

Natural Phytoestrogen For Menopause

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Abstract: The word "Menopause" literally means the "End of Monthly Cycles". It is from the Greek word *pausis* [Cessation] and the root *men-*[month]. The menopause is a normal part of life, like a puberty it is not a disease or a condition. During this phase due to lack of estrogen people can face many problems like hot flashes, night sweats, and mood swings, osteoporosis, lack of concentration and memory loss. They need to be controlled then menopausal people can lead normal life.

Natural estrogens can be very helpful during menopause to mitigate the problems. Estrogen like chemicals found in plants such as soy, barley, wheat, ragi, red beans, chickpeas, sesame seeds, and black licorice which are called as natural estrogens or phytoestrogens. These food grains were used to prepare a diet mix to control menopausal symptoms and estimated the phytoestrogen contents. Significantly high level of phytoestrogen was observed in prepared product.

Key Words: Menopause, hot flashes, mood swings, estrogen, phytoestrogen

I. Introduction

The menopause marks the time in a women's life when her menstruation stops and she is no longer fertile. According to medlixicon's medical dictionary the menopause is the "permanent cessation of the menses due to ovarian failure, termination of the menstrual life".

Menopause typically occurs in women in midlife, during their late 40^s or early 50^s and signals the end of the fertile phase of woman's life.

However the symptoms and signs of menopause are hot flashes and night sweats, mood swings, osteoporosis, depression, memory loss problems.

Stages of menopause: There are 3 stages in menopause. As follows

- 1) Perimenopause
- 2) Premenopause
- 3) Postmenopause

Perimenopause: perimenopause is the term used to describe the menopause transition year. In women who have a uterus, perimenopause describe the years before and after the final period during primenopause the ovarian production of the estrogens and progesterone becomes more irregular.

Premenopause: premenopause is a word used to describe the years leading up to the last period, when the levels of reproductive hormones are already becoming lower and more erratic.

Postmenopause: The term postmenopause is applied to women who have not experienced a menstrual bleed for a minimum of 12 months. The postmenopause is all of the time in a woman's life that take place after her last period, all of the time that follows the point when her ovaries become inactive.

Effects that are due to low estrogen levels. However many effects that are caused by the extreme fluctuations in hormone levels. Plants contain many types of phytoestrogens. They contain minerals and other constituents which help our bodies. A diet full of natural estrogen sources can be very helpful during menopause. Estrogen like chemicals found in plants – like soy, chickpeas, red beans, wheat, barley, black licorice have large amounts of natural estrogens

II. Methodology

Menopause is a natural process that marks the end of menstruation and fertility. It is defined as the 12 months that follow our last menstrual cycle symptoms may include irregular periods, vaginal dryness, hot flashes, mood swings sleep disruptions, depression and memory loss problems.

To combat of these symptoms a diet should contain natural phytoestrogens the highest concentrations are found in whole grains cereals like barley, wheat, ragi legumes like soybean, chick peas, red beans, sesame seeds and black licorice. These foods possess highest estrogen content so a diet mix is prepared by using the cereals and pulses.

Formulation and standardization of product with these food grains done in the laboratory conditions and a chemical analysis of the product.

Product development: The development of product was done by 3 variations they are as follows.

- 1) Variation-1: (diet mix which is naturally dried & powder)
- 2) Variation-2: (germinate sprouts, dried & powder)
- 3) Variation-3:(boil the sprouts, paste them then dried and powder)

Ingredients:

- Barley - 100gm
- Wheat - 100gm
- Ragi - 100 gm
- Chick peas - 50 gm
- Red beans - 50gm
- Soy beans - 50gm
- Sesame seeds -50gm
- Black licorice - 50gm

Method of preparation:

Variation- 1: Take the cereals and pulses in 1:2 ratios. Then clean the food grains remove foreign matter. Soaked overnight then powder these soaked food grains.

Variation- 2: Take all the food grains (cereals & pulses) in 1:2 ratios. Then washed in water and soaked overnight. Take muslin cloth put the food grains into cloth then tie the cloth tightly for two days kept it in room temperature, sprinkle water at every four hours. After two days removed the muslin cloth and sprouts observed. The sprouted food grains are dried and powdered.

Variation-3: All the food grains are taken in 1:2 ratios and soaked overnight. The food grains are tied in a muslin cloth tightly for two days, kept it at room temperature, sprinkle the water at every four hours. After two days removed the muslin cloth and observed sprouts.

Then these sprouts are pressured cooked and grounded into a fine paste and is dried and powdered.

Supplementation of product:

The product was supplemented to menopause women. By mixing with milk or water. They feel some relief of their symptoms after taking of this product.

III. Result and discussion

Menopause is a term used to describe the permanent cessation of the primary functions of the human ovaries. This is an unavoidable change that every woman will experiences. Plants contain minerals and phytoestrogens. Better constituent estrogen are largely responsible for reduce the frequency and severity of A hot flush, incidence of osteoporosis, helps to keep the skin moist and maintain its natural thickness. The product was prepared with estrogen rich foods and supplemented to menopausal women.

Table: 1 – Percentage Distribution Of Women According To Their Menopausal Age.

s.no	Age at menopause	Percentage (%)
1	40-45	20
2	46-50	40
3	51-55	20
4	56-60	20

From the above table, the majority of women (40%) are got menopause between the 46-50 years of age. Then 20% of women got the menopause between the age group 51-55 years and 56-60 years. During menopause years, as the body responds to the rapidly fluctuating and dropping levels of natural hormone estrogen and progesterone, a number of effects may appear such as hot flushes(62%), night sweats(50%), mood swings (51%) , depression(55%), and osteoporosis(65%) and memory loss(50%).

Table-2: Percentage Distribution Of Women According To Their Symptoms.

s.no	Menopause Symptoms	Percentage (%)
1	Hot Flashes	62
2	Night Sweats	50
3	Mood Swings	51
4	Depression	55
5	Memory Loss	58
6	Osteoporosis	65

A diet full of natural estrogen sources can be very helpful during menopause drink plenty of water and incorporating foods rich in phytoestrogens like soy, chick peace, red beans, wheat, barley, and sesame seeds are add to food.

Table-3: Nutritive Values Of Diet Mix Powder

s.no	Name of the food product	Amount gm.	Energy k.cal	Protein gm.	Calcium mg	Vit-A µg
1	Barley	100	336	11.5	26	10
2	Ragi	100	328	7.3	344	42
3	Wheat	100	346	11.8	41	64
4	Chick peas	50	360	17.1	202	189
5	Red beans	50	346	22.9	260	-
6	Soy bean	50	432	43.2	240	426
7	Sesame seeds	50	281.5	9.15	725	30
8	total	500	2429.5	122.95	1838	761

In the 100 gm of diet mix powder 2429.5 k.cal of energy, 122.95 gm of protein was present. Proteins are essential to all human beings they protect structure such as skin, hair and muscles.

The vitamin-A content in diet mix is 761 micrograms. Chick peas and soy bean are high in vitamin-A content. Calcium content in the diet mix powder is 1838 mg. Ragi, chick peas, soy beans, red beans and sesame seeds are rich in calcium. It is one of the most important minerals involved in the treatment and prevention of osteoporosis.

IV. Conclusion

From the results it can be concluded that the supplementation of Natural estrogen rich product to menopausal women showed a change in the frequency of occurrence of symptoms extension of supplementation period may predict significantly decrease the frequency of occurrence of symptoms.

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