

ELDER

Sambucus nigra

Elder (*Sambucus nigra*), also known as elderberry, black elder, common elder, and European elder, is a small, deciduous tree with white flowers and black-purple berries that is native to Asia, Europe, and North Africa.^{1,2} Elder also grows wild in North America, and some northern European countries cultivate elderberry on a small scale.¹

Uses of elder were first recorded in ancient times by Hippocrates, Dioscoridis, and Pliny. Both the berries and flowers were used in Europe for making cordials, preserves, teas, wines, and other foods.^{1,2} The traditional medicinal uses primarily involved liquid preparations (e.g., decoction, juice, syrup, or tea) for colds (especially when unproductive coughs were present), constipation, fever, and fluid retention (edema).³ Indigenous people were the first to grow elderberry in North America, and many continue to do so today, using all parts of the plant for a variety of nutritional and medicinal purposes.



In recent decades, elder berry dietary supplement products have gained popularity for support with common symptoms related to colds, fevers, and flus.² The berries are rich in anthocyanins, a type of flavonoid known for their antioxidant properties and purplish pigments, which may contribute to elder's therapeutic effects on the immune system. Cyanidin-3-glucoside and cyanidin-3-sambubioside make up the majority of elder's anthocyanin content. The berries are also a source of nutrients: 100 g of fresh berries includes 288-305 mg potassium, 65 mg vitamin B2, 49-57 mg phosphorous, 18-26 mg vitamin C, 17 mg folic acid, and other vitamins and minerals. The berries have a sweet and sour taste and a characteristic aroma.³ Unripe berries are mildly toxic due to their cyanogenic glycoside content; therefore, only ripe, cooked, or dried berries are used in preparations.¹⁻³

A 2018 review of four randomized, controlled clinical trials concluded that a standardized elder berry extract shortened the duration and severity of upper respiratory symptoms in participants with cold or flu symptoms when administered at the onset of the illness. Symptoms included cough, nasal congestion/discharge, and sore throat, amongst others.⁴ An earlier systematic review by the Natural Standard Research Collaboration concluded that elder has good scientific evidence

for its usefulness in flu symptoms but no other ailments. Preclinical studies have shown that elder berry inhibits several strains of flu viruses in part by blocking viruses from attacking host cells, increasing inflammatory and anti-inflammatory cytokine production, and inhibiting hematogglutinin.¹⁻³

Preparation and dosage recommendations are not yet established⁵; however, 60 ml of a standardized elder berry syrup taken daily for the first 3-5 days of flu symptoms is most commonly reported. A standardized syrup is often comprised of 3.8 g standardized liquid extract (2:1) per 10 ml syrup. Lozenges containing a proprietary elder berry extract have also been studied.⁶ Elder flowers and ripe fruits are safe to consume; however, more data is needed to determine their safety during pregnancy/lactation and in children.³

Elder berries and flowers have a well-established use in traditional medicine. Recent research and products primarily focus on the use of elder berries for immune system support during the onset of cold and flu symptoms. Although the scientific evidence is promising, more research is needed to fully elucidate elder's uses, mechanisms of action, recommended preparation/dose, and safety in vulnerable populations.



REFERENCES:

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