HORMONE DETOX

PHARMACIST FORMULATIONS

Clinical Applications

- Supports Detoxification*
- Supports Healthy Estrogen Metabolism*
- May Support a Favorable Estrogen Metabolite Profile*
- Promotes Antioxidant Activity*

*Hormone Detox combines diindolylmethane (DIM) and glucoraphanin to support antioxidant activity, cell-life regulation, and detoxification. Designed for both women and men, this formula promotes healthy estrogen metabolism, including detoxification processes that neutralize harmful estrogen metabolites and xenoestrogens.**

All Pharmacist Formulations Formulas Meet or Exceed cGMP Quality Standards

Discussion

Diindolylmethane (DIM)

Healthy metabolism of exogenous and endogenous estrogens can be pivotal for hormonal balance.[1] Diindolylmethane, specifically 3,3'-diindolylmethane, or DIM, is the stable, bioactive metabolite formed when stomach acid breaks down indole-3-carbinol (I3C), a sulfur-containing glucosinolate present in cruciferous vegetables.[2] In vitro evidence suggests that DIM may stimulate detoxification and antioxidant pathways linked to hormone metabolism and immune activity.*[3]

DIM helps maintain safe estrogen levels by fostering the conversion of potentially harmful estrogen fractions into more favorable metabolites and by promoting the restoration of healthy hormone ratios. In a randomized, controlled pilot study in postmenopausal subjects (N = 23), those given 108 mg of DIM daily for 30 days showed increased hydroxylation of estrogen metabolites.[4] Further, DIM may promote metabolism of estrogen into the favorable and protective 2-hydroxyestrone (2-OHE) metabolite versus production of 4-hydroxyestrone (4-OHE) and 16-alpha-hydroxyestrone (16-alphaOHE) metabolites. Results from a prepublication study evaluating the effect of DIM suggest that it supports a favorable urinary estrogen profile. However, additional research is needed to further elicit the mechanism of action and to support the clinical utility of DIM.*[5]

Glucoraphanin

The effects of DIM are complemented by glucoraphanin, which metabolizes to its active form, sulforaphane (SFN), upon consumption. Glucoraphanin is isolated from Brassica oleracea seeds from vegetables like broccoli, kale, and kohlrabi. Researchers have demonstrated that SFN safely and effectively upregulates the Nrf2 system, activates the antioxidant response element (ARE), enhances the production of important antioxidants, and activates vital phase II detoxification enzymes.*[6-8]

The mechanism of action, pharmacokinetics, pharmacodynamics, and role of SFN in health maintenance have been widely examined in animal, in vitro, and in vivo clinical trials.[9] Mechanistically, SFN stimulates the expression of critical enzymes (via the KEAP1/Nrf2/ARE pathways), which supports antioxidant activity, redox cycling, and phase II detoxification. The activation of transcription factor Nrf2 results in increased output of enzymes (primarily glutathione and superoxide dismutase) that can extend antioxidant activity longer than direct antioxidants, such as vitamins C, E, and beta-carotene. The activation of Nrf2 also regulates the production of detoxification enzymes, including glutathione S-transferase, and downregulates inflammatory signaling factors, such as NF-□B. Additionally, the antioxidant enzymes generated are thought to participate in the recycling and maintenance of vitamins A, C, and E.*[10,11]

In a 3-day study, healthy subjects (N = 21) on a controlled diet were given a single dose of broccoli sprout extract containing 30 or 60 mg of glucoraphanin. Analysis of baseline compared with 24 hours postadministration of glucoraphanin indicated an elevation of phase II enzymes and Nrf2 signaling in various tissues.[12] Other human studies have demonstrated positive effects of glucoraphanin on markers of oxidative stress, inflammatory response,[13,14] and liver function,[15] all contributing to the totality of evidence supporting its role in antioxidant activity, redox cycling, and phase II liver detoxification pathways.*[8]

Hormone Detox uses a dual-action approach to supporting healthy estrogen metabolism and detoxification. First, DIM helps to promote healthy estrogen metabolism, which may contribute to a favorable profile of estrogen metabolites (2-OHE, 4-OHE, and 16-alphaOHE).[4,16] Second, the action of DIM is complemented by glucoraphanin, which protects tissues from oxidative stress and supports the phase II detoxification activity.[6] These actions may be important for the health of estrogen-sensitive tissues, such as those of the breast, uterus, cervix, and prostate.*[2,4,16,1]

***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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HORMONE DETOX

Supplement Facts

Serving Size: 2 Capsules
Servings Per Container: 30

	Amount Per Serving	%Daily Value
DIM (diindolylmethane)	300 mg	**
Glucoraphanin (from broccoli, kale, and/or kohlrabi extract)(*Brassica oleracea*)(seed)	60 mg	**

** Daily Value not established.

Other Ingredients: Capsule (hypromellose and water), microcrystalline cellulose, stearic acid, magnesium stearate, and silica.

Directions

Take 1-2 capsules daily, or use as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication or receiving cancer treatment should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

Formulated To Exclude

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

References

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