

## Maca Mania for "Sexual Health"

This Andean plant promises enhanced energy, fertility and aphrodisiac qualities.

Maca mania is sweeping over the alternative medicine world. This "King's Herb", also known as "Peruvian ginseng" (although it is not in the ginseng family), helps balance the entire endocrine system, of which the sexual and reproductive functions are important components. The many compounds in this herb, originally grown in the Andes above 11,000 feet, have a broad nutrient spectrum and give vitality and libido a lift.

Maca appears to work by stimulating the pituitary gland (the master gland in the head), and responding to the individual's specific needs regardless of age or sex. Thus Maca presents a true alternative to replacement of hormones, which has its drawbacks in some individuals. The body almost always uses negative feedback loops to regulate hormone levels, so taking in more hormones causes the pituitary gland to shut down its own natural stimulation of endocrine gland hormone production. If the glands, such as the ovaries, for example, no longer have the capacity to make progesterone and estrogens, some people argue that it is better to replace the hormones and avoid all the aging and disease consequences of being low in these hormones. But Maca gives us a way of stimulating the pituitary with nutrients and phytochemicals (plant chemicals) for well-rounded hormonal stimulation. Not just the ovarian hormones but also adrenal, thyroid, pancreas and testicular hormones may be enhanced.

Cultivation of Maca dates back to the Incas 2,000 years ago. Although scientific data is not abundant, both historical and anecdotal superlatives abound. Maca has been used for hundreds of years to enhance fertility in humans and animals. After the Spanish conquest in South America, the conquerors had difficulty with their livestock reproducing at the high elevations. Local indigenous people

of the high Andes suggested feeding them Maca. The results were so spectacular that Spanish chroniclers wrote glowing reports.

Contemporary studies to examine Maca's contents also support the claims of Maca's medicinal use in traditional cultures. The plant's attributes include anti-fatigue, aphrodisiac, nutritive, immunostimulant, steroidal and tonic properties. Maca contains a rich variety of nutrients, including vitamins B1, B2, B12, C and E; the minerals calcium, iron, phosphorous, magnesium and zinc; and essential amino acids. It contains iodine for the thyroid, alkaloids that nourish the endocrine system and p-methoxybenzyl isothiocyanate, which has reputed aphrodisiac properties. Enhanced fertility effects are thought to be the result of glucosinolates. These chemical compounds are a type of allelochemical or signal substance (pheromones are an allelochemical). Glucosinolates are found in cruciferous vegetables. Indeed, Maca is a member of the cruciferous family and in South America it is a staple food. The root with a tangy taste can be baked like sweet potatoes or made into a sweet drink or a pudding. Maca is ground as a medicine and is now also commercially available in capsules as a supplement. Like other cruciferous vegetables, it also contains anti-carcinogenic properties.

Doctors in South America have used Maca to treat a wide array of problems and diseases such as male impotence, premenstrual syndrome, menstrual irregularities, menopausal syndrome (hot flashes, vaginal dryness, night sweats, depression), osteoporosis, infertility, anemia, tuberculosis, stomach cancer and memory disorders. It has also been used as a tonic in children and touted to help teenage acne. It is becoming popular with body builders for energy and muscle-building powers, and it also promotes mental clarity, improved erections, mental stamina and physical endurance. In short, it makes you feel good.

There appears to be more than one variety being used at this time, among them *Lepidium meyenii* (Walp) and *Lepidium peruvianum* (Chacon), the latter named after Gloria Chacon de Popovici, Ph.D.,

who isolated the four alkaloids responsible for Maca's hormonal effects in 1960. She found that the powdered root or the isolated alkaloids created increased egg follicle maturation in female rats and increased sperm counts in male rats. The hypothalamus-pituitary axis responds appropriately for each sex, creating the right stimulation for men and women.

Recently in the respected journal, "Urology" in April 2000, a group of researchers (Zheng et al.) published the results of an animal study using an extract of the fat-soluble part of the Maca plant in a 10% alcohol solution. Comparing copulation rates and latent period of erections (LPE) in rats with erectile dysfunction, the researchers found that the Maca group copulated over four times more than the control group; the LPE fell from an average of 112 seconds in the control group after penile stimulation to 41 seconds in the highest dose group. The researchers concluded that their study revealed an aphrodisiac activity of the Andean Mountain herb.

The experimental doses used with the rats translate to a comparable dose for a 150-pound human of from 1.4 to 14 grams of Maca per day. Dr. Garry Gordon, who specializes in longevity, recommends a dose of about 4 grams (or 1-2 teaspoons daily) or more, depending on individual tolerance, severity of the problem being addressed and how quickly results are desired. Larger doses may be easier to ingest in powdered form. As with the rats and mice, several weeks or longer taking Maca may be necessary to experience its full effects; some people notice it much more quickly. There are no known side effects at this time, but one should certainly use caution in the presence of prostate cancer, enlarged prostate, breast cancer or any female-hormone-sensitive condition.