Eleuthero, commonly known as Siberian ginseng, is a distant relative of Asian ginseng (\textit{Panax ginseng}). Although it belongs to a different plant genus entirely, eleuthero does share many properties with true ginseng. Use of eleuthero dates back at least 2,000 years. According to Chinese medicine, regular use of eleuthero was believed to increase longevity and vitality, improve general health, provide energy, restore memory, and relieve tension and stiffness in the soft tissue and joints. Eleuthero was also used to prevent respiratory tract infections and colds and flu. In Russia, where most of the research on eleuthero has been conducted, it is widely used as a tonic to increase resistance to stress and reduce infections. In recent years, eleuthero’s ability to enhance stamina and endurance led Soviet Olympic athletes to use the herb to improve their training. Reports also state that following the Chernobyl accident, many Russian and Ukrainian citizens received eleuthero to counteract the effects of radiation.\textsuperscript{1-6}

Eleuthero is considered an adaptogen—a substance that exerts effects on both sick and healthy individuals by ‘correcting’ or normalizing any dysfunction(s), without producing unwanted side effects. A number of experimental and clinical studies have confirmed eleuthero’s adaptogenic properties, as evidenced by its ability to increase non-specific body resistance to stress, fatigue, disease or noxious (harmful) chemicals. Clinical data supports the use of eleuthero as a prophylactic (preventative) and restorative tonic for enhancing mental and physical performance in cases of exhaustion and tiredness, weakness, and during convalescence—the stage of recovery following an attack of disease, a surgical operation or an injury. A review of clinical trials involving over 2,100 healthy individuals found that eleuthero root extract improved resistance to adverse physical conditions (i.e. heat, noise, work load increase, exercise, etc.); increased mental alertness and work output; and improved both the quality of work performed under stressful conditions, as well as athletic performance. Eleuthero is approved by the German Commission E as a tonic to combat fatigue, debility, declining concentration or work capacity, and during convalescence.\textsuperscript{1,3,7-10}

Eleuthero has also been shown to normalize adrenal and thyroid function and balance blood pressure and blood sugar levels in both animal and experimental studies. In a human study, a fluid extract of eleuthero was given to children (ages 7-10 years) with a stable stage of neurocirculatory hypotension (low blood pressure). Eleuthero extract caused a statistically significant elevation in both systolic and diastolic blood pressure levels, which were low prior to treatment.\textsuperscript{1,3,11}

In addition, eleuthero 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 \textit{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. A double-blind human study using a liquid eleuthero preparation with 36 healthy volunteers showed a dramatic increase in the total number of lymphocytes (white blood cells that fight infection and disease), especially T-lymphocytes.\textsuperscript{1,3,6-9,12-19}

Eleuthero has even been shown to improve short-term memory and overall mental performance in healthy humans. A randomized, double-blind, placebo-controlled study found that eleuthero (625mg twice daily for 3 months) significantly improved selective memory, as well as feelings of well-being and activity levels in middle-aged subjects.\textsuperscript{1,9,10,20}

Furthermore, eleuthero root extract has been shown to increase the resistance of rats to the toxic effects of noxious chemicals, including chemotherapeutic agents. Preliminary studies in Russia indicate that eleuthero may be beneficial as an adjunctive treatment in chemotherapy and radiation therapy for cancer. Results of a randomized study showed that eleuthero stimulated general non-specific resistance and immunologic vigor in women with breast cancer being treated with chemotherapy and radiation. Likewise, women with inoperable breast cancer were reported to be able to tolerate more chemotherapy when given eleuthero.\textsuperscript{1,3,21,22}

Eleuthero may be unsuitable for individuals with high blood pressure (180/90mmHg or greater); however, the glycosides contained in eleuthero have actually been shown to lower blood pressure. Eleuthero is not recommended during pregnancy or lactation, as the results are unknown.\textsuperscript{9,10,18,19}

Each capsule contains 410mg of eleuthero root (\textit{Eleutherococcus senticosus}).

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References: