

Convalesce-S

VA-010

Maintains GI tract health and promotes convalescence from major medical treatments

Key Points:

- Highly purified vegetable source L-glutamine – one of the most important amino acid for body tissue repair, convalescence from illness or medical treatments, and gastrointestinal health and functioning.
- Potent antioxidants that work synergistically to strengthen the immune system and reduce oxidative stress.

Indication:

For people suffering from diarrhea, short bowel syndrome, Crohn’s disease and other damages to the GI tract caused by various diseases and conditions.

For people with critical illness and/or undergoing recovery.

For people undergoing major medical treatments such as protease-inhibitor (PI) treatment for HIV/AIDS or cancer treatment.

Description:

Convalesce-S contains highly purified L-glutamine combined with a group of potent antioxidants to provide nutritional support, strengthen the immune system and reduce oxidative stress. Convalesce-S is used to promote bowel health and function while also managing symptoms associated with bowel inflammation. It contributes to the integrity of the GI tract, reducing the occurrence of diarrhea, and increases the ability of the gastrointestinal tract to absorb nutrients.

Convalesce-S is also beneficial for people recovering from illness, injury or major medical treatments by replenishing the body’s supply of glutamine and antioxidants which would otherwise

Quantity: 315 g | Dosage Form: Powder

Ingredients (per 15 gram serving):

L-Glutamine	10 g
Vitamin C (as calcium ascorbate)	300 mg
Vitamin E (as d-alpha-tocopheryl acetate)	100 IU
(equivalent to 67 mg vitamin E acetate)	
Selenium (from <i>Saccharomyces cerevisiae</i>)	70 mcg
Natural Mixed Carotenoids (Caromin [®]) (as vitamin A equivalence 3500 IU)	3 mg
Standardized to contain:	
Alpha-carotene	1 mg
Beta-carotene	2 mg
Gamma-carotene	10 mcg
Lycopene	10 mcg

Non-Medicinal Ingredients: Maltodextrin

Suggested Use:

Adults –Start with one serving (or 1.5 tablespoons, equal to 15 g) a day, gradually increase dosage up to 3 servings a day, or as directed by a health care practitioner.

Direction of Use:

Mix one serving, with 1 cup of cold liquid or semi-solid food and stir briskly, and then consume immediately after mixing.

Vegetarian formulation.

quickly become scarce as they are utilized to repair damaged tissues.

L-glutamine

Glutamine is a conditionally essential amino acid that is the primary source of energy for the epithelial cells, especially those of the small intestine and colon. It also helps to build healthy muscle tissue and support immune function during periods of metabolic stress.

During major medical treatments such as surgery, chemotherapy or radiation-therapy, or protease-inhibitor treatment for HIV/AIDS,^{1,2} glutamine becomes especially scarce in the body it is used up for the healing and repair of damaged cells.

In patients with cancer, glutamine storage depletes because tumor cells are major glutamine consumers and compete with the host for circulating glutamine.³ Furthermore, chemotherapy is associated with inducing significant worsening of intestinal absorption and



intestinal permeability,⁴ resulting in subsequent intestinal mucosal damage. A clinical trial has shown that oral glutamine supplementation attenuates intestinal permeability in patients with esophageal cancer during chemotherapy.⁵

Glutamine can also increase the ability of the gastrointestinal tract to absorb nutrients, which is beneficial for convalescing patients, whose bodies need the nutrients for repair and recovery, and people with short bowel syndrome⁶ and Crohn's disease, a disorder characterized by chronic inflammation in the GI tract.

Vitamin C, Vitamin E, Selenium and Mixed Carotenoids

Under conditions of excessive oxidative stress, such as in the etiology and progression of many diseases, including cancer, cellular antioxidants are depleted and reactive oxygen species can damage cellular components and interfere with critical cellular activities.⁷

Vitamin C, vitamin E, selenium and mixed carotenoids are all excellent antioxidants and are more effective when taken together. Since vitamin E and mixed carotenoids are a fat-soluble antioxidants and vitamin C is a water-soluble antioxidant, together they can quench free radicals throughout the entire body.

Additionally, vitamin C and E work through different mechanisms. Vitamin E is a primary (chain-breaking) antioxidant and vitamin C is a secondary (preventive) antioxidant. When antioxidants with different mechanisms of action are combined, they are often more active than if used alone.⁸ This synergistic ef-

fect is important in normalizing levels of antioxidants. Additionally, vitamin C is also able to restore oxidized vitamin E.

It has been shown that the combination of vitamin E with selenium and beta-carotene may reduce the risk of cancer.⁹ Together, they also boost the immune function of the body by stimulating the production of interferons and antibodies, proliferation of lymphocytes, and the activities of neutrophils and NK cells.

Selenium is also an important antioxidant. Mounting evidence shows that selenium plays a significant role in the ageing process by protecting membrane lipids from oxidizing conditions. In addition, selenium deficient societies and individuals are commonly associated with many chronic degenerative diseases, including cancer. Various studies show an inverse relationship between the plasma selenium concentration with cancer, mortality, and cardiovascular disease.¹⁰

Cautions:

Consult a health care practitioner prior to use in cases of a history of non-melanoma skin cancer. Do not use if pregnant or breastfeeding.

References:

1. Noyer CM, Simon D, Borczuk A, Brandt LJ, Lee MJ, Nehra V. A double-blind placebo-controlled pilot study of glutamine therapy for abnormal intestinal permeability in patients with AIDS. *American Journal of Gastroenterology*. 1998. 93 (6): 972-975.
2. Shabert JK, Winslow C, Lacey JM, Wilmore DW. Glutamine-antioxidant supplementation increases body cell mass in AIDS patients with weight loss: a randomized, double-blind controlled trial. *Nutrition*. 1999. 15 (11-12): 860-864.

3. Souba WW. Glutamine and Cancer. *Annals of Surgery*. 1993. 218 (6): 715-728.

4. Daniele B, Perrone F, Gallo C, Pignata S, De Martino S, De Vivo R, Barletta E, Tambaro R, Abbiati R and D'Agostino L. Oral glutamine in the prevention of fluorouracil induced intestinal toxicity: a double-blind, placebo controlled, randomized trial. *Gut*. 2001. 48: 28-33.

5. Yoshida S, Matsui M, Shirouzu Y, Fujita H, Yamana H and Shirouzu K. Effects of Glutamine Supplementation and Radiochemotherapy on Systemic Immune and Gut Barrier Function in Patients with Advanced Esophageal Cancer. *Annals of Surgery*. 1998. 227 (4): 485-491.

6. Scolapio JS, McGreevy K, Tennyson GS, Burnett OL. Effect of glutamine in short-bowel syndrome. *Clinical Nutrition*. 2001. 20(4): 319-323.

7. Conklin KA. Dietary Antioxidants During cancer Chemotherapy: Impact on Chemotherapeutic Effectiveness and Development of Side Effects. *Nutrition and Cancer*. 2000. 37 (1): 1-18.

8. Neri S, Signorelli SS, torrisi B, Pulvirenti D, Mauceri B, Abate G, Ignaccolo L, Bordonaro F, Cilio D, Calvagno S, and Leotta C. Effects of antioxidant supplementation on post prandial oxidative stress and endothelial dysfunction: a single-blind, 15-day clinical trial in patients with untreated type 2 diabetes, subjects with impaired glucose tolerance, and healthy controls. *Clinical Therapeutics*. 2005; 27 (11): 1764-1773.

9. Blot WJ, Li J-Y, Taylor PR, Guo W, Dawsey S, Wang G-Q, Yang CS, Zheng S-F, Gail M, Li, G-Y, Yu Y, Lie B-q, Tangrea J, Sun Y-h, Liu F, Fraumeni JF Jr., Zhang Y-H and Li B. Nutrition Intervention Trials in Linxian, China: Supplementation with Specific Vitamin/Mineral Combinations, Cancer Incidence, and Disease-Specific Mortality in the General Population. *Journal of the National Cancer Institute*. 1993. 85 (18): 1483-1492.

10. Akbaraly NT, Arnaud J, Hinginer-Favier I, Gourlet V, Roussel AM, and Berr C. Selenium and mortality in the elderly: results from the EVA study. *General Clinical Chemistry*. 2005; 51: 2117-2123.

The information in this guide is for use by health care practitioners as a reference only.