

The Doctor's RESEARCH UPDATE

Natural Medicine for Women's Health

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Dr. Zeligs earned a Masters degree in stress-physiology from the University of California, Santa Barbara, completed a fellowship in Molecular Immunology, and received his M.D. from the University of California, Irvine, College of Medicine. Dr. Zeligs is a leading authority on diindolylmethane (DIM). He was awarded a patent for his microencapsulated formulation of absorbable DIM and has numerous issued and pending patents for novel uses of DIM in preventive medicine. As a physician-investigator, he has sponsored clinical trials for HPV, cervical dysplasia, uterine and prostate health. These clinical trials are underway in collaboration with Cornell University, the NYU School of Medicine, Cancer Research UK, Wayne State University, and New York Medical College. The National Cancer Institute, under a clinical trials agreement with Dr. Zeligs, has sponsored additional clinical trials investigating microencapsulated DIM as a natural preventive and therapeutic candidate for cancer.

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Nutritional Support for Healthy Menopause

Women begin their transition into menopause between the ages of 45 and 55. This natural process of aging is first associated with irregular menstruation and symptoms of periodic excess estrogen. Cessation of menstruation and symptoms of falling estrogen follow. Classic menopausal symptoms include hot flashes, mood swings, insomnia, weight gain, and skin changes. These symptoms are accompanied by chronic changes such as loss of bone density, increasing blood cholesterol, and rising heart disease risk.

Previous pharmaceutical solutions to cope with menopause used synthetic and bio-equivalent estrogen; these methods, however, have revealed cancer-related risks. Today, there remains a great need for safe, nutrition-based support for helping women with the menopausal transition. This article describes an innovative solution using an interactive blend of plant isoflavones with the cruciferous indole, diindolylmethane (DIM). This new approach provides a scientific solution for menopausal women to restore hormonal balance and feel better using natural sources for hormonal and metabolic support.

Why Bother?

During menopause, a woman's body undergoes significant changes in hormone levels, hormone metabolism, and body composition. Hormonal imbalance is characterized by reduced estrogen production and unfavorable estrogen metabolism. Residual estrogen production shifts from the ovaries to fat

tissue. This "peripheral" production of estrogen in fat is driven by inflammation and depletes essential DHEA. This shift, and the overall deficit in estrogenic activity, increases the susceptibility to aging-related osteoporosis, cardiovascular disease, high blood pressure, and memory loss. Maintaining a healthy balance of estrogenic activity throughout menopause and normalizing the metabolism of estrogen to protective metabolites can help women cope with the hormonal and inflammatory basis of menopausal problems. By using estrogen modulating plant products, women can experience a more comfortable menopausal transition and maintain a healthier body.

Estrogen Supplementation: The Cancer Scare

Although replacing the declining levels of estrogen and progesterone with synthetic hormones relieves symptoms of menopause, the use of these treatments has declined significantly since the Women's Health Initiative (WHI) trial. This study associated the use of equine estrogens and medroxyprogesterone from Prempro® with increased rates of breast cancer and failure to prevent heart disease (1). The subsequent reaction and discontinuation of all forms of estrogen replacement by many women and health care professionals has created a critical need for natural alternatives to estrogen and progestin use. Furthermore, the WHI study has shown poor estrogen metabolism to be central to estrogen-related cancer risk in menopausal women (2). This means that healthy hormone metabolism has an

essential role in aiding the menopausal process.

DIM and Safe Estrogen Metabolism

The risks associated with estrogen supplementation are not due to estrogen itself, but in how the body metabolizes it. Chronic inflammation associated with obesity, tobacco exposure, and pesticides in foods have all been shown to shift estrogen metabolism to deficient 2-hydroxy and excessive 4-hydroxy and 16-hydroxy estrogen metabolites (3). This unfavorable balance of metabolites has been shown to be carcinogenic and pro-inflammatory. Absorbable DIM, originally isolated from cabbage and broccoli, promotes a more healthy estrogen metabolism. DIM specifically increased production of 2-hydroxy estrogens in two clinical trials (4,5). The 2-hydroxy estrogens and related 2-methoxy estrogens belong to a family of metabolites associated with lower blood pressure (6), healthier joints (7), circulatory health (8), and reduced cancer risk (3).

The use of absorbable microencapsulated DIM in menopausal women has been shown to improve estrogen metabolism and provide uterine protection. Microencapsulation is necessary for adequate absorption. In clinical trials, microencapsulated DIM promoted greater 2-hydroxylation of estrogen in menopausal women (4), as well as showing uterine protective activity (9). Microencapsulated DIM supplements offer a way to access the beneficial effects of estrogenic activity while avoiding the risks from unfavorable estrogen metabolism.

Plant Isoflavones: A Safe Alternative

Plant isoflavones, one of the classes of “phytoestrogens” discovered in food and traditional medicinal plants, are naturally occurring compounds with estrogen-like activity. Isoflavones from soy and other plants are estrogen modulators; they activate similar pathways as hormonal estrogen, but also protect from the uncontrolled estrogenic activity known to promote cancer. Unlike hormone replacement estrogen, the use of isoflavone compounds is not associated with uterine and breast cancer. In fact, Genistein, the primary isoflavone from soy, is now known to inhibit the pathways of uterine cancer development and hinder the growth of leiomyomas (uterine fibroids) (10).

Recent studies of isoflavone use in populations of women have shown that higher levels of circulating Genistein relate to reduced cancer risk in post menopausal women (11). As such, isoflavones are considered a much healthier and safer alternative than estrogen replacement. The safe use of isoflavones in women with a history of breast cancer, however, has not been established. Combining DIM with isoflavones has been shown to have beneficial interactions, which may help further promote breast, uterine, and bone health.

The Other Side of Bone Health

While the use of calcium and vitamin D supplements has become the mainstay of nutritional supplements for maintaining bone health in menopausal women, a recent study showed that calcium and vitamin D supplements were no better than diet alone to promote bone health in menopausal women (12). In contrast, recent clinical studies have confirmed

the usefulness of Genistein, given in addition to calcium and vitamin D, as a successful way to promote bone health in menopausal women. This one-year study showed that 55 mg of Genistein per day helped maintain stronger bones (13). An additional study showed that Genistein, at 55 mg per day (a dose well above typical soy isoflavone supplements), reduced the risk markers for diabetes and heart disease (14).

Other studies of Pueraria Mirifica, another plant source of isoflavone phytoestrogens, have shown these isoflavones to also promote markers of bone health. Supporting the use of Pueraria in menopausal women, clinical studies of Pueraria Mirifica supplements have shown a significant reduction of hot flashes (15). An additional clinical trial showed that Pueraria Mirifica supplements promote vaginal health in menopausal women (16). These, and additional studies, add further support to the traditional use of Pueraria Mirifica as a source of benefit to menopausal women.

Combination Therapy is the Key

Ultimately, menopausal women can benefit greatly from a safe form of estrogenic support in combination with a healthy estrogen metabolism. Supplementation with microencapsulated DIM and concentrated Genistein and Puerarin isoflavones promotes balanced estrogenic activity and metabolism for healthy menopause. This complementary combination provides naturally for the needs of menopausal women. Isoflavones and DIM offer a safer approach to normalizing estrogen without the cancer risk and dangerous side effects from prescription estrogen.

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