

Available in 120 vegetarian capsules

- Helps to support liver function.
- Provides a source of antioxidants.

Discussion

The term “Dual-Phase Optimizers” refers to those substances with the ability to simultaneously influence and “optimize” the activity of certain phase I and phase II detoxification enzyme systems. Optimizers generally upregulate or induce phase II enzymes; however, optimizing phase I enzymes may mean downregulating them, without totally inhibiting them, when they are too high. Dual-phase optimizers may further balance the phases of detoxification by supporting antioxidant defense systems and binding free radicals formed between the two phases.*

Examples of dual-phase optimizers in MedCaps DPO™ include ellagic acid from pomegranate, catechins from green tea extract, and glucosinolates from watercress powder. Ellagic acid induces phase II enzymes at the gene level and ensures these are not over-induced by modulation of CYP1A (cytochrome P450 1A) activities.^[1,2] In addition, ellagic acid can bind directly to DNA to protect it and can also bind directly to some toxic substances to promote their excretion. The catechins in green tea support antioxidant activity and may bind directly to toxic substances as well, performing dual functions during detoxification. When toxic substances are encountered, catechins modulate detoxification by limiting phase I enzyme production.^[3] Glucosinolates are precursors to isothiocyanates. Watercress, in particular, is metabolized by gut flora into phenylethyl isothiocyanate (PEITC), which, like the other ingredients above, can selectively inhibit phase I enzymes and induce the activities of phase II enzymes.*^[4]

Liver detoxification is further supported with the inclusion of silymarin (milk thistle seed extract), artichoke leaf extract, and alpha-lipoic acid, all of which are selected for their hepatoprotective properties. These key players also promote glutathione production and assist with antioxidant protection.*^[5-7]

Additional ingredients in this formula are present to support vital phase II detoxification pathways. Key ingredients that support methylation include methylsulfonylmethane (MSM), methylcobalamin (B12), and 5-methyltetrahydrofolate (folate).^[9] 5-methyltetrahydrofolate (5-MTHF) is present as Quatrefolic® (a stable, bioavailable form of folate) to support methylation, energy generation, and phase I and

phase II activity. Calcium D-glucarate has been added to support glucuronidation. Sulfate donors sodium sulfate and N-acetyl-cysteine (NAC) are especially important in cases of heavy-metal burden because they support glutathione production and the sulfation pathway.*^[9-13]

MedCaps DPO is designed to be part of a comprehensive detoxification protocol that includes adequate high-quality protein, carbohydrates, fats, and fiber. The resulting combination provides micronutrients to support the active phases of detoxification and macronutrients to support energy production, amino acid conjugation, and elimination.*

MedCap DPO™

Medicinal Ingredients (per vegetarian capsule)

Vitamin B6 (Pyridoxal-5-phosphate)	12.5 mg
Folate (6S)-5-Methyltetrahydrofolic acid, glucosamine salt)	100 mcg
Vitamin B12 (Methylcobalamin)	50 mcg
Artichoke Aqueous Extract (Cynara scolymus)(leaf)(15:1)	150 mg
Watercress (<i>Nasturtium officinale</i>)(leaf).....	125 mg
Milk Thistle Extract (<i>Silybum marianum</i>) (seed)(80% silymarin).....	62.625 mg
Pomegranate Extract (Punica granatum)(fruit)(40% ellagic acid).....	62.5 mg
DL-alpha-Lipoic acid	50 mg
N-Acetyl-L-Cysteine	50 mg
Green Tea Aqueous Extract (<i>Camellia sinensis</i>)(leaf)(80% polyphenols, 60% catechins, 30% EGCG, 6% caffeine)	46.875 mg
Methylsulfonylmethane (MSM)	25 mg
Calcium D-Glucarate	25 mg

Non-Medicinal Ingredients

Sodium sulfate, HPMC (capsule), stearic acid, magnesium stearate, silica, medium-chain triglycerides, microcrystalline cellulose.

Recommended Dose


Adults: Take 2 capsules twice daily with food, or as directed by your healthcare practitioner.

Consult a healthcare practitioner prior to use if you are pregnant or breastfeeding or have kidney stones, gallstones, diabetes, or iron deficiency. Consult a healthcare practitioner if symptoms persist or worsen. Do not use if you are taking nitroglycerin or antibiotics, or are allergic to plants of the Asteraceae/Compositae/Daisy family or have a bile duct obstruction. If allergy occurs, discontinue use.

If you experience sweating, paleness, chills, headache, dizziness and/or confusion, discontinue use and consult a healthcare practitioner. Stop use 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 and consult a healthcare practitioner. Rare, unpredictable cases of liver injury associated with green tea extract-containing products have been reported.

Do not use if tamper seal is damaged.

Keep out of reach of children. Store in a cool dry place.

 Quatrefolic® is a registered trademark of Gnosis S.p.A. Patents pending.
* Quatrefolic® est une marque déposée de Gnosis S.p.A. Brevet en cours.

MecobalActive™ is a trademark of Ferrer Health Tech.
The active form of B₁₂

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Additional references available upon request

Due to the evolving nature of interactions and contraindications, it is advised that practitioners consult a current database for new information.

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