



Seasonal Defense

Stock #806-6 (90 capsules)

Seasonal Defense is a unique "cold-and-flu-season" formula containing herbs that stimulate the activity of the immune system to help prevent and treat common colds and flu. The synergistic blend of herbs in Seasonal Defense provides decongestant, expectorant and antitussive (to prevent or relieve coughs) actions, as well as antibacterial, antiviral and immuno-enhancing effects. Seasonal Defense is the ideal choice for combating colds, flu and upper respiratory tract infections, and for treating symptoms such as congestion, coughs, fatigue, fever and sore throat.

Each capsule of Seasonal Defense contains:

Andrographis paniculata has been used for centuries in China, India and Thailand to successfully treat upper respiratory tract infection, fever and sore throat, as well as other infectious and chronic diseases. Andrographis is also used extensively in Scandinavian countries to prevent and treat common colds and flu. Andrographis is used therapeutically

for bacterial and viral respiratory infections including common cold, pharyngotonsillitis (inflammation of the pharynx and tonsils) and acute sinusitis; as a prophylactic (preventative measure) for the common cold; to boost immune function in bacterial and viral infections; and to relieve fever. Andrographis does not appear to work as an antiviral or antibacterial agent directly, but rather as a potent stimulator of the immune response. Researchers have confirmed that andrographolide, the major constituent, demonstrates immunostimulatory activity as evidenced by increased proliferation of lymphocytes (white blood cells that fight infection and disease) and production of interleukin-2 (a substance that stimulates the growth of certain disease-fighting blood cells in the immune system). Such activity contributes to the effectiveness of andrographis in the prevention and treatment of uncomplicated acute upper respiratory tract infections such as the common cold. For example, a randomized, double-blind trial involving 158 patients with the common cold found that andrographis produced a significant decrease in the prevalence and intensity of cold symptoms (i.e. nasal secretions, sore throat, sleeplessness, tiredness) as early as the second day of treatment compared to placebo. Furthermore, a randomized, double blind, placebo-controlled clinical trial showed a significant decrease in the incidence of colds in school children given an andrographis extract for 3 months during the winter season. Generally there are few side effects associated with the use of andrographis, and it has extremely low toxicity. However, the antifertility effect demonstrated in female mice (although high doses were used) suggests that andrographis should not be used by women who wish to become pregnant or during pregnancy, especially in the first trimester.¹⁻⁹

Thyme acts as an antibacterial agent, antitussive, expectorant and bronchial antispasmodic (a substance that relaxes bronchial spasms). Thyme also provides analgesic (pain-relieving) and diaphoretic (increases perspiration to lower fever) activity. Commonly recommended for bronchitis and coughs, thyme is also used in the treatment of inflamed sinuses, nose and throat, and as a natural remedy for asthma, laryngitis and whooping cough. Thyme contains volatile oils that provide antimicrobial and anti-inflammatory benefits in upper respiratory infections. Thymol, the principal active ingredient, combats bronchial spasms, inhibits the growth of bacteria, and helps loosen phlegm. Thyme is approved by the German Commission E for bronchitis, whooping cough and upper respiratory inflammation; however, its use is not recommended during pregnancy.¹⁰⁻¹⁶

Bitter orange fruit (*Fructus aurantia*) is commonly used as an expectorant for eliminating excess phlegm and relieving congestion. Research indicates that bitter orange contains the flavone nobiletin, a potent antioxidant that exhibits anti-allergic, antihistaminic and anti-inflammatory actions. In addition, bitter orange contains the active ingredient synephrine, which provides decongestant effects on the respiratory system. Synephrine helps maintain normal blood pressure levels, while simultaneously providing decongestant effects such as increasing circulation to the head, shrinking swollen tissues, and dilating respiratory passages to improve breathing. Such evidence helps support the use of bitter orange in herbal nasal decongestants, and lends credence to its use for allergies, asthma, coughs and symptoms associated with colds. Furthermore, researchers studied 34 kinds of traditional herbal medicines and found that bitter orange fruit had the most potent inhibitory activity on rotavirus infection—rotavirus may be the most important cause of severe dehydrating diarrhea in children under 3 years of age.¹⁷⁻²⁵

Eleuthero, commonly known as Siberian ginseng, has demonstrated antioxidant and immuno-enhancing effects. Researchers have identified 6 compounds in eleuthero that show various levels of activity as antioxidants, while 4 compounds exhibit anticancer actions and 2 show immunostimulatory effects. An in vitro study found that an eleuthero preparation increased phagocytosis—the ingestion of waste material, harmful microorganisms or other foreign bodies—of *Candida albicans* by granulocytes and monocytes (types of white blood cells) from healthy donors by 30-45%. Likewise, a liquid eleuthero root extract demonstrated strong antiviral activity and inhibited the replication of human rhinovirus (one of the major causes of the common cold), respiratory syncytial virus (a major cause of

respiratory illness), and influenza A (flu) virus in infected cell cultures. Furthermore, a double-blind, placebo-controlled German study involving 36 healthy volunteers demonstrated that eleuthero boosts immune system response and enhances the body's overall resistance to infection, as evidenced by a dramatic increase in the total number of lymphocytes (white blood cells that fight infection and disease), especially T-lymphocytes.^{15,26-38}

Oregano has been used as a folk medicine for centuries for diarrhea, fevers, headaches and respiratory disorders such as bronchitis, colds and coughs. Oregano contains the active ingredients carvacrol and thymol, which provide antimicrobial and anti-inflammatory benefits in upper respiratory infections, as well as help loosen phlegm in the lungs and relieve spasms in the bronchial passages. Research on the biological activity of oregano has confirmed a wide range of antibacterial, antifungicidal, antiviral, antioxidant and expectorant properties, both for the essential oil, as well as the extracts, including inhibitory activity against *Klebsiella pneumoniae*—a cause of respiratory infections. In fact, the essential oil of oregano is recommended for treatment of acute bacterial infections of the bronchi and may provide relief through inhalation by individuals with chronic asthma, combined with bronchitis.^{11,39-42}

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