

# PMS Nutritional Support<sup>\*</sup> with BioResponse DIM<sup>®</sup>

DIM (diindolylmethane) has been shown to help regulate and promote a more efficient metabolism of estrogen, and an optimal ratio of estrogen metabolites.\*

**PMS Nutritional Support** contains **BioResponse DIM<sup>®</sup>**, a unique formulation containing pure diindolylmethane, an indole. Indoles are plant compounds with health promoting properties, and are found in cruciferous vegetables such as broccoli, cabbage, cauliflower and Brussels sprouts.\* The phytochemicals in cruciferous vegetables have been shown to beneficially affect the body's hormonal and detoxification systems, and epidemiological studies support the health benefits of consuming these vegetables.\* DIM is a major active acid-catalyzed derivative of one of the phytochemicals in cruciferous vegetables, indole-3-carbinol (I3C). DIM is thought to be responsible for the health effects of dietary I3C.\* PMS Nutritional Support contains a stable, bioavailable form of DIM, made possible through a proprietary delivery system. The formula is co-solubilized with phosphatidylcholine, and microencapsulated in starch particles.

PMS Nutritional Support is completed with the addition of Vitex standardized extract, bioactive vitamin B6 as pyridoxal-5-phosphate, chromium picolinate, and magnesium aspartate.



#54720  
120 vegetarian capsules

## Key Features

- Promotes healthy reproductive hormonal metabolism and balance\*
- Helps promote the conversion of estrogen to its beneficial, protective 2-hydroxyestrone metabolites and reduces production of genotoxic 16 $\alpha$ -hydroxyestrone\*
- Stimulates detoxification enzyme systems\*



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Research over the past thirty years has determined that healthy estrogen metabolism is closely linked to several healthy parameters in men and women, particularly some involving the breast, uterus, prostate and other reproductive tissue.\* Genetics, excess weight, poor diet and other lifestyle factors may result in an imbalance of estrogen metabolites. Xenoestrogenic compounds, such as organochlorine pesticides, can also significantly disrupt healthy estrogen metabolism.

These estrogen disruptors alter estradiol hydroxylation metabolism producing a higher ratio of the genotoxic 16 $\alpha$ -hydroxyestrone (16 $\alpha$ -OHE1) to the safer and weaker estrogenic 2-hydroxyestrone (2-OHE1).\* The genotoxic 16 $\alpha$ -OHE1 can potentially disrupt several normal cellular metabolic processes.\* DIM promotes the conversion of estrogen to its beneficial, protective 2-hydroxyestrone metabolites and reduces production of genotoxic 16 $\alpha$ -OHE1.\* Modulating these aspects of estrogen metabolism, particularly the production of 16 $\alpha$ -OHE1, may contribute to healthy aging.\*

The mechanisms for DIM's health benefits primarily involve the induction of mixed function oxidases and phase II detoxification enzyme systems by the binding and activation of the arylhydrocarbon receptor (AhR).\* Research using human breast cells (MCF-7) has shown that the binding of DIM to the aryl hydrocarbon receptor can result in rapid formation of the nuclear AhR complex and consequent induction of gene expression and synthesis of cytochrome P450 detoxification enzyme (CyP450A1).\* DIM consequently produces increased levels of the protective hydroxylated estrogen 2-OHE1.\* Some have suggested that DIM may also positively affect cellular signaling pathways.\* It is becoming increasingly apparent that DIM may provide an important mechanism for supporting successful aging despite the increasing levels of xenoestrogenic compounds in our modern world.\*



The berries of the **chaste tree** (*Vitex agnus-castus*) have been used for millennia to support women's health.\* Modern clinical studies confirm the potential for chasteberry to significantly support the health of women's reproductive system and healthy moods.\* **Vitamin B6** in the bioactive form of pyridoxal-5-phosphate (P5P) helps promote production of the calming neurotransmitters serotonin and gamma-aminobutyric acid (GABA).\* It combines especially well with **magnesium**, which also supports vasodilation, helps relax muscles, and supports healthy moods.\* **Chromium** supports healthy blood sugar levels and insulin sensitivity.\*

## Supplement Facts

Serving Size 2 Capsules  
Servings Per Container 60

Amount Per Serving	% Daily Value*	
Vitamin B6 (as Pyridoxal-5-Phosphate)	25 mg	1471%
Magnesium (as Magnesium Aspartate)	50 mg	12%
Chromium (as Chromium Picolinate)	50 µg	143%

BioResponse DIM® (A patented Diindolylmethane complex-starch, DIM (25% min.), vitamin E (as tocophersolan), phosphatidylcholine (sunflower), silica)	150 mg	†
Vitex agnus-castus (Berry) Extract (Standardized to 0.5% Agnusides)	75 mg	†

† Daily Value not established. \*Percent Daily Value based on a 2,000 calorie diet.

Other ingredients: Hydroxypropyl methylcellulose, microcrystalline cellulose, L-leucine.

**Suggested Use:** As a dietary supplement, 1 capsule two times daily with a meal, or as directed by a healthcare practitioner.

**Precautions:** Do not use this product if you are pregnant or lactating, or using birth control pills. Harmless changes in urine color may occur. Increased water consumption reverses this side effect.

BioResponse DIM® is a proprietary, enhanced bioavailability complex containing diindolylmethane licensed from BioResponse, L.L.C., Boulder, Colorado.\*

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