VS-C®

Stock #937-7 (100 capsules)
TCM - Stock #949-2 (30 capsules)
Stock 3167-6 (2 fl. oz.)

VS-C is a herbal combination designed to strengthen the body's immune system against bacterial and viral infections. VS-C contains herbs that have been used for centuries in Traditional Chinese Medicine to prevent and combat infectious diseases and relieve symptoms, including fever, inflammation, muscle aches, pain, respiratory congestion, and swelling. VS-C is best used as a preventative measure, but can also be taken at the first sign of symptoms and throughout illness.

VS-C can be used to combat pathogenic (disease-causing) microorganisms that cause bacterial and viral infections, including the common cold, dysentery, food poisoning, influenza (flu), respiratory infections, and hepatitis. VS-C may also be helpful for Epstein-Barr virus (mononucleosis), HIV virus, malaria, typhoid fever, and herpes simplex virus type 1.

VS-C is also available in liquid form, with the components of its dried counterpart extracted and preserved in an alcohol-free glycerin base of 80% glycerin and 20% water.

Dandelion (*Taraxacum officinale*) - Recent research has shown that an infusion of dandelion root stimulated the growth of 14 strains of bifidobacteria in vitro. Beneficial intestinal microflora such as bifidobacteria can enhance the body's resistance to pathogenic bacteria, increase stimulation of the immune response, and reduce the risk of cancer. In addition, many studies have shown that dandelion is a rich source of vitamins and minerals—dandelion leaves have the highest vitamin A content of all greens, as well as ample amounts of vitamins C, D, B-complex and minerals such as copper, iron, magnesium, manganese, phosphorous, potassium, silicon, sodium, and zinc. In the last 30 years, systematic studies have confirmed that nutrient deficiencies impair immune function and lead to frequent severe infections resulting in higher death rates, especially in children. Similar findings have been reported even for moderate deficiencies of individual nutrients, such as trace minerals and vitamins, particularly copper, iron, magnesium, manganese, zinc, vitamins A, C, D and various B-vitamins.[1-5]

Purslane (*Portulaca oleracea)* is known as a "cooling" medicinal herb used traditionally in the treatment of conditions where "heat" accumulates in the body such as fever, inflammation and swelling, and infections. Purslane demonstrates antimicrobial, antipyretic (fever-reducing), bronchodilatory (dilates the airways to improve breathing), diuretic, and muscle-relaxant properties. In clinical studies, purslane was about as effective as sulfa drugs in treating acute or recurrent bacillary dysentery (also known as shigellosis)—a highly contagious infection of the colon caused by *Shigella* bacteria, which causes high fever, abdominal cramping, and severe, even fatal, diarrhea. Purslane has also shown some inhibitory effects against *Salmonella typhi* (which causes typhoid fever—a life-threatening illness) and *Staphylococcus aureus* (which can cause food poisoining and other infections), as well as varying degrees of inhibition against pathogenic fungi. Furthermore, purslane is a rich source of nutrients that support healthy immune system functions, including alpha-tocopherol (vitamin E), ascorbic acid (vitamin C), beta-carotene (vitamin A), omega-3 fatty acids, and glutathione—glutathione plays an important regulatory role in the body's response to viral infections such as herpes simplex virus type 1, which causes blisters (cold sores) on the lips and inside the mouth.[6-14]

Indigo (*Indigofera tinctoria*) has traditionally been used to "clear heat" and "relieve toxicity," symptoms that are characteristic of bacterial or viral infections that produce fever and inflammation. Research has shown that indirubin, a substance derived from indigo leaves, is responsible for the herb's anti-inflammatory effects. Indirubin has also been shown to inhibit influenza virus in vitro. In addition, indirubin has been used in the treatment of chronic myelocytic leukemia—a rare type of cancer of the bone marrow. Studies in China have shown that indirubin is as effective as the chemotherapy drugs *hydroxyurea* and *busulfan*; however, unlike chemotherapy drugs, indirubin does not interfere with bone marrow function. Indirubin inhibits the uncontrolled growth of tumor cells by inactivating enzymes called cyclin-dependent kinases (CDKs), which regulate cell division. Furthermore, animal studies have confirmed that indigo demonstrates hepatoprotective effects.[12,15-24]

Thlaspi (*Thlaspi arvense*) has traditionally been used to "clear heat" and "relieve toxicity," symptoms that are characteristic of bacterial or viral infections that produce fever and inflammation. Thlaspi has also been used to relieve pain and dispel blood stasis—a pathogenic or morbid state (sickly condition) caused by the stagnation of blood flow. In addition, thlaspi is a powerful antimicrobial; modern clinical research conducted in China has validated its effectiveness against viruses. For example, a recent study published in *Antiviral Research* confirmed that thlaspi displayed anti-hepatitis C virus (anti-HCV) activities in vitro.[12,25-29]

Bupleurum (*Bupleurum chinense*) is a well-known and important traditional Chinese herbal medicine often used to treat common cold with fever, alternating chills and fever, and feelings of fullness and heaviness in the chest. Bupleurum exhibits analgesic (pain-relieving), anti-inflammatory, antipyretic (fever-reducing), antimalarial (a substance that prevents or cures malaria), diaphoretic (a substance that promotes perspiration) and sedative properties. Bupleurum is used to strengthen the immune response to infection, relieve congestion and chest pain, combat colds with fever and sweating, and treat malaria. Recent research has shown that bupleurum extracts inhibit the growth of *Mycobacterium tuberculosis*. In addition, bupleurum contains a volatile oil that has shown strong in vitro antiviral effects against influenza (flu) and poliomyelitis (inflammation of nerve cells in the spinal cord) viruses. Bupleurum is commonly prescribed even for children and pregnant women, particularly in cases of common cold and flu.[10,12,30-33]

Typhonium (*Typhonium flagelliforme*) is a warming herb that relieves pain and inflammation, including joint pain, and relaxes spasms. Typhonium is also used for lymphatic swellings. In addition, research has identified a substance in typhonium with significant antihepatotoxic (protecting the liver from toxins) activity.[12,34-37]

Scute (*Scutellaria baicalensis*), one of the most widely used herbs in Traditional Chinese Medicine, is noted for its antibacterial, anti-inflammatory, antioxidant and antiviral properties. Scute is commonly used for diarrea, dysentery, hay fever, hepatitis, infections accompanied by fever, jaundice and urinary tract infections. Wogonin, one of the primary active flavonoids in scute, has demonstrated anti-hepatitis B virus effects in vitro. Scute flavonoids have also shown antiviral effects against Epstein-Barr virus (the major cause of infectious mononucleosis), respiratory syncytial virus (which causes minor respiratory infections in adults and bronchitis and bronchopneumonia in children), and human immunodeficiency virus type 1 (HIV-1), which is responsible for the vast majority of AIDS in the United States.[10,12,30,38-45]

Cinnamon twig (*Cinnamomum cassia*) is a warming herb used to enhance the circulation of blood and promote urination to relieve edema (fluid retention). Cinnamon also provides analgesic (pain-relieving) and mild antipyretic (fever-reducing) activity. In Traditional Chinese Medicine, cinnamon is recommended for abdominal cramps and pain, arthritic and rheumatic conditions, cold extremities, edema, fatigue, headaches, lower back pain, muscle aches and cramps, and inflammation associated with sinusitis. Research has found that cinnamon exhibits strong antibacterial activity againsts *Salmonella typhi* (which causes typhoid fever) and *Staphylococcus aureus* (which can cause food poisoining and other infections). Cinnamon has also been shown to have inhibitory effects in vitro against Asian influenza virus (type A) and ECHO virus—enteric cytopathic human orphan (ECHO) virus is associated with various diseases including croup-like syndromes, diarrhea, non-specific fevers, rashes, mild respiratory disorders, and, less frequently, viral meningitis (acute inflammation of the membranes that cover and protect the brain and spinal cord, causing symptoms including fever, headache, stiff neck and tiredness, sometimes accompanied by a rash).[10,12,30,31,46-48]

Licorice (*Glycyrrhiza uralensis*) is perhaps the most widely used herb in the *Chinese Materia Medica*. Licorice has anti-histamine, anti-inflammatory, antitussive (a substance that relieves or prevents cough), expectorant, sedative and tonic properties. Licorice also acts as a demulcent (a substance that soothes irritation and inflammation) to the lungs and bronchi and is used to moisten the lungs to relieve dry cough. Licorice is recommended for acute symptoms in the early stages of infection to reduce fever and to relieve inflammation and swelling, and is commonly used for asthma, colds, dry cough, fatigue, fever, sore throat, and lung and bronchial congestion. Research has confirmed the antibacterial activity of licorice components against upper respiratory tract bacteria such as *Streptococcus pyogenes*, *Haemophilus influenzae* and *Moraxella catarrhalis*—bacteria that can cause chronic bronchitis, community-acquired pneumonia, sinusitis, strep throat and tonsillitis, as well as other respiratory tract infections. In addition, studies conducted in China and Japan have found that licorice stimulates the production of interferon—a substance that fights viral infection by inhibiting viral growth. In fact, a recent study found glycyrrhizin, one of the main active components in licorice, to be highly active in inhibiting replication of the severe acute respiratory syndrome (SARS)-associated virus.[10,30-32,49-51]

Ginseng (*Panax ginseng*) contains the polysaccharide ginsan, which has been shown to be a potent immunomodulator. Research indicates that ginseng enhances the immune response, in part, by stimulating phagocytosis (the process by which white blood cells fight infection), as well as the production of white blood cells and interferon—a substance that fights viral infection by inhibiting viral growth. In a randomized, placebo-controlled, double-blind study, a statistically highly significant decrease in the frequency of influenza or common cold was found among 114 volunteers receiving 100mg of standardized ginseng extract compared to 113 volunteers taking a placebo. Plus, natural killer (NK) cell activity levels were nearly twice as high in the ginseng group as compared to the placebo group.[10,12,31,52-56]

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