CORDYCEPS: THE ANTI-AGING SUPERFOOD

Cordyceps is a blade shaped mushroom whose natural home was the remote meadows of the Tibetan Himalayas. It infests the caterpillar, “Hepialus armoricanus” ,and grows slowly inside the host and eventually kills the caterpillar. Fruiting portions of the cordyceps caterpillar sprouts from the caterpillar’s head and grows up through the ground to reach the surface. The cordyceps was coveted by the Chinese Emperors for centuries for the cordycep’s health and longevity benefits. This phenomenon only took place in a five day period between winter and spring at 20,000 feet altitude.

The biological effects of cordyceps are profound and extremely beneficial. Cordyceps has been called by many “The most effective anti-aging compound known to man”. It contains proteins, peptides, all the essential amino acids, polamines, saccarides, and sugar derivatives that stimulate macrophage formation and promote lymphocytic transformation (white blood cells), and sterols. Cordyceps contains vitamins B1, B2, B12, E, and K and minerals K, Na, Ca, Cu, Mn, Zn, Pi, SE, Al, S, Ni, Sr, Ti, Cr, Ga, and V.

Research in the 1980’s by a Dr. Shu demonstrated over a 55% increase in liver ATP production, after being given cordyceps. ATP is the cellular energy generated by the mitochondria. Dr. Lou et al.1986 evaluated mice 10 minutes after being injected with cordyceps, the mice studies demonstrated a 49% reduced oxygen consumption, which means the mice were utilizing oxygen 51% more efficiently than before injection, and the mice injected with cordyceps lived 300% longer than the untreated mice! Drs Wang and Zhou -1987 studied rats given “claw inflammation”. Within 30 minutes of injection of the cordyceps, a marked improvement in the inflammation was noted.

Millions of people in China have used cordyceps beneficially for many conditions oer the last 2,000 years. What can cordyceps do? Cordyceps has been found to be helpful for the following: respiratory systems, endocrine systems, circulatory system, kidneys, pancreas, liver, asthma, senility, inflammation, fibromyalgia, sexual dysfunction, elevated blood sugars, elevated cholesterol, hypothyroidism, chronic bronchitis, chronic hepatitis B, tinnitus, osteoporosis, diabetes, cognitive/concentration problem, arrhythmias, arthritis, muscular disorders, nerve disorders, menopause problems, and pain.

Patient and laboratory studies show cordyceps inhibit cancer, promotes greater endurance, displays anti-fatigue effects, reduces and reverses senility, helps guard against stroke, provides protection against heart related problems, reduces or eliminates depression, increases energy, improves blood viscosity by 25% within hours after injection, balances and stabilizes hypothalamic-pituitary-adrenocorticol axis, provides patient with benefits of a younger, more

normal functioning hormonal system, results in the reduction or elimination of auto-immune disorders. Numerous animal and in vitro studies have shown cordyceps extracts are potent immunopotentiators. A study of rats demonstrated 36% increases improvement in immune response after 25 days of oral therapy. A water extract of cultivated cordyceps senensis 100ug/ml was to be dose dependent on reversing rodent kidney cell cancer. A 1994 study demonstrated the positive effects on the liver by cordyceps. 33 chronic hepatitis B patients were treated with cordyceps senensis. The cordyceps improved liver function, promoted negative transfer HBs Ag, markedly raise plasma albumin, resisted high gamma globulin, and adjusted the body ammonia competence.

Cordyceps and advanced age. Intravenous injection of coryceps senesis significantly lowered the mean arterial pressure in a dose dependent manner. The cordyceps induced vaso-relaxation mediated by the epithelium of the blood vessel possibly by stimulating the release of nitric oxide and endolthelium-dermal hyperpolarization factor. The study revealed a constituent that worked on directly relaxing the vascular beds.

Cordyceps and Lupus. Cordyceps seesis appears to have an immunomodulating effects and was found to be effective improving survival of lupus mice. An isolated compound (H1-A) from the cordyceps senesis was found to inhibit auto-immune program in lupus mice. The treated group had a reduction in lymphadenopathy, delayed onset of proteinuria, and improvement in kidney function. The new cordyceps senesis compound (H1-A) may be potentially useful for treating systemic lupus erythematous in human patients. Water extracts from the cordyceps was found effective in accelerating the formation of Kuppfer cells in the liver, which are involved in anti-metastatic action.

Cordyceps senesis exhibits very broad biological and pharmacological actions in hepatic, renal, cardiovascular, immunological systems, and strong anti-cancer activity. It appears that codyceps senesis could be used as adjunctive therapy for immune function disturbances, cancer, and renal failure. Numerous studies show the main activities of cordyceps senesis to be oxygen-free radical scavenger, antienscene (disrupts the communication between cancer cells), endocrine, hypolipidenic (reduces cholesterol and triglycerides),anti-atherosclerotic, and sexual function restorative.

Cordyceps and the Elderly. There is much evidence that shows during aging considerable accumulation of excess oxygen free radicals occurs resulting in oxidative damage to cells and their intercellular organelles, producing age and illness associated damage to energy-producing mitochondria. In two open label clinical trials of the elderly, a marked increase in S. O.D.(super oxide dismutase, one of the most powerful anti-oxidants there is), and red blood cells, which correlated with remarkable clinical improvement. In placebo-controlled clinical trials, cordyceps was administered orally to the elderly with asthenia (weakness), the majority

showed subjective improvement with concomitant significant increase in red blood cell function and S.O.D. activity. Patients receiving cordyceps had marked improvement compared to those patients receiving placebo. In another study, elderly patients with chronic pulmonary disease showed marked improvement compared in coughing phlegm, appetite, vitality, and pulmonary symptoms after being treated with cordyceps. Wang. 1995.

Cordyceps and Renal Failure. Patients with chronic renal dysfunction treated wit cordyceps senesis for one month demonstrated significant increase in total S.O.D. activity vs. pre-treatment levels. Lipoperoxide (a free radical that oxides lipids, fats) concentrations significantly decreased. The findings suggested that cordyceps senesis enhances the body's ability to scavenge oxygen-free radicals in many different disease conditions. In 30 patients with chronic renal failure, treatment with cordyceps significantly improved renal functions. SCr was significantly reduced. BUN was significantly reduced. There was dramatic improvement in anemia. Both the hemoglobin and red blood cells increased significantly and the transformation rates of the lymphocytes increased significantly. Cheng et al. 1986. After one month of cordyceps senesis treatment there was a 15% decrease in average arterial blood pressure observed, urinary protein decreased dramatically, and increase in super oxide dismutase (SOD) was demonstrated. Jiang and Gao. 1995.

Cordyceps and Impotency. Many animal studies demonstrated that cordyceps induced a sex hormone effect. Wan. et al. 1988. In a human clinical trial of 189 patients who reported decreased sex drive, 50% of the subjects reported improvement after cordyceps senesis treatment. Wan. et al. 1988. Separate clinical trials led to improvement in 64.3% of the 28 male patients with impotency. In a different open-label trial involving 22 male patients with impotence, more than 1/3 were capable of sexual intercourse, and 1/2 experienced clinical improvement to some extent. Guo. 1986.

Cordyceps and High Cholesterol and Triglycerides. Clinicians in China have recommended cordyceps senesis for the treatment of hyperlipidemia. Studies have suggested that natural cordyceps and its fermentation products can regulate the metabolism of blood lipids, control hyperlipidemia (high cholesterol and triglycerides), and act against the formation of atherosclerosis. Zang ZJ. Jiang Medical College The Second Affiliate Hospital, unpublished report. In a double–blind placebo-controlled clinical trial of 273 patients with hyperlipidemia, a significant reduction in triglycerides was noted in the controls within 30 days. After two months of treatment, significant reduction in total cholesterol was found in the controls, and significant increase in helpful HDL-C was found as well. Shao. et al. 1990. In another study, over half of the patients demonstrated greater than 10 % decrease in total cholesterol, greater than 20 % decrease in triglycerides, and 76% of the patients had greater than 10% increase in HDL-C. Quin. et al. 1995. A clinical study consisting of 20 patients with chronic coronary heart disease

demonstrated a significant reduction of both total cholesterol and triglycerides after cordyceps senesis treatment. The (BETA) lipoprotein was also significantly decreased. An increase in HDL-C was also noted as well. Che and Lin. 1996.

Cordyceps and Respiratory Disease. Several studies have demonstrated improvement in clinical symptoms of respiratory disease after the administration of cordyceps-containing medication. The vast majority of patients with various respiratory diseases (eg. Chronic bronchitis, bronchial asthma, cor pulmonale) reported significant clinical improvement after cordyceps treatment. Han. 1995. Cordyceps treatment of patients suffering from chronic bronchitis and bronchitis asthmaresulted in a very high rate of clinical improvement. Zheng and Deng. 1995. Yeng. Et al. 1985. Cordyceps has been used in conjunction with other drugs to treat patients suffering with cor pulmonale (acute or recurring acutely with first-degree to third-degree heart, lung dysfunction). Addition of cordyceps to basic treatments of oxygen inhalation and antibiotics resulted in a highly improved overall rate of therapeutic benefit. Lei and Wey. 1995.

Cordyceps and the Cardiovascular System. Treatment of arrhythmias with cordyceps and its fermentation products have been reported to have a rate of efficacy ranging from 75% to 88%.Tang and Jiang 1999. Li et al. 1985; Liu et al. 1990; Xu and Zheng, 1994. Yan. Et al. 1992.

In conclusion, Cordyceps demonstrates broad based protection for many systems and organs in the body. Marked benefits are seen in the cardiovascular system, respiratory system, immune system, liver, kidney, and is a powerful anti-cancer food. Cordyceps is a food I take every day as part of my own personal regimen to keep my body functioning optimumly. For more information contact Kelly Miller, DC, FASA, NMD, Miller Clinic for Optimum Health, 11804A North 56th Street, Temple Terrace, Florida 33617, 813-774-3744, www.drkellymiller.com.