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

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RE: Peruvian Maca Extract Used to Treat Symptoms of Menopause

Hudson T. Maca: new insights on an ancient plant. *Integr Med*. Dec 2008/Jan 2009;7(6):54-57.

The author, a naturopathic physician and professor at the National College of Naturopathic Medicine in Portland, Oregon, reviews the Peruvian herb maca (*Lepidium peruvianum*), which she has been prescribing for more than 15 years for common perimenopausal and menopausal symptoms. She examines the different types of maca, history of maca research, the health benefits of maca, and clinical evidence of its efficacy.

The maca species *L. meyenii* grows all over several South American countries, but the recently differentiated Peruvian maca species *L. peruvianum* grows only in Peru. In the early 1960s, Peruvian scientist, Gloria Chacón, PhD, presented a dissertation on maca root, which led to the eventual identification of over a dozen different Peruvian maca phenotypes as well as identification of the regions in Peru where these phenotypes grow. *L. peruvianum* has 13 different phenotypes corresponding to different colors, some of them containing unique DNA profiles and distribution patterns of active constituents, says the author.

Earlier, in 1843, the species *L. meyenii* had been described by botanist Gerhard Walpers. However, Dr. Chacón suggested, and herbalists around the world have agreed, that the cultivated maca of Peru (*L. peruvianum*) is a unique species. *L. peruvianum* is now accepted by many as the species name for medicinal maca from Peru. Though it may be confusing, says the author, "it is critical for a practitioner to investigate the source of the maca used as from Peru and/or ensure it is identified and labeled as *L. peruvianum*."

Maca has been found to be rich in minerals (with high concentrations of calcium, magnesium, iron, sodium, silica, manganese, copper, zinc, vanadium, and others) and also contains thiamine, riboflavin, ascorbic acid, proteins, carbohydrates, lignans, glucosinolates, phytosterols, and alkaloids.¹ The alkaloids in its root are believed largely responsible for its traditional healing use, possibly benefiting the endocrine and reproductive systems by influencing such disorders as chronic fatigue, anemia, and infertility, and aiding in enhanced stamina and "female hormone balance."¹

Traditionally used as an adaptogenic plant, maca aids the body in dealing with physiological, biochemical, and psychological stressors. Its adaptogenic properties represent an alternative approach to managing symptoms of menopause, says the author. Researchers theorize that maca stimulates hormonal reserves by strengthening the body's ability to regain and maintain hormonal homeostasis in the face of stressors.² Other adaptogens have been used by herbal and alternative practitioners for years, but the extent of maca's effects on

the range of menopausal symptoms has not been documented in studies of these other adaptogenic herbs. According to the author, this suggests that maca may be unique in its adaptogenic menopausal effects.

The author cites research on perimenopausal and menopausal women using two grams daily of a proprietary maca product (Maca-GO™; Natural Health International; San Francisco, CA), which found that maca can increase the body's production of estrogen and lower its levels of cortisol and adrenocorticotrophic hormone. It also helped alleviate numerous menopausal symptoms including hot flashes, insomnia, depression, and nervousness.² Other research cited, which was conducted on the composition of various powdered preparations of maca root, reported that the herb does not contain plant estrogen or hormones. Some researchers suggest that maca's therapeutic actions rely on plant sterols stimulating the hypothalamus, pituitary, adrenal, and ovarian glands, and therefore also affecting the thyroid and pineal glands.³ As such, says the author, maca tends to treat menopausal symptoms as a whole and not any one specific menopausal symptom.

The author reports that the most common symptoms of menopause she sees in her patients are hot flashes, mood swings, and low energy. She prescribes Maca-GO, one gram twice a day, for perimenopausal and postmenopausal patients, and reports an onset of benefits within two to three weeks, although some patients require treatment for two to three months (depending on the patient's overall health and prior prescription history). Benefits include a remarkable reduction in the number of hot flashes, an overall improvement in mood (less depression and irritability), and increased energy levels.

Much research is still needed, says the author, to clarify the role of exogenous estradiol (via prescription) versus endogenous estradiol (produced by the body) in general, and, specifically, for patients in whom exogenous estrogen is questionable or even contraindicated. With confusion and inconsistency looming over the benefits and risks associated with hormone replacement therapy, "it behooves us to seek the lowest dose and the most gentle, least invasive approach to achieve the identified goals—whether these be relief of symptoms, prevention of bone loss, or protection of cardiovascular health," writes the author. Maca research should influence the optimal strategy for treating the symptoms of menopause, especially when trying to minimize unnecessary long-term exposure to exogenous estrogens.

The author also includes a sidebar on current supply issues relating to the commercial use of maca. "Some of the product previously and currently available in the United States may contain less than a therapeutically useful dose" and "may not contain the appropriate combination of phenotypes to elicit the desired gender-, age-, and symptom-related physiological responses, or the product may simply contain the wrong plant." She recommends that practitioners check into the ethics of the companies selling and manufacturing maca products.

—Shari Henson

References

¹Chacon G. *Maca (Lepidium peruvianum Chacon)*. 1st ed. Lima, Peru: Grafica Mundo; 2001.

²Meissner HO, Mscisz A, Reich-Bilinska R, et al. Hormone-balancing effect of pre-gelatinized organic maca (*Lepidium peruvianum Chacon*): (III) Clinical response of early-postmenopausal women to maca in a double blind, randomized, placebo-controlled, crossover configuration, outpatient study. *Int J Biomedical Sci*. 2006;2(4):375-394.

³Walker M. Effect of Peruvian maca on hormonal functions. *Townsend Lett*. Nov 1998:18-22.

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