Nutrition & Menopause

Making changes when you can’t eat like a 25 year old, and get away with it..

Disclosures

• I have no disclosures

What changes?

• Social situation
• Family and family meals
• Activity levels
• Hormonal influences
• Stress
• Metabolism
• Concurrent illnesses or limitations

Mindless Eating

• The “empty-nester” can lead to changes in meal preparation and eating routines.
• Less regular meal habits,
• Eating while watching television or otherwise distracted
• Prepared meals,
• Meals eaten out,
• Comfort eating
Eating “errors”

- Mistaking fatigue or thirst for hunger
- Eating quickly
- Eating foods that do not produce satiety
  - Fats and protein do
  - Carbs don’t
- Kitchen clean up
- Alcohol

Physical Activity

- Women are less active than men
- Become less active with time
- More likely to have sedentary occupations
- Experience barriers to physical activity
  - Safety and security
  - Financial
  - Body image
  - Time

We under-estimate what we eat, and overestimate our activity level

Weight gain

- Weight control consistently emerges as a major concern among women in/at menopause
- Weight gain is typical at this time.
- In SWAN, an observational study of healthy women throughout the menopausal transition, women gained on average 4.5 pounds

J Clin Endocrinol Metab. 2007 March ; 92(3): 895–901.
Does MHT Cause weight gain?
Several large trials and longitudinal studies on three continents and Cochrane meta-analysis:
• No increase or reduced gain in women on HT compared to controls
• Denmark, SOFT : The reduction in weight was almost entirely accounted for by decreased fat accumulation.
• 5 year prospective Australian study showed weight gain in all groups except those on hormone therapy
• WHI found that women randomized to E+P had less fat gain and maintained or gained lean body mass.

Body Fat Goes Up

What is the role of hormones?
• Estrogens influence adipose tissue lipoprotein lipase activity and increase lipolysis
• In the absence of estrogen, increased central fat deposition

Cortisol and Fitness
• Abdominal fat deposition increased by chronic stress, through the action of cortisol,
• Basal and 24 hour cortisol and ACTH levels rise with age.
• Modified by fitness.
• The ACTH and cortisol levels of un-fit (younger) women are greater than fit older women,
• ACTH and cortisol responses of physically fit older women to a stress test are more like those of younger women

References:


Increased Risk for Overweight women

• SWAN: Forty-three percent of women who were obese when they entered menopause, progressed from benign obesity to an at-risk phenotype over seven years of observation.
• The increase of visceral adipose tissue begins in the peri-menopause phase, 3–4 years prior to menopause
  – correlated with a decrease in estrogen (estradiol) and increase in Follicular Stimulating Hormone.


It is a situation, not a sentence

SWAN followed a cohort of obese women over seven years
• impaired glucose tolerance was most predictive of the progression to high risk metabolic state,
• physical fitness was the only lifestyle factor that was protective from progressing to higher risk state.


Muscle mass Goes Down

• Loss of 0.6% - 1% muscle mass/year post-menopause
• Decline in muscle strength of 1.5%/year — a loss of 21% between the ages of 25 and 55.
• Aggravated by inactivity and low protein intake,
• Vitamin D, sex hormones, growth hormone, dehydroepiandrosterone, insulin-like growth factor 1 and insulin are associated with better maintenance of muscle mass and strength


Muscle Mass Goes Down

• Regular exercise may not arrest loss of muscle mass, but does improve muscle function
• Quantified with standardized measures of strength, and with decreased performance on tests of overall strength, such as the “timed up and go”.
  – Both measures are directly related to risk of disability and death
  – Studies conflicting as to role of estrogen or estrogen plus progesterone

Calci Tissue Int. 2008 Aug;83(2):93-100.
BMI. 2010 Sep. 9:341.e4467.
Weight Loss

• To maintain their weight, and avoid weight gain:
  – Restrict caloric intake
  – Increase physical activity.
  – Awareness and portion control
  – Diet diaries or use of mobile apps

Lose Fat not Muscle

• Weight loss at midlife requires careful attention to nutritional intake;
  – It is important for women to maintain lean body mass.
  – Unless adequate protein is maintained, weight loss in older adults can be associated with further loss of muscle mass.

Fight Bone Loss

• Bone mineral density declines with age, with rapid losses associated with menopause.
• In a study of healthy post-menopausal women, multiple nutrients were associated with increased bone density, notably protein and calcium, as well as magnesium, zinc and vitamin C (ref).
• A diet rich in these nutrients should be accompanied by weight bearing exercises, core strength and resistance training, all of which are helpful in reducing falls and fractures

Heart health and diet

• The healthiest adults consume a diet
  – rich in fruits and vegetables, plant and seafood protein, healthy fats and low fat dairy,
  – moderate alcohol intake,
  – relatively low in refined grains, sugars and salt.
Diet and the Brain

- Diets that are rich in fish and vegetable fats, non-starchy vegetables, low-glycemic index fruits, low refined carbohydrates, and moderate wine intake.
- “Anti-inflammatory” diets and the brain and gut Microbiome diets are areas of ongoing interest and research.

Protein

- Adequate protein intake is important for maintenance of muscle mass and strength, as well as for maintenance of healthy bone mass.
- 1 g protein/ kg body weight, with 25-35 gm of high quality of protein at each meal.
  - There are ongoing discussions as to whether this should be increased.

Carbohydrates

- Glucose resistance increases with age
  - Individual modifying factors, notably genetic predisposition, stress and physical activity.
- Low glycemic index foods preferred
- Appropriate contribution of carbohydrates to diet varies with age and between individuals.

Dietary Fat: the about face?

- Canada Food Guide (CFG) advises a small amount of fats, 30 to 45 mL of unsaturated fat each day including oil used for cooking. The CFG recommends limiting butter, hard margarine, lard and shortening.
- The 2015 Dietary Guidelines for Americans does not specify an upper limit on dietary fat.
Fat???

- Reducing dietary cholesterol has not been found to reduce serum cholesterol
- Women's Health Initiative did not find that a low fat dietary intervention impacted CVD risk
- Low fat diets may result in decreased healthy fats, such as fish, vegetables and nut-derived oils.
- Low fat foods are often modified by the addition of highly refined sugars or corn syrup;
- Fats contribute to satiety, an important regulator of consumption.
- Moderation, and attention to adequate consumption of healthy fats is prudent advice.

Calcium

- Recommendations for Calcium vary between countries,
- Osteoporosis Canada recommends 1200 mgm for post-menopausal women
- Found in a variety of foods

Calcium

- Calcium cannot be absorbed in large quantities, can cause hypercalemia and hypercalcuria
- Best absorbed over three meals
- Supplements should be divided doses, or in slow release formulation to minimize the risk of hpercalcuuria, hypercalcemia

Vitamin D

- Health Canada recommends that all adults over the age of 50 should take a daily vitamin D supplement of 10 micrograms (400 IU)
- Osteoporosis Canada also recommends routine vitamin D supplementation for post-menopausal women, the recommendations is 800 to 1000 IU daily
- Vitamin D measurement is not recommended in the low risk population
Iron

• Menstrual iron losses stop with menopause, but women who have had menorrhagia may have persistent iron deficiencies, particularly if they have a diet, which is low in meat.
• Iron is important for neuro-cognitive function, so deficiencies should be corrected.
• Hemochromatosis, a common inherited disorder, typically manifests in women in their sixties, and can have severe consequences if unrecognized.
• Post-menopausal women should not receive routine iron supplementation.

Resources

• Eatrightontario
• Daily diaries
• Food trackers
• Fitness trackers
• SOGC Nutrition Guideline
• Motivational interview techniques

Web resource

• [http://www.hernutrition.ca/](http://www.hernutrition.ca/)
Summary

- At midlife women have the potential for a perfect storm: Dietary intake, physiology, and activity
- Women are motivated to make healthy changes at the menopause transition
- Changes in family and social situation provides a further opportunity to change for health
- Understanding the changes that impact diet at midlife is key to integrating new habits
- Use proven tools to assist in making change

In a “nutshell”

- Dietary habits
- Physical Activity
- Health and hormonal status
- Preserving bone and muscle
- Specific nutrients

Thank You!