

# Comprehensive Protein Powder



Fully  
Functional  
Health

## Clinical Applications

- Supports Natural Detoxification Mechanisms\*
- Supports Gastrointestinal Health\*
- Supports a Balanced Cytokine Profile\*
- Lactose-Free Vegan Protein\*

**Comprehensive Protein Powder** is a comprehensive, monk-fruit-extract-sweetened, low-allergy-potential dietary supplement designed to support gastrointestinal (GI) function and balanced detoxification. It features Vegan Protein Blend, Fully Functional Health's proprietary amino acid and pea/rice protein blend; Aminogen®, to facilitate protein absorption; phytonutrients; mineral amino acid chelates; and activated B vitamins, including Quatrefolic® and methylcobalamin. In conjunction with a modified elimination diet, Comprehensive Protein Powder addresses GI and hepatic function as well as eicosanoid balance and cytokine metabolism. This formula is suitable for vegans.\*

All Fully Functional Health Formulas Meet or Exceed cGMP Quality Standards

## Discussion

**Comprehensive Protein Powder** is now sweetened with a natural, high-potency sweetener extracted from monk fruit. This generally recognized as safe (GRAS) monk-fruit extract offers a high-quality sweetness and flavor without the bitter aftertaste associated with some natural sweeteners.

### Protein Metabolism

Vegan Protein Blend is Fully Functional Health's proprietary blend of pea protein isolate and rice protein concentrate, L-glutamine, glycine, and taurine. Generation of glutathione and sulfation cofactors—vital for phase II conjugation—requires an array of amino acids. The combination of pea protein and rice protein, containing a complement of amino acids, achieves an amino acid score of 100%. Glutamine, a conditionally essential and versatile amino acid with two nitrogen moieties, is crucial to nitrogen metabolism and helps maintain healthy liver tissue and function.<sup>[1,2]</sup> The amino acid glycine is needed for bile synthesis, phase II detoxification, and glutathione production. Taurine, a derivative of the sulfur-containing amino acid cysteine, is also important for synthesis of bile salts and helps stabilize cell membranes.\*

### Gastrointestinal Support

**Ginger root**, included to support healthy digestion such as the release of bile from the gallbladder, acts at several sites to moderate PGE(2) production and support the normal response to inflammation.<sup>[9]</sup> Fiber (from inulin and flaxseeds) supports production of short-chain fatty acids as well as a healthy intestinal flora. **MeadowPure™**, an organic flaxseed complex, possesses excellent oxidative stability, supports antioxidant activity, and provides lignins, soluble fiber, and omega-3 and omega-6 essential fatty acids.<sup>[4]</sup> **Glutamine** plays a key role in healthy intestinal cell proliferation and gut barrier integrity, immune function, and normal tissue healing.<sup>\*[1,2]</sup>

### Detoxification Support

**Ellagic acid** (from pomegranate extract) prevents over-induction of CYP1A enzymes, works at the gene level to induce synthesis of glutathione-S-transferases and other phase II activities, binds directly to toxins, and protects DNA and hepatocytes.<sup>[5,6]</sup> **Watercress** is a rich source of beta-phenylethyl isothiocyanate (PEITC)—a versatile compound found to inhibit phase I enzymes and induce the phase II enzymes associated with biotransformation and excretion of toxins. Watercress has been found to contain even stronger phase II inducers known as 7-methylsulfinyheptyl and 8-methylsulfinyloctyl isothiocyanates as well.<sup>[7,8]</sup> **Green tea catechins** not only support antioxidant activity but also appear to act as modulators of phase I and phase II detoxification.<sup>[9]</sup> **Choline** is present to support lipid metabolism in the liver and can be converted to betaine, a methyl donor.<sup>\*[10]</sup>

The active, bioavailable form of **B vitamins** (pyridoxal-5'-phosphate (B6), 5-methyltetrahydrofolate (folate), methylcobalamin (B12)) and glycine all support amino acid conjugation and are vital for the detoxification of xenobiotics and xenoestrogens. 5-methyltetrahydrofolate (5-MTHF), methylcobalamin, betaine, and **methylsulfonylmethane (MSM)** are present to support methylation and detoxification. 5-MTHF supports healthy folate nutrition, especially in individuals with variations in folate metabolism. In Comprehensive Protein Powder, 5-MTHF is provided as Quatrefolic® for enhanced stability, solubility, and bioavailability.<sup>\*[11]</sup>

**Preventium®**, a patented form of potassium hydrogen d-glucarate, supports glucuronidation. Sulfation is supported by **MSM** and **sodium sulfate**. Acetylation is supported by **d-calcium pantothenate**, pyridoxal-5'-phosphate, and magnesium. Several minerals in Comprehensive Protein Powder are provided as Albion® mineral chelates and TRAACS® mineral amino acid chelates for enhanced gastrointestinal absorption and bioavailability.<sup>\*[12]</sup>

### Antioxidant Support and Cytokine Balance

**Bioflavonoids, quercetin, rutin, and curcumin** support antioxidant activity, counter free radicals, and support healthy eicosanoid and cytokine metabolism.<sup>[13,14]</sup> Curcumin has a long history of use for its support of a normal, healthy response to inflammation.<sup>[15]</sup> **N-acetylcysteine (NAC)** stimulates glutathione synthesis, enhances glutathione-S-transferase activity, and promotes detoxification.<sup>[16]</sup> **Selenium glycinate** provides support for glutathione metabolism and antioxidant protection.\*

**\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**

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Fully Functional Health  
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Comprehensive Protein Powder



# Creamy Chocolate Sugar- & Stevia-Free<sup>‡</sup>

## Supplement Facts

Serving Size: 2 Scoops (about 57 g)  
Servings Per Container: About 14

Amount Per Serving			%DV	Amount Per Serving			%DV
<b>Calories</b>							
Total Fat	8 g	10%*		Sodium (from ingredients with naturally occurring sodium, sodium sulfate anhydrous, and sodium ascorbate)	580 mg	25%	
Saturated Fat	2 g	10%*		Potassium (from tripotassium citrate and ingredients with naturally occurring potassium)	505 mg	11%	
Total Carbohydrate	13 g	5%*		Stabilized Flaxseed	5.6 g	**	
Dietary Fiber	6 g	21%		Typical Alpha-Linolenic Acid Content	1.28 g	**	
Protein	26 g			Typical Linoleic Acid Content	392 mg	**	
Vitamin A (as natural beta-carotene)	750 mcg	83%		Pomegranate Extract ( <i>Punica granatum</i> )(hull)(40% ellagic acid)	400 mg	**	
Vitamin C (as sodium ascorbate)	250 mg	278%		Betaine Anhydrous (trimethylglycine)	250 mg	**	
Thiamin (as thiamine HCl)	15 mg	1250%		Lemon Bioflavonoid Complex ( <i>Citrus x limon</i> ) (fruit peel)(25% bioflavonoids)	250 mg	**	
Riboflavin (as riboflavin 5'-phosphate sodium)	5 mg	385%		Quercetin (as quercetin dihydrate from <i>Dimorphandra mollis</i> (pod)	250 mg	**	
Niacin (as niacinamide and niacin)	40 mg	250%		Preventium® (potassium D-glucarate)	250 mg	**	
Vitamin B6 (as pyridoxal 5'-phosphate)	5 mg	294%		Rutin (from <i>Sophora japonica</i> )(bud)	200 mg	**	
Folate (as Quatrefolic® (6S)-5-methyltetrahydrofolate acid, glucosamine salt)	200 mcg DFE	50%		BCM-95® Turmeric Extract ( <i>Curcuma longa</i> )(rhizome)(95% total curcuminoids complex, including curcumin, curcuminoids, and volatile oils)(86% curcuminoids)(65% curcumin)	200 mg	**	
Vitamin B12 (as methylcobalamin)	50 mcg	2083%		N-Acetyl-L-Cysteine	150 mg	**	
Biotin	150 mcg	500%		Ginger ( <i>Zingiber officinale</i> )(rhizome)	150 mg	**	
Pantothenic Acid (as d-calcium pantothenate)	35 mg	700%		Methylsulfonylmethane (MSM)	120 mg	**	
Choline (as choline bitartrate)	100 mg	18%		Sodium Sulfate Anhydrous	100 mg	**	
Calcium (as DimaCal® di-calcium malate and ingredients with naturally occurring calcium)	225 mg	17%		Watercress ( <i>Nasturtium officinale</i> )(aerial parts)	100 mg	**	
Iron (naturally occurring)	6 mg	33%		Green Tea Aqueous Extract ( <i>Camellia sinensis</i> )(leaf) (80% polyphenols, 60% catechins, 30% EGCG, 6% caffeine)	82 mg	**	
Iodine (as potassium iodide)	60 mcg	40%					
Magnesium (as Albion® di-magnesium malate)	140 mg	33%					
Zinc (as TRAACS® zinc bisglycinate chelate)	10 mg	91%					
Selenium (as Albion® selenium glycinate complex)	100 mcg	182%					
Manganese (as TRAACS® manganese bisglycinate chelate)	2 mg	87%					
Chromium (as TRAACS® chromium nicotinate glycinate chelate)	60 mcg	171%					
Molybdenum (as TRAACS® molybdenum glycinate chelate)	35 mcg	78%					

**Other Ingredients:** Vegan Protein Blend (Company Name's proprietary blend of pea protein isolate, taurine, glycine, rice protein concentrate, and L-glutamine), cocoa powder, natural flavors (no MSG), sunflower oil, medium-chain triglyceride oil, cellulose gum, xanthan gum, Aminogen® fungal proteases, monk fruit extract, guar gum, and silica.

AMINOGEN® is a registered trademark of Innophos Nutrition, Inc. AMINOGEN® is protected under U.S. patent 5,387,422.

Albion, DimaCal, TRAACS and the Albion Medallion design are registered trademarks of Albion Laboratories, Inc. Malates covered by US patent 6,706,904.

**Quatrefolic®**

Quatrefolic® is a registered trademark of Gnosis S.p.A. Produced under US Patent 7,947,662.

Preventium® is a registered trademark of Applied Food Sciences, LLC. (US patents 4,845,123, 5,364,644, 5,561,160).

BCM-95® is a registered trademark of DolCas Biotech, Ltd. Protected under US patents 7,883,728; 7,736,679; and 7,879,373.

‡This formula is not a low-calorie dietary supplement. Please see the Supplement Facts panel for more details.

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## Directions

Blend, shake, or briskly stir 2 level scoops (57 g) into 10-12 ounces of chilled, pure water (or mix amount for desired thickness) and consume once daily, or use as directed by your healthcare practitioner.

Consult your healthcare practitioner prior to use. Individuals taking medication should discuss potential interactions with their healthcare practitioner. Do not use if tamper seal is damaged.

## Does Not Contain

Wheat, gluten, yeast, soy, animal or dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, or artificial preservatives.

### Typical Amino Acid Profile Per Serving:

Alanine	1,280 mg	Methionine	330 mg
Arginine	2,580 mg	Phenylalanine	1,630 mg
Aspartic Acid	3,400 mg	Proline	1,340 mg
Cysteine	300 mg	Serine	1,570 mg
Glutamic Acid	4,990 mg	Threonine	1,160 mg
Glycine	1,720 mg	Taurine	500 mg
Histidine	740 mg	Tryptophan	300 mg
Isoleucine	1,330 mg	Tyrosine	1,130 mg
Leucine	2,490 mg	Valine	1,490 mg
Lysine	2,120 mg		