

Women's Health Lecture Series
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Part I: Menopause

Menopause- Permanent cessation of menstruation due to loss of ovarian follicular activity-after there have been 12 consecutive months without menses.

Peri-menopause- the time prior to menopause that encompass the change form normal ovulatory cycles to cessation of menses; average onset at age 46, lasting approximately 5 years.

Postmenopause- the years following cessation of menses

Climacteric- derived form the Greek word for "ladder"; the period of time when a women passes form the reproductive stage of life through peri-menopausal transition and the menopause to the postmenopausal years.

Menopause Facts

Peri-menopausal transition

- average age of onset: 46
- age of onset for 95% of women: 39-51
- average duration: 5 years

Menopause

- average age of onset 51

Influential factors for onset of Menopause

- Family History
- Body type and nutritional status- decreased body fat and vegetarian earlier onset
- Alcohol consumption- alter onset due to increased circulating estrogens (more than 2 drinks a week)
- Menstrual History
- Smoking-earlier onset due to decreased estrogen
- Low cholesterol
- nulliparity
- late menarche

Hormones

Estrogen types:

- a. estradiol (E2)- produced by ovary and adrenal predominantly. Dominant hormone during reproductive years, only present premenopausally
- b. estrone (E1)- produced mostly by the ovaries and adrenal glands, premenopausally, and menopausally mostly derived from peripheral conversion of androstenedione. Body weight plays a key factor in determining percent conversion. Dominant hormone in peri and post menopause.
- c. Estriol (E3)- produced mainly in the liver from E1 and E2, predominately present in pregnancy. Weakest estrogen

- Main production in ovaries
- DHEA and androstenedione are produced in the adrenal glands and are peripherally converted into estrogen by muscle and fat
- In post-menopausal women, most of their estrogen comes from the aromatization of adrenal and ovarian androgens in the liver, muscle, and fat
- Estrogen is metabolized by the liver into various by-products
 - 4-hydroxyestrone and 16-alpha-hydroxyestradiol are carcinogenic. Can test through urinalysis. Metabolism can be shifted to non-carcinogenic pathway with the use of flax seeds, calcium d-glucarate and indole 3 carbinol

*a study of 10,786 women showed that the ratio of the 2-OH to 16-OH estrone was a very sensitive indicator of breast cancer risk.

Bio-identical Hormones

- decrease allergic reaction
- decrease sensitization
- support normal function
- established enzyme systems for detoxification and reaction to metabolites

Conjugated Equine Estrogen: CEE

- from horse's urine
- contains 10 different estrogens, 2 of which are bio-identical
- Metabolic byproducts are more potent than CEE and can produce carcinogenic DNA changes
- Lowers LDL cholesterol
- adverse reactions include headache, bloating, and sore breasts

Estradiol (Estrace, Estraderm, Climara, Vivelle, Alora) E2, 17- β estradiol

- main hormone secreted by ovaries pre-menopause
- bio-identical
- relieves vasomotor symptoms
- protects against osteoporosis
- protects against cardiovascular disease

Estrone (E1)

- highest during menopause
- produced by aromatization of adrenal androstenedione in fatty tissue

Estriol (E3)

- weakest estrogen
- produced mainly in pregnancy
- weaker effects on breast and uterine tissue

*women taking estriol may have higher levels of estradiol because it can be converted.

Naturopathic Approach to Menopause:

Review risk factors

1. Osteoporosis
2. Heart Disease
3. Breast Cancer
4. Alzheimers

Diagnostics

1. CBC, Chem screen with lipids, TSH, fT3, fT4
2. DEXA scan
3. Mammogram
4. Adrenal Stress Index. The adrenal glands are the backup source for the sex hormones through the conversion of DHEA.
5. Serum/Salivary/24 hr. urinary for estradiol, progesterone, DHEA, testosterone
6. Ratio of 2-hydroxyestrone to 16-hydroxyestrone
7. GI health assessment

Treatment Approach

1. Address conditions discovered through diagnostic work-up
2. Detoxification/elimination diet
3. Optimize Adrenal Function

4. Address menopausal symptoms
 - a. Hot flashes
 - i. Bioflavonoids- 1000mg three times a day
 - ii. Vitamin C 1 gram daily
 - iii. Gamma-oryzanol- 100mg three times a day. Derived from rice bran
 - iv. Vitamin E up to 1200IU daily
 - v. Phytoestrogens (soy, red clover, flax seeds)
 - vi. Estrogen- most reliable tool
 - vii. Botanical Formulas- also reliable
 - b. Mood changes
 - i. look at underlying issues
 - ii. determine best nutraceutical (5-HTP or Tyrosine) or botanical fit.
 - c. Cardiovascular Health
 - i. heart disease risk factors (managing homocysteine)
 - ii. symptomatic management of palpitations
 - d. incontinence
 - i. pelvic floor training and physical therapy
 - ii. biofeedback
 - e. vaginal dryness and atrophy
 - i. topical creams
 - ii. HRT
 - iii. botanical formulas
 - f. osteoporosis
 - i. Cal/mag formula
 - ii. botanicals
 - iii. multivitamins and micronutrients

Basic Estrogen Detox Plan

1. Important to balance relative levels of estrogen to testosterone and progesterone. Even though we want to optimize levels of estrogen in the blood proper metabolism and detox is important to maintain overall balance and health.
2. Foods that support liver function help with the proper metabolism of estrogens
 - Examples:
 - a. dandelion root
 - b. beets
 - c. burdock
 - d. asparagus
 - e. artichokes

These foods also stimulate optimal cholesterol levels

3. Other important foods include vegetables that contain indole-3-carbinole like broccoli, brussel sprouts, cabbage, and cauliflower. Indole-3-carbinole helps promote estrogen metabolism down the non-carcinogenic pathway 2-hydroxyestrone vs. 16-hydroxyestradiol

4. Master cleanser drink

Use to satisfy cravings during a detox program

2 tbs lemon juice

1-2 tsp honey

pinch cayenne

fresh grated ginger

pinch salt

1 tsp applejuice

8oz water

Botanical Considerations:

Black cohosh, motherwort, wild yam, dong quai, burdock, licorice, sage, hops, ginseng, fennel, anise, skullcap, passion flower, chamomile

Review of overall approach from most conservative to most invasive

- ◆ Start with diet and lifestyle changes addressing any issues uncovered with diagnostic testing
- ◆ Implement the use of botanical preparations and nutritional supplements
- ◆ Bio-Identical Hormones
 - Start with just progesterone
 - If not effective add estriol (E3)
 - If still not effective graduate to bi-est formula estradiol (E2) + estriol (E3)
- ◆ If switching from prempo/premerin start with bi-est formula