

# *The Secret Lemon Fix:*

HOW NATURE'S #1

# DISEASE-FIGHTING FRUIT

*CAN RADICALLY HEAL*

.....  
Your Body  
*Every Day...*  
.....



The Alternative Daily

# ***The Secret Lemon Fix:***

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*How Nature's #1 Disease-Fighting Fruit  
Can Radically Heal Your Body Every Day*

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*“We are living in a world today where lemonade is made from artificial flavors and furniture polish is made from real lemons.”*

*—Alfred E. Newman*



## **The Tart and Powerful Superfood**

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Lemons are one of the most affordable superfoods on the planet. For less than a dollar, you can help remedy and prevent an assortment of temporary and chronic ailments. Lemons are versatile fruits that can complement most dishes, so it's easy to sneak them into your diet.

The lemon is such a powerful fruit that many people are beginning to drink lemon water first thing in the morning to alkalize their bodies and get their morning vitamin C boost.

Others include lemons in comforting herbal teas, with raw honey to complement the healing properties in the tea blend.

You might be surprised to learn that there is enough information about lemons to make an informational book such as this. However, lemons deserve respect for their potent nutritional and medicinal properties—and don't forget that lemons are a great addition to your beauty and home cleaning regime, as well.

It's time for lemons to shine, and we have compiled the latest information on this little tropical wonder, with the added bonus of unique, cost-saving recipes for you to enjoy.



## **Fascinating Facts about Lemons**

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### ***Lemons can prevent colds and flu***

By boosting the immune system, the high quantity of vitamin C found in lemons helps your body fight off infection and viral ailments.

### ***Lemons can help to break a fever***

By increasing perspiration, lemons may help bring down a fever.

### ***Lemons have been used to help treat cholera and malaria***

Lemons can help your circulatory system. In fact, they have been used traditionally for centuries for their blood purification properties.

### ***Lemons can stop a nosebleed***

Lemons have antiseptic and anticoagulant properties, which means they can help disinfect an area and stop bleeding. When applied to the inside of your nostrils with a cotton ball, lemon juice may help to stop annoying nosebleeds.

### ***Lemons can be used as a natural pain reliever***

Lemons are naturally diuretic and may help relieve symptoms of rheumatism and arthritis by flushing out toxins and bacteria in your system.

### ***Lemon juice can help to reduce gallstones***

Drinking lemon water can help reduce gallstones and eliminate kidney stones by producing urinary citrate, which prevents the formation of crystals.





### ***Lemons can help shrink your waistline***

Lemons can aid in weight loss because they help speed up your metabolism. They may also help lower your risk of diabetes.



### ***Lemon water can be used as a natural hairspray***

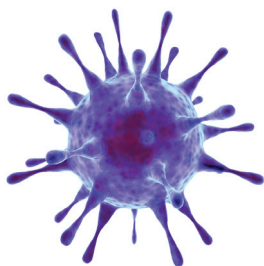
Lemon water can be used as a hairspray replacement. It can also naturally lighten your hair. Best of all, lemon juice is actually beneficial to your hair and scalp! It reduces inflammation that causes dandruff and hair loss, and leaves your hair with a natural shine.

### ***Lemon juice can reduce the pain of a burn***

Apply lemon to the skin to help cool down a burn. It may even reduce the appearance of scarring from burn-related incidents. Lemon juice may also help reduce the pain associated with sunburns and bee stings.

### ***Lemons can reduce the signs of aging***

The antioxidants found in lemon help fight free radicals and reduce the signs of aging.



### ***Lemons can help stop gum disease***

Massaging your gums with lemon juice can help stop gum disease and eliminate the odor associated with it. Rubbing lemon juice onto a painful tooth may also help to eliminate the pain.



### ***Lemons kill germs***

Lemon is a great disinfectant because it kills germs and helps prevent the spread of bacteria. It can be used to clean floors, countertops, and tables.

### ***Lemons repel insects***

The scent of lemons is strong enough to repel mosquitos and other pests. Using lemon in your home, and especially in your kitchen, can help keep your surfaces safe from tiny invaders.

**Read on for more amazing lemon facts, uses, and tips...**

## ***History of Lemons***

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Lemons were developed as a hybrid of the lime and the citron. Although images depicting lemons have been found from Ancient Greece and Rome, historians believe that they were first cultivated in Ancient India 2,500 years ago on the hot, semi-arid Deccan Plateau.

The word “lemon” originates from the Persian word “limu,” which is pronounced with a long “e” and a short “u.” The first description of the lemon was discovered in the early tenth century treatise on farming by Qustus al-Rumi. Written proof of the use of lemons was first found in an early twelfth century Cantonese text.

Europeans were introduced to the lemon by the Arabs, who brought the fruit over to Spain in the eleventh century. Around that same time, lemons were also being introduced via trade to the African continent. The spread of lemons throughout Europe is





attributed to the Crusaders, who found lemons growing in Palestine. Lemons appeared in the Azores in the late fourteenth century and were cultivated in Genoa, Italy in the fifteenth century.

Ibn Jami', personal physician to the ancient Muslim leader, Saladin, produced a treatise on the lemon. After the treatise was made public, the mention of lemons in literature grew throughout the Mediterranean region. As with several other fruits, the lemon was brought to the Americas by Christopher Columbus in his second voyage to the New World in 1493.

In the nineteenth century, lemons were highly prized by hard-working laborers, especially those working in coal mines. Lemons protected these workers from scurvy due to their abundance of vitamin C. In 1849, the demand for lemons was so incredibly high that producers charged the consumer one dollar per lemon, a price that would even be considered unreasonable by today's standards.

Florida has been a predominant producer of lemons in the United States since the sixteenth century. Today, the United States and Italy are considered two of the main producers of lemons in the world. Other major producers include Greece, Spain, Turkey, Israel, and Argentina.

## ***Lemon Varieties***

According to Sunkist, there are two main varieties of lemons that dominate the global marketplace: the Lisbon and the Eureka. Sunkist claims that these two varieties are so similar that many specialists can't tell the difference. The Lisbon and the Eureka are part of a group called "sour lemons," which are more tangy and acidic than the "sweet" varieties.



Other sour lemons include pink lemons and Ponderosa lemons. Pink lemons are popular for their use in pink lemonade, due to their slightly different flavor and beautiful rose color. The skin of this lemon is not pink, but green and yellow. It is the flesh within that is pink.



Pink lemons come from the variegated pink Eureka lemon tree. Ponderosa lemons come from the Ponderosa lemon tree. However, don't let the name fool you—Ponderosa lemons are actually not lemons at all. In fact, they are considered to be a lemon substitute. The juice of this yellow fruit is tart enough to be used as a replacement for squeezed lemon juice in recipes.

"Sweet lemon" varieties taste less sour and acidic when compared with most lemons on the market. Sweet lemons include Meyer lemons and Sanbukan lemons. Meyer lemons are not truly sweet, just milder than sour lemons. In other words, they don't make you pucker quite as much. They are heavier in weight and more juicy than typical sour varieties.

Meyer lemons are great for sweet dishes and for making lemon olive oil. Sanbukan lemons could be considered a lemon-orange hybrid. This type of lemon was first discovered in Japan in 1848. The Sanbukan resembles an orange with a prominent neck. As it matures, it even turns orange instead of yellow. It may look like an orange, but it tastes more like a lemon. Unfortunately, it is not considered marketable in the United States due to its orange color and excessive seediness.

There is also a lemon called the "rough lemon," which is a cross between an orange and a citron fruit. This fruit is often considered to be of low quality, so rough lemon trees are normally used as rootstock for other, more profitable lemon varieties.



## *Nutritional Information*

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According to the U.S. Food and Drug Administration, a medium lemon contains only 15 calories, is fat free, low in sodium, and has 5.4 grams of total carbohydrates, only 2 grams of which are sugar. Lemons are low-glycemic, alkalizing fruits that are loaded with a plethora of nutrients.

Lemons have dietary fiber to keep you regular, and contain a good amount of vitamin C. In fact, one lemon has 40 to 50 percent of your daily requirement for vitamin C! Lemons are also a good source of B vitamins, including thiamin, vitamins B2 and B6, riboflavin, and pantothenic acid. On top of that, they boast a wealth of minerals, including potassium, phosphorus, calcium, iron, manganese, magnesium, copper, and zinc.



Lemon juice is commonly used in both savory and sweet dishes, drinks, and desserts. One fluid ounce of lemon juice contains only 7 calories. It contains 2.1 grams of total carbohydrates and only trace amounts of protein and fats. Although it has only 0.1 grams of both fiber and sugar, it still has a whopping 23 percent of your daily vitamin C needs!

Lemons are also rich in antioxidants, which give them their bright yellow color. These antioxidants help protect DNA from free radicals, eliminate toxins from the system, help prevent cancer, and may reduce the appearance of aging.



## Nutritional Profile

Minerals in Lemons	Vitamins in Lemons
<b>Potassium: 116 mg</b>	<b>Vitamin C: 44.5 mg</b>
<b>Calcium: 22 mg</b>	<b>Vitamin B1 (thiamine): 0.034 mg</b>
<b>Phosphorus: 13 mg</b>	<b>Vitamin B2 (riboflavin): 0.017 mg</b>
<b>Magnesium: 7 mg</b>	<b>Vitamin A: 18 IU</b>
<b>Sodium: 2 mg</b> <b>Iron: 0.5 mg</b> <b>Selenium: 0.3 mcg</b> <b>Manganese: 0.025 mg</b> <b>Copper: 0.031 mg</b> <b>Zinc: 0.05 mg</b>  <i>Also contains small amounts of other minerals.</i>	<b>Niacin: 0.084 mg</b> <b>Folate: 9 mcg</b> <b>Pantothenic Acid: 0.16 mg</b> <b>Vitamin B6: 0.067 mg</b> <b>Vitamin E: 0.13 mg</b>  <i>Contains some other vitamins in small amounts.</i>

## Scientific Research

From the first section of this book, you can see that lemons are widely regarded as cleansing agents that can detoxify your body, help prevent disease, and clean your surroundings. These seem like wonderful claims, but is there any evidence that suggests these seemingly outlandish health claims are true? Scientists have indeed put these claims to the test. The following are some of their results:

*The Journal of Clinical Biochemistry and Nutrition* published their findings on the effects of polyphenols within lemons on body weight. They put mice on one of three diets: a low-fat diet, a high-fat diet, and a high-fat diet that included lemon polyphenols. They found that lemon polyphenols actually suppressed not only body weight and fat deposits, but also obesity-related disorders such as insulin resistance, hyperlipidemia, and hyperglycemia.





What about cancer? If we told you that lemons may help prevent and combat tumor cells, it may seem pretty far-fetched—but is it? A 2002 study published in the *Journal of Agricultural and Food Chemistry* revealed that the flavonoids in citrus fruits can actually help combat several forms of cancer, including melanoma, breast, colon, lung, and prostate cancers.

Another study, released by *Oxford Journals* in 1990, found that lemon oil can inhibit the inducement of cancer from carcinogens. Citrus pectin was also found to be effective against prostate cancer by actually slowing its progression, according to 2003 research released by *Prostate Cancer and Prostatic Diseases*.

What about other potentially deadly diseases? Research published in the 2010 edition of the *Journal of Basic and Applied Sciences* studied rabbits that were fed a high cholesterol diet for four weeks and were given lemon juice to determine the effect of lemons on hyperlipidemia.

As a quick reference, blood lipid content is a major determinant of developing heart disease. The results of the 2010 study showed that the lemon juice improved cholesterol, triglyceride, and lipoprotein levels, thus acting as a powerful protector against heart disease and stroke.

Lemon has been used for generations as a cleaning agent due to its antibacterial and antiseptic properties. A study published by *BMC Complementary and Alternative Medicine* in 2006 found that lemon oil is, in fact, antibacterial and was shown to be effective against multiple strains of bacteria.



The December 2008 edition of *Food Control* also published findings that demonstrate how lemons can be an effective antifungal agent, by showing how lemon oil can inhibit mold growth on food products. The researchers concluded that lemon oil and other citrus oils could replace chemical preservatives.



*The Iranian Journal for Public Health* published a study in 2003 on the use of lemon oil and lemon extract as mosquito repellents. Researchers found that lemon is in fact an adequate mosquito repellent, though not as potent as DEET. However, DEET has many potentially dangerous side effects, while lemon is natural and healthy. The researchers who performed this study also discovered that lemon oil is more effective than lemon extract at repelling mosquitoes.

There are also patents pertaining to the use of lemons in cosmetics, pharmaceuticals, and pet health products. These products use lemons for a variety of functions, including moisturizing, cleaning, treating hair and skin disorders in pets and humans, and fighting inflammation. There are even patents on health drinks that promote their lemon juice content as an anti-inflammatory agent. Research published in 1997 by the *Journal of Agriculture and Food Chemistry* found that when gut bacteria comes in contact with lemon, the antioxidative effects remain active.



## *What Lemons Can Do for Your Health*

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Many of us love lemons for their fresh flavor and the pop they lend to so many recipes. However, lemons have a wide range of important health benefits, as well. Here are some to consider:

### *Anxiety relief*

Since lemon contains a considerable amount of potassium, it may help to curb anxiety and depression. It has been found that low potassium levels in the body may contribute to both of these psychological disturbances, and the potassium boost that lemon provides may aid in bringing relief. Plus, the energy boost that you'll get from fresh lemon can help to elevate your mood in general.

Using lemon essential oil as aromatherapy may also bring about a lift in mood and potentially ease anxiety. It may help you to sleep better, as well. The authors of a 2008 study published in the journal *Tree and Forestry Science and Biotechnology* wrote:

"Traditional populations in several countries usually reference *Citrus* species as useful in reducing symptoms of anxiety or insomnia."

For an extra anxiety-relieving punch, try squeezing a wedge of fresh lemon into a cup of chamomile or lemon balm tea. To enjoy the aromatherapeutic benefits of lemon essential oil, try placing a few drops in a diffuser in your bedroom or study.





## **Blood pressure**

The potassium found in lemon serves another important purpose: it may help to lower blood pressure. Potassium is an important mineral that helps to keep blood vessels soft and flexible. This, in turn, helps to reduce high blood pressure. Controlling high blood pressure levels may help to reduce the risk of heart disease and stroke.



A 1998 study published in *Food Science and Technology International*, Tokyo tested the relationship between some of the components found in lemon juice on blood pressure in rats. On their experiment and its results, the study authors wrote:

“The effects of lemon juice and its crude flavonoids on blood pressure were examined using spontaneously hypertensive rats (SHR). The 5% diluted lemon juice was orally administered in the diet to SHR, and they tended to have a lower systolic blood pressure than the control rats after 90 days. The systolic blood pressure of SHR fed a diet containing crude flavonoids from the juice for 16 weeks was significantly lower than that of the control group...”

The vitamin B found in lemons is also beneficial to heart health.

## **Brain health**

Although the peel of the lemon is frequently tossed in the garbage, it contains the phytonutrient tangeretin, which has been shown to have positive effects on brain disorders like Parkinson's Disease due to its neuroprotective qualities.

The effects of tangeretin on “rat models of Parkinson's disease” were examined by a 2001 study published in *NeuroReport*. The authors of the research wrote:





“These studies, for the first time, give evidence that tangeretin crosses the blood–brain barrier. The significant protection of striato-nigral integrity and functionality by tangeretin suggests its potential use as a neuroprotective agent.”

So, instead of throwing out that peel, try adding lemon zest to your recipes. To avoid potential contact with dangerous pesticides, always choose organic lemons.

### *Cancer protector*

Lemons contain 22 anti-cancer compounds. One of these is limonene—an oil that has been shown to halt the growth of cancerous tumors in animals.

A 2005 study published in the *Journal of Nutrition* found that the limonoids in citrus fruits protect cells from damage that can lead to cancer. Another study published in the *Journal of Agriculture and Food Chemistry* stated that limonoids can inhibit tumors in the mouth and stop the growth of cancer cells once a tumor has formed.

In addition, lemons also contain flavonol glycosides, which may help stop the division of cancerous cells.

On the cancer-combatting effects of flavonol glycosides and other citrus flavones, the authors of a 2001 study published in *Current Medical Chemistry* wrote:

“Citrus flavonoids encompass a diverse set of structures, including numerous flavanone and flavone O- and C-glycosides and methoxylated flavones. Each of these groups of compounds exhibits a number of in vitro and in vivo anti-inflammatory and anticancer actions.”



The authors of another study, published in 2008 in the journal *Nutrition and Cancer*, explain:

“Dietary polyphenols are important potential chemopreventive natural agents. Other agents, such as citrus compounds, are also candidates for cancer chemopreventives. They act on multiple key elements in signal transduction pathways related to cellular proliferation, differentiation, apoptosis, inflammation, and obesity.”

### ***Canker sores***

The antiviral and antibacterial properties of lemons can help to speed up the healing process when it comes to canker sores.

A 2004 study published in the *Journal of Pharmaceutical Sciences* found that an adhesive tablet which released citrus oil (along with other natural compounds, including magnesium salt) was more effective at treating canker sores than tablets without the infused compounds.

For a simple solution, which doesn't involve tablets at all, try adding fresh lemon juice to warm water and rinsing your mouth with it.



### ***Cholesterol***

Lemon pulp contains pectin, a type of soluble fiber that has been shown to help lower levels of LDL “bad” cholesterol. To get the cholesterol-lowering benefits of pectin, eat the whole lemon, not just the juice.



For a 1996 study published in the *Journal of Nutrition*, researchers fed rats either pectin or another type of fiber to examine the effect on cholesterol levels. Pectin was found to be one of the fibers that lowered average cholesterol levels. The authors of the study wrote:

“The addition of pectin to the diet resulted in lower serum and liver cholesterol concentrations.”

Several studies have found that the flavonoids and rich vitamin C content of lemons may also help to lower cholesterol levels.

On flavonoids, the authors of a 1996 study published in the *Journal of Nutritional Biochemistry* wrote:

“Epidemiological studies show an inverse correlation between dietary flavonoid intake and mortality from coronary heart disease (CHD) which is explained in part by the inhibition of low density lipoprotein [LDL] oxidation and reduced platelet aggregability.”

### *Clear skin*

Sometimes we forget that the key to clear and beautiful skin starts with great nutrition. Thanks to the vitamin C in lemons, these little citrus fruits can help decrease wrinkles and blemishes. Vitamin C is a powerful antioxidant, and getting an ample amount in your diet can keep you looking and feeling youthful.

Researchers involved in a 2007 study published in the *American Journal of Clinical Nutrition* tested the effects of certain nutrients on the “skin-aging” of American women between the ages of 40 and 74. One of the nutrients tested was vitamin C. Regarding the effect of vitamin C on the skin, the study authors wrote:





“Higher vitamin C intakes were associated with a lower likelihood of a wrinkled appearance... and senile dryness.”

Lemons also help to push toxins from the body and support healthy liver function, which also keeps skin clear and supple.

### **Detox**

Lemon juice helps to cleanse the liver by liquefying bile and dissolving uric acid. Your liver is vital to cleansing your blood, so keeping it as healthy and free of toxins as possible is essential. Furthermore, lemons can also help to cleanse toxins from your urinary tract, since they contain natural diuretic properties.

A 2005 study published in *BMC Pharmacology* found that hesperidin, a bioflavonoid present in citrus fruits, decreased chemically-induced oxidative stress levels in the liver and kidneys of rats. On their results, the study authors wrote:

“Our study demonstrated a protective effect of HDN [hesperidin] in CCl<sub>4</sub> induced oxidative stress in rat liver and kidney. This protective effect of HDN can be correlated to its direct antioxidant effect.”

Adding lemon juice to water or fresh green juices is an easy detox practice that you can incorporate into your daily diet.



### **Digestive health**

Your body works hard to digest all that you put into it. Lemons help to flush away unwanted materials and toxins left from the digestive process. Because lemon juice is similar in atomic composition to digestive juices and saliva, it does a great job breaking down material and encouraging the liver to produce bile.



A 2011 study published in the journal *Chemico-Biological Interactions* found that the in vitro use of lemon essential oil, and its limonene component, “offered effective gastro-protection” against gastric ulcers.

Adding lemons to your diet may also help to relieve digestive disturbances such as bloating and indigestion.

### ***Fatigue***

Lemons, especially in the form of fresh lemon water, can help to bring about a fantastic energy boost. Not only is it hydrating—and we all know dehydration can lead to fatigue—it also helps to oxygenate your body. Additionally, it provides your body with the vitamins and minerals that it needs to perk up and function optimally.

A 2007 study published in the journal *Japanese Pharmacological Therapy* tested the effects of the citric acid found in lemon juice on the fatigue levels of 625 participants over a 28-day period. On their results, the study authors wrote:

“It... turned out that the drink containing lemon citric acid was useful for people frequently feeling fatigue.”

These yummy citrus fruits also helps to lift “brain fog,” so when the afternoon yawns show up, sip on a glass of lemon water for a pick-me-up.



### ***Fiber***

Most people fall far short of the 20 to 38 grams of fiber recommended daily. Without proper fiber, however, you can easily become constipated or develop hemorrhoids. Consuming adequate fiber has also been shown to reduce the risk of developing health conditions such as diabetes, heart disease, and diverticulitis.



In fact, the *American Diabetes Association* includes lemons on their list of superfoods because of their high fiber content. In addition, the pectin fiber in lemons can help to curb cravings, thus helping you to keep your weight in check.

On the potential benefits of pectin for weight loss, the authors of a 1988 study published in the journal *Gastroenterology* wrote:

“As pectin induces satiety and delays gastric emptying in obese patients, it may be a useful adjuvant in the treatment of disorders of overeating.”

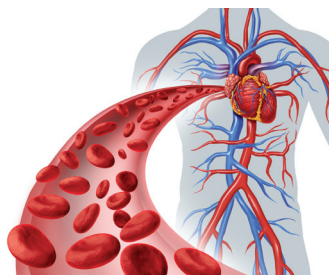
### *Free radical fighter*

As we've mentioned, vitamin C is a crucially important antioxidant for your body. The vitamin neutralizes free radicals both inside and outside of cells. Free radicals, which are byproducts of oxidative stress, are responsible for damaging cells and cellular membranes. If left unchecked, this damage can lead to inflammation, accelerated aging, and a host of chronic diseases.

Free radicals can also damage blood vessels and alter cholesterol so that it builds up on artery walls. Vitamin C helps prevent this buildup, and consequently helps to stop the progression of atherosclerosis and heart disease in diabetics.

On the protective effects of vitamin C against a variety of chronic conditions, the authors of a 1999 study published in *The American Journal of Clinical Nutrition* wrote:

“Recent scientific evidence indicates that an increased intake of vitamin C is associated with a reduced risk of chronic diseases such as cancer, cardiovascular disease, and cataract.”





The flavonoids found in lemons are linked to fighting free radicals and oxidative stress, as well. For a 1998 study published in the journal *Lipids*, researchers tested the role of certain flavonoids found in lemons for their ability to fight oxidative stress in diabetic rats. On their results, the researchers wrote:

“Crude flavonoids, eriocitrin, and hesperidin suppressed the oxidative stress in the diabetic rats. These results demonstrated that dietary lemon flavonoids of eriocitrin and hesperidin play a role as antioxidant in vivo.”

### ***Good source of potassium***

We've already mentioned the role of potassium in potentially mitigating anxiety and depression, as well as in lowering blood pressure. However, this crucial mineral has many other functions. One is to balance out the sodium in the body, which is very important to kidney and cardiovascular health. It also helps to reduce the risk of kidney stones.

On the role of potassium in decreasing kidney stone risk, the authors of a 1993 study published in the *New England Journal of Medicine* wrote:

“Potassium intake and fluid intake were inversely related to the risk of kidney stones.”



Potassium is also vital to the health of the nervous system, and getting a good amount of this mineral may help ease PMS symptoms in women.



## **Healthy feet**

Lemon essential oil can help dissolve hardened patches of skin like corns and callouses. Use this essential oil directly on the hardened skin, but be careful not to get the oil on other areas, as it may be too strong in its undiluted form for skin that is not hardened. In addition, it has aromatic and antiseptic properties and can be used to help relax tense foot muscles.



Also, try adding lemon juice to warm water for a healthy, relaxing foot bath.

## **Immune system booster**

When cold and flu season arrives, it is a good idea to keep a bag of fresh lemons handy. The citric acid, bioflavonoids, vitamin C, calcium, pectin, and limonene found in lemons do a great job of boosting your immune system and keeping infections at bay.

On flavonoids, the authors of a 1996 study published in the *International Journal of Pharmacognosy* wrote:

“A variety of in vitro and in vivo experiments have shown that selected flavonoids possess antiallergic, anti-inflammatory, antiviral and antioxidant activities... a considerable body of evidence suggests that plant flavonoids may be health-promoting, disease-preventing dietary compounds.”

If you do happen to catch a bug, sipping on warm lemon water may help you to recover quicker.





### ***Increased iron absorption***

Iron deficiency is certainly not uncommon, and can lead to anemia if left unchecked. Pairing foods high in vitamin C with those rich in iron will help the body to absorb more of the iron.

On the relationship between vitamin C and iron absorption, the authors of a 1989 study published in the *International Journal for Vitamin and Nutrition Research* state:

“The key role of ascorbic acid [vitamin C] for the absorption of dietary nonheme iron is generally accepted. The reasons for its action are twofold: (1) the prevention of the formation of insoluble and unabsorbable iron compounds and (2) the reduction of ferric to ferrous iron, which seems to be a requirement for the uptake of iron into the mucosal cells.”

Try squeezing lemon juice onto a spinach salad, or enjoying hummus, which contains lemon juice and iron-rich chickpeas.

### ***Insomnia***

Insomnia, especially chronic insomnia, can be extremely damaging to your health, as sleep is so important for all of the body's systems to function properly. The tangy and sweet aroma of lemon essential oil has been found to be relaxing, and may help soothe you into restful sleep.

**CHRONIC  
INSOMNIA**

On lemons and insomnia, the authors of a 2009 study published by *ResearchGate* wrote:

“Insomnia is one of the most common sleep disorders around the world. Species of plants such as Citrus



sinensis, Citrus limon [lemon], Ternstroemia pringlei, Ternstroemia sylvatica, Casimiroa edulis, Galphimia glauca and Cymbopogon citratus are traditionally and widely used in Mexico as sleep aids. The aim of this work was to evaluate the sedative effect of different extracts of these plants by using the exploratory cylinder model in mice.”

Based on their research, the study authors concluded:

“Our results give evidence of the popular use of these medicinal plants as sleep aids.”

Along with using lemon essential oil for aromatherapy, sipping a cup of tea made with fresh lemons before bed may boost your Z's, as well.



## **Kidney stones**

We've already covered that getting an ample amount of potassium, found in lemons, may help to prevent kidney stones. Additionally, when you don't have enough citrate in your urine, you are at an increased risk of developing kidney stones.

Eating lemons on a regular basis can help raise the citrate levels in your urine. A stone forms when calcium binds to oxalate or phosphate. However, citrate will bind to calcium, thus preventing it from binding to oxalate and phosphate to form stones.



A 2007 study published in the journal *BMC Urology* examined the effects of lemon juice on calcium oxalate kidney stone formation (urolithiasis) in rats. In this study,



the rats were given drinking water containing ethylene glycol (EG) and ammonium chloride (AC) in order to promote kidney stones.

The study authors wrote:

“This EG/AC-induced increase in kidney calcium levels was inhibited by the administration of lemon juice. Histology showed that rats treated with EG/AC alone had large deposits of calcium oxalate crystals in all parts of the kidney, and that such deposits were not present in rats also treated with either 100% or 75% lemon juice... These data suggest that lemon juice has a protective activity against urolithiasis.”



### *Mood and energy booster*

Have you ever gotten up on the “wrong side of the bed”? If you are often lethargic and cranky in the morning, or at any time of the day for that matter, you may want to consider munching on a lemon.

Our energy comes from the atoms and molecules in our food. When positively charged atoms flood the digestive tract and mingle with those that are negatively charged, a positive reaction occurs.

Lemons contain more negatively charged ions than positive ions, which gives you a boost as the lemon enters your digestive tract. Just the scent of lemons alone can improve your mood and elevate your energy levels. As mentioned, lemons also promote clear thinking and help reduce anxiety and depression.

The authors of a 2009 study published in the journal *Aroma Research* wrote:

“The purpose of this paper is to analyze the psychological effect given to pre symptomatic depression by using the lemon and the yuzu essential oil as an olfactory stimulus.



POMS and Semantic Differential method were used for the psychological assessment. As a result, the depression feeling and the tension anxiety of [the] pre symptomatic depression group were reduced by the lemon essential oil in a short time.”

### *Oxygen uptake helper*

Lemons have a purer concentration of negatively charged ions than any other fruit. Pierce J. Howard, PhD, author of *The Owner's Manual for the Brain; Everyday Applications from Mind-Brain Research*, says, “Negative ions increase the flow of oxygen to the brain; resulting in higher alertness, decreased drowsiness, and more mental energy. They also may protect against germs in the air.”

Possibly due to its potential effect of increasing oxygen to the brain, some research has found that aromatherapy with lemon essential oil may help boost attention and learning. The authors of a 2010 study published in *NeuroSciences* analyzed the effects of lemon aroma on rats and their ability to solve labyrinths. On their results, the authors wrote:

“Our results indicate that the lemon aroma may have some effects on learning. The findings obtained from this study are consistent with the findings of similar research on the behavioral properties of the lemon aroma.”

The first man to reach the top of Mount Everest, Sir Edmund Hillary, said that he attributed much of his success to lemons!



*LEMON FACT: One lemon tree can produce up to 600 pounds of lemons in a year. If you live in an area where you can grow a lemon tree, why not plant one or two!*



## **pH balancer**

Lemons are considered one of the most alkalizing foods you can eat. This may seem counterintuitive, as they are acidic on their own. However, in the body, lemons have an alkalizing effect; the citric acid does not create acidity once it has been metabolized.

The minerals in lemons actually help to alkalize the blood. Most people are too acidic, and lemons reduce overall acidity, drawing uric acid from the joints. This may reduce the joint pain and inflammation which many people feel.

Regarding the alkalizing effects of lemons, the authors of a 2015 study published in *Annals of the Rheumatic Diseases* wrote:

“Lemon juice stimulates the formation of calcium carbonate released by the pancreas and aids in alkalization of the blood and urine, neutralizing acids such as uric acid.”

The researchers involved in this study tested the ability of lemon juice to reduce uric acid levels in gout patients. On their results, the authors wrote:

“In this study all individuals given lemon water showed a reduction in SUA [serum uric acid], improvement of serum creatinine and GFR [glomerular filtration rate, a test of kidney functionality] as well as urine alkalization after 6 weeks of lemon water. Lemon water may be a useful adjuvant in the treatment of patients with gout.”





## Reduce inflammation

As discussed earlier, lemons can help to decrease the body's acidity and restore healthy pH. This, along with the many antioxidant compounds found in lemons, can help reduce inflammation throughout the body.

The authors of a 2007 study published in the journal *Food Science* tested the anti-inflammatory powers of citrus limonoids on mouse subjects. On their results, the authors wrote:

*"Limonoids from citrus fruits have potent anti-inflammation and analgesic effect."*

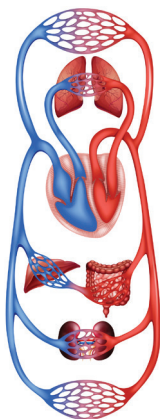
Reducing systemic inflammation is vital to your overall health, as inflammation has been found at the root of many chronic conditions, including a host of autoimmune illnesses, as well as diabetes and heart disease.



## Respiratory conditions

The vitamin C in lemons can aid in the healing of all sorts of illnesses. In particular, lemon may provide some relief to sufferers of respiratory conditions such as asthma.

The antibacterial nature of lemon may help to fight respiratory infections. In a 2014 study published in *Pharmaceutical Sciences*, honey and lemon were tested for their ability to combat bacteria derived from respiratory tract infections. The study authors wrote:





“Excellent antibacterial activity was observed with lemon, honey and lemon mixture... Better killing of the bacteria isolates on exposure to honey and lemon was observed with lemon and honey/lemon mixture than the honey alone... This study justifies the use of honey and lemon separately and in mixture as an alternative medicine by the populace in the treatment of respiratory tract infections.”

### *Soothe chapped lips*

Rubbing fresh lemon juice onto puckered lips at night, then rinsing it off in the morning, is a great way to exfoliate dead skin and soften the lips. As an added bonus, your lipstick will go on more smoothly.

### *Stronger nails*

Go to any pharmacy and you'll see a number of nail-strengthening products, however, these are often made from harsh chemicals. Combining lemon juice with olive oil and using the mixture as a nail soak is a natural alternative that can help to condition brittle nails. This easy soak can also help to whiten yellowed nails.

## *What Lemons Can Do for Your Home and Beauty*

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Besides their many benefits to your health, lemons are also great to have around your home—and as an essential part of your beauty regimen—for a number of reasons:

### *Berry stain remover*

Berries are a delicious and nutritious treat, and it's so much fun to go pick them yourself. If you find that your fingers become stained from the berries (and they will if you pick enough), you will also find that regular soap and water will not come close to removing the stains. However, lemons offer a simple solution.





Just pour a little undiluted lemon juice on your hands, wait a few minutes, and wash with warm soapy water. Repeat until your hands are stain-free—it shouldn't take more than a couple of washes.

### ***Breath freshener***

For long-lasting fresh breath, rinse with straight lemon juice. Rather than spitting the juice out, swallow it. Citric acid, found in lemon juice, will alter the pH level in your mouth, killing the bacteria that cause breath odor. Rinse your mouth and teeth thoroughly with water after the lemon juice, as prolonged exposure to citric acid can damage tooth enamel.

### ***Clean and whiten nails***

Whether you dig in the dirt a lot, have yellow stains from nail polish, or have dull and listless nails, lemon juice is just what you need. Lemons contain natural bleaching power that can restore your nails to a vivid white.



Fill a bowl halfway with fresh lemon juice. Place your nails in the juice for about fifteen minutes. Use a soft brush, or a toothbrush, to gently scrub the yellow from your nails. Rinse your hands with lukewarm water and apply a thin coat of coconut oil. Do this daily until your nail color has been restored.



### ***Clean brass and chrome***

Does your brass or chrome need a pick-me-up? If so, let lemons do the work for you. You can easily make a paste with lemon juice and baking soda. Just mix enough of each to make the consistency of toothpaste. Apply the mixture to your brass or chrome and let it sit for about five minutes. Wash it off with warm water, then dry and polish with a clean cloth.

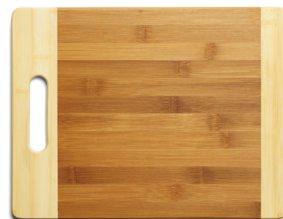




You can also clean your kitchen sink with this mixture, and the bonus is that it smells amazingly fresh. It will work to remove mineral deposits, as well.

### *Cutting board refresher*

No matter how clean you try to keep your cutting boards, it is inevitable that they will capture the odors of the foods that you cut on them. After each use, cut a lemon in half and rub the cutting board down. You can also pour some lemon juice in a small spray bottle and spritz the board after each use. Rinse well and allow the board to air dry.



### *Dandruff fighter*

Many people are plagued with dandruff, and tirelessly seek relief. Thankfully, there is a very easy way to ease dandruff using lemon juice. Massage two tablespoons of lemon juice into your scalp and rinse with water. Next, stir one teaspoon of lemon juice into a cup of water and rinse your hair with it—repeat this until you see an improvement in your dandruff.

### *Healthy skin*

Lemon juice can be used to ease the pain of sunburn, other minor burns, and bee stings, and it may help minimize scars from old burns. It can also be used to help relieve eczema. In addition, it has anti-aging properties, and can be used to help remove blackheads.

To use as an acne treatment, pour a small amount of lemon juice onto a cotton ball, then apply to the area of concern before going to bed. Rinse off the lemon juice in the morning.



### ***Insect repellent***

If you have small children or pets, you may be wary of using a chemical treatment for insects that decide to take up residence in your home. To keep ants and other insects out, spray a little lemon juice on door thresholds and window sills. If you can see where the ants, or other unwanted guests, are coming from, squeeze a little juice into the holes or cracks.



You can also cut up small pieces of lemon and place them outside of doors. To deter roaches and fleas, mix the juice of four lemons, and the rinds, with a half gallon of water, and wash your floors with the mixture.

### ***Lighten age spots***

Age spots, also known as liver spots, are harmless spots that generally appear in people over 50. They can sometimes be the result of sun exposure. While they are harmless, many people find them unsightly. If you are one of these people, you can lighten these spots naturally with lemon.

Simply apply some fresh lemon juice to the dark area (a spray bottle works well), and let it sit on the spot for about fifteen minutes before rinsing it off. Keep this up daily and you will see the spot lighten in no time.

### ***Make soggy lettuce firm***

Do you hate soggy lettuce, and often find yourself throwing it out? Before you do, try this: Add the juice of half a lemon to a bowl of cold water and place the soggy lettuce in the bowl. Refrigerate for one hour. You will be amazed at what happens to your limp lettuce. Just take the leaves out of the lemon juice mixture and dry them off before using in your salad.





### *Natural hair highlights*

Do you dream of beautiful hair highlights but dread using heavy chemicals? Using lemon juice for lightening your hair is a wonderful way to get lovely highlights without exposing yourself to toxins. Mix one-quarter of a cup of lemon juice with three-quarters of a cup of water, and use this mixture to rinse your hair. After you rinse, sit in the sun until your hair dries. Repeat this once daily for up to a week until you see the desired effect.

### *Warm Lemon Water: Super Simple Health Tonic*

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Ayurvedic philosophy states that the choices that we make each day can either build us up or make us more susceptible to life-destroying disease.

Because we are exposed to so many environmental toxins, from what we breathe in to what we put on our skin—in addition to the damaging impact of our Western diet—our bodies can quickly shift into toxic overdrive.



While we sleep each night, our bodies continue to work to rebalance, heal, repair, restore, and revitalize us, so that we can have ample energy to face the next day. If you knew that there was one simple, inexpensive thing you could do each day to aid your body in building up your health and clear away toxins, would you do it?

Consuming a cup of warm lemon water upon rising is one small change that can make a dramatic impact on how our bodies function. If this seems too simple to be true, we invite you to read on.



The health promoting benefits of lemons are old news. For centuries, it has been known that lemons contain powerful antibacterial, antiviral, and immune boosting components. We know that lemons are a great digestive aid and liver cleanser.

As mentioned, lemons contain citric acid, magnesium, bioflavonoids, vitamin C, pectin, calcium, and limonene, which supercharge our immunity so that our bodies can fight infection. Drinking lemon water every morning can give your body the boost it may need to keep you as healthy as possible.

### *How to Make Warm Lemon Water*

While it is not rocket science, making warm lemon water involves paying particular attention to a couple of things. The water you use should be purified and lukewarm. Don't make the water super hot, and avoid cold water. It is hard on the body, especially first thing in the morning, to ask it to process ice-cold water, so make sure you get the temperature right.

Always use fresh, organic lemons in your water—never bottled lemon juice. Squeeze the juice of half a lemon into a glass of warm water. Be sure to drink the lemon water before you eat anything.

Kicking off your morning with warm lemon water is a great way to provide your body with the many health benefits of lemons, detailed earlier in this book. Along with being a perfect morning tonic, warm lemon water also makes a nice pre-workout drink.

### *More on Lemons and Weight Loss*

The notion that tangy, delicious lemons can help with weight loss may seem too good to be true. However, they really can help quite a bit. The following are a few ways that lemons can potentially help you maintain a healthy weight.





### ***A low-sugar alternative***

Of course, eating lemons alone is not a magic weight loss solution. But if you choose to drink lemon water instead of soda or coffee with sugar, it can certainly support your weight loss goals.



### ***Better digestion***

Lemons support digestive health and can have a mild diuretic effect, so consuming them can help you to shed some water weight. While this is, of course, not the same as losing body fat, it is a good start and can certainly help you to feel lighter and less bloated.

### ***Improved metabolism***

Lemons are rich in potassium, which is important for healthy metabolic functioning. While it's a leap to say that lemons will give you a super-charged metabolism, including lemons as part of a healthy diet can help to maintain the kind of metabolic efficiency you want when you're trying to lose weight.

### ***Curb cravings***

Some anecdotal reports suggest that lemon water can help satiate food cravings. While we may sometimes crave healthy foods as a result of our bodies needing a certain nutrient, many of us develop emotional fixations around certain foods—or just around eating in general—that are not necessarily related to our body's nutritional needs.

When this is the case, drinking lemon water can help satisfy the desire to consume something.



### *Mineral absorption*

It is thought that lemons may help with the absorption of certain minerals. If we're not absorbing sufficient nutrients, we're more likely to continue experiencing cravings, regardless of how many calories we're consuming. While this is an indirect connection, any healthy food that can help to curb cravings is potentially beneficial when you're trying to lose weight.

Simply drinking lemon water is not enough to help you achieve significant weight loss, but it is a beneficial addition to a healthy diet and exercise plan. Also, because of their low calorie content and nutrient density, there's very little to lose by upping your lemon intake—and much to gain.

### *More on Lemons and Cancer*

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Sometimes, the greatest assets to your health are also the simplest. Lemons, as well as other citrus fruits, provide a diverse and plentiful array of benefits to the body. Eating organic citrus fruits and drinking freshly squeezed citrus juices can give your skin a healthy glow, boost your immune system, and, according to some studies, could even help fight a variety of cancers.



One of the best known health properties of citrus fruits such as lemons is their high vitamin C content. As we've mentioned, vitamin C is a powerful antioxidant, which aids the immune system in all of its disease-fighting functions. Lemons also contain flavonoids, which increase the potency of vitamin C, reduce bodily inflammation, improve circulation, and help regulate blood pressure.



Lemons also aid in the detoxification of the liver by stimulating natural liver enzymes, which helps keep your circulatory system, and your skin, clear. The electrolytes found in lemons help keep your body hydrated and functioning optimally.

Lab studies of the limonoids and citrus pectins found in lemons have shown that these compounds can help slow the growth of cancer cells, keep them from spreading, and also in some cases destroy the cancer cells themselves. Studies have found that limonoids promote cytotoxicity to breast, colon, liver, and pancreatic cancers, as well as to leukemia and neuroblastoma.

In one study, which set out to test the effect of limonoids on breast cancer cells, nine different limonoids were extracted from dried lemon seeds. Seven of these nine limonoids showed significant cytotoxicity against ER+ breast cancer cells. Four of the nine limonoids were cytotoxic to ER- breast cancer cells, and decreased their growth by approximately 44 percent. The most potent of the limonoids was limonin glucoside, which is the most prevalent limonoid in citrus juices.

Another recent case-control study, performed in Europe, found that four or more 150-gram portions of citrus fruits per week decreased the risk of throat cancer by 58 percent, oral/pharyngeal cancer by 53 percent, and stomach cancer by 31 percent.

Limonoids are found in the juices, pulp, and peels of all citrus fruits. If you include pulp when juicing your lemons, oranges, and grapefruits, you will increase your intake of limonoid glucosides significantly. Approximately 75 grams of citrus fruits and juices per day is recommended to help aid your body in natural cancer prevention.





## **Lemon Essential Oil**

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Lemon essential oil, made by cold-pressing lemon rinds, is a great way to get many of the benefits of lemon, as it basically concentrates its goodness into one tiny, portable bottle. Unlike fresh lemons, it does not go bad, and it can do in a pinch if you find that you don't have any whole fresh lemons.

Due to its concentrated nature, lemon essential oil has a host of versatile uses. The following are just 13 of the hundreds out there:



### **Add some natural highlights**

We mentioned earlier that fresh lemon, combined with sunshine, can help lighten your hair. This works with lemon essential oil, as well. If there's ample sunshine where you live, and you're seeking some natural blonde highlights, apply lemon essential oil to your hair in streaks or strands, then go out in the sun for a few minutes.

### **Banish nail fungus**

Applying undiluted lemon essential oil to fingernail or toenail fungus throughout the day may help to clear it up.



### **Boost your spirits**

A little bit of aromatherapy with lemon essential oil, either circulated through the room in a diffuser, or applied to pressure points, can improve your mood.





### *Clean the kitchen*

Just as you can use fresh lemons to clean your home, you can use lemon essential oil, too. In an empty spray bottle (preferably glass), combine one part water with one part white vinegar. Add about six or seven drops of lemon essential oil, and shake. This multipurpose spray is great for cleaning counters, tables, chairs, your fridge, and your sink. Simple and chemical-free.



### *Degrease oily hair*

Adding a drop of lemon essential oil to a handful of your regular, organic shampoo can help cut the grease and leave your hair feeling healthy. For very long or thick hair, use two drops.



### *Ease congestion*

Rubbing lemon essential oil on your throat may help when you feel stuffed up. You can also add a couple of drops of food-grade lemon essential oil to a cup of herbal tea.

### *Enhance your focus*

Speaking of aromatherapy, did you know that the scent of lemon can improve cognitive clarity so that you can zero in on the task at hand? Try a dab on your temples next time you're in a bind at the office.

### *Exfoliate your skin*

To make a great exfoliating scrub, combine oatmeal, raw honey, and a bit of water to make a paste. Add a few drops of lemon essential oil, mix, and rub on your face in a gentle circular motion. Wait about five minutes, then rinse and wash your face with a gentle organic soap.



### ***Freshen your breath***

If your breath is less than fresh, add a few drops of food-grade lemon essential oil to a glass of warm water, and gargle. You can also freshen your toothbrush with this oil: a drop or so on a weekly basis will keep bad breath at bay, and keep pathogens off your brush.

### ***Help heal bug bites***

Dabbing a bit of lemon essential oil onto bug bites and bee stings can help to prevent infection, and may help heal the bite faster.



### ***Kick cold sores to the curb***

Use a cotton swab to dab lemon essential oil onto a cold sore up to three times per day. This promotes healing, and may help make that scaly patch disappear.

### ***Speed digestion***

If you ate something a bit too heavy, or your digestion is just working too slowly, try gently massaging some lemon essential oil, blended with some organic coconut oil, onto your tummy.

### ***Soothe a sore throat***

Along with adding a couple of drops in your herbal tea throughout the day, you can mix a drop of lemon essential oil into a warm salt-water gargle.



As you can see, lemon essential oil has many of the same benefits as a fresh lemon—with a few variations here and there. It can be especially helpful when traveling or at work, so be sure to pack a bottle in your purse or briefcase!

## *Lemons and Dogs*

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The American Society for the Prevention of Cruelty to Animals states that citrus fruit may be harmful to dogs. According to their report, the pith (fiber), the seeds, and the peel can cause the most damage. Eaten in large quantities, lemons may cause photosensitivity issues, lethargy, or digestive issues (such as vomiting or diarrhea), and dogs may become dehydrated as a result of this reaction.

Just like in humans, eating too much citrus can be painful and have undesirable side effects for dogs. Grapefruit is the most dangerous, and should not be given to our canine friends.

However, as long as you only give your dog lemon in small quantities, and just give them the juice or a lemon extract, it is far from toxic. On the contrary, lemon may actually provide numerous health benefits to your pet.

### *The vitamin needs of dogs*

Just like humans, dogs need a wide variety of vitamins to function at optimal levels. According to research collected by *The Bark* magazine, dogs need the following nutrients in their diet:

- 🔥 Vitamin A
- 🔥 Vitamin D



- 🔥 Vitamin E
- 🔥 Vitamin C
- 🔥 Vitamin K
- 🔥 B vitamins
- 🔥 Silicone
- 🔥 Magnesium
- 🔥 Selenium
- 🔥 Molybdenum
- 🔥 Fluorine
- 🔥 Cobalt
- 🔥 Manganese
- 🔥 Chromium
- 🔥 Copper
- 🔥 Iodine
- 🔥 Iron
- 🔥 Sulfur
- 🔥 Zinc
- 🔥 Calcium
- 🔥 Potassium
- 🔥 Sodium
- 🔥 Chloride
- 🔥 Phosphorous





Of these essential nutrients, lemons provide a significant amount of vitamin C, B vitamins, vitamin E, copper, magnesium, manganese, phosphorous, and potassium. Lemon juice alone can provide many of the vital nutrients that a dog needs each day.

### *Can't dogs make their own vitamin C?*

Most health experts agree that dogs can make their own vitamin C—they can synthesize the nutrient from a variety of sources. However, evidence suggests that dogs that do not routinely consume a source of vitamin C may be more susceptible to health problems.

A study from 1942 examined the effects of vitamin C on dogs with skin diseases. The study authors found that dogs who had skin diseases were likely to have lower levels of vitamin C than dogs with healthy skin. Dogs who had fevers and dogs pushed to physical capacity (such as those running long distances at top speeds) had low blood levels of vitamin C. This study found that stress is a depleting factor for a dog's vitamin C levels. The more stressed the dog, the lower the vitamin C level in their blood.

In 1965, Wendell O. Belfield, DVM, experimented with the use of vitamin C supplementation on dogs with health problems, based on the findings from the earlier study. During his vet practice, he experimented with using large doses of vitamin C to treat common health issues in dogs, such as distemper. Just like in humans, the doses of vitamin C were able to help dogs fight their health problems.





According to a 1996 book titled *Encyclopedia of Nutritional Supplements*, vitamin C is essential for building the immune system because it is able to increase the effectiveness of white blood cells. Vitamin C also encourages the growth of interferon cells and antibodies, which fight cell mutation and infection. Based on these findings, small doses of lemon may not only be safe for dogs to consume, but may actually boost their overall health.

### ***Possible health benefits of lemon for dogs***

There are multiple breeds of dogs, and not all dogs will respond to lemon in the same way. Additionally, most of the remedies on this list have not been studied in a lab setting, which means there is no scientific backing for their use. However, based on the science of how vitamin C works in humans, who are similar to dogs in many ways, the following uses for vitamin C may be beneficial to your dog's health:



### ***Anti-aging and cancer-fighting properties***

Lemons contain high levels of antioxidants. Antioxidants not only fight the oxidation of cells, which causes signs of aging, but also fight against the growth and spread of cancer cells. A daily dose of lemon, containing 22 antioxidants, could help prevent the development of cancer in your best friend.

### ***Antibacterial effects***

Lemons are antibacterial, which can be beneficial both for the health of your dog's intestines and for your dog's breath. A daily intake of lemon water could help fight bad breath, while preventing tooth decay at the same time.



### *Digestive regulator*

Although large doses of lemon juice can have a negative effect on the stomach and intestines, the right dose can have a beneficial effect. The antibacterial properties in lemons can help eliminate unwanted bacteria from the intestines and bring balance back to your pet's digestive system. Lemons may also be able to prevent your dog from getting worms.

### *Ear infections*

If your dog gets frequent ear infections, a gentle wash of lemon water can help fight the infection and keep it from getting worse. If you attempt this remedy, never pour water directly into your dog's ears, as this can make the infection worse. Rather, use a damp cloth to rub a dollop of lemon oil or a lemon-juice-infused rag around the outside of your dog's ear and into the visible part of the ear canal.



### *Immune system booster*

According to the studies mentioned above, vitamin C is beneficial in boosting the immune system in dogs as well as humans. Vitamin C is essential for supporting the effectiveness of white blood cells in fighting off invaders and common ailments.

### *Nutrient harvester*

Vitamin C helps boost the absorption rate of other vitamins that are essential to your dog's health, such as vitamin B3, calcium, vitamin E and glutathione.



### *Healthy bones and teeth*

As mentioned above, lemon juice not only fights plaque and bacteria in the mouth, but it can also boost the absorption of other nutrients that your dog needs to build strong teeth and bones, such as calcium. Vitamin C is one of the most beneficial nutrients for your dog's dental health.

### *Insect repellent*

Mosquitoes and other insects do not like the flavor of lemon or lemon oil. Applying lemon topically to your dog's fur can help deter insect bites.

### *How to give lemon to dogs*

As stated earlier, avoid giving your dog large doses of lemon at once, and don't give him or her the fiber, seeds, or peel of a lemon. This could result in unwanted side effects and pain for your dog. Instead, add lemon juice or lemon essential oil to your dog's daily routine. (Lemon essential oil should only be used topically.)

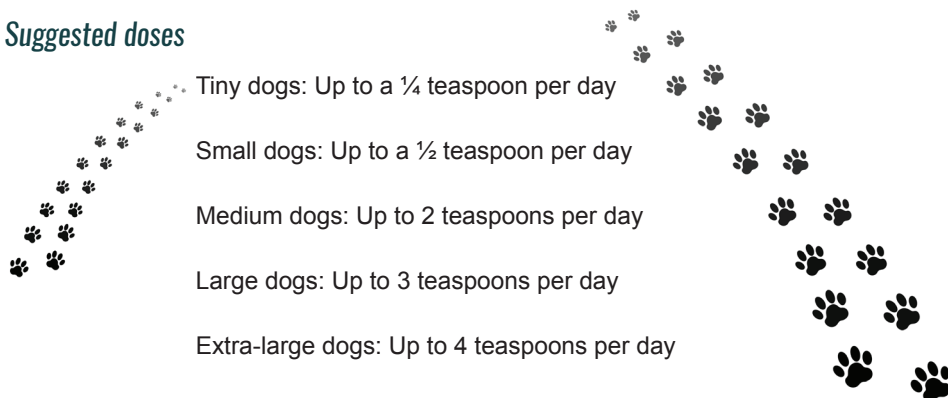
For questions on how specific breeds will respond to lemon, it may be wise to have a conversation with your vet—just to be safe.







## *Suggested doses*



Tiny dogs: Up to a ¼ teaspoon per day

Small dogs: Up to a ½ teaspoon per day

Medium dogs: Up to 2 teaspoons per day

Large dogs: Up to 3 teaspoons per day

Extra-large dogs: Up to 4 teaspoons per day

## *Try these serving ideas for your dog:*

- 🍊 Mix a small amount of fresh lemon juice into your dog's water bowl.
- 🍊 Squeeze some fresh lemon juice over your dog's food.
- 🍊 Use lemon essential oil topically on your dog's skin, or in topical recipes.

## *Beneficial Lemon Recipes for Dogs*



### *Lemon Flea Spray/ Insect Repellant*

- 🍊 Cut up two lemons into thin slices.
- 🍊 Place the lemons in a pot with two cups of water.
- 🍊 Boil the lemon slices for about five minutes.
- 🍊 Allow the lemon slices to steep in the water overnight.

The next day, place the lemon water (with the lemons removed) into a spray bottle and spray on your dog's fur to help eliminate fleas.



### **Lemon Shampoo**

Many commercial dog shampoos contain unhealthy ingredients. Instead of exposing your pet to toxic chemicals, you can make your own lemon shampoo that is safe and effective at keeping your dog clean and healthy.



- 🍋 Steep two bags of green tea in two cups of hot water. Discard the tea bags once the water cools.
- 🍋 Add the juice of one lemon.
- 🍋 Add five tablespoons of unfiltered apple cider vinegar.
- 🍋 Allow the mixture to steep overnight, then the following day, it will be ready for use.

Although this mixture may seem like it would not be an effective cleaner, you may be surprised at how well it works. When using this shampoo, keep it out of your dog's eyes. You can adjust the recipe based on how large your dog is. It should keep for about a week before it starts to go bad.



### *Lemon Yogurt*

Yogurt is safe for dogs to eat, and it can help provide bacterial balance in their intestines—just like in humans. Add about a quarter of a teaspoon of lemon to your dog's yogurt before serving it to him or her for a tasty, healthy treat.

### *Lemon Bacon Treats*

These lemony treats will make your dog smile.

#### *Ingredients:*

- 🔥 1 ½ cups organic rice flour
- 🔥 1 ½ cups wheat germ
- 🔥 2 free-range eggs
- 🔥 1 cup homemade chicken broth
- 🔥 1 cup bacon fat
- 🔥 1 cup oatmeal
- 🔥 2 tablespoons fresh lemon juice

#### *Instructions:*

1. Preheat the oven to 350°F.
2. Combine all the ingredients together to form a dough. Roll out the dough to a half-inch thickness and cut out pieces with a cookie cutter. Bake for 20 minutes or until lightly browned. Allow the cookies to cool and harden before giving them to your dog.



## *Growing Lemons*

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Lemons, like other fruits in the citrus family, prefer subtropical climates and thrive in the heat. The U.S. Department of Agriculture recommends growing lemons in zones 9 through 11. Although lemons can be grown in regions outside of the recommended zones, be aware that fruit production



will likely be less than optimal as a reflection of the growing conditions. Citrus trees, in general, are best grown between sea level and 2,450 feet in the subtropics, and between sea level and 5,250 feet in the tropics.

Lemon trees thrive in temperatures ranging from 77 to 86 degrees Fahrenheit, although they can tolerate higher temperatures. For example, lemon trees are often grown in California, where temperatures can exceed 100 degrees Fahrenheit. Lemons are more sensitive to cold temperatures than other citrus varieties. The fruit is killed within 30 minutes if the temperature drops to 28 degrees Fahrenheit or lower. The trees can become inactive at 55 degrees Fahrenheit.

Lemon trees are able to withstand poor and slightly acidic soils, and in this respect, they are relatively hardy. They do, however, prefer well-drained soils. Lemon trees require weekly deep watering. They also thrive when raised slightly above the ground. It is best to plant them shallower than the length of the root ball, and it is a good idea to add mulch to retain the moisture. Pruning can help lemon trees maintain their shape and height.



If you do not live in a climate conducive to planting lemons outside, you can grow lemons indoors—they can be easily maintained as a potted plant. They will, however, need to be potted in an area that will allow them to grow three to five feet. When potted indoors they will need well-drained, slightly acidic soil.

Lemons require a lot of sunlight, therefore plants kept inside may need fluorescent lighting during the winter months. During summer months, it is recommended to place your potted trees outside so that they can receive direct sunlight, which can increase their fruit production. Fruits can take six to eight months to ripen.

### *Tips & Techniques*



There are a variety of tips and tricks to help you with regards to growing, harvesting, and ripening your lemons. For instance, purchasing a one-year-old nursery tree that is already established means it will grow at a faster rate. To plant the tree, dig up any grass and raise the plant bed for better drainage. Fertilize

the tree with a natural fertilizer that contains nitrogen for the first year, from spring to summer months.

Water the tree as needed, and be sure to water more frequently during droughts or in dry climates. Prune as needed to maintain proper growth.

You can grow lemons organically by purchasing an organic nursery tree or seeds, ensuring good drainage, fertilizing the soil with organic material, and providing your tree with a decent amount of sunlight and warmth. To grow a tree from organic seeds, it is best to use organic soil so as not to contaminate the lemons with inorganic mate-



rial, which can hinder their growth. Non-organic lemons cannot produce new trees from their seeds. However, it is possible to germinate the seeds of organic lemons.

If you are tight on space or live in a less-than-ideal climate for lemons, Meyer lemons might be your best option, due to their size. These little lemons are ideal for growing in containers.

Lemons require 10 to 14 hours of direct sunlight during the sprouting stage. First, fill your container with premoisturized soil, leaving an inch below the rim of the pot or container. Remove the seeds from the lemon. Do not allow the seeds to dry, as they need moisture to germinate. Plant your seeds roughly half an inch below the surface.

Cover the container with a breathable plastic to retain heat and moisture. Place the container in a warm place for the next few days. Keep a watchful eye, and don't let the soil dry out completely during the germination period. If you are successful, you will notice sprouts within two weeks. Once sprouts emerge, remove the plastic and place the container in direct sunlight.

Occasionally a tree may struggle to flourish. The following are some tips on how to troubleshoot problems: To revive a dying citrus tree, first determine what is causing it to die. If the tree needs more water, ensure that the drainage is adequate, then water it more frequently. Dig composted horse or cow manure, if available, and apply it at the base of the tree to encourage good drainage. If weeds are the problem, pull up the weeds and surrounding grass and add mulch to prevent weed growth.





If your tree has a fungus growth, apply a natural fungicide. Inspect your tree for any insect infestation that could be causing it to die, and treat it for any diseases it may have. Remove shrubs nearby that could be preventing your tree from receiving adequate sunlight. Remember, lemon trees need at least eight hours of direct sunlight each day.

Lemons cannot effectively be ripened at home—so make sure you get the tree into the sun for the fruit to ripen. Placing ripe lemons in a cool environment or a refrigerator can prevent them from rotting before you have the chance to enjoy them.

### *Wrapping it up*

There you have it, lemons can surely brighten your day, keep your house clean, help you look and feel your best, and keep your furry friends healthy. We hope you have enjoyed this brief look at one of nature's most alluring little fruits.

*Be sure to pick up a copy of our 51 Ways to Use Lemons Every Day...  
Recipes for Health, Beauty and Home!*