

# Zanthoxylum piperitum

## Japanese pepper

## Japanese prickly-ash

## ΙΑΠΩΝΙΚΟ ΠΙΠΕΡΙ



Prickly ash (*Zanthoxylum*) is an evergreen tree that grows around the world. Its name comes from the half-inch (1.2-cm) spines that cover its bark. Incredibly versatile, this species has been used for everything from alternative medicine to cooking — and even bonsai tree art. Because the bark of the tree is prized by some cultures for relieving tooth and mouth pain, prickly ash is sometimes referred to as “the toothache tree”. Yet, you may wonder whether this effect is backed by scientific testing, and whether this tree has any other benefits.

## What is prickly ash?

Over 200 types of prickly ash make up the *Zanthoxylum* genus, many of which are used for medicinal purposes. Typically, the bark is utilized for infusions, poultices, and powders. Yet, the berries are safe to consume, too — and used as a spice in addition to a medicine due to their aromatic qualities. In fact, it's commonly believed that Sichuan pepper is part of the pepper family, but the Chinese spice is made from prickly ash berries or seeds. Medicinally, prickly ash has been used to treat a variety of ailments, including :

toothaches  
malaria  
sleeping sickness  
ulcers and wounds

fungal infections  
colds and coughs



Prickly ash is linked to some health benefits

Prickly ash is very versatile due in part to its alkaloids, flavonoids, and other plant compounds. Over 140 compounds have been isolated from the Zanthoxylum genus. Many of these act as antioxidants, which help protect your body by fighting free radicals, which are unstable molecules that may lead to various illnesses .

Current research reveals that this tree may indeed have several health benefits.

## May relieve pain and inflammation

Medicinally, prickly ash is best known for treating toothaches and other mouth pains.

Research indicates that this plant may indeed have analgesic effects by repressing inflammation-related pain.

A 7-day study gave mice with inflamed paws Zanthoxylum injections of 45.5 mg per pound (100 mg per kg) of body weight.

They experienced reduced swelling and inflammation in their paws, as well as a significantly lower number of white blood cells, suggesting that the mice's bodies were no longer having to work as hard to fend off pain .

Test-tube studies suggest that prickly ash fights inflammation by inhibiting the creation of nitric oxide, a molecule that your body sometimes overproduces. Too much nitric oxide may lead to inflammation .

In particular, this supplement may aid conditions like osteoarthritis.

This inflammatory disease affects over 30 million people in the United States alone and can lead to damaged cartilage and bones .

One rodent study revealed that Zanthoxylum extract significantly lowered markers of pain and inflammation related to osteoarthritis .

Still, research in humans is needed to confirm these effects.

## May help treat digestive complaints

Prickly ash may help treat multiple digestive conditions, including diarrhea, gastritis, and gastric ulcers .

A study in mice noted that extracts of both Zanthoxylum bark and fruit significantly reduced the severity and frequency of diarrhea .

In another study, mice with chronic gastritis — an inflammation of the stomach lining — were given extracts of prickly ash stem and root, both of which aided this condition by improving digestive movement .

What's more, the extracts effectively fought stomach ulcers in the mice.

Keep in mind that human research is lacking.

May have antibacterial and antifungal properties

Prickly ash may have several antibacterial and antifungal effects .

In a test-tube study, Zanthoxylum essential oils were found to inhibit seven microbial strains. The researchers concluded that these extracts had strong antimicrobial properties against some pathogens and organisms known to cause food to spoil .

Another test-tube study noted that various parts of the tree, including the leaf, fruit, stem, and bark, showed antifungal properties against 11 strains of fungi, including *Candida albicans* and *Aspergillus fumigatus* — with the fruit and leaf extracts being the most effective .

While these results support the traditional use of prickly ash to treat multiple infections, more studies are necessary.



## How to take prickly ash

There are several ways to take prickly ash, the easiest of which is to simply chew on its bark — which is often sold in specialty stores or online.

Alternatively, you can make a tea by simmering 1–2 teaspoons of chopped bark in 1 cup (240 ml) of water for 5–10 minutes.

You can also find supplements and powdered forms of prickly ash. In particular, the powder can be used to make not only teas or tinctures but also poultices, which can be applied externally to treat wounds, cuts, and ulcers.

In addition, tinctures and extracts are made from both the berries and bark of prickly ash.

Keep in mind that there are no set dosage guidelines for ingested forms of this supplement. As such, you shouldn't exceed the dosage recommendations on the label for whichever product you choose.

## Does prickly ash have side effects?

When consumed in moderate amounts, prickly ash is unlikely to cause side effects.

Although research in mice suggests that especially high doses can result in diarrhea, drowsiness, arrhythmia, neuromuscular effects, and even death, it would take nearly 3,000% of the intake generally used in studies to experience such adverse effects .

As such, researchers have concluded that extracts from Zanthoxyloide species commonly used for supplements are relatively safe.

Still, more studies are needed to evaluate long-term effects.

# Who should avoid prickly ash?

While the consumption of certain parts of prickly ash is widely considered safe, some people may want to avoid it.

Children and women who are pregnant or breastfeeding shouldn't take it due to a lack of safety information or dosage guidelines.

In addition, prickly ash may accelerate defecation and stimulate digestion. While many people may benefit from these effects, those with digestive conditions should practice caution or consult a medical provider first .

Conditions that may be exacerbated or negatively affected by prickly ash include inflammatory bowel disease (IBD), irritable bowel syndrome (IBS), Crohn's disease, and ulcerative colitis (UC).

