disease or food allergy.*

## **The Anti-bacterial Problem That Hurts Gut Health**

Before we dive into the Top 6 Essential Oils for Gut Health, we need to address the elephant in the room: our obsession with being "clean" and killing bacteria.

There is certainly a time and a place for antibacterial effects and even antibiotics. In fact, there are essential oils that carry these actions. Sound like a contradiction? It's not. It's not the act of eliminating a bacteria that's the concern; it's the lifestyle of being anti bacterial.

When we are anti-bacterial and out to destroy it haphazardly, we miss the mark in a big way.

Yet, we are interrupting healthy bacterial growth in every phase of life. Babies are increasingly born via C-section, which bypasses the mother's birth canal and loses valuable transfers of beneficial bacteria from mother to baby.

In childhood, children are plastered with antibacterial hand sanitizers while parents scrub the house with antibacterial wipes and sprays – all the while killing weaker bacterial strains and allowing the more dominant to resist the component and live on.

As young adults, we often become a little too free with "junk" foods, damaging beneficial intestinal bacteria. As older adults, we've spent a lifetime damaging

and otherwise eliminating bacteria, and the effects begin to surface as GERD, leaky gut, IBS, and more.

Healing the gut is a topic to come, but for now let's work to overcome the struggles that we've created for ourselves in this dangerously hygienic world!

## Holistic Gut Health Solutions

With a shift in focus away from eliminating dangerous bacteria and toward strengthening good bacteria, holistic options are available to us.

Holistic refers to the body as a whole, which means we can take those first baby steps toward wellness from any area of our lives. Diet is a primary concern, improving the gut directly via the substances that come in contact with it – particularly in light of many meat sources relying on gross misuse of antibiotics that may be retained in the meat itself. Cleaning supplies that do not harshly eliminate beneficial bacteria are also important, as well.

Believe it or not, even stress plays a role in gut health. A Harvard educational article describes this phenomenon as the “brain-gut axis,” explaining,

*The enteric nervous system is sometimes referred to as a “second brain” because it relies on the same types of neurons and neurotransmitters that are found in the central nervous system (brain and spinal cord)... researchers are interested in understanding how psychological or social stress might cause digestive problems.*

Essential oils, if you haven't heard, can meet each of these needs – from improving the intestinal tract directly to cleaning up our cleaning products to relieving stress. If you're ready to be good to your gut, get these oils:

- Thyme & Rose
- Cardamom
- Peppermint
- Clove
- Tea Tree & Oregano
- Fennel
- Tarragon

Each of their preparations and actions are different, but the overarching effects spell wellness for the gut. Here are some of the best ways to use these essential oils for gut health.

## Top 6 Essential Oils for Gut Health

1. **Thyme & Rose** – In a study released earlier this year, researchers found that the primary constituents of thyme and rose oil – thymol and geraniol, respectively – “could be effective in suppressing pathogens in the small intestine, with no concern for beneficial commensal colonic bacteria in the distal gut.”
2. **Cardamom** – Both anti-inflammatory and antispasmodic, cardamom is a soothing oil related to the ginger family. It has been associated with many digestive health benefits, including gastroprotective effects.
3. **Peppermint** – Cool and soothing, peppermint oil has been shown to improve IBS, one of the most common disruptors for gut health, when taken in a professional grade, enteric coated, commercial supplement.
4. **Clove** – As an oil with some of the most eugenol, clove is an efficient antimicrobial that can counter *Candida albicans* overgrowth. Its effects against the yeast are effective to the point that an over the counter internal preparation is being studied using clove oil.
5. **Tea Tree & Oregano** – A powerful duo, tea tree and oregano essential oils are the case-in-point for antibacterial as a beneficial component, compared against harsher, synthetic or toxic antibacterials. Use in DIY cleaners to help stop the spread of viral illnesses without attempting to bleach away the good with the bad.
6. **Fennel** – Used as a digestive stimulant in whole-herb form, the essential oil retains some of the soothing components for the gut as an anti-spasmodic, likely connected to the estragole content. This component is also found in fennel. Aromatherapy and diluted topical use are very popular, but since estragole has been monitored for potential toxicity internally some recommend against ingesting it.

### **BONUS:**

Not making the Top 6 Essential Oils for Gut Health list, don't forget about Tarragon. It's still a super healing oil that promotes gut health as well!

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# CHAPTER 11

## Gut Health Protocol

Now that we've talked about essential oils for gut health and oils that can help to heal the gut, we can walk through ways to use DIY essential oil blends for digestive issues. There are dozens of oils and countless blends out there, but a few are especially beneficial for the gut, with several approaches for application and use.

### **When to Use Essential Oils**

An essential oil is the “volatile” component of the plant, meaning they are released quickly and evaporate just as fast. This little botany tidbit can help you remember that they work especially well for *quick* results situations.

In other words, most essential oils are helpful for fast-acting results, such as symptom relief and antimicrobial effects.

This kind of effect matches well with gut health concerns and is amplified as part of a multipronged approach to healing the gut. Diet and lifestyle changes are imperative, and it's often worth working with a holistic healthcare professional to maximize your natural efforts using essential oils.

### **Taking a Whole-Body Approach Using a DIY Essential Oil Blend**

As we walk through some of the uses for essential oils and gut health, it's important to remember that you can integrate the essential oils into your whole-body approach to wellness. Suggesting a DIY essential oil protocol or preparation does not exclude other steps toward health and healing.

For gut health in particular, a DIY essential oil blend will pair very well with probiotics, an absolutely vital component of intestinal healing and balance. They are also often used alongside digestive enzymes to maximize digestion improvement. An excellent example of early research on the combination comes with lab testing, where animals showed decreased intestinal inflammation

with thymol and cinnamaldehyde essential oil components combined with the enzymes xylanase and beta-glucanase.

## DIY Essential Oil Applications for the Gut

The DIY Essential Oil Protocol for Gut Health includes evidence-based & traditional techniques to counteract concerns like nausea, GERD, IBS and more! EOs can be used in numerous ways, varying based on the oil, individual, concern, and even preference. Here are some ways to use essential oils for improved gut health.

### INTERNAL USES

Use capsules when you need the oil to make it to the stomach rather than the mucous membranes of the esophagus. If the oil is specifically for the intestines, enteric coated capsules are necessary, which you can find, but they can be pricey.

The important thing to remember for capsule creation is that the oils should still be diluted as an extra precaution, and that the capsule shouldn't be filled only with the DIY essential oil blend for gut health. You still only need 2-3 drops at a time, so most of the capsule should be comprised of the carrier oil. Very small capsules are best.

Note: Internal, medicinal use of oils should be executed in proper dosing, with knowledge of contraindications and safe usage. Seek guidance or further education before creating and using capsules, or use a pre-formulated, pre-dosed essential oil supplement.

- **Optimal oils for capsule use:** peppermint, clove, ginger, oregano, tea tree, thyme. (Choose 2-3 oils at a time, and mix up protocol every couple weeks).
- **Optimal situations for capsule use:** indigestion, nausea, IBS, GERD, dysbiosis, with supervision by an integrative care professional. (Note: Peppermint oil could make GERD worse and is not recommended for this specific condition.)
- **Carrier oil options:** coconut, almond, sesame, apricot kernel, avocado, castor, evening primrose, jojoba, sunflower, pumpkin seed, neem, hemp seed, hazelnut, borage seed.

## TOPICAL USES

The soothing effects of aromatherapy are translated well into massages, and an upset tummy can be eased with a topical application. If you keep a diluted blend or two on hand, you can quickly grab it and apply when needed.

Dilute oils to 1-3% of the total volume into a carrier oil of your choice. Favorites include coconut oil, almond oil, jojoba, and avocado oil. Do remember that if the coconut oil is exposed to temperatures below the mid-seventies, it will solidify. Fractionated coconut oil is an option if you'd like it to remain liquid and other carriers are unavailable.

- **Optimal oils for topical use:** peppermint, ginger, caraway, coriander, \*fennel, anise, tarragon, thyme, or citrus.
- **Optimal situations for topical use:** indigestion, constipation, stomach aches, and nausea.
- **Word of Caution:** \*Fennel oil (*Foeniculum vulgare*) contains the estrogenic compound Trans Anethole. This raises obvious concerns for people with estrogen dominance and estrogen positive cancer. Also, "estragole, a main component of vulgare has become a cause of concern, as the structurally similar methyleugenol has been recently found to be a potential carcinogen. This has led to the European Union (EU) to allow a new legal limit for estragole of 10 mg/kg in non-alcoholic beverages."

## INHALATION

Don't let a pretty scent fool you! Aromatherapy is powerful, transferring the oil's composition to your body simply by inhaling it. Inhalation is actually one of, if not the most, effective ways to administer the benefits of essential oils.

We are most familiar with diffusion, but DIY essential oils for digestive health can be inhaled much more directly for the person who is experiencing tummy trouble or gut concerns. A couple of drops in a bowl of hot water becomes an instant personal steamer if you "tent" a towel over and inhale. Jewelry or clothing can hold a drop or two for a more lasting personal source to inhale, and aroma sticks can fit in pockets or purses for easy, portable access. The easiest method? Simply open the bottle and sniff!

- **Optimal oils for inhalation:** citrus, ginger, fennel, peppermint, clove, cinnamon...or any!
- **Optimal situations for inhalation:** nausea, stomach ache.

(Note: It is recommended to avoid hot oils like cinnamon and clove in steam inhalations so as not to irritate the sinus passages.)

## DIY Essential Oil Digestive Blends

Now that you have a good idea of your options, you can start to connect them for overall health and wellness. Blending the oils first into a carrier oil or honey will ensure proper dispersion and dilution, creating a safer and more effective remedy. For internal use, culinary or otherwise, a pure, organic essential oil is ideal.

### HEALTHY DIGESTION BLEND

- Choose a few of the following, and blend a total of 20 drops into 10 ml honey and carrier oil (coconut is my favorite): clove, orange, cinnamon, rosemary, eucalyptus, lemon. Stir 2 drops of this diluted blend into tea or water, or take directly.
- Add a drop or two of the following organic essential oils as replacements in culinary preparations: ginger, fennel, dill, coriander, cardamom, cinnamon, citrus, thyme, clove, etc.

### NAUSEA BLEND

- Blend 3 drops ginger and 2 drops lemon and diffuse. You could also blend the same number of drops into 10 ml carrier oil and apply topically.
- Blend 3 drops peppermint and 2 drops ginger and diffuse. You could also blend the same number of drops into 10 ml carrier oil and apply topically.

### TUMMY TROUBLE BLEND

- Choose a few of the following, and blend a total of 5 drops into 10ml carrier oil: cardamom, peppermint, tea tree, ginger, caraway, coriander, or fennel. Inhale or use topically.
- Blend one drop of peppermint in 1 tsp of honey and consume for soothed and improved digestion, or create capsules replacing the honey with carrier oil.

## LEAKY GUT CAPSULES

- Taking 2-3 drops of oregano in an enteric-coated capsule filled with an edible carrier olive oil and take once a day for a week while you monitor your results. Be sure to work with your healthcare provider when doing this.

A working knowledge of DIY essential oil blends can be a valuable ally in times of digestive upset. Take the time to learn about each of these oils thoroughly so that you can add them to your at-home DIY essential oil medicine cabinet and begin to heal your gut.

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# CHAPTER 11

## 101 Additional Uses

Knowing the concepts of aromatherapy and enjoying the 101 essential oil uses for your home is key to living a clean, healthy and abundant life! But don't worry, you don't have to have a full cabinet of essential oils at home to get a wide – extremely wide! – range of uses. Some of the most gentle and effective essential oil uses are also the most versatile.

Lemon, lavender, and peppermint are three of the most commonly purchased and used oils out there. Aside from some caution against using peppermint directly on small children, all three of these oils are known as extremely safe and effective for most of the population.

### **How to Use Essential Oils: Essential Oil Uses for Freshening Up**

1. Add lavender to an alcohol or vinegar spray for refreshing linens and creating a bedtime ambiance.
2. Put a couple of drops of lavender or lemon on a cloth in the closet to remove stale odors.
3. Make a lavender spritz to spray the “monsters” away at bedtime – they’ll be relaxed and ready to snooze!
4. Freshen up an old mattress with a lavender-peppermint or lemon spray, or add the oils to baby powder or baking soda and sprinkle it on before adding sheets.
5. Wash towels with some lemon to freshen up that stale towel smell.
6. Add lemon or peppermint to baking soda and sprinkle in stinky shoes.
7. Wash sporting gear or sprinkle it with baking soda and a lemon peppermint mix to kick that sweaty athlete smell to the curb.
8. Remove cigarette smoke odors with a diluted alcohol or vinegar based spray with lemon and peppermint.
9. Clean pet stains with a castile soap and lemon essential oil, or spray pet beds and pet potty areas.

10. Put a couple drops each of lavender and lemon in a simmering pot on the stove after dinner to cut the heavy cooking smell.
11. Pour a few drops in the bag of your vacuum cleaner for a fresh scent throughout the house.
12. Add essential oils to baking soda and sprinkle on the carpet before vacuuming.
13. Add a few drops to the wash (not the dryer), especially with no-additive unscented laundry soap.
14. Use a drop of lemon as a spot treatment to cut grease and lift stains – especially effective with peroxide!
15. Run another quick rinse with a few drops of lemon in some vinegar to cut the “I forgot to switch the laundry”
16. Add a couple of drops of peppermint or lemon to a gallon of paint to help disperse the chemical fumes.
17. Drop some lemon or peppermint onto sponges or washcloths and run them through the dishwasher for heavy sanitization and refreshment.
18. Put a drop in the inside of the toilet paper roll for a boost of scent every time the roll turns!
19. Brighten potpourri by sprinkling a few drops of your favorite oils onto it.
20. Coat unscented incense sticks in several drops of essential oils and allow to dry for a full day before using.
21. Create a diluted vinegar, witch hazel, or alcohol based spray with your favorite scented essential oils, then spritz into the potty before use for direct odor control!
22. Combine 10-15 drops of lemon and lavender essential oil with baking soda and sprinkle into the bottom of the diaper pail.
23. Lemon and peppermint combined with baking soda sprinkled into the trash can before the bag goes in will keep trash odors at bay.
24. Freshen the car even if you don't have a car diffuser – just add a drop or two to a central air vent for circulated aroma!
25. For more specific car use, choose lavender and bergamot to calm traffic anxiety or peppermint and ginger to minimize car sickness.

## ***BONUS RECIPE: INSPIRED BY MAMA Z HERSELF, MAKE YOUR OWN DIY LAUNDRY SOAP***

- Grate 1 bar Fels-Naptha Soap over a giant pot on the stove (or split batches).
- Add 10 cups water, turn it on medium-high, and stir until dissolved.
- Add 5 cups Borax and 1.5 cups washing soda, stir until dissolved.
- Let cool while pouring 4 cups hot water into one bucket for each of the 6 months this soap will last.
- Add 2 cups of your stove mixture into each bucket.
- Add up to 40 drops of a combination of lemon, lavender, and peppermint (or choose a single oil) and stir.
- Top the buckets with water and let sit overnight to thicken. Stir each time before use.

## **How to Use Essential Oils: Essential Oil Uses for Cleaning**

26. Add lemon essential oil to a combination of baking soda, a squirt of dish soap, and a dash of vinegar for a grout cleaning.
27. Lemon, lavender, and peppermint blend well with tea tree for a disinfecting spray or air-cleaning diffusion.
28. Mix dish or castile soap with water and lemon into a squeeze-top bottle; squeeze into the inner rim of toilets and scrub.
29. Use your baking soda, soap, and vinegar grout cleaning scrub with lemon and peppermint for a non-toxic shower scrub.
30. Skip the scrub altogether with a daily shower spray. Vinegar, a squirt of soap, and your favorite essential oils, sprayed daily after showering.
31. Combine a gallon of hot water with ¼ cup castile soap and a total of 40-60 drops of any combination of essential oils – lemon and lavender work well here – to clean the floors.
32. Wash windows with vinegar and water boosted with peppermint and lemon. (See our favorite essential oil powered glass cleaner.)
33. Dishes get an extra boost with a drop of lemon in the dishwasher or dishwasher soap compartment.
34. Use a few drops of lemon oil on a rag for polishing silverware.
35. Take dusting to the next level with a drop of essential oil on the rag.

36. Refresh old wooden surfaces with a bit of lemon oil on the polishing rag.
37. Wipe down sinks and surfaces with a diluted vinegar or alcohol based spray brightened with antiviral lemon and antibacterial lavender.
38. Clean the fridge with a few drops of lemon and lavender added to some vinegar, water, and a dash of dish soap.
39. All purpose cleaners can be mixed up and ready to go – try combining all three (lavender, lemon, peppermint) with a bit of dish soap, vinegar or alcohol, and water as an all purpose disinfectant cleaner.
40. Cut grease with lemon oil added to your dish soap.
41. Clean stainless steel with lemon or peppermint in a bit of soap mixed into water.
42. Burned pan? Add some lemon oil to a bit of water and boil to loosen burnt residue.
43. Bugs don't like peppermint – spritz it on them directly or add to baking soda and powder it around bug entrances.
44. Clean cutting boards with lemon and lavender to stop the spread of foodborne illness.
45. Sticky surface? Soak a rag in water and add a bit of soap and lemon oil – lay it over the sticky then wipe it up a few minutes later.
46. Put some baking soda and a combination of lemon, lavender, and peppermint into a mason jar with holes in the lid. Set in the bathroom and shake periodically to reboot its air freshening power.
47. Polish scuffed surfaces with a rag and a bit of lemon oil.
48. Kick your hand soap up a notch with a few drops of lemon and lavender mixed in.
49. Spritz cut produce with diluted lemon oil to minimize browning.
50. The best cleaning tool is good old fashioned motivation – diffuse peppermint for a stimulating energy boost to get you going.

## ***EASY-TO-MAKE RECIPE: ESSENTIAL OIL USES FOR FLOOR CLEANER***

### **Ingredients**

- 1 gallon of hot water
- ¼ cup castile soap
- ¼ cup murphy oil soap
- Around 25-30 drops of a combination of lemon, lavender, and/or your choice of essential oils. Mix and use to mop.

### **Instructions**

1. Mix soap and oils together in large bucket.
2. Pour in hot water.
3. Gently stir and use with mop.

## **How to Use Essential Oils: Essential Oil Uses for Pampering**

51. Add a drop of peppermint to toothpaste.
52. Make your own mouthwash with a diluted alcohol base and oils like peppermint, clove, and myrrh.
53. Shampoo is transformed with just a few drops of peppermint or lavender shaken into the whole bottle.
54. Make DIY deodorant with baking soda, cornstarch, coconut oil, and your favorite combination of oils.
55. The most basic lotion is simply coconut oil scented with a bit of lavender oil.
56. Acne doesn't stand a chance against antibacterial lavender oil. Apply a drop neat or slightly diluted to a cotton ball and swab affected areas.
57. Sugar scrubs with lemon, lavender, or peppermint simply can't be beat.
58. Make a soothing facial mask with honey and lavender oil.
59. Rebalance the skin's pH with a witch hazel, lavender, and peppermint toner.
60. Soothe tired feet by diluting peppermint and lemon into an evening foot soak.

61. Dilute lavender into an Epsom salt mixture for a calming bath.
62. Put a few drops of peppermint onto a rag in the bottom of the shower for an energizing start to your day.
63. Melt a bit of beeswax into your coconut oil and lavender mix for an all purpose soothing balm.
64. Massage your aches and pains away; dilute peppermint or lavender into the carrier oil of your choice.
65. Add a bowl of water and essential oils to a sauna to maximize their respective benefits.
66. A vinegar rinse is excellent for conditioning your hair but smells like a pickle jar. Add some lemon and lavender to freshen it up.
67. Fix cracked feet with an overnight application of lavender and coconut oil.
68. Settle into a restorative night of sleep with lavender diffused at your bedside.
69. Create a simple perfume with your favorite oils diluted into a carrier and poured into a roller ball.
70. Beat dandruff with a few drops of lavender and a couple drops of tea tree added to shampoo.
71. Whiten teeth periodically with the odd but effective combination of lemon and fresh, mashed strawberries mixed with coconut oil. Rub onto teeth, let sit for a couple of minutes, then rinse off.
72. Add your favorite essential oils to a small amount of alcohol or witch hazel in a spritz bottle, topped off with water, for a custom body spray.
73. A small spritz bottle of peppermint essential oil in alcohol and water makes a quick and easy breath spray.
74. Peppermint and lavender in coconut oil relieve tension, especially massaged onto the temples for headaches.
75. Diffuse peppermint and lemon before and during exercise routines for energy and endurance.

## ***BONUS RECIPE: DIY LIP BALM***

Melt together:

- 4 Tbls. coconut oil or combination of carrier oils
- 2 Tbls. beeswax

Remove from heat; stir in:

- 5-10 drops lavender
- 5-10 drops lemon or peppermint

Pour into tins or tubes and enjoy!

## **How to Use Essential Oils: Essential Oil Uses for Health**

76. Sooth mild burns with lavender and coconut oil.
77. Anti-inflammatory lavender and cooling peppermint are a must for any balm made for soothing sores.
78. A drop of lavender directly on bug bites can soothe itching.
79. Inhale or massage diluted peppermint oil for headache relief.
80. Include lavender in massage oil blends to help relieve body aches.
81. Breathe clear with peppermint added to aromatic chest rub formulas.
82. Or, simply place a drop each of lavender, lemon, and peppermint into a bowl of steaming water. Lean over it and breathe deep.
83. Improve digestion with a drop of peppermint or lavender diluted into honey and added to your favorite drinks.
84. Inhale peppermint to relieve acute bouts of nausea.
85. Soothe psoriasis, eczema, and other inflammatory skin conditions with lavender preparations.
86. Calm an inflamed sunburn with aloe vera, lavender, and peppermint sprays.
87. Diffuse or inhale lavender to lessen the severity of anxiety.
88. Find a boost of energy with stimulating lemon and peppermint diffusions.
89. Melt stress away with lavender rubbed onto temples and neck.
90. Cleanse the air with antiviral lemon and antibacterial lavender diffused.

91. Help curb cravings and appetite with peppermint diffused between meals.
92. Improve focus and calm anxious minds by diffusing lavender during study times.
93. Dilute peppermint onto a rag soaked in cool water, and sponge onto the neck and back of someone feverish. (Head to the doctor if it gets too high!)
94. Keep lemon and peppermint on hand to inhale when morning sickness takes over.
95. Add lavender to compresses for an added anti-inflammatory effect.
96. Make a gentle spray of lavender and water to ease kids' minds that you can take care of boo-boos when they're too old for magic kisses but too young to shake it off. (Do shake the bottle well, however!)
97. Add some diluted peppermint to your clove based toothache remedy and apply with a cotton ball or swab.
98. A drop of peppermint and lemon mixed into a spoon of honey can sooth a painful sore throat.
99. Massage diluted lavender oil around lymph glands and ears to help ease discomfort and promote drainage for ear infections.
100. Put a drop or two of lavender into your humidifier per manufacturer's instructions for a quick, multi-purpose diffuser.
101. Cold sores are soothed with a drop of lavender applied with a cotton ball or swab.

### ***BONUS RECIPE: ESSENTIAL OIL USES FOR SUNBURN SOOTHER***

Mix together:

- ½ cup water
- ⅓ cup aloe vera gel
- 10 drops lavender
- 5-10 drops peppermint

Pour into a glass spritz bottle and store in the fridge to be spritzed onto sunburns.

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# SECTION THREE

## Using Essential Oils Safely & Effectively

### Three Steps to Healing Your Gut

- 1) Avoid Food Triggers
- 2) Use Essential Oils
- 3) Restore Microbiome

*In addition to following our gut-healing, inflammation-soothing essential oil protocols, everyone with leaky gut and inflammatory bowel disorders will benefit from taking high-quality supplements to repair leaky gut and balance their microbiome. The best way to get started is to take LIVE probiotics every day, and...*



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# CHAPTER 13

## Anise

With its licorice-reminiscent flavor and scent, anise oil benefits brings a refreshing and unique element to your single-oil use or combination blends. Here, we'll learn how to differentiate true anise oil uses and incorporate them into your wellness routines.

### **Anise Plant Profile**

When a common name is shared between plants, we often make the mistake of assuming they are related, similar, or even interchangeable. None of the above are necessarily true. Anise and star anise are examples, sharing the common name of anise, but they are entirely different plants. Latin names help us to narrow down exactly which plants we are dealing with and understand how to use them.

True anise is the plant of focus today, with the Latin name *Pimpinella anisum*. It's part of the dill family, a group of almost spindly annual and sometimes perennial herbs with "umbel" shaped flowering heads and strong aromatic compounds.

Star anise, on the other hand, is *Illicium verum*, a spice derived from the pods of an evergreen tree.

### **Whole Herb Use**

Anise seeds are usually the part of the plant used, and have been for generations. Traditional medicine uses anise seeds for "*carminative, aromatic, disinfectant, and galactagogue*" purposes, as well as menstrual issues, diabetes, inflammation, and more digestive issues.

A good example of anise whole-herb use is found in a 2007 article in the *World Journal of Gastroenterology*. An extract of the seeds was prepared and tested on gastrointestinal health. The researchers found that it could protect the gut against ulcers and lesions, perhaps thanks to its abilities as an antioxidant.

Like its relatives dill and fennel, anise is known for its digestive properties, particularly when the seeds are used in extracts or powders. However, there is a good deal of essential oil content found in those seeds that can be distilled for varying and sometimes more targeted uses and benefits of anise oil.

## 5 Health Benefits of Anise Oil

Now that we know what anise oil is why should we use it at all? Here are five benefits of anise oil and uses that are backed by research.

### 1. ANTI-INFLAMMATORY PAIN RELIEF

A major constituent of anise seed oil, anethole, was tested in animal models in 2014 for its pain-relieving abilities apart from simply making the individual feel sedated. The results were fairly clear that the compound helped to lessen pain without creating sedation, most likely thanks to anti-inflammatory actions.

This backs traditional uses as a pain reliever, particularly as an oil for muscle pain and inflammatory discomfort.

*Indications: Massage oil, diluted topical application.*

### 2. BRONCHODILATOR

In a similar vein, anise essential oil appears to relax muscles, which would also contribute to pain relief in many cases. To watch this action take place, researchers tested anise essential oil on isolated guinea pig tracheal chains to evaluate the tracheal muscles' response to the application. The essential oil showed "significant relaxant effects."

This study demonstrated a bronchiodilatory response. In other words, breathing could improve in the case of inflamed or congested airways.

*Indications: Topical massage and inhalation during respiratory illness.*

### 3. ANTIFUNGAL OPTIONS

Topical fungal infections are uncomfortable and difficult to get a handle on, and systemic yeast can be devastating. Essential oils are often effective against fungal problems, sometimes even more so than other options. Anise in various forms,

including the essential oil, seems to be effective against multiple kinds of fungi in vitro, including the dreaded *Candida albicans*.

*Indications: Diffusion, diluted topical treatments, periodic inclusion of one or two drops in a lipid dilution mixed into a full culinary recipe.*

#### 4. ANTIBACTERIAL POWERHOUSE

Last but not least, of the anise essential oil actions we're highlighting today, antibacterial effects steal the show. Antibacterial essential oils are incredibly useful, from respiratory illnesses to skin treatments or countertop cleaning solutions.

Anise is one of the essential oils with the distinct benefit of being active against bacteria in the mouth. In one study, a decoction of the whole seed was used to demonstrate antibacterial activity. This gives us reason to believe that the essential oil, diluted properly, can add to an antimicrobial oral rinse.

With oils that have content like estragole that require a bit of extra attention to caution, synergy can allow you to use a little less of it while actually obtaining more benefits. Synergy is especially important for antimicrobial benefits in vitro, and anise demonstrates this perfectly. In a 2008 study, anise essential oil demonstrated increased antibacterial benefits when paired with thyme essential oil, one of the best-loved antimicrobials out there.

#### 5. NAUSEA RELIEF

If you think back to the last bout of nausea you struggled with, you'll remember sensitivity to smells. The right, or wrong, scent can have a bigger impact during nausea than under normal circumstances.

A 2005 study combined multiple anti-nausea essential oils – anise, fennel, Roman chamomile, and peppermint – to create a soothing blend for patients in hospice care. While it was not their single treatment for nausea, a majority of the patients who used the blend found improved nausea symptoms, and aromatherapy may have contributed to that overall success. As a non-invasive application, we should utilize our bodies' ability to turn something as simple as a scent into a healing tool.

*Indications: Personal inhalers, aromatherapy diffusion, on the collar of a shirt.*

## Anise Essential Oil Interactions

On top of the mild estragole concerns with ingestion, anise essential oil carries interactions with pharmaceutical drugs, as well. Some common interactions include drugs that act on the central nervous system (e.g., diazepam) and blood thinners. Acetaminophen and caffeine may also change in effects when consumed alongside anise essential oil.

Anise may also include phytoestrogen properties, which isn't actually a problem in most instances; just use caution or speak with a physician before use if you are battling an estrogenic cancer.

Always discuss supplements and essential oil use with your doctor, especially if you are on medication, and learn full interactions before beginning to use essential oils internally. Keeping the dose to culinary levels helps to maintain safety, but drug interactions should always be a top concern.

## Estragole Essential Oil Content

It's important to note that anise essential oil is a strong source of estragole, which we've discussed with fennel and tarragon essential oils as a concerning compound.

To quickly summarize, estragole itself has been flagged as a toxic compound, potentially causing cancer or creating other kinds of havoc in the body. Two important distinctions should be made, however, before writing off these important substances: 1) we don't consume estragole on its own, and 2) the amounts needed to replicate that risk are almost impossible to achieve. Nevertheless, further studies are needed to define both the nature and implications of the doseresponse curve in rats at low levels of exposure to ES. In the meantime exposure of ES to sensitive groups such as young children, pregnant and breastfeeding women should be minimised.

The absolute safest way to get around the controversial effects of estragole content is to consume only the whole seed, which contains other compounds thought to mitigate the risks, or the essential oil only in very small quantities. Pregnant and nursing women and children should avoid internal use to be safe. Anyone with a seizure disorder should use caution.

## DIY Anise Preparations

You can utilize anise for its strongest benefits in a number of ways.

- Careful culinary inclusion of a drop or two properly diluted in lipids and added to a recipe, remembering that less is more with essential oils
- Antimicrobial respiratory inhalation, combined with eucalyptus or cinnamon
- Antimicrobial mouthwash, with cinnamon, myrrh, and peppermint
- Dilution into a carrier oil for a topical respiratory relief massage oil
- Whole-herb and occasional essential oil culinary inclusion for digestive wellness

Become familiar with the safe uses of anise, as well as the GC/MS analysis from your essential oil source, which can tell you exactly how much estragole is in your anise essential oil. Then have fun experimenting with the distinctive licorice flavor and scent as you blend it with more familiar essential oils.

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# CHAPTER 14

## Cardamom

Cardamom essential oil benefits include fighting cancer and soothing nausea. It is a helpful remedy for digestive wellness & antioxidant potential as well. Joining ancient aromatic spices like cinnamon and myrrh, cardamom shares many of the benefits of these classic, fragrant substances. As a whole spice or an isolated essential oil, cardamom essential oil uses are underutilized options for digestive wellness and antioxidant potential.

### Types of Cardamom

The common name “cardamom” can refer to two entirely different plants (and their essential oils). *Elettaria cardamomum* is considered to be true cardamom; while *Amomum subulatum* is “greater Indian” or “black” cardamom. Depending on where you live, you may know all of them as cardamon, as well.

Both types of cardamom have their benefits, and if a specific type is required in the benefits in this overview, we’ll note it. Both are from the ginger family, both have similar culinary benefits – though black cardamom isn’t as sweet – and both are good choices.

Cardamom essential oils include 1,8-cineol (also found in eucalyptus), various terpenes, and fenchyl alcohol, among other compounds.

If you’re using a cardamom essential oil for specific benefits, make sure you know which one your essential oil source has provided, based on the Latin name, and whether that’s the oil you need.

## Historical Cardamom Uses

Cardamom originates in India, and as with most Indian spices, found its way to Rome in heavily utilized trade routes. Even if the essential oil itself wasn't isolated as we are able to do today, it was still enjoyed in whatever ways they could employ.

In the Ayurvedic traditions of India, however, cardamom was used as both a culinary spice and medicinal ingredient. True cardamom was the variety of choice, and the fruit pods were used for digestive wellness, nausea, detoxification, oral health, and respiratory health.

This was, of course, the whole or powdered spice, which does contain the essential oil in small percentages. Many of the health benefits of cardamom extend to both whole spice preparations and essential oil.

Today, as we analyze the specific compounds in essential oils and how they behave in the lab and in the body, we are able to verify some of these actions and apply them in our own health and wellness routines.

## 5 Cardamom Essential Oil Benefits

Cardamom spice as a regular dietary inclusion will mirror ancient uses, or you can use the more concentrated essential oil, with proper dilution of course. These studies reflect some of the more exciting things we know about cardamom essential oil.

Some of them will be specifically about black cardamom, while most will be for the more common true cardamom. In any case, they all give us a good understanding of how best to use cardamom essential oil in our natural remedies medicine cabinet.

### 1. ANTIOXIDANT

As a whole spice, cardamom is among the Indian culinary choices that have demonstrated free radical scavenging capabilities in vitro. As an essential oil, black cardamom is especially potent as an antioxidant, with "significant activities in all antioxidant assays," as well as antifungal activity.

*Indications: A drop in culinary preparations; topical preparations for antioxidant benefits.*

## 2. GASTROPROTECTIVE

The ginger family is renowned for its digestive benefits, from healing and protective abilities to nausea relief. Like ginger, cardamom essential oil is a good aromatherapy option for nausea, having been evaluated as a part of a blend for post-operative nausea. True cardamom in various forms, including essential oil, has been evaluated for its protective effects against ulcers, and found to have “significantly inhibited gastric lesions.”

*Indications: Inhalation for nausea relief; culinary inclusion for digestive improvement and protection.*

## 3. CHEMOPREVENTIVE

The potential for cancer-preventive effects of essential oils to be used in our everyday lives is exciting and promising for the future. Alongside other potent antioxidants, the in silico studies demonstrate cardamom’s anti-tumor potential. As with all essential oils, studies are underway to determine exactly how we can best utilize these benefits to prevent cancer and perhaps treat it. Until that day, we can rest easy knowing that our regular essential oil routines are contributing to overall health.

*Indications: Inhalation, topical, and culinary use to access potential chemopreventive properties.*

## 4. ANTIBACTERIAL

Essential oils of the major spices and ginger family are often antibacterial, adding a warm touch to a citrus cleaning spray. In 2007, researchers tested this group of oils for their major components and ability to mitigate the growth of bacteria. The scent of cardamom mixes well with other antibacterial oils, creating the potential for some incredible synergy in fun combinations – including antimicrobial oral rinses.

*Indications: Cleaning sprays, well-diluted wound healing blends, oral health blends.*

## 5. ANTISPASMODIC

The category of antispasmodic covers a lot of ground: easing spasms. It can apply to digestive upsets (stomach cramps, diarrhea) and respiratory issues alike (coughing, tickle in the throat). Since we’ve already covered digestive wellness, we can take a look at a traditional use of cardamom for respiratory wellness.

The presence of 1,8-cineol is our first clue, shared with the respiratory poster-oil eucalyptus. Other research has been conducted toward varying kinds of respiratory benefits, including the extract (not essential oil, but sharing some similar properties) easing symptoms of asthma.

*Indications: Steam inhalations, personal inhalers, diffusion with an ultrasonic diffuser.*

## DIY Uses & Applications

For digestive health and general wellness promotion, cardamom can be included in meal prep as a simple addition to a healthy lifestyle. Just blend a single drop into sauces and ingredients that call for that spicy, smoky taste, before including the sauce in the full recipe. The lipid will dilute it, and the light inclusion will be both safe and beneficial.

Other applications include:

- Antimicrobial diffusion or sprays, with citrus, frankincense, and myrrh.
- Respiratory steam inhalation, with eucalyptus.
- Anti-nausea inhalation, with ginger and peppermint.
- Bonus: include cardamom in summertime bug/mosquito sprays with lemon eucalyptus.

Ancient spices are some of the most richly scented, richly historical essential oils. Bring a touch of the past into your everyday life with the Queen of Spices, cardamom.

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# CHAPTER 15

## Cinnamon

Warm, spicy, fragrant, powerful, even dangerous? What comes to mind when you think of cinnamon essential oil uses? Even as a potentially sensitizing and irritating oil, we shouldn't make the mistake of avoiding cinnamon altogether. There are many benefits of this classic spice and essential oil.

### Cinnamon Essential Oil Uses and Sources

While we know cinnamon as simply sticks, powder, or oil, there is much more to it than a simple cinnamon source. The flavorful "sticks" we know are derived from the inner bark of a *Cinnamomum* tree, of which there are many different varieties. In fact, cassia essential oil comes from a cinnamon tree – *Cinnamomum cassia*. This is a different essential oil though with its own therapeutic benefits. This chapter is going to discuss cinnamon essential oil uses though and we'll save cassia for a different book.

As always, variety effects composition, and cinnamon essential oil most commonly comes from the *Cinnamomum zeylanicum* tree. From there, either the inner bark or the leaves can be harvested for distillation. This should be indicated as either "cinnamon bark" or "cinnamon leaf" on your bottle of essential oils.

And yep, you guessed it: the bark and leaf oils have their own composition, as well.

- Cinnamon bark essential oil, on the other hand is steam distilled from cinnamon bark, is reddish/ brown in color and contains mostly cinnamaldehyde (63.1-75.7%) and much less eugenol (2.0-13.3%). It's a known sensitizer and irritant.
- Cinnamon leaf essential oil, for example is steam distilled from cinnamon leaves, is yellowish in color and contains high amounts of eugenol (68.6-87.0%) and some cinnamaldehyde (0.6-1.1%). It's not as common a sensitizer as cinnamon bark is, though it's still a known irritant.

Cinnamon leaf is typically more heavily filled with eugenol – used to relieve pain and inflammation and fight bacteria – while the bark is comprised more of cinnamaldehyde – potent as an antioxidant and antidiabetic.

## History of Cinnamon Essential Oil Uses

One of the oldest and most beloved spices, cinnamon was prized in ancient times as a costly and decadent substance, usually burned for its aroma. Biblical mentions include cinnamon as a “choice spice” and part of the holy anointing oil of Exodus.

Further east, cinnamon was used in medicinal preparations in the Ayurvedic model of medicine. It was thought to be “warming” and was used as an antimicrobial treatment or protective substance.

Over time, the spice trade waned and culinary preparations became standard, at least in the Western world. The ability to distill essential oils specifically has opened up another avenue of use for us, and extensive research on this ancient spice has confirmed both aromatherapy uses and medicinal whole-spice uses.

## Top 5 Cinnamon Essential Oil Uses

Because the leaf and bark oils work differently, I’ll note where one is preferred over the other. The safest use for essential oil is aromatic, via sprays and diffusion or inhalation methods. Some internal and topical use can be utilized as well, though, as long as you carefully dilute and use appropriate amounts. With that in mind, here are the top 5 uses for your cinnamon essential oil.

### 1. ANTIBACTERIAL STRENGTH

Cinnamon oil is well known as antibacterial, and that is translating to varied uses as researchers begin to think outside of the box. In 2015, a couple of interesting studies were released for uses of cinnamon’s antibacterial strength.

The first combined antibiotic doxycycline with isolated components of 3 essential oils, one of which being cinnamon – with all three components (carvacrol, eugenol, cinnamaldehyde) found in both cinnamon leaf and bark oils. The combination had a synergistic effect, which could imply some answers to the problem of antibiotic resistance!

The second addressed an issue on our minds for awhile now, that of oral health with natural products. Cinnamon oil on its own was protective against an array of oral bacterial colonies. The oils didn't contain prominent levels of cinnamaldehyde, indicating a potential preference toward leaf oil.

A much earlier study had confirmed more traditional uses for this antibacterial oil – relieving bacterial respiratory conditions. Of the essential oils tested in 2007, cinnamon and thyme rose to the top as most effective against respiratory infections.

*Indications: Diluted into alcohol for mouthrinse blends, cleaners, hand sanitizers, room diffusion, respiratory blends for inhalation.*

## 2. ANTIDIABETIC POTENTIAL

We know that cinnamon as a whole spice can be used for anti-diabetic purposes, helping to lower fasting blood sugar levels. Further research is diving into the way this works, and some studies have found specific compounds of cinnamon are responsible for the effect – compounds also found in the essential oil.

For example, cinnamaldehyde in animal models has been observed reducing glucose levels and normalizing responses in circulating blood. In 2015, researchers found cinnamic acid to improve glucose tolerance and potentially stimulate insulin production.

These results are promising, and it will be interesting to see how it ultimately plays out. Diabetes affects a large swath of the population, and natural remedies are needed now more than ever.

*Indications: One or two drops diluted in a lipid and included in recipes; inhalation or diffusion; whole-spice culinary inclusion.*

## 3. ANTIFUNGAL SYNERGY

Especially with such a strong and potentially irritating essential oil like cinnamon, blending and dilution are important. Fortunately, the oils seem to work even better that way. A 2013 study demonstrated the effects of synergy on fungal infections, with the lavender and cinnamon blend performing the best.

Incidentally, lavender soothes what cinnamon may irritate! When creating your blends, use small amounts of cinnamon to enhance the other oils in the combination for an overall effective result.

*Indications: Topical fungal infections, diffusion and sprays for in-home fungal growth.*

#### **4. GUT HEALTH PROTECTION**

Traditional medicinal uses of cinnamon essential oil include protecting the digestive system. The whole spice is still indicated for this purpose, but aspects of the essential oil are finding their way into studies on this topic, as well.

Eugenol, for example, found in the cinnamon leaf oil, was the subject of a study in 2000. It was found to have a protective effect on the mucosal lining against ulcers and lesions. More recently, in 2015, both eugenol and cinnamaldehyde were explored as additives in animal feed for intestinal protection.

Both cinnamon leaf and bark oils could be utilized here, though the leaf is much milder in taste and should contain the eugenol content that is recurring in studies.

*Indications: One or two drops diluted into a lipid and added to recipes; whole-spice use in culinary preparations.*

#### **5. CANCER FIGHTING**

Last, but certainly not least, is cinnamon essential oil's ability to fight cancer. Eighty studies to date have investigated cinnamaldehyde's ability to inhibit tumor cell proliferation via trigger cancer cell apoptosis ("programmed cell death") and other mechanisms and the research is clear: cancer patients should be encouraged that natural solutions truly do exist!

## Cinnamon Essential Oil Blends and Applications

For all of its known benefits, cinnamon oil is also known as a sensitizer. And keep to 1% max dilution and no more than 2 drops per culinary dish. Remember that oil and water don't mix, so dilution should happen first in a lipid like coconut oil or another carrier oil.

Use cinnamon oil in:

- Cleaners and sprays with clove and citrus
- Respiratory diffusions with eucalyptus and frankincense
- Culinary preparations with sweet orange
- Highly diluted topical treatments with ginger and lavender

Dilution is the key to unlock the many benefits of cinnamon oil!

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# CHAPTER 16

## Fennel

Tasty, aromatic and a global favorite, fennel essential oil benefits help manage anxiety, cramps, digestive upset and a number of other health conditions. You may be surprised how useful it can be to your overall health!

Various preparations and applications of fennel have strong and reliable benefits, and safety is a priority with this potent essential oil.

### **Traditional Fennel Essential Oil Uses**

From the flowering herb – related to the carrot family of plants – fennel seed is most commonly used in culinary preparations, though fennel essential oil uses can come from the seed or the aerial (above ground) parts of the plant.

Native to southern Europe, fennel is found in many Mediterranean recipes, much like its closely related dill, caraway, and coriander. Fennel's primary use in whole-herb preparations has been for digestive health. Seeds would be chewed after a meal to improve digestion, and it was included in many recipes for the same reason.

While the seed was the more substantive part of the plant used, the leaves, stem, and flower are highly aromatic. Like anise, fennel has a touch of black licorice scent and flavor that make it uniquely suited for aromatic preparations.

While we have little evidence of fennel being used aromatically throughout history, there's no question that the ancients enjoyed the fennel oil benefits, if only as they walked by their cultivated plants and brushed the leaves, releasing the oil. Today, we can do far more.

## 6 Fennel Essential Oil Benefits

Traditional uses of fennel include everything from digestive wellness to anti-inflammatory, pain relief, antioxidants, breast milk production, and more. The primary use would have been with the whole herb, and many believe that the concurrent compounds help deactivate the risks of estragole.

According to one study,

*“Anethole is the most basic fennel compound that reduces inflammation and prevents cancer. Anethole also protects the liver against damage. Researchers ascribe the anti-inflammatory and anti-cancer properties of fennel to postpone or off the intra cellular signaling pathway called TNF.”*

The essential oil has fewer compounds, but choosing an oil that has lower estragole, using it in appropriate concentrations, and sticking to external use can help us access the benefits of fennel without compromising safety. Here are the top six benefits of fennel I'd like to feature.

### 1. EMF PROTECTION

Somewhat a surprise, as I researching electromagnetic frequencies (EMFs) and the potential dangers of 5G recently, I stumbled upon a fascinating research article suggesting that fennel essential oil can help reduce reproductive organ damage due to EMFs. “The antioxidant compounds in fennel and vitamin E, with other antioxidants,” the Iranian researchers stated, “Can reduce the harmful effects of EMFs on the reproductive system.”

Harmful effects of EMFs on the reproductive system? Yep!

Most people are unaware that, “EMFs induced cell death in testicular germ cell in mice” and, “According to many researchers, neuroendocrine changes caused by EMFs are a key factor in changing hormone function and cause infertility symptoms in females.”

What's the solution? Reduce EMF exposure and consider applying a 2% dilution of fennel as a gentle, therapeutic body oil when you're stuck in a heavy wi-fi zone.

## 2. IMPROVED DIGESTION

Historically, fennel seeds were chewed after meals to improve digestion. More recently, fennel has been used and tested as a remedy for infant colic. It's important to note that the above concerns led to unfortunate and tragic side effects for some of the infants and the study and its methods should not be repeated.

However, we do know that *"Fennel seed oil has been shown to reduce intestinal spasms and increase motility of the small intestine."* For adults with appropriate application, we can translate that knowledge into safe use. Including fennel in recipes and moderate internal applications, as well as including the whole seed into our diets can help maximize the digestive benefits of fennel seeds.

*Indications: One drop diluted into lipids and combined into recipes; topical massage oils for stomach aches.*

## 3. RELIEVED MENSTRUAL CRAMPS

Fennel essential oil's antispasmodic abilities are showcased when used against menstrual cramps and dysmenorrhea. In 2001, researchers tested fennel essential oil on a rat model of menstrual issues and painful cramping. The essential oil was able to reduce both the frequency and intensity of some of the "cramp" contractions.

The soothing actions of aromatherapy are well suited to this kind of application, as each step works together toward the ultimate goal of relief. The soothing aroma, calming effects of massage or breathing deeply, and medicinal actions work together to further the results.

*Indications: Topical massage oil blended with balancing herbs for PMS and cramping.*

## 4. CALMED ANXIETY

A potential benefit of fennel that researchers are in the preliminary stages on is that of anxiety reduction. The researchers used internal applications studied on mice, finding significant and promising anti-anxiety results. As an animal model, preliminary test, and internal use study, this isn't a 1:1 application to real life. However, we can utilize it in our inhaled and topical anxiety and calming blends to seek synergistic and added benefits. In other words: *It can't hurt to try!*

This is especially noteworthy in light of the menstrual cycle benefits just described. Both cramping and anxiety tend to be symptoms of PMS and difficult menstrual cycles, and fennel could help to relieve them.

*Indications: Anti-anxiety inhalers, topical or inhaled PMS blends, diffusion during anxious times.*

## 5. INHIBITED FUNGAL ISSUES

Topical antifungals are a big over-the-counter market, yet not all are effective. Fennel essential oil provides a potential alternative, with excellent antifungal actions. From a 2015 in vitro study,

*With better antifungal activity than the commonly used antifungal agents and less possibility of inducing drug resistance, fennel seed essential oil could be used as a potential antidermatophytic agent.*

Inhibiting fungal growth in the form of athlete's foot or other topical infections, or even just in the home environment, can be difficult. This puts fennel among potential protective and healing sources for combating fungal issues.

*Indications: Diluted into topical applications and foot soaks for antifungal treatments.*

## 6. BREAST MILK PRODUCTION

A 2014 study published in the Veterinary Medicine Journal evaluated what the research literature had to report about *galactogogues* (substances used to induce, maintain, and increase milk production) in both in humans and animals and found the whole herb anise and fennel to be the most potent; estragole's strong estrogenic activity may play a role in the success of these herbal preparations in helping to stimulate milk production. (More on the potential effects of estragole below...)

In a special section about fennel, the authors of this article state, "The first report of its galactagogue properties was by a Greek botanist Pedanius Dioscorides (40–90 A.D)...It has been used as a galactagogue in humans and no adverse effects have been reported yet... *F. vulgare* has been used as an estrogenic agent for centuries. It has been reported to increase milk secretion, improve the reproductive cyclicity, facilitate birth, and increase libido. It contains E2-like molecules, such as anethole and estragole."

While fennel essential oil lacks other milk-stimulating components the herb has, we have seen strong anecdotal evidence of it's ability as a galactagogue. Personally, Mama Z can attest to fennel's ability to stimulate breast milk and so can the dozens of women we've coached from low to normal-to-high milk production throughout the years.

*Indications: Applying a highly diluted blend of basil and fennel oil around the breasts into the armpit regions has done wonders for our friends, family and clients.*

Unfortunately, there has been little research to prove this and it remains a controversial topic in the essential oil community. Many Aromatherapists believe that au naturel is always best. Meaning this: once baby enters the world and has been checked to make sure that everything is ok, the only things that are needed is skin-on-skin time with Mama, immediate nursing, and nothing else. No oils, no creams, nothing. Just Mama and baby. A connection needs to be made between the two, and a primary component is through the sense of smell; which is profound sensitive from birth.

A *Parent's Magazine* editorial covers this topic well, and here are some key takeaway from their article.

- *According to Lise Eliot, Ph.D. the sense of smell starts in the womb as baby can detect odors from the foods you eat and aromas you inhale through your amniotic fluid.*
- *Subsequently, breastfed babies can even "sniff out" Mom sooner than bottle-fed babies because they are held close to her body more often.*
- *Research actually suggests that, shortly after she arrives, baby can recognize the comforting scent that emanates from their mother's breasts, underarms, and even beauty products because of her keen sense of smell.*

Because of this keen sense of smell, many Aromatherapists passionately recommend that Mama shouldn't use essential oils or scented body care products for the weeks postpartum – to give baby the time to experience the world and not overload the senses.

To this point, I feel it's important to mention that should put things into proper perspective. Moms across the nation regularly wear deodorant, perfume, use aerosols, burn scented candles and bring their baby to places that are filled with fragrances. It's impossible to avoid artificial or natural fragrances.

In fact, Marcia Levin Pelchat, Ph.D., a sensory psychologist at the Monell Chemical Senses Center, in Philadelphia. suggests exposing baby to a variety of

scents, and telling her what she's smelling. Pelchat recommends placing safe household items and objects underneath baby's nose – "just be sure she doesn't inhale or touch irritating spices, such as wasabi, powdered mustard, chili powder, or pepper, any of which can create a burning sensation in the back of her nose."

- Aromatic flavorings and seasonings (vanilla extract, cinnamon, paprika)
- Baby shampoo
- Clean diapers
- Coffee
- Crayons
- Flowers
- Herbs
- Leather shoes
- Ripe fruit

We tend to avoid dangerous artificial fragrances, and use essential oils around infants with caution and as-needed to address specific needs. Mama Z will use essential oils in her nipple cream, but apply it immediately after a feeding to give it time to absorb before the baby's next feeding.

## Essential Oil Composition

Fennel essential oil can be derived from the "aerial parts" (aboveground stems, leaves, and flowers) or the seeds of the *Foeniculum vulgare* plant, and the seeds are the primary part used in herbal and culinary preparations. Typically, the seed is what is used for essential oils, as well.

Familiar compounds like alpha-pinene and limonene are found in fennel, but the seeds contain varying – and usually significant – amounts of another compound that we don't see as often: estragole.

## POTENTIAL EFFECTS OF ESTRAGOLE

Estragole is a phytochemical compound found in essential oils like fennel, tarragon, and basil. Interestingly, experts claim that estragole "is a naturally occurring genotoxic carcinogen with a DNA potency similar to the one of safrole." This has led to much controversy, culminating in official statements by health officials:

*“...Exposure to [estragole] resulting from consumption of herbal medicinal products (short time use in adults at recommended posology) does not pose a significant cancer risk. Nevertheless, further studies are needed to define both the nature and implications of the dose- response curve in rats at low levels of exposure to [estragole]. In the meantime exposure of [estragole] to sensitive groups such as young children, pregnant and breastfeeding women should be minimized.”*

So how do we balance that with our family's use of fennel to help stimulate milk supply? Well any concern about risks associated with fennel use (both herbal and EO) seem to be correlated to long term use. So we focus on short term use to help establish supply. With use for a couple weeks any potential risk is likely very low.

## **Note on Seizures & Hypertension**

A 2011 case report tells the story of a women who, “Although she was under antiepileptic treatment and had well-controlled epilepsy, she developed a typical generalized tonic-clonic seizure and remained unconscious for 45 minutes following ingestion of a number of cakes containing an unknown quantity of fennel essential oil.” Because of this, the researchers concluded that, “This reported case recalls the fact that fennel essential oil can induce seizures and that this oil should probably be avoided by patients with epilepsy.”

There are several epidemiological reasons why this conclusion is false and is out of the scope of this article to cover each one, but I'll leave you with this thought: just because fennel oil was a common ingredient in the cakes that this woman ate, it does not prove that fennel was the cause. This is a classic statistics blunder that many make. “Correlation does not imply causation,” because there are countless other variables that not being considered (diet, environmental triggers, medicines, other ingredients, and etc.).

This is also a tough one for me to figure out because there's virtually no research on this. Nonetheless, virtually every blog that I see on the topic states that fennel is contraindicated for epileptics and people prone to seizures.

According to Aromatherapist Lauren Bridges, a mother of an epileptic child, this issue has become convoluted by myths and jumping to conclusions prematurely.

“Long story short, a lot of the seizure lists floating around the internet are not accurate nor real pictures of the risks and threats. None of them seemingly

account for species or chemotype, which makes a difference in this matter. As far as a list of oils with convulsant properties, I would check essential oils safety expert Robert Tisserand's work, but with the understanding that this list can no way give a complete risk profile because of the nature of epilepsy and other seizure disorders."

Same message applies to hypertension. According to Tisserand "I believe that there is no case for contraindicating any essential oil in someone with high blood pressure. As well as closely examining the evidence above, I also refer to more recent research, which confirms that the four "Valnet oils" present no risk. The lack of compelling evidence is reason enough to let go of this chimera."

If these are areas of concern for you, please contact your physician before using fennel.

## Best Ways to Use Fennel

Fennel remains an important digestive substance in spite of safety concerns. When used in appropriate aromatherapy doses and for the appropriate circumstances, it remains beneficial. Remember:

- Seizure disorders are contraindicated for some although Tisserand does not directly contraindicate fennel for seizures. Remember that levels of sensitivity vary from person to person.
- One drop diluted into a lipid should be plenty for a full culinary recipe
- Safety is established for inhalation, topical use, and small, diluted amounts internally
- Don't exceed or override cautions without a trained and certified aromatherapist

These precautions can be considered for the other estragole-heavy essential oils, including anise and tarragon, so that you can feel confident enjoying their health and wellness benefits. Some of the best ways to include fennel essential oil uses:

- Topical antifungal treatments with anise diluted into a carrier oil for topical treatment
- Bath salts mixed with a topical dilution used periodically as a foot soak
- Topical sprays are also beneficial for applying the treatment without leaving the skin to a moist, fungi-inviting environment

- Relieve PMS cramping and anxiety with a topical massage of anise and clary sage
- Add a drop or two of fennel to full recipes for digestive assistance

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# CHAPTER 17

## Ginger

When you think of ginger essential oil benefits, the first thing that comes to mind is digestive uses but there are more healing properties to know! Sip some ginger ale, or have a delicious ginger chew – it'll make your tummy feel better! I hear a mom's voice in my head when I think about ginger. Its soothing effects on the digestive tract are just the beginning of what this powerhouse oil has to offer you.

### Culinary Ginger Uses

Ginger as we know and love it is the rhizome (part of the root) of the *Zingiber officinale* plant. At the end of the growing season, the whole plant is dug up and the rhizomes harvested for use. Some can be retained for replanting, which starts the whole process again for another year. Ginger stores well and has a wide range of preparation possibilities, which has helped to establish it as a staple from early in human history. The harvested root can be chopped, grated, dried and powdered, even candied. It's added to both sweet and savory recipes, food and drink alike.

### Traditional Medicinal Uses

Not only has ginger established itself throughout history for its flavor and versatility, but the medicinal benefits of ginger are obvious and well suited to its uses. From the journal *Food and Chemical Toxicology* (linked below), ginger has been used for at least 2500 years, traditionally for gastrointestinal health, including:

- Digestive upset
- Diarrhea
- Nausea

And, in more recent years, the review notes that researchers are finding even more potential benefit, specifically in the aromatic compounds: *Some pungent constituents present in ginger and other zingiberaceous plants have potent*

*antioxidant and anti-inflammatory activities, and some of them exhibit cancer preventive activity in experimental carcinogenesis.* Could ginger as a digestive-aid staple have protected earlier generations from the plague of cancer that we currently face today? Details remain to be seen, but we can certainly take a page from traditional recipes to incorporate more ginger into our daily lives. Include more ginger in your diet by making recipes such as:

- Ginger-seasoned stir fries
- Gingersnaps
- Gingerbread
- Ginger ale
- Ginger beer
- Ginger sauces
- Ginger marinades
- Ginger-seasoned desserts
- Candied ginger

The root is well established as beneficial for digestion, and you will get some amount of the essential oil compound with it, as well.

## **Ginger Essential Oil Composition**

The benefits of ginger essential oil is also derived from the so-called ginger root (that's actually a rhizome), via steam distillation. As with any essential oil, the actual compounds will vary based on where and how the plant is grown.

Still, some of the most commonly present constituents in ginger essential oil include citral, zingiberene, and camphene, all from the terpene hydrocarbons category of chemical compounds.

According to an analysis of ginger essential oil from a 2015 analysis, the compounds in ginger essential oil include free-radical scavenging capabilities and boosting the body's natural antioxidants. Ginger essential oil is used to add a spicy note to perfumes and in aromatherapy blends as well as culinary preparations.

## 4 Health Benefits of Ginger Essential Oil

We love to diffuse ginger around Christmastime especially for its spicy, festive scent reminding us of holiday treats. There are some specific benefits of ginger essential oil to keep in mind when choosing oils. Ginger's benefits are primarily digestive, but you may be surprised at just how effective it might be – or what else it might be used for!

### 1. GASTROPROTECTION

Ginger root has been used as a digestive aid throughout its long history. Of course, the whole root carries many benefits in its various components. The essential oil itself still retains the benefit of being a digestive aid, which is both important for potency as well as ease of use. A recent study depicted an example of the protective effects that ginger essential oil – as well as turmeric – can have on ulcers specifically. The study was conducted in a lab on rat stomachs, but the essential oil was shown to reduce oxidative stress and reduce the damage the ulcers inflicted.

*Properly incorporate a couple drops of ginger essential oil in your culinary preparations when extra need for digestive support arises.*

### 2. NAUSEA RELIEF

Probably the most reliable and definitely the easiest remedy to “apply,” simply inhaling ginger essential oil is quite effective against nausea. An encouraging body of study is being done on this effect to help relieve chemotherapy-induced nausea. A full review of the effects of aromatherapy on nausea found that, of the studies that have been conducted, “*the inhaled vapor of peppermint or ginger essential oils not only reduced the incidence and severity of nausea and vomiting.*” Sixty women with breast cancer volunteered to use ginger essential oils during chemotherapy, and the acute nausea as well as appetite loss and functioning were improved over placebo.

*Create an inhaler with some cloth that has a couple of drops of ginger essential oil, or simply open the bottle and sniff for relief of waves of nausea.*

### 3. INFLAMMATION

Some of the anti-inflammatory properties that no doubt aid in digestive wellness seem to also help with muscle pain. A trial using Swedish massage with ginger

essential oil in short term and long term treatments found improvement in chronic low back pain, even at disability levels.

*Add ginger essential oil to carrier oils to massage into painfully inflamed areas.*

#### 4. CANCER PREVENTION

In vitro and the markers of their actions inhibited *in vivo* (in the body!) *We don't yet have indication of how to maximize these benefits, but including ginger essential oil in your regular aromatherapeutic use can only help!*

### Suggested Oils to Blend with Ginger

Synergy is a major part of aromatherapy, which means oils typically perform better when combined with others. Try ginger with these oils for both scent combinations and effect enhancements...

- *Citrus: orange, bergamot, neroli.*
- *Floral: geranium, rose, ylang ylang.*
- *Woody/Earthy: eucalyptus, frankincense, sandalwood, cedarwood.*

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# CHAPTER 18

## Peppermint

When we talk about peppermint essential oil benefits, we aren't talking about mints, gum, or candy canes. Really, it's quite fascinating – in a somewhat sad way – that peppermint is so commonly associated with sweet treats rather than profound medicinal benefits. Aside from lavender, peppermint essential oil uses may be the most varied of all our essential oils.

And yet we've limited it to Santa Claus and toothpaste! Is there any reason at all that we wouldn't stock our cabinets with peppermint essential oil? Our culture is seriously missing out!

### **History & Composition of Peppermint**

Peppermint (*Mentha x peperita*) is a hybrid combination of watermint and spearmint that grows prolifically – in fact, it can take over like a weed. The aerial parts – flowers and leaves – are harvested for essential oil production, which is conducted via steam distillation. At this point, active ingredients typically include menthone at around 20% of the composition and menthol at roughly 40%, though these amounts may naturally vary. To get the most out of your preferred peppermint essential oil uses, choose a quality brand.

Typically, peppermint essential oil is used as an antiemetic (helps to prevent nausea) and antispasmodic (helps to prevent vomiting as well as any other harsh gastrointestinal contractions). It's a soothing digestive aid and beneficial during times of illness.

Historically, peppermint dates back as one of the oldest medicinal herbs used in Europe, an ancient remedy for both Chinese and Japanese cultures, and an Egyptian medicine in at least 1,000 B.C. When, in Greek mythology, Pluto pursued the nymph Mentha, he transformed her into an herb (guess which?) so that the generations to come would enjoy her just as well as he. Such a colorful legacy is contained well in this cool, accessible, effective substance.

## Top 3 Peppermint Oil Benefits

Stepping away from Greek literature and into the scientific realm, peppermint is found throughout databases of studies and reviews – even more so when we look at its specific component *menthol*. With hundreds and literally thousands of mentions, scientists are all over this remarkable herb. I don't make promises and guarantees often, but peppermint is almost a sure thing: add it to your daily regimen and your life will never be the same.

### 1. NAUSEA RELIEF

For example, while we all hope to avoid surgery, sometimes it is a necessary part of life – and a common part of surgery is unpleasant post-operative nausea, to the tune of 1/3 of surgical patients. In 2012, Clayton State University facilitated tests on peppermint essential oil's effects on this nasty phenomena. Moms who are in recovery from a Caesarean especially do not want to deal with vomiting and nausea on top of the mixed emotions of the joy of birth and pain of surgery, not to mention the time that could be spent bonding with their babies. So, moms were chosen for this study, with 35 respondents discovering “significantly lower” nausea levels with inhaled peppermint compared with standard treatments.

### 2. IRRITABLE BOWEL SYNDROME

The use of essential oils is sometimes underestimated when limited to the connotations of “aromatherapy.” Topical and occasionally internal applications are relevant, as well. One drop mixed with one teaspoon of coconut oil, rubbed on the stomach or ingested in a spoon of honey, can calm an upset stomach or indigestion in a snap. This remarkable ability is being broached by researchers, marked by a systematic review of the literature that covers irritable bowel syndrome (IBS) and peppermint, though this treatment typically requires the use of peppermint encapsulated in enteric-coated capsules.

Nine studies were reviewed, spanning more than seven hundred patients, and the conclusion was clear – taking peppermint essential oil in enteric-coated capsules performs much better than placebo when it comes to pain and symptom management. In their conclusion, University of Western Ontario researchers stated that,

*“Peppermint essential oil is a safe and effective short-term treatment for IBS. Future studies should assess the long-term efficacy and safety of peppermint essential oil and its efficacy relative to other IBS treatments including antidepressants and antispasmodic drugs.”*

### 3. BUG REPELLENT

One of my personal favorite benefits of peppermint essential oil is bug repellent – especially since I live in mosquito country!

In a comparison of seven commercial bug repellants, Terminix® ALLCLEAR® Sidekick Mosquito Repeller nearly topped the charts. If you aren't aware, this is an "all-natural" blend that lists cinnamon, eugenol, geranium, peppermint, and lemongrass oils. It was very close to a tie with OFF!®, the chemical-laden, DEET-filled commercial brand.

Although I don't recommend Terminix® ALLCLEAR® because I have little faith in a big name company to use true, pure, therapeutic grade essential oils, the lesson is the same. It underscores the efficiency of essential oils, no matter their quality. And an effective essential oil blend most definitely is preferred to harmful, toxic chemicals or nasty 'skeeter bites!

### 10 More Uses

1. **Ease Pain Naturally** – For a natural muscle relaxer or pain reliever, peppermint essential oil is one of the best. Try using it on an aching back, toothache, or tension headache.
2. **Clear Sinuses** – Diffused or inhaled peppermint essential oil usually clears stubborn sinuses and soothes sore throats immediately. As an antitussive, the results may be long lasting and beneficial when you're down with a cold, plagued with a cough, or struggle with bronchitis, asthma, or sinusitis. Use peppermint in a homemade cough drop recipe to capitalize on these benefits.
3. **Relieve Joint Pain** – Peppermint essential oil and lavender oil work well together as a cooling, soothing anti-inflammatory for painful joints.
4. **Cut Cravings** – Slow an out of control appetite by diffusing peppermint before meal times, helping you feel full faster. Alternatively, apply a drop or two on your sinuses or chest to keep the benefits to yourself.
5. **Energize Naturally** – Road trips, long nights studying, or any time you feel that low energy slump, peppermint essential oil is a refreshing, non-toxic pick-me-up to help you wake up and keep going without the toxins loaded into energy drinks.

6. **Freshen Shampoo** – A couple of drops included in your shampoo and conditioner will tingle your scalp and wake your senses. As a bonus, peppermint's antiseptic properties can also help prevent or remove both lice and dandruff.
7. **Ease Cough** – The antitussive effect of peppermint can help ease a persistent cough. Try using it in a diffuser or as part of this homemade cough drop recipe.
8. **Relieve ADHD** – A spritz of peppermint on clothing or a touch on the back of your neck can help to improve concentration and alertness when focus is needed.
9. **Soothe an Itch** – Cooling peppermint and soothing lavender combine again to soothe an itch from bug bites or healing sun burns.
10. **Block Ticks** – Stop ticks from burrowing with a touch of peppermint essential oil. Make sure you remove them by their head to lessen your chances of contracting Lyme disease!

## A Quick Word of Caution

Be sure to follow professional recommendations, healthcare provider advice, and common sense when using peppermint essential oil. While it is incredible versatile and relatively gentle, it is still a medicinal-quality substance and should be treated with care. As with all oils, make sure to always dilute with a carrier oil and, as always, listen to your body and the wisdom of those who have used aromatherapy before us: essential oils are best in small doses!

Also, don't consume neat. The University of Maryland Medical Center warns that peppermint essential oil can relax the esophageal sphincter and pose risks for those with reflux. Don't consume neat. Taking one or two drops of peppermint in a gel capsule can remedy this risk relatively easily.

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# CHAPTER 19

## Tarragon

Tarragon essential oil health benefits come from its rich estragole content. There is some controversy to using it, so be careful before diving in.

### **Tarragon's Plant Profile**

As a member of one of the largest flowering plant families, *Asteraceae*, tarragon is one of around 500 varieties of the species *Artemisia*. Native to Europe and Asia but thriving in North America, as well, tarragon spans traditional uses as well as modern essential oil isolation.

Tarragon grows in an upright, shrub-like formation with narrow leaves and bright yellow flowers. Much like modern use, traditional preparations of tarragon varied from culinary ingestion to medicinal extracts and preparations.

As one of the main herbs in French cooking, tarragon leaves are flavorful and fragrant. The compounds in them are understood to act as an herbal "bitter," stimulating the digestive system to better process food. This can have many implications, some of which translate into the essential oil compounds.

### **Top 4 Tarragon Essential Oil Benefits**

Think of a fragrant dish simmering on the stove or baking in the oven – which culinary herbs and spices are you smelling? These are often full of aromatic compounds, the essential oils escaping and making your stomach growl. Tarragon is one such culinary herb with an essential oil element. If you haven't tried tarragon essential oil yet, here's what you need to know.

#### **1. ANTIBACTERIAL FOOD SAFETY**

Often overlooked in antibacterial uses, one group of researchers took the opportunity to test tarragon essential oil's bacteria-fighting ability and test it in real-life application. The study, released in 2012, not only tested tarragon for its chemical properties and effects in the lab (which many studies on many products do) but also tested it in a food preservation environment.

The results told us what we already know traditionally about essential oils: they are enhancers. Tarragon was effective against *E. coli* and *Staph. aureus*, and was even effective in protecting cheese during the study. Confirming both aromatherapeutic traditions of blending and tarragon's contributions to food safety, they concluded:

*Thus, it is suggested that tarragon EO be used as a part of a combination with other preservation...and can be applied as a natural preservative in food such as cheese.*

In both estragole-safety and effectiveness perspectives, tarragon included as part of the overall recipe can be beneficial, enjoyable, and safe in most cases.

*Application: One to two drops blended into a lipid and added to culinary preparations, especially in combination with other culinary essential oils; cleaning blends for antibacterial surface protection.*

## 2. DIGESTIVE WELLNESS

Tarragon as a whole herb carries many traditional uses for digestive wellness, from antidiabetic effects to lipid metabolism to liver protection and ulcer resistance.

The whole herb is still likely the best inclusion for maximum digestive stimulation, but there are some important secondary effects that the essential oil has on digestive wellness, as well. Both topical and moderate internal use can yield big benefits with tarragon essential oil.

Translating those benefits to the essential oil isn't necessarily direct – many of the studies have centered around water infusions and alcohol extracts. As you begin to experiment with tarragon as a culinary herb, you can utilize a drop or two of the essential oil now and then, as well. Consider inhalation and topical belly massages, as well, to introduce digestive wellness compounds in other ways.

*Application: Use of the whole herb; some inclusion of careful internal use; blends for topical massage or inhalation.*

## 3. PAIN RELIEF

Often hand in hand with gastrointestinal wellness is the relief of gastrointestinal pain, and tarragon was used to relieve both concerns traditionally. A 2013 *in vitro* trial used an animal model to see just how tarragon essential oil might work to relieve painful conditions.

Pain relief was confirmed, validating yet another traditional use of an herb and its essential oil. While the study wasn't in humans or their typical applications, the effects remain and tarragon essential oil can reasonably be applied following safety guidelines to enhance blends intended to relieve discomfort.

*Application: Massage oil blends, topical stomachache blends.*

#### 4. ANTI-INFLAMMATORY SWELLING REDUCTION

The major compounds anethole and estragole found in digestive herbs like tarragon, anise, and fennel might have some controversy surrounding them, but they also carry benefits. One group of researchers evaluated the effects of anethole and estragole on swollen paws of mice. Not only did the treatment relieve the swelling, but there weren't any signs of toxicity.

This doesn't tell us to throw caution to the wind, but it does demonstrate a couple of important things about tarragon and the other digestive herbs and essential oils. First, pain relief and gastrointestinal benefits are likely tied to anti-inflammatory actions. And second, toxicity in many cases depends on use. Be smart with your oils and stay safe.

*Application: Massage oil and other topical blends, especially for swelling, sore muscles, and inflammatory illness.*

### Estragole's Controversial Twist

Before we get into the ways you can use tarragon essential oil, it's important to know what you cannot do. One of the main components of the essential oil content in tarragon is called *estragole*, which can also be indicated as *methyl chavicol*, among other names.

Reviewing similar cautions for fennel essential oil, you'll find that many whole herbs known for their digestive prowess also have concentrated estragole in their essential oils. The complexities of nature are so intriguing!

The bottom line for estragole safety is to use your essential oil in absolute moderation and wisdom. Ask your supplier for a copy of the GC/MS evaluation to know how much estragole is in that batch of tarragon, and only use it internally if the percentage is low and the dilution high. In preparations, one or two drops for an entire meal is more than enough to suffice.

Official safety statements for estragole confirm that moderation is key – toxicity levels were far above anything we'd actually consume – however, a few demographics should minimize use:

- Pregnant or nursing women,
- Children, and
- Individuals with seizure disorders.

With that said, tarragon has stood the test of time, and it seems the essential oil will, as well. Here are some of the reasons tarragon (used safely) isn't going away.

## How to Use Tarragon Essential Oil

As more research is conducted, we will undoubtedly learn details that will improve our use. Learning how essential oils like tarragon work in the body, why estragole is concentrated in digestive herbs yet not without its controversial effects, and the best ways to get the most out of an oil will come to light bit by bit, study by study. For now, we can mimic traditional wisdom in light of what we do know. Some suggested tarragon uses include:

- Stomachache topical blend, including oils like lavender
- Culinary essential oil use, with one or two drops per recipe.
- Topical treatments for antioxidant skin health
- Massage oil inclusion for easing tense, painful muscles
- Whole-herb use, taking advantage of the entire composition of tarragon to mitigate estragole and allow for fewer safety concerns

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# CHAPTER 20

## Thyme

Thyme essential oil benefits are profound and bring healing to the body in many ways. It's a powerful oil from such a humble little herb!

### **Thyme History & Chemical Properties**

A perennial that can bunch up as a bush or creep along a forest floor, thyme is a ground cover, soil nutrient, and "living mulch." Really, thyme essential oil uses are similar medicinally to its botanical presence: it's always there, sturdy and without much fanfare, but accomplishes important things.

To obtain the thyme essential oil benefits, the leaf and flower of garden thyme, or *Thymus vulgaris* (of which there are many chemotypes) are steam distilled. Named either for its strong, herbaceous fragrance (*thymon* – to fumigate) or its association with bravery (*thumon* – courage), thyme's "roots" reach back to ancient Greece.

Analyzed for its chemical properties, thyme essential oils can include different chemotypes, one of the most popular of which is high in a component called thymol. Thymol chemotype also includes gamma-terpinene and cymene. Thymol is most studied, with a rash of research covering its food safety and antimicrobial benefits. In fact, it stands out as thyme's most notable function, cleansing of microbes and danger.

Once again, thyme's presence in the botanical world mirrors that of the essential oil realm. As a plant, it grows along the surface of the ground, preventing moisture loss and protecting the soil and the plants around it. As an essential oil, thyme continues its protective mission, cleansing surfaces and the air around it of detrimental microbes and fungal invasions.

The plant world is teeming with these complete packages of nourishment and health! When we fill our homes and lives with naturally protective substances like thyme, along with its fellow nourishing, healing, and relaxing foods, herbs, and essential oils, we add benefits to our whole life – mind, body, and spirit!

## 7 Thyme Essential Oil Benefits

I'd be willing to bet that the chemical names and composite structure of an essential oil is probably still not what you're looking for. Unsurprisingly, the technical details rarely hold interest – we want to get right down to the meat of things. What can we DO with the components? For thyme oil, some of the possibilities are pretty promising!

### 1. IMMUNOSTIMULANT

While thyme protects us as an antimicrobial for cleaning and food safety, which we'll look closely at in a moment, it may also help condition us to respond to microbes we encounter. The International Immunopharmacology journal published a study in 2014 that demonstrated thymol, the dominant constituent in the thymol chemotype of thyme essential oil, suggests a potential role as a white blood cell stimulant and immune-boosting substance. We all talk about health from the inside out, but thyme may be single handedly embodying that philosophy!

### 2. ANTIDEPRESSANT

One avenue that thymol appears to take in the body is through neurotransmitters associated with depression. Published in Behavioral Brain Research this year (2015), Chinese researchers followed the effects of thymol on “chronic unpredictable mild stress” in mice, observing anti-inflammatory relief on the neurotransmitters that cause depression. Its potential as an antidepressant therapy is exciting and one I'm looking forward to seeing discovered and developed.

### 3. ANTICANCER

In another article, we looked at a study that demonstrated the benefits rose oil carried against acne bacteria. In the same study, ten powerful essential oils were tested in vitro against cancer cells to see how they could stand up. Thyme was one of those oils, and it stood out from the crowd as having the strongest cytotoxic activity against three human tumor cell lines. While it can't be stated enough that these studies are preliminary, I'm filled with hope for a future where naturally occurring products replace toxic chemicals for cancer treatment and – dare we hope? – cures!

## 4. HORMONE BALANCING

As one of the top herbs for estrogen binding, thyme may be able to help the body balance and regulate hormones. Incidentally, this is not the only time we have seen a potential estrogenic herb noted for its anticancer potential, as well. Because cancer frequently holds receptors for estrogen, thus being fed by anything estrogenic, it is often suggested that you should avoid estrogen if you have or are at high risk for cancer. However, in my opinion, this logic should not cause us to avoid essential oils because of potential estrogenic properties.

Still, as a note of caution, researchers have put it, "Several aromatic oils have been recommended as phytoestrogens because they include components related to the sex hormones." What this looks like exactly is not clear. But, from what I can tell, using essential oils like thyme can help create homeostasis in the body, which supports proper hormone balance. Essentially, true healing from the inside out – not using essential oils for hormones like you would a drug.

## 5. ANTI-FUNGAL

In a study released this year, thyme joined lemon, basil, geranium, clove, and cinnamon as highly effective against fungi, including *Candida albicans* and the resulting candidiasis. Antifungal properties are important as a cleaning agent, but I'm especially interested in tools to battle systemic Candida struggles. This specific study occurred in vitro (in lab tests), but we have seen other studies demonstrate diffusion of lemongrass, peppermint and eucalyptus as an effective essential oil application against Candida. Diffuse a couple drops each of thyme, cinnamon and clove for a spicy, herbaceous fragrance that may help ward off Candida.

## 6. ANTIBACTERIAL

Thyme is an excellent addition to cleaning solutions, with potent antimicrobial properties. To establish antibacterial control in potentially one of the most infections environments – a commercial chicken house – Polish scientists used essential oil mists and monitored the antibacterial results. Both peppermint and thyme mixed with water were tested separately for three days, with both exhibiting strengths against specific bacteria. Combining antimicrobial and antibacterial oils helps to facilitate that incredible synergistic effect that feels like magic – with each oil enhancing the abilities of the other. Diffuse thyme, peppermint, and lemon for an energizing and disinfecting effect. Add to a spritz bottle of 190 proof grain alcohol for topical disinfecting, particularly in the kitchen after handling raw meats and other food safety risks.

## 7. FOOD SAFETY

Thyme is especially well utilized when we take advantage of its antimicrobial prowess and improve food safety. Commercial applications are intriguing, with the potential for preservation and packaging to occur with natural substances like thyme oil. But safety in our homes is important, as well.

For example, a chicken marinade using thyme and orange essential oils was able to inhibit *Salmonella*. A 2004 study and 2007 study found similarly beneficial effects against *Listeria* and *E. coli*, respectively. Though we should all be practicing good kitchen hygiene and food safety habits anyway, appropriately including thyme oil in food preparations may help to make up for shortcomings commercially – if nothing else, it's a bit of added peace of mind!

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# CHAPTER 21

## Turmeric

Turmeric essential oil benefits are profound. This ancient spice has been used for thousands of years for healing and we are literally just now discovering the wide spectrum of health benefits of this amazing oil.

### **One Plant, Two Extraction Methods**

Turmeric spice has long been used in Eastern cooking and has historically played a prominent role in Ayurveda, Chinese medicine, and traditional home treatments. As millions of consumers use it for everything from pain to mental health (it is being touted as the most versatile natural remedy in the world next to CBD oil), the demand for *stronger*, more *medicinal* grades of turmeric has reached the marketplace. *Enter turmeric essential oil and CO2 extract.*

The most potent and bioavailable (i.e. ability of the body to absorb and assimilate chemicals and nutrients) forms of turmeric available in the world, as the demand for *turmeric CO2 extract* and *essential oil* increases, the need for researchers to substantiate their potential therapeutic efficacy has reached an all-time high.

The *proven* benefits turmeric can have on your body have been heralded by experts across the globe as “the most effective nutritional supplement in existence.” Thousands upon thousands of research studies exist evaluating the therapeutic efficacy of turmeric (and its primary healing component *curcumin* – the orange/yellow compound that colors mustard and curry) showing it has potent anti-inflammatory, anti-cancer, and immune-stimulating properties to name a few. It benefits your brain, heart, immune system and everything in between!

Though, not all of the research on turmeric and curcumin is applicable to the essential oil, and it all starts with how the *plant* has been extracted. There are several processes used to extract essential oils from plants, and turmeric is one of a many plants that will derive very different products, depending on the process chosen.

## TURMERIC ESSENTIAL OIL

Derived from the *Curcuma longa* plant, which comes from the *Zingiberaceae* family – the same as ginger, turmeric essential oil can be extracted through traditional steam distillation, which loosens up the essential oils from the plant along with plant components. This is commonly done with the turmeric plant's rhizome, the underground stem of the plant that sends out roots and shoots.

It is important to note the *curcumin* has not been reported in turmeric essential as it has with oleoresin & CO2 extracts.

## TURMERIC CO2 EXTRACT

Another extraction method requires a solvent to “dissolve” the different compounds and components of the plant. CO2 extraction uses carbon dioxide as a nontoxic solvent to extract the oil. The CO2 completely returns to a gaseous state, leaving no traces behind, unlike other, less eco-friendly solvents.

The end result? *Two very different products!* The CO2 extraction contains curcumin as one of its major components, a widely researched compound with a long list of health benefits and also contains turmerones. The steam distilled essential oil, on the other hand, does not contain curcumin. Instead, turmerones are its major components and are the cause of the distinctive spicy aroma of many turmeric products.

It's important to know which version you are purchasing, however, the CO2 extract is what most companies sell under the generic term “turmeric essential oil.” If you are ever in doubt, turmeric oil that is yellow in color comes from the CO2 extract – curcumin gives both the spice and the oil its bright pigmentation!

## Turmeric Essential Oil Compounds

As mentioned above, turmeric essential oil is predominantly derived from the rhizome and roots of the turmeric plant, although sometimes its leaves flowers are used as well.

The major constituents of this essential oil include the following:

- *Turmerone*
- *ar-Turmerone*
- *Zingiberene*
- *Alpha-Phellandrene*
- *Beta-Sesquiphellandrene*
- *ar-Curcumene*

*ar-Turmerone*, has been shown to have powerful cardiovascular effects (antiplatelet aggregation and hypoglycemic activity), as well as antimutagenic properties and anti-carcinogenic properties.

Some derivations also contain cineole, a compound found in ginger, helichrysum, rosemary, tea tree, and peppermint oils.

However, it's important to note that these are just a handful of the constituents in turmeric essential oil. Turmeric oils and extractions have been found to contain up to over 50 different components!

There is no doubt that the synergy between all these compounds contributes to its awesome healing potential.

## 10 Turmeric Essential Oil Uses

Turmeric oil is safe to be used via inhalation, topically and ingestion if dosed and diluted properly. Try some of the recommendations below and be sure to consult with your physician if you're being treated for a medical condition or are currently taking pharmaceuticals.

### 1. CANCER-FIGHTING PROPERTIES

One of the most promising areas of research for turmeric oil is in the field of cancer prevention and management. Traditional treatments for cancer can have very damaging side effects to your overall health that make the process difficult and exhausting.

However, adding a holistic component, such as essential oils, to your treatment plan may ease or reduce symptoms, and can alleviate the stress of your healing journey.

Compounds in turmeric oil have been shown to impact cancer. Current laboratory research performed on cells or on animals demonstrate the following benefits of turmeric oil for cancer:

- Curcumin and turmerones inhibited the spread of breast cancer cells.
- Additionally, the turmerones in this study were shown to have "immunostimulating effects," that is, they kickstarted the immune system into action.
- Turmeric oil killed pancreatic cancer cells.
- Ar-turmeric, one of the turmerone compounds, induced cell death in two separate human leukemia cell lines. Turmeric oil has been tested on other leukemia cell lines as well with similar results.
- Turmeric essential oil demonstrated anticarcinogenic effects in a 2014 study. It also displayed antimutagenic effects, meaning it might help prevent cells from mutating into a more serious problem.

These demonstrate the ancient healing potential of this turmeric essential oil for treating cancer and relieving treatment symptoms.

*Application: Add 1-2 drops of turmeric essential oil to your curries, soups, stir-frys, stews, and other entrees to enjoy a safe, culinary dose. Be sure to discuss different methods of adding this oil to your treatment plan with your doctor.*

## 2. PROTECTS BRAIN CELLS

Neurological diseases impact over 100 million Americans every year and costs are expected to skyrocket to \$600 billion by 2030 for dementia and stroke. The potent medications that are used to treat these diseases are difficult to manage if a patient has multiple conditions and some have devastating side effects. And for some conditions, like Alzheimer's, there is currently no cure available at all.

Fortunately, research is looking to turmeric essential oil for its promise in healing and preventing neurological disorders. In the lab, one study of turmerone suggested that inhaling it could help regenerate stem cells in the brain. This is exciting news! And scientists from China and the U.S. also demonstrated that this compound may reduce neuroinflammation and the memory impairment it can cause.

Researchers have also been examining the impact of turmeric extracts on Alzheimer's disease. Current science suggests that plaque buildup on the brain caused by amino acids likely contributes to this disease. Turmeric oil extracts were shown to inhibit the buildup of these amino acids.

More research is needed, but the neuroprotective qualities of turmeric essential oil on the brain make it an important tool that may be able to help you stave off brain deterioration and damage caused by neurodegenerative diseases – or even prevent them!

*Application: Use a personal aromatherapy inhaler with 10 drops turmeric, 5 drops frankincense and 5 drops lime essential oil.*

## 3. FIGHTS PAIN AND INFLAMMATION

A little pain is not always a bad thing. Inflammation causes pain but it's part of your body's normal, healing response to injury and other harmful agents. That said, prolonged inflammation can lead to chronic pain, disorders, and even serious diseases. When inflammation doesn't heal, turmeric essential oil can be a powerful ally to alleviate your pain.

Arthritis is one such disease. It has numerous causes and encompasses over a hundred diseases but they all have one thing in common: inflammation that causes pain. This occurs in joints and bones as well as the tissues that surround them. The most common forms are:

- Osteoarthritis, which is caused by aging or physical wear and tear on the bones over time, and
- Rheumatoid arthritis, an autoimmune disease.

While the root cause of your inflammation should be addressed with your healthcare provider, turmeric essential oil may be able to ease your symptoms.

Research from 2011 shows that turmerones are more effective in reducing certain types of inflammation in cells while curcumin inhibits other types of inflammation. Another study from 2006 demonstrated that curcumin from turmeric extract prevented experiential rheumatoid arthritis in mice.

It's also been demonstrated that high doses of turmeric essential oil had an anti-inflammatory effect on joints when tested on rats. This suggests that this oil may be helpful for arthritis, however, more research is needed.

However, for continued pain, it can't hurt to add turmeric essential oil to your routine to get some much-needed relief!

*Application: Make a homemade pain relief cream by adding 12 drops of turmeric to 1 ounce of Mama Z's DIY Salve Base & Lotion Bar Recipe.*

#### **4. POWERFUL ANTIOXIDANT CAPABILITIES**

Over time, our bodies are exposed to a host of natural – and unnatural – compounds, chemicals, and toxins. These are called free radicals, and they increase oxidative stress. This can damage different cells that are overexposed to it, leading to disease and the ravages of aging.

Antioxidants, on the other hand, are chemicals that help prevent free radicals from causing too much damage. These compounds, found in many essential oils, serve many functions and are necessary for your body's optimal well-being.

Turmeric is an oil that is widely known for its antioxidant abilities. In lab studies, turmeric oil appeared to remove free radicals that cause oxidative stress. It was also shown to reduce certain types of oxidative stress that are responsible for causing high cholesterol. A healthy diet and regimen full of antioxidants is a recipe for anti-aging and good health!

*Application: Take advantage of the antioxidants in turmeric oil by consuming 2-3 drops of turmeric in a gel capsule filled with olive oil once daily during cold/flu*

season. Be sure to discuss adding this oil to your treatment plan if you're currently being treated for a disease by a doctor.

## 5. ANTIMICROBIAL BENEFITS – FUNGUS AND BACTERIA

Turmeric essential oil is also useful for killing fungal and bacterial pathogens. *Candida albicans* is a type of fungal yeast infection that is very difficult to fight – ask anyone who's dealt with it!

Candida overgrowth wreaks havoc in the gastrointestinal tract, causing an imbalance in bacteria in the gut. It's been linked to chronic fatigue, sinus allergies, bloating, constipation, eczema, and more! It is particularly harmful to people who are immunocompromised and is a common infection for those in treatment for cancer or HIV.

Researchers tested the impact of turmeric essential oil on candida cells and found that it was *twice as powerful as the commonly prescribed antifungal medication, Nystatin*, to combat this fungus. Other studies have shown that it can combat other forms of bacteria, making this an effective and useful oil for both clearing the gut and adding to your homemade cleaning formulas!

Turmeric essential oil was also one of four oils tested for its efficacy in combating the *P. Gingivalis* bacteria, which primarily lives in the oral cavity and may cause certain periodontal diseases. All the oils tested were effective in combating this bacteria, including turmeric.

If you are battling candida overgrowth, a clean eating regimen along with adding turmeric oil to your culinary dishes can help. Check out our book, [The Essential Oil Diet Book](#), to discover a sustainable way to enjoy food while living your healthiest life ever!

*Application: Try adding a drop of turmeric to your oil pulling routine if you are fighting gingivitis or to promote oral health.*

## 6. USE TURMERIC OIL TO HELP MANAGE OR PREVENT DIABETES

Diabetes requires a change in eating habits, however, using essential oils for diabetes can be a healthy part of combating – or preventing – this disease. In the lab, food scientists studied turmeric essential oil and found that it inhibited important enzymes that are linked to the development of type 2 diabetes.

Animal research from 2006 also showed that the compounds in both turmeric essential oil and the CO2 extract may be able to reduce blood sugars in rats, particularly curcumin. Additionally, turmeric oil without curcumin and turmeric oleoresin inhibited abdominal fat in the subjects. This does not replace the benefits of a healthy diet low in sugar along with regular exercise but it can assist you in healing your body.

*Application: Add 1-2 drops of turmeric essential oil to your favorite dishes to enjoy a safe, culinary dose. Be sure to discuss different methods of adding this oil to your treatment plan with your doctor.*

## 7. POTENTIAL ANTI-SEIZURE APPLICATIONS

According to the CDC, epilepsy is common and it's more frequently seen in children than adults. All seizure disorders are life-threatening and are usually treated with medication. Unfortunately, finding the right medication and dosage is tricky, and side effects can have a heavy impact on patients.

In fact, some 30% of epilepsy patients don't respond to treatment. That is why in 2013, scientists researched one of the components of turmeric oil, ar-turmerone, as a potential future drug candidate to treat epilepsy by testing it on zebrafish and mice embryos. Their results indicate that ar-turmerone is a safe candidate as a drug for some forms of epilepsy.

Hopefully, research will develop proven solutions for epilepsy with turmeric oil but for now, you can use this amazing elixir in your home to discover its benefits.

*Application: Enjoy a diffuser blend with 2 drops each of turmeric, lavender and Roman chamomile. Be sure to consult with your physician and discontinue use immediately if any adverse reactions occur.*

## 8. AIDE FOR GASTROINTESTINAL HEALTH

Turmeric essential oil might also have protective benefits for digestive health. A 2014 study compared turmeric and ginger essential oils for inhibiting ulcers in rats. The animals were given different doses of each oil in different groups. Both oils appeared to inhibit ulcers by over 80%! They also reduced lesions and stomach injuries.

Turmeric root extract has been shown to improve the symptoms of irritable bowel syndrome (IBS). Scientists randomly tested 207 otherwise healthy adults before and after treatment with the extract and surveyed the subjects. About

two-thirds of the subjects reported improvements in symptoms after the treatment, including pain and discomfort demonstrating that turmeric oil may be beneficial in addressing IBS.

*Application: Consume 2-3 drops of turmeric in a gel capsule filled with olive oil once daily for 3-4 weeks and monitor symptoms. Be sure to discuss adding this oil to your treatment plan if you're currently being treated for a disease by a doctor.*

## 9. SAFE FOR BACKYARD GARDENING

Is turmeric essential oil a safe tool to use in your backyard garden? Research shows that you can! Food scientists in China studied the benefits of turmeric essential oil in combating *Aspergillus flavus*, a fungus known for harming maize, grains, and legumes, and found it to be both effective and eco-friendly.

Turmeric essential oil, along with ginger oil, was also found to be to useful as an herbicide on maize plants. Turmeric was most effective after the weeds started to emerge and caused no damage to the crops. Learn more about organic backyard gardening from Mama Z!

*Application: Add 20-30 drops of turmeric oil to 16 oz of your natural weed killer recipes.*

## 10. BUG REPELLENT

Many essential oils have been studied for their effectiveness as a bug repellent. Turmeric essential oil and CO2 extract are both safer choices for bug repellent than most brand name pesticides, which commonly contain malathion, DEET, and permethrin. All these chemicals are linked to a variety of health concerns and you'd be wise to avoid them.

In fact, essential oils can work even better than these harmful products, including turmeric! Research showed that it was more effective than DEET for reducing mosquito bites and killing mosquito larvae. Essential oils are an excellent choice to keep your family safe from warm-weather outdoor pests.

*Application: Add 10 drops of turmeric oil per 1 ounce of your favorite DIY bug repellent recipes.*

## Turmeric Oil and Safety

Yes, as seen in the recommendations above, turmeric oil is safe to consume.

One of the peer-reviewed studies done on inflammation and arthritis raised concerns about the toxicity of ingesting turmeric essential oil because it proved fatal to mice that were given very high doses. However, this conflicts with another animal study performed in 2013 that showed no toxicity from the oil.

In earlier research from India, nine healthy volunteers were given 0.6ml of turmeric essential oil three times a day for one month and 1ml/day divided into 3 doses for the following two months. While two subjects had a mild reaction, this dose of turmeric oil had no effect on weight, blood pressure, or symptoms of the subjects for up to 12 weeks, and no additional toxicity at three months. This size of the study, however, is far too small to be conclusive.

Turmeric essential oil has powerful benefits but there are some common-sense precautions you should take when using this essential oil, including:

- At present, there is no clinically safe level of dosage for children, but this doesn't mean that you cannot give it to them. Start off small and in "culinary doses" – no more than 1 drop per dish. Also safe to use in your diffuser and topical applications (1% or less for children).
- Don't consume straight out of the bottle, and don't drink with water (remember oil and water do not mix).
- Try adding in some turmeric essential oil in your food (culinary doses), replace 1 teaspoon turmeric spice with 1-2 drops of essential oils in your curries and favorite recipes.
- Consume safely by adding 2-3 drops of turmeric essential oil into a veggie gel capsule, and fill capsule with olive oil. Consume with food.
- Do not stay on turmeric oil for an extended length of time. Ideally, you should rotate your oils every few weeks.
- Stop using it immediately if you experience any side effects.
- Use with caution if you take medications, especially aspirin, warfarin, or other blood thinners. Turmeric oil can also interact with anti-inflammatory drugs. Check with your healthcare provider first.

Turmeric essential oil abounds in health and wellness applications, and in keeping your home and body fungus-free. It blends well with citrus oils, as well as ginger essential oil – not surprising since they share the same family!

With such a great number of wonderful healing properties, don't miss out on this lesser-known oil. It's a great addition to your home, even if you regularly cook with turmeric spice!

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# About the Author



ERIC ZIELINSKI, D.C. has pioneered natural living and biblical health education since 2003. Trained as an aromatherapist, public health researcher, and chiropractor, Dr. Z started NaturalLivingFamily.com alongside his wife Sabrina Ann in 2014 to help people learn how to use natural remedies like essential oils safely and effectively. Now visited by more than six million natural health seekers every year, it has rapidly become the #1 source for Biblical Health and non-branded essential oils education online.

Dr. Z is an accomplished researcher with several publications, conference proceedings and is committed to sharing the healing power of natural therapies at churches and events across the globe.

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