

Native American Botanics

Elder - "Nature's Medicine Chest"

Scientific Name

Sambucus nigra
Sambucus canadensis

Botanical Family

Caprifoliaceae

Common Name(s)

Sambucus nigra: Black Elder, European Elder
Sambucus canadensis: American elder

Plant Parts Used:

Flowers (mainly); also bark, berries, leaves



Overview

Elders (*Sambucus spp*) are common hedges that are native to Europe and the British Isles. Elder flowers are used in both the Old World and New World, and are a common ingredient in cold and flu formulas. *Sambucus canadensis* was used traditionally by some Native American tribes to promote sweating and relieve fever. In Germany, *Sambucus nigra* is used in a similar manner as a diaphoretic to increase perspiration during feverish colds.

There are very few human studies on the therapeutic benefits of elders. However, according to the *Expanded Commission E Monographs*, the medicinal use of *Sambucus* is supported by its long history of traditional use, preclinical test tube and animal investigations, and phytochemical studies. *Sambucus nigra* contains up to 3% flavonoids. This is noteworthy because flavonoids are plant chemicals known to boost immune activity. Some herbal remedies for feverish colds sold in the United States and Canada combine elder flower with yarrow flower and peppermint leaf.

Botanical Description

Elders (*Sambucus species*) are tall shrubs in the Caprifoliaceae, or Honeysuckle, family. Several species are native to North America and Europe, but *Sambucus canadensis*, or the black elderberry, is most commonly used by North American tribes. *Sambucus canadensis* bears fragrant white flowers in dense clusters in June and July. The branches become heavy with purplish black berries by September. People living near wild stands of elder use nearly all parts of this valuable plant as food and traditional medicine.

Chemical Constituents

Flowers: Flavonoids (kaempferol, quercetin), quercetin glycosides (rutin, hyperoside, isoquercitrin); triterpenes (alpha- and beta-amyrin), oleanolic acid, ursolic acids, volatile oils, free fatty acids; mainly linoleic, linolenic & palmitic acids, alkanes, chlorogenic acid, pectin, sugars.

Medicinal Uses

Traditional Uses (Flowers): influenza, colds, chronic nasal catarrh with deafness, sinusitis, diuretic, laxative, local anti-inflammatory therapy, colds, feverish colds,

Clinical Applications (Flowers): influenza, colds, chronic nasal catarrh with deafness, sinusitis, diaphoretic (sweat-producing remedy), diuretic, laxative, local anti-inflammatory therapy, eczema, dermatitis, night sweats.

Pharmacological and Clinical Findings

In laboratory studies, *Sambucus canadensis* showed some degree of antibacterial activity against *Staphylococcus aureus* and *Bacillus subtilis*. In animal investigations, *Sambucus spp.* produced moderate anti-inflammatory effects in carrageenan rat paw edema. *Sambucus spp.* also has shown antispasmodic and diuretic activity.

Israeli researchers evaluated the effect of remedies containing black elderberry extract on stimulating the immune system. Their experiment measured increases in the production of human inflammatory and anti-

inflammatory cytokines -- substances involved in the immune response. Three commercial formulations containing *Sambucus* extracts were compared to two other "immune-enhancing" commercial preparations containing echinacea and propolis. The *Sambucus* preparations resulted in an up to six-fold increase in the production of five cytokines compared to the control. The *Sambucus* extracts also produced a greater increase in five inflammatory and anti-inflammatory cytokines production compared to the other two commercial preparations.

These findings suggest that elderberry may inactivate flu viruses by blocking them from replicating. The researchers concluded that the black elderberry extract may be beneficial for activating a healthy immune system in patients with influenza. The findings also suggest that compounds in *Sambucus* may stimulate the immune system of cancer or AIDS patients with depressed immune systems who are receiving chemotherapy or other treatments.

Dosage Range

Dried flower: 2 to 4 g dry powder or as tea 3 times per day.

Safety

Elder flowers are safe when taken as directed.

Side Effects

Side effects can occur if excessive quantities are taken. Prolonged use may lead to hypokalaemia because of the diuretic action of *Sambucus canadensis*.

Warnings/Contraindications/Precautions

Pregnant and lactating women should not take elder.

Interactions

None reported

References

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