

Monodora myristica  
Calabash nutmeg  
Annonaceae  
Custard apple family  
African Nutmeg



Nutmeg is a popular spice made from the seeds of *Myristica fragrans*, a tropical evergreen tree native to Indonesia .

It can be found in whole-seed form but is most often sold as a ground spice.

It has a warm, slightly nutty flavor and is often used in desserts and curries, as well as drinks like mulled wine and chai tea.

Although it's more commonly used for its flavor than its health benefits, nutmeg contains an impressive array of powerful compounds that may help prevent disease and promote your overall health.

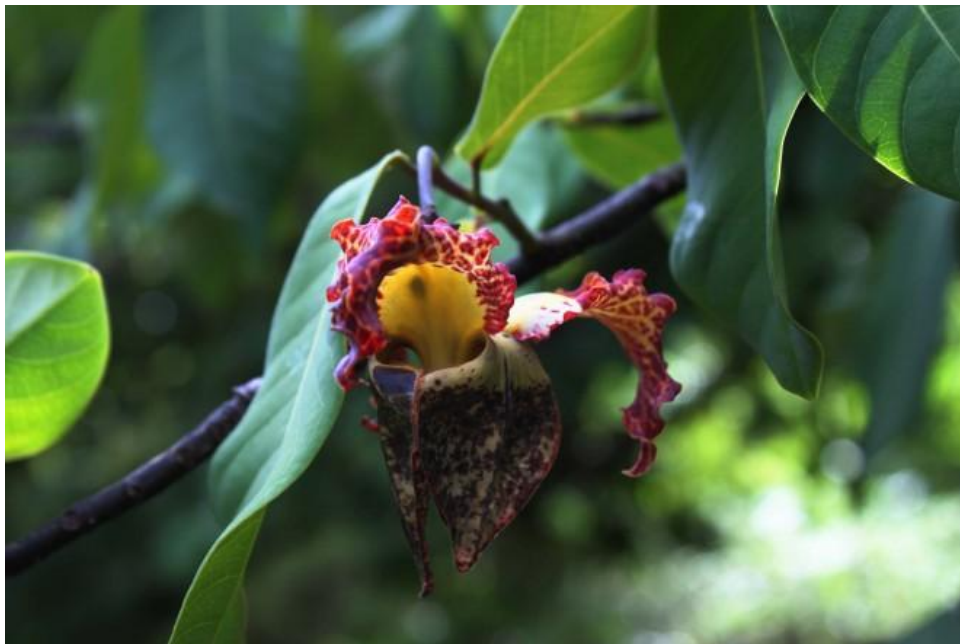
# 1. Contains powerful antioxidants

Though small in size, the seeds from which nutmeg is derived are rich in plant compounds that act as antioxidants in your body.

Antioxidants are compounds that protect your cells from damage caused by free radicals. These are molecules that have an unpaired electron, which makes them unstable and reactive .

When free radical levels become too high in your body, oxidative stress occurs. It's associated with the onset and progression of many chronic conditions, such as certain cancers and heart and neurodegenerative diseases .

Antioxidants neutralize free radicals, preventing cellular damage and keeping your free radical levels in check.



Nutmeg contains an abundance of antioxidants, including plant pigments like cyanidins, essential oils, such as phenylpropanoids and terpenes, and phenolic compounds, including protocatechuic, ferulic, and caffeic acids .

One animal study showed that consuming nutmeg extract prevented cellular damage in rats treated with isoproterenol, a medication known to induce severe oxidative stress.

Rats that did not receive the nutmeg extract experienced significant tissue damage and cell death as a result of the treatment. In contrast, rats that received nutmeg extract did not experience these effects .

Test-tube studies have also shown that nutmeg extract exhibits powerful antioxidant effects against free radicals.

## *2. Has anti-inflammatory properties*

Chronic inflammation is linked to many adverse health conditions, such as heart disease, diabetes, and arthritis.

Nutmeg is rich in anti-inflammatory compounds called monoterpenes, including sabinene, terpineol, and pinene. These may help reduce inflammation in your body and benefit those with inflammatory conditions .

What's more, the wide array of antioxidants found in the spice, such as cyanidins and phenolic compounds, also have powerful anti-inflammatory properties .

One study injected rats with an inflammation-producing solution and then gave some of them nutmeg oil. Rats that consumed the oil experienced

significant reductions in inflammation, inflammation-related pain, and joint swelling .

Nutmeg is thought to reduce inflammation by inhibiting enzymes that promote it .

However, more studies are needed to investigate its anti-inflammatory effects in humans.



### *3. May boost libido*

Some animal studies show that nutmeg may enhance sex drive and performance.

In one study, male rats that were given high doses of nutmeg extract (227 mg per pound or 500 mg per kg of body weight) experienced significant

increases in sexual activity and sexual performance time compared to a control group .

A similar study showed that giving male mice this same high dose of nutmeg extract significantly increased their sexual activity compared to a control group .

Researchers still aren't sure exactly how the spice enhances libido. Some surmise these effects are due to its ability to stimulate the nervous system, along with its high content of powerful plant compounds.

In traditional medicine, such as the Unani system of medicine used in South Asia, nutmeg is used to treat sexual disorders. However, research on its effects on sexual health in humans is lacking .

## 4. Has antibacterial properties

Nutmeg has been shown to have antibacterial effects against potentially harmful strains of bacteria.

Bacteria like *Streptococcus mutans* and *Aggregatibacter actinomycetemcomitans* can cause dental cavities and gum disease.

A test-tube study found that nutmeg extract demonstrated powerful antibacterial effects against these and other bacteria, including *Porphyromonas gingivalis*. These bacteria are known to cause cavities and gum inflammation .

Nutmeg has also been found to inhibit the growth of harmful strains of *E. coli* bacteria, such as O157, which can cause severe illness and even death in humans.

While it's clear that nutmeg has antibacterial properties, more human studies are needed to determine whether it can treat bacterial infections or prevent bacteria-related oral health issues in humans.



## *5-7. May benefit various health conditions*

Although research is limited, studies suggest that nutmeg may have the following effects:

1. **May benefit heart health.** Animal studies show that taking high-dose nutmeg supplements reduced heart disease risk factors, such as high cholesterol and high triglyceride levels, though human research is lacking.
2. **Could boost mood.** Rodent studies have found that nutmeg extract induced significant antidepressant effects in both mice and rats.

Studies are needed to determine if nutmeg extract has the same effect in humans .

3. **May improve blood sugar control.** A study in rats showed that treatment with high-dose nutmeg extract significantly reduced blood sugar levels and enhanced pancreatic function .

However, these health effects have only been tested in animals using high doses of nutmeg extract.

Human studies are needed to determine whether high-dose supplements of the spice are safe and effective in humans.

## *8. Is versatile and delicious*

This popular spice has a variety of uses in the kitchen. You can use it alone or pair it with other spices, such as cardamom, cinnamon, and cloves.

It has a warm, sweet flavor, which is why it's commonly added to desserts, including pies, cakes, cookies, breads, fruit salads, and custards.

It also works well in savory, meat-based dishes, such as pork chops and lamb curry.

Nutmeg can be sprinkled onto starchy vegetables like sweet potatoes, butternut squash, and pumpkin to create a deep, interesting flavor.

What's more, you can add it to warm or cold beverages, including apple cider, hot chocolate, chai tea, turmeric lattes, and smoothies.

If you're using whole nutmeg, grate it with a microplane or grater with smaller holes. Freshly grated nutmeg is delicious on fresh fruit, oatmeal, or yogurt.

# Precautions

Though nutmeg is unlikely to cause harm when consumed in small quantities, taking it in high doses may cause adverse side effects.

It contains the compounds myristicin and safrole. When ingested in large amounts, they can cause symptoms like hallucinations and loss of muscle coordination.

Interestingly, nutmeg is sometimes taken recreationally to induce hallucinations and cause a “high” feeling. It’s often mixed with other hallucinogenic drugs, which increases the risk of dangerous side effects .

In fact, between 2001 and 2011, 32 cases of nutmeg toxicity were reported in the U.S. state of Illinois alone. A whopping 47% of these cases were related to deliberate ingestion by those using nutmeg for its psychoactive effects.

Myristicin, the main component of the essential oil found in nutmeg that has powerful psychoactive properties, is thought to be responsible for these toxic effects .

Cases of nutmeg intoxication have been reported in people who have ingested 5 grams of nutmeg, which corresponds to about 0.5–0.9 mg of myristicin per pound (1–2 mg per kg) of body weight .

Nutmeg toxicity can cause serious symptoms, such as rapid heartbeat, nausea, disorientation, vomiting, and agitation. It may even lead to death when combined with other drugs .

Additionally, studies in mice and rats have shown that taking high doses of nutmeg supplements long term leads to organ damage. However, it’s unclear if humans would also experience these effects .



It's important to note that the toxic effects of this spice are linked to the ingestion of large amounts of nutmeg — not the small amounts typically used in the kitchen.

To avoid these potentially harmful side effects, avoid consuming large amounts of nutmeg and do not use it as a recreational drug.

## *The bottom line*

Nutmeg is a spice found in many kitchens worldwide. Its warm, nutty flavor pairs well with many foods, making it a popular ingredient in sweet and savory dishes alike.

Aside from its many culinary uses, nutmeg contains powerful anti-inflammatory plant compounds that act as antioxidants. These may improve mood, blood sugar control, and heart health, though more research is needed on these effects in humans.

Be careful to enjoy this warming spice in small amounts, as large doses can cause serious side effects.



