

# High-Dose Soy Improves Vasomotor Symptoms

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SAN DIEGO — High doses of soy containing isoflavones were associated with significant improvements in energy, vasomotor symptoms, and psychosocial functioning among postmenopausal women, according to an interim analysis of data from a randomized, placebo-controlled study.

Among the first 35 subjects to complete

a 3-month study, the 18 receiving active soy had a 40% reduction in psychosocial symptoms, a 36% reduction in vasomotor symptoms, and a 30% reduction in physical complaints, compared with those receiving placebo.

The study ultimately will enroll 100 healthy women who have not taken hormone therapy for the 6 months prior to enrollment, Kendall Dupree, M.D., said at the annual meeting of the Endocrine Society.

“At this point, we’re pretty happy about the results. We think that soy may show an improvement in quality of life in women who have postmenopausal symptoms,” said Dr. Dupree, who works in the division of endocrinology and metabolism at Johns Hopkins University in Baltimore.

The primary outcome of the study is to determine whether high doses of a carefully studied formulation of a product containing the isoflavonoids genistein and

daidzein can produce a quantified impact on quality of life in postmenopausal women.

Results were calculated using the Menopause-Specific Quality of Life questionnaire at baseline, 6 weeks, and 3 months.

Within the survey are questions that specifically address physical functioning, including energy and activities of daily life. There also are questions about vasomotor symptoms, including hot flashes and night sweats, as well as questions about psychosocial symptoms, including mood and depression, and sexual functioning.

The mean age of the women who participated in the interim analysis was 55. Despite the improvement in their reported menopausal symptoms, there were no changes noted in their serum sex hormones.

Previous studies of soy and postmenopausal symptoms have been largely unconvincing, with a systematic review

identifying few well-designed trials that show a significant impact on hot flashes or other symptoms (Obstet. Gynecol. 2004;104:824-36).

However, many previous trials have used relatively low doses of phytoestrogens, often 50 mg/day to about 85 mg/day. The dose in this study was 160 mg/day.

The preparation was dehydrated and did not use alcohol extraction during processing, according to Dr. Dupree who also spoke at a press conference at the meeting.

“Alcohol extraction removes the proteins, which in combination with isoflavones seem to be important,” she said.

A commercial product (Revival Soy, manufactured by Physicians Laboratories Inc., of Kernersville, N.C.) was used in the study.

However, study investigators pointed out that they also conducted an independent analysis to ensure that the dosages listed on the label were actually contained in the product.

Physicians Laboratories also helped to fund the study, which was done in conjunction with the National Center for Complementary and Alternative Medicine within the National Institutes of Health.

“I think this is really hot stuff,” said Mary Lee Vance, M.D., who served as moderator of the press conference and who is a professor of endocrinology and metabolism and is associate director of the University of Virginia in Charlottesville.

“Other studies have not shown that soy is very beneficial.”



Brief Summary (See Package Brochure for Full Prescribing Information)

#### Rx only

Plan B® is intended to prevent pregnancy after known or suspected contraceptive failure or unprotected intercourse. Emergency contraceptive pills (like all oral contraceptives) do not protect against infection with HIV (the virus that causes AIDS) and other sexually transmitted diseases.

#### CONTRAINDICATIONS

Progestin-only contraceptive pills (POPs) are used as a routine method of birth control over longer periods of time, and are contraindicated in some conditions. It is not known whether these same conditions apply to the Plan B® regimen consisting of the emergency use of two progestin pills. POPs however, are not recommended for use in the following conditions:

- Known or suspected pregnancy
- Hypersensitivity to any component of the product
- Undiagnosed abnormal genital bleeding

#### WARNINGS

**Plan B® is not recommended for routine use as a contraceptive.**

**Plan B® is not effective in terminating an existing pregnancy.**

#### Effects on Menses

Menstrual bleeding patterns are often irregular among women using progestin-only oral contraceptives and in clinical studies of levonorgestrel for postcoital and emergency contraceptive use. Some women may experience spotting a few days after taking Plan B®. At the time of expected menses, approximately 75% of women using Plan B® had vaginal bleeding similar to their normal menses, 12-13% bled more than usual, and 12% bled less than usual. The majority of women (87%) had their next menstrual period at the expected time or within 7 days, while 13% had a delay of more than 7 days beyond the anticipated onset of menses. If there is a delay in the onset of menses beyond 1 week, the possibility of pregnancy should be considered.

#### Ectopic Pregnancy

Ectopic pregnancies account for approximately 2% of reported pregnancies (19.7 per 1,000 reported pregnancies). Up to 10% of pregnancies reported in clinical studies of routine use of progestin-only contraceptives are ectopic. A history of ectopic pregnancy need not be considered a contraindication to use of this emergency contraceptive method. Health providers, however, should be alert to the possibility of an ectopic pregnancy in women who become pregnant or complain of lower abdominal pain after taking Plan B®.

#### PRECAUTIONS

##### Pregnancy

Many studies have found no effects on fetal development associated with long-term use of contraceptive doses of oral progestins (POPs). The few studies of infant growth and development that have been conducted with POPs have not demonstrated significant adverse effects.

##### STD/HIV

Plan B®, like progestin-only contraceptives, does not protect against HIV infection (AIDS) and other sexually transmitted diseases.

##### Physical Examination and Follow-up

A physical examination is not required prior to prescribing Plan B®. A follow-up physical or pelvic examination, however, is recommended if there is any doubt concerning the general health or pregnancy status of any woman after taking Plan B®.

##### Carbohydrate Metabolism

The effects of Plan B® on carbohydrate metabolism are unknown. Some users of progestin-only oral contraceptives (POPs) may experience slight deterioration in glucose tolerance, with increases in plasma insulin; however, women with diabetes mellitus who use POPs do not generally experience changes in their insulin requirements. Nonetheless, diabetic women should be monitored while taking Plan B®.

Plan B® is a registered trademark of Women's Capital Corporation, a subsidiary of Duramed Pharmaceuticals, Inc.

Duramed Pharmaceuticals, Inc.  
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#### Drug Interactions

Theoretically, the effectiveness of low-dose progestin-only pills is reduced by hepatic enzyme-inducing drugs such as the anticonvulsants phenytoin, carbamazepine, and barbiturates, and the antituberculosis drug rifampin. No significant interaction has been found with broad-spectrum antibiotics. It is not known whether the efficacy of Plan B® would be affected by these or any other medications.

#### Nursing Mothers

Small amounts of progestin pass into the breast milk in women taking progestin-only pills for long-term contraception resulting in steroid levels in infant plasma of 1-6% of the levels of maternal plasma. However, no adverse effects due to progestin-only pills have been found on breastfeeding performance, either in the quality or quantity of the milk, or on the health, growth or development of the infant.

#### Pediatric Use

Safety and efficacy of progestin-only pills have been established in women of reproductive age for long-term contraception. Safety and efficacy are expected to be the same for postpubertal adolescents under the age of 16 and for users 16 years and older. Use of Plan B® emergency contraception before menarche is not indicated.

#### Fertility Following Discontinuation

The limited available data indicate a rapid return of normal ovulation and fertility following discontinuation of progestin-only pills for emergency contraception and long-term contraception.

#### ADVERSE REACTIONS

The most common adverse events in the clinical trial for women receiving Plan B® included nausea (23%), abdominal pain (18%), fatigue (17%), headache (17%), and menstrual changes. The table below shows those adverse events that occurred in ≥5% of Plan B® users.

Table 3 Adverse Events in ≥5% of Women, by % Frequency

Most Common Adverse Events	Plan B® Levonorgestrel N=977 (%)
Nausea	23.1
Abdominal Pain	17.6
Fatigue	16.9
Headache	16.8
Heavier Menstrual Bleeding	13.8
Lighter Menstrual Bleeding	12.5
Dizziness	11.2
Breast Tenderness	10.7
Other complaints	9.7
Vomiting	5.6
Diarrhea	5.0

Plan B® demonstrated a superior safety profile over the Yuzpe regimen for the following adverse events:

- Nausea: Occurred in 23% of women taking Plan B® (compared to 50% with Yuzpe)
- Vomiting: Occurred in 6% of women taking Plan B® (compared to 19% with Yuzpe)

#### DRUG ABUSE AND DEPENDENCE

There is no information about dependence associated with the use of Plan B®.

#### OVERDOSAGE

There are no data on overdosage of Plan B®, although the common adverse event of nausea and its associated vomiting may be anticipated.

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