

## NATURAL SUPPORT FOR IMMUNITY & VITALITY

### Supplement Facts

Serving Size: 2 Capsules  
Servings Per Container: 45

	Amount Per Serving	% Daily Value
Cordyceps (Cs-4) mycelia extract ( <i>Cordyceps sinensis</i> ) (8:1)	1000 mg	**

\*\* Daily Value not established.

**Other ingredients:** Cellulose (capsule), microcrystalline cellulose, vegetable stearate, silicon dioxide. **Does not contain gluten.**

**SUGGESTED USE:** 2 CAPSULES PER DAY OR AS DIRECTED BY YOUR HEALTHCARE PROFESSIONAL.

**WARNING:** IF TAKING MEDICATION, PREGNANT OR NURSING, CONSULT A PHYSICIAN BEFORE USING.

- Researched *Cordyceps sinensis* fermented Cs-4 extract.\*
- Time-honored tonic with potent antioxidant activity.\*
- Modulates immune system & inflammation response.\*
- Helps support healthy glucose and insulin metabolism.\*

**Cordyceps Select™** contains a researched form of an ancient tonic mushroom. Each capsule provides 500 mg of *Cordyceps sinensis* as pure Cs-4 mycelia extract, produced via controlled fermentation on a rice substrate rather than obtained from wildcrafted sources, as described below. Cs-4 cordyceps extract has been the subject of clinical studies investigating its potential benefits on a variety of outcomes—from helping optimize a healthy inflammation and immune system response to enhancing insulin sensitivity and glucose metabolism.

CORDYCEPS SINENSIS is a fascinating medicinal fungus, in use since at least 200 BCE as an aphrodisiac and longevity tonic in Traditional Chinese Medicine where its name, *Dongchongxiacao*, translates as “winter-worm summer-grass”. In recent decades, cordyceps has become a popular dietary supplement used to promote energy and endurance, boost immunity, support healthy blood sugar control and address many other conditions, from neoplasms to libido. Cordyceps contains the free radical scavenging, bioactive polysaccharide *cordycepin* plus synergistic compounds which may help support a healthy immune response through mechanisms such as modulation of phagocytosis and increased macrophage activity.

*Cordyceps sinensis* occurs naturally as a parasitic fungus that grows inside of caterpillars who live and feed underground in the high alpine meadows of Tibet and neighboring regions. The life cycle of wild cordyceps begins when its windborne spores fall and settle upon plants and soil. Feeding caterpillars, primarily larvae of the ghost moth, consume the spores either directly by mouth or through respiratory pores on their bodies. From either point of entry, cordyceps mycelium competely invade and kill the larva, replacing the host tissue entirely. The dark, cylindrical fruiting body which emerges out of the forehead of the dead insect, growing to a length of 5 to 15 centimeters, is the cordyceps mushroom. Whether it develops underground in a caterpillar host or is cultured in a modern laboratory on vegetable medium (like the Cs-4 extract in **Cordyceps Select™**), studies suggest both forms of cordyceps offer equal effectiveness, functioning via multiple mechanisms of action for use in numerous applications.

Cordyceps has been suggested to adaptogenically support both the innate and adaptive immune response by influencing immune cells such as T-lymphocytes, B-lymphocytes, natural killer cells and macrophages. In vitro research with Cs-4 cordyceps extract on human monocyte-derived dendritic cells showed that it helps to inhibit the proliferation of CD4+ T cells, regulate cytokine secre-

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This product is not intended to diagnose, treat, cure or prevent any disease.

tions of T-helper cells, and prevent lymphocyte infiltration into tissues. Due to its ability to inhibit an overactive immune response in conjunction with its anti-inflammatory activity, cordyceps has been suggested to offer support for people dealing with issues of autoimmune dysregulation. It also may function as a beneficial immunosuppressive following organ transplant. Conversely, cordyceps may help to boost intestinal immune activity by promoting healthy gut-associated lymphoid tissue (GALT) function. In animal research, administration of a cultured cordyceps mycelia extract for 7 days stimulated activation of GALT macrophages and Peyer's patch cells—lymphatic tissue housed in the ileum which prevents the growth of pathogenic bacteria. Cordyceps also was shown in this study to help increase levels of IL-6, an inflammation-modulating cytokine.

Researched metabolic benefits of Cs-4 mycelia extract include helping to improve glucose metabolism by enhancing insulin sensitivity, and helping to lower basal blood glucose and plasma insulin. A study in which adult rats were given Cs-4 cordyceps daily for 17 days showed that fasting blood glucose was significantly reduced, while glucose tolerance was significantly improved for up to two hours following a meal. In a diabetic mouse model, cultured cordyceps extract was shown to protect pancreatic beta cells against oxidative stress, to significantly improve HDL:LDL ratios and to help support healthy body composition.

Strong antioxidant inhibition against superoxide anions and hydroxyl radicals may underly the many reported beneficial effects of cordyceps on healthy aging, metabolism, and modulation of inflammation and immune responses. Cultured cordyceps has been shown to exhibit direct antioxidant activity against lipid-peroxidation and protein-peroxidation in vitro, while cordycepin alone has been studied for its ability to increase SOD and glutathione peroxidase activity. Other studies have demonstrated that cordecepin can induce tumor apoptosis by mechanisms such as autophagic modulation and angiogenesis inhibition. Numerous studies have found that cordycepin is able to protect a wide variety of cells throughout the body—e.g. brain, bone, kidney, skin, prostate and male reproductive cells—through its potent antioxidant activity. Most human research on Cs-4 has been conducted in China where, as of 1998, the extract had been studied in more than 2,000 patients. No reports of adverse events are noted in the medical literature, suggesting an extremely high safety profile and efficacy potential for Cordyceps Select™.

## REFERENCES

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