Ginger-Tussin Syrup™

Ginger-Tussin™ Syrup is an effective sore throat and cough remedy. It contains all-natural herbal ingredients in a base of vegetable glycerin with organic honey, which boosts the pleasant, potently ginger-based taste, as well as the throat-soothing texture of this elixir. The three active ingredients in Ginger-Tussin™ Syrup—ginger, wild cherry bark, and osha—have been shown to support the immune response, aid in cough suppression, and provide relief from the pain and irritation that may be associated with cough and sore throat, without the adverse side-effects of pharmaceutical drugs commonly used for this purpose.

**Ginger**

Ginger root (*Zingiber officinale*) is well-regarded for its anti-inflammatory, antimicrobial and immune-supportive properties. In combination with the general warming sensation induced by the strong, spicy flavor, these properties all contribute to ginger being beneficial for soothing inflamed and irritated tissue in the throat, and relieving the pain induced by coughing.

Specific constituents in ginger extract may make this herb especially helpful as a cough remedy. Citral, the major active compound in ginger oil, was identified as suppressing contraction of the trachea and contributing to bronchodilation in a rat model. Other studies support ginger’s use for respiratory ailments. Extracts of fresh ginger were shown to be effective against human respiratory syncytial virus (HRSV) in human upper and lower respiratory tract cells in vitro. The ginger dose-dependently inhibited viral attachment and internalization. The study’s authors speculated that concentrated ginger might stimulate mucosal cells to secrete IFN-β, which could contribute to counteracting viral infection. Antibacterial properties of ginger have been demonstrated against strains of *Staphylococcus* and *Streptococcus*, as well as the gram-negative bacterium *Haemophilus influenza*, isolated from human cells in vitro.

Ginger has also been shown to boost non-specific immune response in a mouse model of immunosuppression and subsequent infection. Ginger extract induced differentiation and viability of macrophages, and led to greater release of pathogen-targeting nitric oxide from macrophages. Ginger also increased expression of cell adhesion molecules on macrophages, enhancing their ability to bind to and engulf pathogenic organisms. Phagocytic capacity was increased in the presence of ginger extract, leading the study authors to put forth two possible mechanisms: first, ginger may support normal functioning of existing macrophages, and second, it may induce production of an increased total number of macrophages. Treatment with ginger extract also restored production of pathogen-targeting reactive oxygen intermediates induced by myeloperoxidase, which was greatly suppressed in immune-compromised cells without ginger. The study authors concluded that ginger exhibits potent bioactive properties that may ameliorate immunosuppressive conditions.
Osha

Osha (*Ligusticum porteri*) is a member of the Apiaceae botanical family (related to parsley), and has a long history of use as a traditional folk remedy by native North Americans in Mexico and the Southwestern U.S. Modern science has since corroborated the functional properties of this herb, with studies supporting its effects in reducing pain and inducing tissue relaxation.

In vivo and in vitro models have shown osha to exert spasmolytic and sedative properties. In a mouse model of chemically-induced pain, oral delivery of osha extracts resulted in a significant reduction in the visible muscle movements indicative of pain. Another mouse model of chemically and physically-induced pain showed aqueous extracts and essential oils of osha to be effective in reducing signs of pain in a dose-dependent manner.

Wild Cherry Bark

The bark of the wild cherry tree (*Prunus serotina*) is another traditional Native American remedy for colds, fever, and sore throat, the efficacy of which is now supported by present-day research. The complex phenolic compounds in wild cherry, including chlorogenic acid and hyperoside, contribute to its antioxidant and anti-inflammatory properties. Rat models have shown wild cherry to have significant effects as a vasodilator and smooth muscle relaxer, properties which may be instrumental in reducing the irritation associated with sore throat and cough. The impressive vasodilatory and endothelial-relaxing effects of wild cherry led the authors of a comprehensive review looking at the nutraceutical value of wild cherry, to say that it could be considered a “functional food.”

### Recommended Use

As a dietary supplement, take 2.5 ml (approx. 1/2 teaspoon) per day, or as directed by a health care practitioner.

### References


To contact Designs for Health, please call us at (800) 847-8302, or visit us on the web at www.designsforhealth.com.