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**FILE:** ■ Maca (*Lepidium peruvianum*)

■ Menopause

■ Hormones

HC 030283-355

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## **RE: The Effects of Maca in Postmenopausal Women**

Meissner HO, Mscisz A, Reich-Bilinska H, et al. Hormone-balancing effect of pre-gelatinized organic maca (*Lepidium peruvianum* Chacon): (II) physiological and symptomatic responses of early-postmenopausal women to standardized doses of maca in double blind, randomized, placebo-controlled, multi-centre clinical study. *Int J Biomed Sci.* 2006;2(4):360-374.

Maca (*Lepidium peruvianum*) has been used for years by the native people of Peru as a traditional remedy to treat common health problems in both men and women. In addition, it is used to treat various, specific female-related disorders such as hormonal imbalances, menstrual irregularities, infertility, and menopausal symptoms.

On the basis of results from a pilot study on early-postmenopausal women, the authors concluded that non-hormonal pre-Gelatinized Organic Maca (Maca-GO™; Femmenessence™; Natural Health International; San Francisco, California. The Maca-GO for this study was provided by NatureCorp Pty Ltd, Australia.) preparation exhibits hormone-balancing effects on the female organism and thus may reduce the discomfort experienced by women in the early-postmenopausal stage.

This double-blind, randomized, coordinated multi-center, outpatient, full-scale clinical study in Poland sought to determine the effect of Maca-GO treatment in early-postmenopausal women on changes in levels of 4 sex hormones and 4 serum lipids.

Dried maca roots were processed at the National Institute of Agricultural Research in Lima, Peru, after previous verification of their origin, organic status, and scientific authenticity. Subjects were randomized to four 500 mg capsules (2,000 mg total) daily of either Maca-GO or placebo during 3 (Trial I; n=102) or 4 (Trial II; n=66) month study periods. Blood serum levels of hormones were measured on monthly basis for: 17β-estradiol (E2), follicle stimulating hormone (FSH), luteinizing hormone (LH), and progesterone (PRG).

Indices of menopausal discomfort were determined by using the Menopausal Score and Index questionnaire according to Greene (GMS) and Kupperman.

Trial I was a follow-up, three-month trial, to confirm outcome of pilot study and to establish residual effects of Maca-GO treatment. Trial II was designed to assess the placebo effect when introduced in different sequence and length intervals with Maca-GO. Placebo (sorbitol and cellulose) was a resting period from Maca-GO treatment.

A total of 124 subjects completed the study. Maca-GO significantly stimulated production of E2 ( $P < 0.001$ ) with a simultaneous suppression of blood FSH ( $P < 0.05$ ). Maca-GO significantly reduced both frequency and severity of individual menopausal symptoms (hot flushes and night sweating in particular) resulting in significant ( $P < 0.001$ ) alleviation of Kupperman indices from 22 to 10 and in GMS from 18 to 11. It also led to increased serum high-density lipoproteins ( $P < 0.05$ ).

The authors suggest that Maca-GO offers an attractive non-hormonal addition to the choices available to early-postmenopausal women in the form of a natural plant alternative to hormone replacement therapy. It should be noted that if a product is actually capable of significantly increasing estradiol levels, long term safety should be carefully assessed. Additional studies are warranted.

—Jennifer Minigh, PhD

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