

Soybeans: A Boon for Menopausal Women

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ABSTRACT

Menopause is the course time when menstruation ceases in the life of a woman. It is commonly associated with troubling symptoms such as fatigue, hot flashes, joint pain, and mood swings, resulting in lower estrogen levels. Around one third of the Indian women contribute approximately one third of the life in menopause, surviving with the consequences of hormonal deprivation. Alternative methods for mitigating menopausal symptoms are lifestyle changes, use of Yoga and meditation, use of hormone therapy, and phytoestrogen-rich foods such as soybeans. Studies recommend that phytoestrogen supplementation offers a possible alternative or complement to conventional hormonal replacement therapy (HRT). Soybean exhibits the highest concentration of isoflavones. Everyday intake of 68 g of soybeans had been evidenced to have diminished menopausal symptoms.

Keywords: Menopause, Menopausal women, Phytoestrogen, Soybeans.

Pondicherry Journal of Nursing (2020): 10.5005/jp-journals-10084-12131

INTRODUCTION

India has a large population, with 71 million people over 60 years of age and about 43 million menopausal women already cut through the 1 billion mark. The expected population in India is projected to be 1.4 billion in 2026, with 173 million people over 60 years and 103 million menopausal women. In Indian women, the median age of menopause is 47.5 years with an average life expectancy of 71 years.¹ That causes the Indian women to have about one third of their menopause lives surviving the effects of hormonal deprivation. This can have symbolic impact on their quality of life. Phytoestrogens have estrogen which are abundant in soybean and chickpeas, which in turn reduce menopausal symptoms. Soybean is one of the nutritious pulses feasible under cultivation. It has all macronutrients for better nutrition, protein, fat, carbohydrates, calcium, iron, vitamin B1, and phytoestrogens which are helpful to alleviate the menopausal problems.²

An Overview of Menopause

Menopause is a time of course, during which quick changes occur in the physiological and psychological patterns in the body. It is the period when the last and final menses occurs due to loss of ovarian follicular action. Generally, the initial years of menopause are followed by vasomotor symptoms (VMS) such as hot flashes and night sweats; body symptoms such as exhaustion, body aches, and vaginal dryness; and psychological symptoms include irritability, anxiety, depression, decreased libido, and sleeping difficulty.³ The incidence, severity, and duration of VMS vary by population. Menopause is a significant time for physicians and health policy makers as well as a common improvement in life expectancy; women are likely to remain in an estrogen-deprived state with reduced quality of life due to menopause complications for more than 20 years after menopause.

Research studies also recommend that phytoestrogen implementation offers a potential alternative or counterpart to conventional hormonal replacement therapy (HRT). Hence, to assure quality life to these women, attention needs to be concentrated on menopausal problems to manage these problems through appropriate interventions.

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How to cite this article: Iniyaval R, Lavanya S, Renuka K. Soybeans: A Boon for Menopausal Women. *Pon J Nurs* 2020;13(1):16–17.

Source of support: Nil

Conflict of interest: None

Alternative Methods for Managing the Menopausal Symptoms

Lifestyle Changes

The expert committee strongly recommends and stresses improvements in lifestyle as a key mode of care for menopause treatment recommendations, including regular exercise, diet-rich phytoestrogens, calcium, fiber, and low fat, especially saturated fats. Each of these should be initiated throughout childhood and adolescence and continue throughout life. Their benefits are minimal to no cost. These have also contributed to bone strength, cardiovascular disease, diabetes, and mood.⁴

Use of Yoga and Meditation

It is also advised that the use of Yoga and meditation be increased in relieving the effects of menopause. These are keeping in mind the fact that all Indian women who are rich or poor, living in rural or urban areas should pursue these suggestions globally to improve their global health. Across all levels of healthcare, attention should be paid to promoting a “culture of exercise” for women of all ages.⁵

Use of Hormone Therapy

Menopausal women with symptoms may tend to be prescribed oral estrogen–progestin combinations as a short-term treatment in the fifth decade of their lives, which ranges from around

2–5 years. This should be tapered continuously to reduce the chances of symptom recurrence. Many other national and international organizations say hormone therapy (HT) is only for women with signs of menopause. Hormone therapy will be in a limited dose and be short-lived.⁶

Other Therapies

Estrogen remains the most effective hot flash treatment and is approved by the US Food and Drug Policy. Even though some women may prefer lifestyle changes, there is no witness that lowering the room warmth, exercising, or avoiding triggers like alcohol and spicy foods that improves hot flashes. Hormonal replacement therapy is recently recommended to avoid osteoporosis and to alleviate the effects of the VMS and vulvovaginal atrophy followed by menopause. Additionally, HRT increases the bone mineral density and reduces osteoporotic fracture incidence. Due to the severe side effects mentioned above, HRT should be administered for the shortest time in the minimum appropriate doses to achieve the objectives of treatment. The VMS strongly affects the quality of life in menopause, and the function of HRT is still required. Studies have shown that acupuncture, hypnosis, exercise, accelerated respiration, cognitive behavioral therapies, combined black cohosh preparations and intake of omega-3 can intentionally decrease VMS in affected women who cannot use HRT.⁷

SOYBEANS FOR MENOPAUSE

Hormone replacement therapy is the most effective treatment of menopause symptoms, but the results of the 2002 Women's Health Initiative have been dishonored.⁸ Currently women need not take hormonal therapy out of fear of adverse effects and even gynecologists are reluctant to prescribe HRT. A growing range of complementary and alternative medicines have flooded the market and are commonly used to treat problems with menopause. Most of these therapies rely on soy isoflavones which are phytoestrogens having more closeness to oestrogen β receptors. They bind overtly to β receptors of estrogen and slightly to a receptors of estrogen, thus showing organ-specific estrogenic or antiestrogenic action by blocking the receptor of estrogen and obtaining weak estrogenic activity. Their high intake in the Japanese population has been accepted for lower rates of cardiovascular problems, death rates of breast and endometrial cancer, and lower VMS. This has been contributed to the widespread use of nonhormonal soy isoflavone therapies to treat menopausal symptoms with clinical proof of their effectiveness. Studies have shown that menopause issues differ with menopause, race, area, and higher interindividual differences. Furthermore, the ability of women to digest the soy isoflavone, daidzein into the active equol is also not same among various ethnicities.⁹

Nutraceuticals such as phytoestrogens and herbal derivation have recently gained popularity because of their challenging potential to alleviate symptoms of menopause. Nutraceuticals are classified as foods, food sections, or botanicals that provide health and medical benefits, such as disease prevention and treatment. Phytoestrogens are a mixture of plants that are structurally or functionally similar to the body-made steroidal estrogens, such as estradiol. Phytoestrogens are derived from dietary factors such as soybeans.

Soybean or soya bean (*glycine max*) is a legume species that is commonly cultivated with more uses for its edible bean. Popular uses of soya include soya milk, tofu, soya sauce, fermented bean paste, and tempeh. Soybeans contain some of the large quantities of phytic acid, dietary minerals, and vitamin B.¹⁰

A high source of isoflavones is soya bean and soya products. Soya consists of the highest isoflavone concentration, i.e., up to

300 mg per 100 g. Isoflavones are identical to the hormone estrogen and defined for many health effects on soybeans. Witnessing the utility of isoflavones in the clinical treatment of menopausal problems such as hot flushes and vaginal dryness, the balance for soy consumption and its products has changed.¹¹

The US Department of Agriculture estimates that 100 g of cooked green soybeans without salt consists of:

- 141 kcal
- 12.35 g of protein
- 6.4 g of fat
- 11.05 g of carbohydrate
- 4.2 g of fiber

Regular intake of 135 mg of isoflavones for 1 week which is equal to 2.4 ounces (68 g) of soybeans per day had been proved to have reduced menopausal symptoms.¹²

CONCLUSION

The enormous abundance of knowledge available today for a vast number of clinical trials and epidemiological evidence clearly shows the position that natural phytoestrogens play in treating menopausal symptoms. However, only women in the reproductive age-group correspond to Reproductive and Child Health-II and National Rural Health Project, excluding those who have passed reproductive stage. In rural areas too, very few studies were conducted to understand the micro-level menopause.

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