



Postmenopausal Obesity

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The prevalence of obesity is increasing world wide and is reaching epidemic proportions. Majority of adults are becoming increasingly overweight and one of the sub-populations in which this prevalence is growing most rapidly is postmenopausal women. 8.3 million population is forecasted to be obese in age of 50 years or older in 2010 (1).

Postmenopausal women have an increased tendency for gaining weight. It is as yet unclear whether the menopausal transition itself leads to weight gain, but is known that the physiological withdrawal of estrogen brings about changes in fat distribution (2), together with physical inactivity, are probably the major causes of this phenomenon. Other contributing factors include ethnicity, reduced lean mass, resting metabolic rate and treatment with certain drugs, e.g. steroids, insulin, glitazones (3). Moreover, estrogen withdrawal during menopause has a detrimental effect on metabolism and bring changes in body fat distribution from a gynoid to an android pattern, reduced glucose tolerance, abnormal plasma lipids, increased blood pressure, increased sympathetic tone, endothelial dysfunction and vascular inflammation. As a result postmenopausal obesity compounds the situation leading to increased rates of hypertension, diabetes mellitus, coronary artery disease and mortality. Additional consequences of obesity may include hormone-dependent cancer, gallstones, nephrolithiasis, and osteoarthritis with increased mortality (4).

Women with abdominal obesity compared to other women have, high vasomotor scores, personal life dissatisfaction, nervousness, memory loss, depression, flatulence, muscle and joint pains, sleeping disorders,

Table-1 Health Benefits of Exercise/Weight Reduction (7-10)

- Fall of 10mm of Hg in systolic BP & diastolic BP in hypertensive patients
- Fall upto 50 % in fasting blood glucose in DM patients
- 30 % increase in insulin sensitivity
- 40-60% fall in incidence of DM
- Fall of 10% of TC, 15% LDL, 30% TG & 8 % rise in HDL
- 20% fall in all cause mortality
- 30% fall in deaths related to DM
- 40 % fall in deaths related to obesity
- Improve in muscle strength and endurance
- Increase in walking endurance
- Decrease in incidence of falls
- Increase in flexibility and co-ordination
- Increase in longevity
- Decrease in incidence of estrogen dependent cancers
- Reduction in hot flashes
- Increase in central endorphin activity
- Increase in bone mineral content and/or Decrease in bone turnover
- Decrease in exercise induced ischemia
- Decrease in depression and anxiety scores
- Decrease in risk of stroke

lack of energy (5,6). BMI > 21 in women increases risk of CVS diseases, DM, Musculoskelton disorders. WC > 88cm, in women, carries great vascular and metabolic risk.

A sustained weight loss of 5-10 % in obese patients confers marked health benefits (7, 8, 10). The metabolic and vascular benefits of even modest reduction of weight are well described. A reasonably balanced approach to regular exercise can generate similar benefits as HRT and usually without unnecessary risks. There is irrefutable evidence of the effectiveness of regular physical activity in the primary and secondary prevention of several chronic diseases (e.g., cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis) and

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Table: 2 Lifestyle Interventions to Prevent Weight Gain During Menopause

- **Dietary Interventions**

Caloric restriction, maintaining a healthy balanced diet, eating pattern consisting of 1,300 kcal/day (25% total fat, 7% saturated fat, 100 mg of dietary cholesterol), eating calcium, flavonoid and antioxidant rich diet. But eating right food with good intake of fiber, spinach, kale, cabbage, broccoli, tomatoes, beans, lentils and citrus fruits will be of immense value. One can avoid of fatty diet, and black coffee. All the excess sugars, salt, even honey should be avoided. Vitamins (B2, B6, B12 and folic acid) should be supplemented (5,6,7).

- **Exercise/Physical Actiity**

Major recommendation is to exercise regularly, for at least 30 min on at least 5 days of the week or increased their physical activity expenditure (1,000-1,500 kcal/week). Controlled yoga and mindful exercises like meditation under supervision of trainer. Strength, Resistance & stretching exercise training. Aerobic like walking, jogging, swimming, cycling, dancing, step ups and downs, brisk walking, lawn mowing are recommended by all. High-impact aerobic exercises, ie jumping, skipping should be avoided by people with osteoporosis and other joint disorders (7-9) .

premature death. Treatment of postmenopausal obesity is very simple logically, but incredibly difficult - eat less and exercise more. Pharmacotherapy available for the treatment of obesity are amphetamines, dexamphetamine, benzphetamine, phendimetrazine, phentermine, diethylpropion, mazindol, orlistat, sibutramine and other investigational antiobesity agents are rimonabant, zonisamide, somatostatin analogs, leptin agonists, gherelin antagonists etc. Only three drugs, sibutramine, orlistat and rimonabant are approved by US FDA for long term use (3). But no convincing data is available recommending their use in postmenopausal obesity as such.

Hence, presently life style modification at the transition of menopause will go long way in preventing weight gain during this metabolically vulnerable period which will help in primary and secondary prevention of several chronic diseases (e.g., cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis) and premature death beside keeping women physically and mentally fit in her menopause .

References

1. Wang YC, Colditz GA, Kuntz KM. Forecasting the obesity epidemic in the aging US. Population. *Obesity (Silver Spring)* 2007;15:2855-65
2. Dubnov-Raz G, Pines A, Berry EM. Diet and lifestyle in managing postmenopausal obesity. *Climacteric* 2007;10 (Suppl 2) :38-41.
3. Samat A, Rahim A, Barnett A. Pharmacotherapy for obesity in menopausal women. *Menopause Int* 2008;14(2):57-62
4. Rosano GM, Vitale C, Marazzi G, Volterrani M. Menopause and cardiovascular disease: the evidence. *Climacteric* 2007; 10 (Suppl 1):19-24.
5. Khajuria V, Chopra VS, Raina AS. Dietary supplement in Menopause. *JK Science* 2008;10(1):2-4.
6. Dubnov G, Brzezinski A, Berry EM. Weight control and the management of obesity after menopause: the role of physical activity. *Maturitas* 2003 ;44 (2):89-101
7. Simkin-Silverman LR, Wing RR, Boraz MA, Kuller LH. Lifestyle intervention can prevent weight gain during menopause: results from a 5-year randomized clinical trial. *Ann Behav Med* 2003;26(3):212-20.
8. Carroll S, Borkoles E, Polman R. Short-term effects of a non-dieting lifestyle intervention program on weight management, fitness, metabolic risk, and psychological well-being in obese premenopausal females with the metabolic syndrome. *Appl Physiol Nutr Metab* 2007;32(1):125-42.
9. Kruk J. Physical activity in the prevention of the most frequent chronic diseases: an analysis of the recent evidence. *Asian Pac J Cancer Prev* 2007;8(3):325-38.
10. Darren E R W, Crytal WN, Shannon SDB. Health benefits of physical activity: The evidence. *CMAJ* 2006 14; 174(6): 801-09.

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