Ginger-Tussin[™] Syrup

Throat soothing herbal syrup*

C designs for health

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Ginger-Tussin[™] Syrup is formulated as a sore throat and occasional cough remedy.* This throat-soothing elixir contains all-natural herbal ingredients in a base of vegetable glycerine with organic honey, and boasts a potent and pleasant ginger flavor. The three herbal ingredients in Ginger-Tussin[™] Syrup—ginger, lovage, and wild cherry bark—have been shown to support the immune response, aid suppression of occasional cough, 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

Other Ingredients: USP kosher vegetable glycerine, organic honey, deionized water.

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 an herbal 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.¹ 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*.² The ginger dose-dependently inhibited viral attachment and internalization. The study's authors speculated that concentrated ginger might stimulate mucosal cells to secrete IFN-ß, 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*.³

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.⁴ 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.

Supplement Facts

Serving Size 2.5 mL (approx. 1/2 teaspoon) Servings Per Container about 47

Amount Per Serving	%Daily Value	
Calories	10	
Total Carbohydrate	2 g	<1%††
Total Sugars	less than 1 g	*
Includes less than 1 g Added Sugars		2%#
Dry & Fresh Organic Ginger (Zingiber officinale)(root)	360 mg	*
Lovage (Levisticum officinale)(root)	100 mg	*
Wild Cherry (Prunus spp.)(bark)	67 mg	*
*Daily Value not established. ++Percent Daily Values are based on a 2,000 calorie diet.		

Wild Cherry Bark and Lovage

The bark of the wild cherry tree (*Prunus serotina*) is a traditional Native American remedy for colds, fever, and sore throat, the efficacy of which may now be supported by present-day research. The complex phenolic compounds in wild cherry, including chlorogenic acid and hyperoside, contribute to its antioxidant and antiinflammatory properties.⁵ 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.⁶ 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."⁶

Lovage (*Levisticum officinale*) is an herb belonging to the Apiaceae botanical family, a category that also includes carrot, celery, coriander, dill, fennel, and parsley. Lovage leaves can be used in salads and the roots can be eaten as a vegetable or grated for use in salads, with a flavor and aroma similar to those of celery and parsley. Lovage is used as an expectorant and to loosen secretions in respiratory conditions.⁷ Traditionally, it has been used as a natural cough remedy, and research supports antimicrobial effects of lovage against *Mycobacterium bovis*, an agent that causes tuberculosis in animals and humans.⁸

Recommended Use:

• Take 2.5 mL (approx. 1/2 teaspoon) per day, or as directed by your health care practitioner.

For a list of references cited in this document, please visit: https://www.designsforhealth.com/techsheet-references/ginger-tussin-syrup-references.pdf

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Healthcare practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities. Individual monitoring, including liver function tests, may be appropriate.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

To contact Designs for Health, please call us at (860) 623-6314, or visit us on the web at www.designsforhealth.com.