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Diet Counseling for Postmenopausal Women

D. Praveena

2009
Women's health is the result of a complex interplay of the biological, economic, socio cultural and psychological forces which operates synergistically throughout their lives, causing high levels of morbidity and mortality.

From menarche to menopause there are lot of biological changes in women's body and its effect on mind and health in totality need to be looked carefully. The menopausal years are as turbulent as the years when a woman approaches womanhood, namely puberty. Just as her hormones are juggling to establish a pattern to begin the reproductive span of life, now they are settling down into a quieter phase and gradually declining, signaling the end of the reproductive phase. However, this does not mean the end of life. It is just that a new phase will now start, which can be as fulfilling as the earlier years.

Menopause is only a physical sign that a woman has now reached midlife. She is free of the demands of raising children and can now develop her own identity and interests. Many women, opt out of a career in favour of a family life, can now start out on their own. However, in a society which is youth oriented, often a person's value is solely determined by age and opportunities do not always strike twice, in youth and in middle age! With awareness increasing about women's needs and aspirations, this is now changing. Those who are in their forties are, of course, facing the brunt of these changing social norms. In the younger generation, who will twenty years hence also reach this midlife state, things will probably be better and different.

The first physiological change which begins is that the follicles in the ovary where the ova mature and are
released every month under the influence of the pituitary hormones become less sensitive to them. The number of cycles which are ovulatory, become less. No ovulation means less estrogen and hence less bleeding. Gradually, the cycles become less frequent, with scanty bleeding till they just stop suddenly. In still others, there may be heavy periods with irregular cycles. The latter is attributed to sudden spurts of oestrogen release with long intervals of no periods. Sometimes, there may be other conditions co-existent that contribute to bleeding irregularities, all which of surface at this time. All oestrogen does not stop forming, once the periods have stopped. A low amount of oestrogen is still produced by the adrenal glands, which usually looks after the transition to smoothen it out. However, in some cases, this is not enough and symptoms occur, which are given the name of the menopausal syndrome.

There are only three actual symptoms which occur due to changing hormone patterns and declining levels of oestrogen. These are:

- Irregular menstruation
- Hot flushes
- Vaginal dryness

Menopause is the point at which a woman has her last menstrual period and is, therefore, no longer fertile. Menopause can be divided into three phases.

- Pre-menopause: In this phase the ovarian function is disrupted, but the menstrual cycle remains regular. Some
symptoms may begin to occur in this phase.

- Peri-menopause: Declining ovarian function along with menstrual irregularities is typical of this phase. Symptoms commonly start and become troublesome during this phase.

Post-menopause: Once there has been no menses for 12 months, the post-menopause phase is attained.

**Nutritional guidelines during menopause**

- **Fat:** Before menopause, hormones like estrogen seem to protect women against heart disease, but after menopause this hormonal protection is lost. Therefore, it will be prudent to minimise fat in the diet. Foods high in fat, especially saturated fat and cholesterol, could be avoided and fibrous foods such as whole grain breads and cereals, fruits and vegetables could be preferred. Foods low in fat but high in fibre content will also help to keep weight under control.

**KNOW YOUR CHOLESTROL**

<table>
<thead>
<tr>
<th>Type of cholesterol</th>
<th>Normal values</th>
<th>Borderline risk</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cholesterol</td>
<td>&lt;200</td>
<td>200-240</td>
<td>&gt;240</td>
</tr>
<tr>
<td>LDL cholesterol</td>
<td>&lt;130</td>
<td>130-160</td>
<td>&gt;160</td>
</tr>
<tr>
<td>HDL cholesterol</td>
<td>&gt;50</td>
<td>35-40</td>
<td>&lt;35</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>&lt;150</td>
<td>150-450</td>
<td>&gt;450</td>
</tr>
</tbody>
</table>
Calcium: Calcium intake in Indian women is generally low. Moreover, lower levels of estrogen during menopause leads to the loss of calcium, which in turn may result in osteoporosis. It may, therefore, be necessary to ensure adequate intakes of calcium and vitamin D during menopause. Good food sources include milk, cheese and other milk products. Intake of salt should be reduced, as salt increases the urinary excretion of calcium. Also, caffeine products and carbonated soft drinks should be minimized, as caffeine and cola lead to calcium loss from bones and teeth. Foods high in phytates, oxalates and tannic acid should be avoided as they bind to calcium, interfering with its absorption. One of the factors that lead to depletion of calcium is prolonged bed rest. It is important for menopausal women to lead active lifestyles and take regular physical exercise.
<table>
<thead>
<tr>
<th>No:</th>
<th>FOODS (in 100gms)</th>
<th>Calcium (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Milk and Milk products</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Milk</td>
<td>160</td>
</tr>
<tr>
<td>2.</td>
<td>Curd</td>
<td>150</td>
</tr>
<tr>
<td>3.</td>
<td>Cheese</td>
<td>790</td>
</tr>
<tr>
<td>4.</td>
<td>Khoa</td>
<td>650</td>
</tr>
<tr>
<td></td>
<td><strong>Cereals and Pulses</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Ragi</td>
<td>344</td>
</tr>
<tr>
<td>2.</td>
<td>Horse gram</td>
<td>287</td>
</tr>
<tr>
<td>3.</td>
<td>Rajmah</td>
<td>260</td>
</tr>
<tr>
<td>4.</td>
<td>Field Beans</td>
<td>210</td>
</tr>
<tr>
<td>5.</td>
<td>Bengal gram</td>
<td>202</td>
</tr>
<tr>
<td></td>
<td><strong>Condiments / Spices</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Omum</td>
<td>1525</td>
</tr>
<tr>
<td>2.</td>
<td>Pepper(Dry black)</td>
<td>460</td>
</tr>
<tr>
<td>3.</td>
<td>Cumin seeds</td>
<td>1080</td>
</tr>
<tr>
<td>4.</td>
<td>Cloves(Dry)</td>
<td>740</td>
</tr>
<tr>
<td>5.</td>
<td>Coriander Seeds</td>
<td>630</td>
</tr>
<tr>
<td>6.</td>
<td>Mustard Seeds</td>
<td>490</td>
</tr>
<tr>
<td></td>
<td><strong>Nuts and Dry fruits</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Groundnuts</td>
<td>90</td>
</tr>
<tr>
<td>2.</td>
<td>Gingelly Seeds</td>
<td>1450</td>
</tr>
<tr>
<td>3.</td>
<td>Dry coconut</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td><strong>Others</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Egg</td>
<td>36</td>
</tr>
<tr>
<td>2.</td>
<td>Tamarind</td>
<td>170</td>
</tr>
<tr>
<td>3.</td>
<td>Greens/Vegetables</td>
<td>283</td>
</tr>
<tr>
<td>4.</td>
<td>Fish/Dry fish</td>
<td>843</td>
</tr>
</tbody>
</table>
Dietary fibre

Dietary fibre decrease cholesterol, triglyceride, fasting blood sugar, blood pressure, reduces platelet aggregation and increase satiety value.

Eg: Soluble fibre :- oats, beans, fenugreek seeds, whole grams, fruits.

Insoluble fibre :- Green leafy vegetables, string bean, drumstick.

- Include yellow and orange vegetables and fruits in the raw form.

- Diet should be rich in fibre by including raw salads, fruits, green vegetables and whole grains.

- Vegetables and fruits are delicious natural capsule of vitamins and minerals offering protection against heart diseases.

Magnesium: Increased intake of magnesium helps in relieving menopausal symptoms such as heart palpitations, hot flushes, irritability, hyperactivity, insomnia and anxiety. Magnesium is contained in green leafy vegetables, whole grains like oats and nuts and almonds. To support good bone health, it is recommended to maintain a dietary calcium: magnesium ratio of 2:1, since high calcium: magnesium ratio interferes with magnesium absorption.

Iron: Even though the iron requirements in post-menopausal women are not high as those of the reproductive age group, it is still important to include a range of iron containing foods in
the diet. Women who experience heavy menstrual bleeding during menopause have to maintain a good iron intake. Iron-rich foods include organ meats, whole grains and green leafy vegetables.

Boron: Boron proves to be helpful in preventing osteoporosis as it markedly reduces the urinary excretion of calcium and magnesium. Post-menopausal women, subsiding on low boron diet have increased calcium loss and demineralisation. Also boron is found to raise the estrogen levels in the body. Foods high in boron include apples, pears, peaches, almonds, honey, peas, beans, lentils and peanuts.

Phytoestrogens: Certain plants mimic the effects of estrogen and are called phytoestrogens. They help in alleviating some of the symptoms of menopause such as hot flushes and vaginitis. Phytoestrogens-rich foods have been shown to have a beneficial effect on the vaginal tissue and to have a positive effect on the libido.

Rich source: soya bean; Good sources: apples, barley, cabbage, carrot, cherries, green, bens, peas, potatoes, rice, wheat, etc. it is found that plant estrogen are several times weaker than natural estrogen, but they circulate in the blood at levels several times higher than natural estrogen. Thus, symptoms such as hot flushes, night sweats and palpitations can be reduced by increasing the intake of soya products. For example, Japanese women suffer little from the hot flushes of menopause because they eat a lot of tofu, miso and other soya bean products.

In fact, soya consumption actually promotes healthy breast, endometrial and colon tissues. Soya can even help younger
women in managing the premenstrual syndrome and other menstrual disturbances.

Tryptophan: Foods containing the amino acid, tryptophan, helps to reduce depression and insomnia associated with hormonal fluctuations. Tryptophan is the precursor to the neurotransmitter serotonin-the feel-good-substance in our brain, which helps to control appetite, body temperature, libido, mood and prevent depression. Tryptophan-rich foods include banana, pineapple, plum, nuts, milk, cheese, etc. Such foods will combat depression in menopausal women.

Indoles: Indoles are nitrogenous compounds, which are found in cabbage and other cruciferous vegetables. Indoles have a protective effect against breast cancers, colon and other types of cancer. There is evidence that indoles protect against estrogen-related cancer, such as breast cancer, as they block the estrogen receptors, thus inhibiting the growth of tumours in the mammary gland and in other locations.

Bioflavonoids: Bioflavonoids combined with vitamin C gives relief from night time leg cramps, bruises, and spontaneous nose bleeding in menopausal women. Usually estrogen prevents excessive vasodilation and maintains the capillary tone. With menopause, this capillary tone is not maintained. Bioflavonoids restore the endothelium to its normal structure and helps to reduce the hot flushes and vasodilation. Bioflavonoids can be found in oranges, grapefruit and tangerine.

Vitamin A and beta-carotene: Both vitamin A and beta-carotene strengthen the mucous membranes throughout the body. Therefore, adequate intake of carrots and other
yellow and orange fruits and vegetables proves to be helpful in reducing the unpleasant symptoms of vaginal dryness.

Antioxidant Foods

Include food rich in antioxidants like guavas, red grapes, pomegranate, green leafy vegetables, yellow orange colored vegetables, citrus fruits etc

♦ One clove of garlic per day is sufficient to reduce cholesterol level.

♦ Include soya bean, fenugreek, garlic, onion and turmeric in the diet.

♦ Flavanoids naturally occurring in fresh fruits, vegetables, tea and wine are powerful antioxidants.

Vitamin B: Often menopause is associated with diminution of memory power. Foods rich in vitamin B such as unmilled cereals, pulses and nuts should be taken in plenty, as they are important for memory function.

Vitamin C: Inclusion of vitamin C-rich foods is very important for absorption of iron in the body and is also found to lessen the hot flushes of menopause. Vitamin C also enhances calcium absorption and is required for the synthesis of collagen proteins, which make the skeleton more flexible and less prone to sprains and fractures. Vitamin C-rich foods include citrus fruits, tomatoes, capsicum, broccoli, berries, banana, guava, green leafy vegetables and sprouted grains.

Vitamin E: Vitamin E has a protective, or 'sparing' effect on estrogen. Vitamin E effective in relieving menopausal symptoms such as hot flushes, vaginal dryness and breast
tenderness. Food sources of vitamin E include broccoli, nuts and tomatoes.

Essential fatty acids: The intake of essential fatty acids reduces vaginal dryness and has the added benefit of reducing hot flushes by enhancing and balancing the production of sex hormones and prostaglandin. Essential fatty acids can be obtained from fish, fish oils, fresh vegetables, seeds, nuts, and vegetable oils.

Other menopausal symptoms and their remedy

♦ Headaches and migraines often become worse with menopause. Foods rich in amines such as cheese, pickles, alcohol, chocolates, oranges, etc could be avoided. Ginger is found to reduce headaches and migraines by dilating blood vessels in the head, and therefore chewing a small cube of fresh ginger is a quick remedy.

♦ Dry vagina problems can have an impact upon libido. Water intake should be increased to keep the tissues hydrated and an energy-boosting diet of vegetables, fruits and juicies along with phytoestrogen-rich foods such as soya should be incorporated in the diet.

♦ Alcohol and caffeine should be avoided, as they cause hot flushes. Caffeine and alcohol also increase magnesium excretion.

♦ Red meat intake should be minimized as it causes calcium loss leading to osteoporosis.

♦ Antacids that increase the gastric pH should be avoided, as they tend to neutralize normal stomach acid, which is necessary for proper digestion.
Spicy foods should be restricted, as they increase hot flushes in menopausal women.

High carbohydrate foods should be avoided as they cause elevated insulin levels, which can exacerbate menopausal symptoms such as hot flushes, palpitations, anxiety and depression.

Weight gain often occurs in menopausal women, possibly due, in part, to declining estrogen. Usually estrogen helps to store fat around the hips. Before menopause, most women deposit fat around the hips (pear shaped), but after menopause, women deposit more fat around the abdomen (apple shaped). Thus estrogen deficiency leads to fat deposition in the abdomen leading to abdominal obesity which is again a risk factor for diabetes, hypertension and cardiovascular diseases. The amount of calories in the diet should be reduced as metabolism slows down with age.

Ideal Body weight

Ideal Body weight = Height in cms - 100

Overweight and obesity can be found out by calculating Body Mass Index (BMI)

\[
\text{BMI} = \frac{\text{Weight in Kg}}{\text{Height in m}^2}
\]

<table>
<thead>
<tr>
<th>BMI</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 18.5</td>
<td>Under weight</td>
</tr>
<tr>
<td>18.5-22.9</td>
<td>Normal</td>
</tr>
<tr>
<td>23-24.9</td>
<td>At risk of obesity</td>
</tr>
<tr>
<td>25-29.9</td>
<td>Obesity Grade I</td>
</tr>
<tr>
<td>Over 30</td>
<td>Obesity Grade II</td>
</tr>
</tbody>
</table>
Waist Hip Ratio is used to determine the distribution of fat in obese person.

Waist Hip Ratio can be calculated by

\[
\text{WHR} = \frac{\text{Waist circumference (cm)}}{\text{Hip circumference (cm)}}
\]

<table>
<thead>
<tr>
<th>Gender</th>
<th>Normal Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>Female</td>
<td>&lt;0.8</td>
</tr>
</tbody>
</table>

Exercise is particularly important for women in menopause as it helps in eliminating hot flushes. Sedentary women are more likely to have moderate or severe hot flushes compared with women who exercise. Regular active exercise increases the production of HDL cholesterol and reduces LDL cholesterol. Exercises has a positive effect on blood pressure, blood lipids, cholesterol and blood sugar, all of which affect cardiovascular health.