

# Black Elderberry (Sambucus Nigra) Supplementation Effectively Treats Upper Respiratory Symptoms: A Meta-Analysis of Randomized, Controlled Clinical Trials

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## Abstract

Upper respiratory symptoms are often treated with over the counter drugs, antibiotics, and antiviral medications. Due to concerns about safety and efficacy, there is a demand for an alternative solution. Black elderberry (*Sambucus nigra*) has been used to treat cold and flu symptoms, but there are no large-scale studies or meta-analyses. This meta-analysis quantifies the effects of elderberry supplementation and evaluates moderators including vaccination status and the underlying pathology. This analysis included a total of 180 participants and evaluates moderators such as vaccination status and cause of the upper respiratory symptoms. Supplementation with elderberry was found to substantially reduce upper respiratory symptoms. The quantitative synthesis of the effects yielded a large mean effect size. These findings present an alternative to antibiotic misuse for upper respiratory symptoms due to viral infections, and a potentially safer alternative to prescription drugs for routine cases of the common cold and influenza.

**Keywords:** Common cold; Elderberry; Influenza; Sambucus.

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