

# Opti-GHI Sugar- & Stevia-Free



Available in Vanilla Delight and Chocolate

## Discussion

**Opti-GHI Sugar- & Stevia-Free** 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.

Like XYMOGEN's other Opti-GHI formulas, Opti-GHI Sugar- & Stevia-Free contains macro- and micronutrients, as well as a host of ingredients (some patented or proprietary) that support fatty acid metabolism, gastrointestinal health, and healthy eicosanoid and cytokine metabolism. Activated cofactors support mitochondrial energy production needed for biotransformation and detoxification. This formula's ingredients help moderate phase I detoxification, upregulate and support phase II pathways, and provide antioxidant support as well.

### Protein Metabolism

**VegaPro** is XYMOGEN'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>[3]</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> The flaxseed is extensively milled, which provides a smoother mouthfeel and less grit than earlier versions of OptiCleanse formulas. **Glutamine** plays a key role in healthy intestinal cell proliferation and gut barrier integrity, immune function, and normal tissue healing.<sup>[1,2]</sup>

- Source of antioxidants and protein for the maintenance of good health
- Digestive enzyme to help the body digest and metabolize carbohydrates, fats and proteins
- Helps prevent niacin, biotin, chromium, pantothenic acid, riboflavin, selenium, thiamine, vitamin B6, vitamin B12 and vitamin C deficiencies
- Supports wound healing, connective tissue formation and red blood cell formation
- Supports the development and maintenance of bones, cartilage, teeth, gums
- Provides support for healthy glucose metabolism and liver function
- Helps maintain healthy skin, immune and thyroid gland function
- Source of vitamin A to help maintain good health, eyesight, skin, membranes and immune function
- Source of vitamin A to support the development and maintenance of bones, teeth and night vision
- Source of amino acids involved in muscle protein synthesis
- Assists in the building of lean muscle mass when combined with regular resistance, training and a healthy balanced diet

### 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 Opti-GHI, 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 Opti-GHI 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-acetyl-cysteine (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.

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## Opti-GHI Sugar- & Stevia-Free Vanilla Delight Supplement Facts

Servings Per Container: About 28

### Medicinal Ingredients (per scoop)

Betaine .....	125 mg
Choline (choline bitartrate).....	50 mg
Quercetin (Quercetin dihydrate).....	125 mg
Rutin .....	100 mg
Niacinamide .....	15 mg
Biotin .....	75 mcg
Calcium (DimaCal® dicalcium malate).....	100 mg
Green tea extract ( <i>Camellia sinensis</i> , Leaf - 1.024:1 42.0 mg).....	41 mg (2.46 mg Caffeine, 30% Epigallocatechin 3-gallate, 60% Catechins 24.6 mg Catechins, 6% Caffeine, 12.3 mg Epigallocatechin 3-gallate)
Chromium (as TRAACS® chromium nicotinate glycinate chelate).....	30 mcg
Citrus bioflavonoids .....	31.3 mg
Lemon ( <i>Citrus limon</i> , Fruit peel).....	.90 mg
Pantothenic acid (Calcium-d-pantothenate).....	17.5 mg
Folate ((Quatrefolic® (6S)-5-Methyltetrahydrofolic acid, glucosamine salt).....	100 mcg
Aminogen® Protease (Fungal protease from <i>Aspergillus flavus</i> var. <i>oryzae</i> and <i>Aspergillus niger</i> ).....	150 mg (7500 FCC HUT)
Iodine (Potassium iodide).....	30 mcg
Vitamin C (Sodium ascorbate) .....	125 mg
L-Glutamine .....	.87.5 mg
Flaxseed ( <i>Linum usitatissimum</i> , seed) .....	2.8 g
Magnesium (Albion® di-magnesium malate) .....	.70 mg
Manganese (TRAACS® manganese bisglycinate chelate).....	1 mg
MSM (Methylsulfonylmethane).....	.60 mg
Molybdenum (TRAACS® molybdenum glycinate chelate) .....	17.5 mcg
N-Acetyl-L-cysteine .....	.75 mg
Niacin .....	.5 mg
Pea Protein .....	.12 g
Preventium® Potassium hydrogen D-glucarate .....	125 mg
Riboflavin (Riboflavin 5'-phosphate sodium).....	2.5 mg
Selenium (Albion® selenium glycinate complex) .....	.50 mcg
Thiamine (Thiamine hydrochloride) .....	.7.5 mg
Vitamin B12 (methylcobalamin).....	.25 mcg
Vitamin B6 (Pyridoxal 5-phosphate) .....	.2.5 mg
Zinc (TRAACS® zinc bisglycinate chelate) .....	.5 mg
Ginger ( <i>Zingiber officinale</i> , Rhizome) .....	.75 mg
beta-Carotene .....	750 mcg

### Non-Medicinal Ingredients

Natural flavors, sunflower oil, medium-chain triglycerides, potassium citrate monohydrate, taurine, glycine, cellulose gum, xanthan gum, Punica granatum fruit extract, rice protein concentrate, BCM-95® curcumin, monk fruit extract, guar gum, sodium sulfate, silicon dioxide.

### Recommended Dose

**Adults:** Take two scoops once a day. Mix two scoops with 250-350 mL of water or other beverage immediately before consumption. Take once daily with food and two hours before or after taking other medications. Store in a light-resistant container. Consult a healthcare practitioner for use beyond six weeks.

Consult a healthcare practitioner prior to use if you are pregnant or breastfeeding, if you have diabetes or difficulty swallowing, if you have an iron deficiency, kidney stones or kidney disease, gallstones or a bile duct obstruction, if you have stomach ulcers or excess stomach acid, if you have a liver disorder or liver disease. Consult a healthcare practitioner prior to use if you have a gastrointestinal lesion/ulcer, are taking an anticoagulant, a blood thinner or an anti-inflammatory or if you are having surgery. Consult a healthcare practitioner immediately if you experience chest pain, vomiting, or difficulty swallowing or breathing after taking this product. Consult a healthcare practitioner prior to use if you are experiencing a sudden change in bowel habits that has persisted for more than two weeks, have undiagnosed rectal bleeding or have failed to defecate following the use of a laxative product. Consult a healthcare practitioner prior to use if you have symptoms such as abdominal pain, nausea, vomiting, or fever (as these could be signs of abnormal constrictions of the gastrointestinal tract, disease of the oesophagus and/or the superior opening of the stomach (cardia), potential or existing intestinal blockage or paralysis of the intestine, megacolon, faecal impaction, inflamed bowel or appendicitis). Consult a healthcare practitioner prior to use if you are taking medications which may inhibit peristaltic movement (i.e., opioids, loperamide). If you are taking prescription medication, consult a healthcare practitioner prior to use as citrus bioflavonoids may alter the effectiveness of these medications. If you are taking antibiotics and/or nitroglycerin, do not use this product. Hypersensitivity/allergy has been known to occur; in which case, discontinue use. Some people may experience mild and temporary gastrointestinal bloating, gas, constipation or indigestion.

Stop use and consult a healthcare practitioner if you develop symptoms of liver trouble such as yellowing of the skin/eyes (jaundice), stomach pain, dark urine, sweating, nausea, unusual tiredness and/or loss of appetite. Rare, unpredictable cases of liver injury associated with green tea extract-containing products have been reported.

**Storage:** Keep tightly closed in a cool, dry place out of reach of children.

### Nutritional Information

	Amount per 1 Scoop
Calories .....	110
Total Fat .....	4 g
Saturated Fat 1 g	
Sodium 280 mg	
Potassium 230 mg	
Total Carbohydrate .....	5 g
Dietary Fiber 2 g	
Sugars 0 g	
Protein .....	13 g

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Additional references available upon request

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