



▼ INGREDIENTS

SUPPLEMENT FACTS		
Serving Size: 2 capsules; Servings per container: 30		
Amount Per Serving		% Daily Value
Vitamin B1 (Thiamine Mononitrate) 5 mg		333%
Vitamin B2 (Riboflavin 5-Phosphate) 5 mg		1471%
Vitamin B3 (Nicotinamide) 2 mg		10%
Vitamin B6 (Pyridoxal 5-Phosphate) 25 mg		500%
Vitamin B12 (Methylcobalamin) 500 mcg		25%
Vitamin C (Ascorbic Acid) 10 mg		20%
Vitamin B9 Calcium Folate-MTHF 500 mcg		125%
Vitamin E (D-Alpha-Tocopherol) 10 mg		20%
Vitamin B12 (Hydroxycobalamin) 500 mcg		8333%
Calcium (Malate) 250 mg		4%
Calcium (Citrate) 105 mg		10%
Methylcoburn (Methyl) 200 mcg		267%
Zinc (Chelated L-Alanine) 3 mg		23%
Thiosulfate Redox Proprietary Blend 775 mg		
Trimethylglycine Betaine Anhydrous		
Green Tea (Polyphenols)		
Green Tea Extract (Catechins/EGCG)		
Resveratrol		
N-Acetyl-L-Cysteine		
Taurine		
Manifanidine		
Choline Bitartrate		

Other Ingredients: Cellulose, Silica, Vegetable Stearate

▼ **DOSAGE**

- 1-2 capsules per day, or as directed.

▼ PACKAGING

- Capsules: 60 capsules/eco-bottle

▼ PERSPECTIVE

All homocysteine products have Vitamin B₆ and some supportive B vitamins such as Methyl B₁₂, Riboflavin, and the amino acid trimethylglycine. Clinicians know that such formulas help some 70% of their patients with the homocysteine risk factors. These risk factors have a dramatic impact on our health, affecting systems like methylation, hormones, stress and anxiety, immune function and cardiovascular performance. Here is a supplement with all the comprehensive homocysteine nutrients, PLUS specific nutrients and herbalomic™ ingredients for Homocysteine-Thiolactone, a toxin that attacks many types of proteins, especially in the blood and brain. Homocysteine TLR is the next generation of natural support for the body's innate homocysteine/methylation processes.

▼ LIFESTYLE



#845 HOMOCYSTEINE TLR (Thiolactone Redux Support)

One formula—comprehensive homocysteine support, PLUS homocysteine-thiolactone redux support, working together for improved clinical outcomes. Elevated homocysteine and homocysteine-thiolactone are dangerous metabolic chemicals that bind with tissues and cause permanent damage, especially impacting cardiovascular functions. By increasing the nutrients that the body requires and addresses via the PON1 enzyme's ability to decrease oxidative stress, hydrogen peroxide, and organophosphate pesticides and glyphosate, this nutritional approach is a cornerstone to longevity.

▼ INDICATIONS

- **Homocysteine Cycle Support** - Nutrient support for homocysteine metabolic processes.
- **Homocysteine-Thiolactone** metabolic deconstruction support.
- **PON1 Gene Risk Allele** - Supports PON1 enzyme to process thiolactone.
- **B12 Supplement** - Three types of B12 for complete homocysteine support.
- **Methylation Support** - Support for risk alleles: MTHFR, MTRR, BHMT, MTR, CBS, and CTH.
- **Patients on Rx Drugs** that interfere with folate absorption.

▼ KEY COMPONENTS

Vitamin Complexes & Activated Vitamin Complexes:

- **B₁ – Thiamine Mononitrate & Benfotiamine** – Part of the B-Complex support.
- **B₂ – Riboflavin 5-Phosphate** – Required to convert homocysteine to glutathione.
- **B₃ – Niacinamide** – Part of the B-Complex synergistic support.
- **B₅ – Pantothenic Acid** – Part of the B-Complex synergistic support.
- **B₆ – Pyridoxal 5-Phosphate** – The bioactive form of B6 directly required for proper homocysteine metabolic processes.
- **B₇ – Biotin** – Part of the B-Complex support.
- **B₈ – Inositol** – Part of the B-Complex support, a phospholipid for cell membranes.
- **B₉ – 5-Methyltetrahydrofolate & Calcium Folate** – Two important Folate forms critically important for proper homocysteine regulation, along with B₆ and B₁₂.
- **B₁₀ – Para-Aminobenzoic Acid** – B-Complex support.
- **B₁₂ – Methylcobalamin, Adenosylcobalamin, & Hydroxocobalamin** – Homocysteine metabolic pathways use three forms of B₁₂. People with COMT, MUT, or MMAAB genetic variants do not have as successful of results when they only take methylcobalamin—the most common B₁₂ in homocysteine supplements.

Mineral/Trace-Mineral Synergists

- **Zinc (Chelate/Lipoate)** – Required for homocysteine and glutathione metabolic processes.
 - **Di-Magnesium Malate** – Required for homocysteine and glutathione metabolic processes.
 - **Molybdenum** – Important to liver sulfation processes.
- Excessive homocysteine challenges the CBS (Cystathionine Beta Synthase) and can cause unwanted increased sulfites.

Nutriments

- **Taurine** – Amino acid support for the transsulfuration pathways. Helps deplete homocysteine levels by promoting the TS pathway in the formation of cysteine.
- **N-Acetyl L-Cysteine** – Helps decrease plasma homocysteine levels. Particularly helpful regarding dangerous endogenous thiols.
- **Trimethylglycine Betaine Anhydrous** – A methyl donor required to re-methylate homocysteine via pathways separate from B-vitamins.

▼ KEY COMPONENTS (continued)

- **Choline Bitartrate** – Supports cell membranes.
- **Quercetin** – Increases PON1 gene expression and the enzyme that detoxifies homocysteine-thiolactone. It helps the body protect itself from LDL-cholesterol oxidation. Supports cardiovascular and brain health.
- **Resveratrol** – The famed antioxidant from red grapes and wine. It's shown to increase PON1 gene expression in human liver and kidney cells. Resveratrol is known to be protective for the heart, cardiovascular system and brain.

Herbalomic Botanical Agents

- **Green Tea Extract (Catechins/EGCG)** – EGCG from green tea, improves PON1's ability to decrease homocysteine, and increase PON1 levels. Catechins have demonstrated their ability to attenuate the reduction of the liver CBS-gene activity, restore the decreased PON1 gene expression, and support the metabolic processes induced by elevated homocysteine levels.
- **Green Coffee Bean (Polyphenolics)** – Often touted as a metabolic booster for weight loss, one scientific study revealed that chlorogenic acid significantly helps lower homocysteine.

▼ CONTRAINDICATIONS

None when taken as directed.

▼ CLINICIAN CONSENSUS

- **Hyperhomocysteinemia and/or PON1 Risk Allele:**
Take 1-2 capsules of #845. Homocysteine TLR with food, or as directed.

▼ BACKGROUND

Based on recent scientific studies, Dr. Shayne Morris, a nutri-metabolomic expert, designed this support for cellular methylation processes and the cellular metabolic functions. He teamed up with Dr. Christy Sutton and Dr. Jack Tips to create a new, more effective homocysteine support formula. Thanks to Dr. Sutton's pioneering insights on the genetic predispositions that affect homocysteine, a breakthrough occurred with recent studies on the PON1 Enzyme Gene. Coupled with herbalomic research that demonstrates efficacious botanical-nutrient influence over cellular epigenetic expressions of health, Dr. Morris combined the nutrients and herbal "activation" components into a synergistic matrix that helps the cells' organelles function properly and meet the challenges of daily wear and tear.

▼ SYNERGISTIC CONSIDERATIONS

- **#850** MORS (Methylation Donor)
- **#810** ENRG (Quantum Cellular ATP Energy)
- **#820** EPIC (Metabolic NO/ONOO Micro Antioxidant)
- **#840** EVENTA (Cellular Enzyme Corrector)
- **#880/#881/#882/#883** VISTA 1 & 2 (Membrane Regeneration)
- **#184** ROX (Super Antioxidant w/Resveratrol)
- **#128** CVO^R (Cardiovascular Oil)
- **#131** FBR (Fibers For Intestinal Health)
- **#433** GCEL (Intracellular Glutathione)
- **#138** MBC (Microbiome Colonizer)
- **#865** RPM OMEGA (Pro Resolvin, Protectin, Maresin)

▼ INFORMATION RESOURCES

- www.systemicformulas.com

Quality Control: All herbal ingredients are tested before use for: microbes, heavy metals/contaminants, and assurance of correct genus/species

Disclaimer: This information is exclusively a communication from clinicians to other clinicians. It was created exclusive of any company's directive. **This is not for public dissemination.** All recipients must be practicing clinicians. Photocopying is strictly prohibited. This information does not propose a method for diagnosing or treating any disease whatsoever - a process exclusive to licensed medical doctors. This information is anecdotal, designed for whole body nutrition to support the body in caring for itself. It features insights from clinician's practices to support proper and ethical usage of nutritional ingredients. The statements have not been evaluated by any regulatory agency and serve only as guidelines for individual clinician decisions.

SYSTEMIC FORMULAS

800-445-4647

10/2019