# Citrus Bergamot



Citrus bergamot is a citrus fruit that grows exclusively in the coastal region of southern Italy, Calabria. The reason why it's so powerful: It has a variety of youth-boosting polyphenols—specifically flavonoids—that are linked to antioxidant activity and many health benefits tied to longevity and youthfulness including improving cardiovascular health, fighting inflammation, and having a role in weight management. The fruit—while looking like a cross between a bitter orange and a lemon—is delicious and aromatic. It's less sour than lemon and more bitter than grapefruit. You may recognize the name

because bergamot oil, which is extracted from the fruit's peels, is used to flavor earl grey tea.

## What is Citrus Bergamot?

Citrus bergamot is a citrus fruit with powerful health benefits, including an ability to reduce cholesterol levels, lower blood sugar levels, have an anti-inflammatory effect, and perhaps even be linked to weight loss. Bergamot oil—because the fruit is so aromatic—is used in perfumes, creams, lotions, and soaps, as well as a citrus flavoring agent, especially in gelatins and puddings. Fun fact: It takes about 100 citrus bergamot fruits to produce just 3 ounces of bergamot oil.



Some time ago, while I did know a bit about its history of use as a medicinal agent, I started a quest to learn more about it. I met with a team of scientists to teach me the key to this age-defying drink at the birthplace of bergamot, on the sundrenched slopes of the Aspromonte mountain. They explained to me that it had two polyphenols that were particularly effective against oxidative stress and inflammation: melitidin and brutieridin.[\*] Their power came from their ability to help

the body make good HDL (high density lipoproteins) cholesterol while discouraging the production of bad LDL (low density lipoproteins) cholesterol.[\*] Numerous studies published have supported that—and shown to help balance blood sugar levels.

Perhaps most amazing about my quest to learn more about citrus bergamot was that when I was talking about the fruit with my friend Dr. Elzbieta Janda, a molecular biologist at the University Magna Graecia, she told me that the fruit had another effect. The unique characteristic of the potent, flavonoid-rich bergamot peel is that it activated autophagy—the body's self-cleaning and anti-aging mechanism. It was the first time I had ever heard the word, and it started me on my journey to learn more about the biology and power of autophagy.

## History of Citrus Bergamot

Derived from the Turkish word meaning "prince's pear", bergamot is used in traditional Chinese medicine to improve vital energy—mainly to help the digestive system work well. But that's not all. It's also used to help relieve muscle pain and improve the health of skin.

Bergamot essential oil has been used historically in a variety of ways:

Italians used it to treat problems related to digestion, skin health, and fevers.

In Ayurvedic medicine, the oil was used to reduce acne, skin rashes, sore throats, bladder problems, digestive issues —and even compulsive behaviors.

Citrus Bergamot Benefits

While it certainly seems that historic cultures used bergamot to treat just about everything, science has shown that there's some truth to the medicinal power that it holds. Some of the health benefits of bergamot include:



Cholesterol and Cardiovascular Health

Polyphenols, especially flavonoids like the ones found in bergamot, are thought to help reduce cholesterol levels. For example, a review of studies showed that the flavonoids found in bergamot can increase good HDL levels and reduce triglyceride levels in the liver. Another study shows that bergamot had an effect of a 30-percent reduction in bad cholesterol and a 40-percent increase in good cholesterol, as well as a 40-percent drop in triglycerides and a 20-percent decrease in blood glucose.

# Anti-Inflammatory

In an animal study looking at liver issues, bergamot was shown to lower anti-inflammatory activity in the liver by increasing specific anti-inflammatory agents. More research showed that it had an effect on lowering inflammation in the gut in animals suffering from bowel problems. One way it's believed to work is because bergamot contains molecules that inhibit proteins that can have pro-inflammatory effects on the body.

#### **Antioxidant**

Oxidative stress is linked to many age-related health problems, such as heart health, inflammation and joint discomfort. The antioxidants in bergamot (technically, citrus bergamia) have an effect on scavenging the free radicals caused by oxidative stress. They do this by absorbing and neutralizing the free radical. They do this by absorbing and neutralizing the free radicals. Studies have shown this activity to work to help prevent damage to the lungs.

## Weight

Some research has shown that bergamot can help with the risk factors of metabolic syndrome (those are abdominal obesity, high triglycerides, low HDL, high blood pressure, and high blood sugar). While that's not to say that bergamot is a direct path to weight loss, it does suggest that there can be some related benefits to taking bergamot, especially its effect in helping improve the health of the blood vessels and overall blood flow. Some research does also show that the polyphenols can increase a protein that helps prevent the accumulation of fat.

# Citrus Bergamot and Autophagy

As you may know, autophagy is the cellular process that allows your body to repair and rejuvenate. When your body can't go through this process, that is what ages you. When it can activate autophagy, then your body is able to repair from the inside out—allowing you to look, act, feel, and be youthful at any age. Thankfully, there are many things that can activate autophagy. Citrus bergamot is one of them. Its main compound (called limonene) has been shown to have an effect. One of the ways it does so: Through a process in which a protein is signaled to start autophagy—sort of like a cellular traffic light that gives your body the go ahead to proceed. Studies have

shown that bergamot can help activate autophagy in various parts of the body, including the skin and liver.

How to Get Citrus Bergamot Earl Grey Tea Health Benefits

The easiest way: earl grey tea (please verify that the tea is made with real bergamot extract, as opposed to synthetic fragrances, which have zero therapeutic effect). There are many varieties of earl grey tea, some that even contain dried orange peel or rose petals to add a lovely floral and enhanced citrus aroma. The basis, however, is a variety of black tea leaves, like Darjeeling or Ceylon that have dried and oxidized. Bergamot oil is then added to the black tea creating that signature bergamot scent of earl grey.

### Some other ways:

You're not going to see a bergamot juice at the store like you would other kinds of fruit juices. So I would also recommend the AutophaTea I created as a simple way to reap the benefits of autophagy.

Use bergamot extract or bergamot essential oil to flavor salad dressings, smoothies or desserts, much like you would vanilla or almond extract.

Consider taking a bergamot supplement that supplies 500 mg of bergamot, the equivalent of what you would get by eating one fruit. For maximum benefits, take bergamot twice a day for 60–90 days, reevaluate your lipid levels, and adjust your dose accordingly.