

Menopause

Myths, Mysteries, and Medicine

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“Women’s health isn’t just PMS, contraception, pregnancy, and menopause...The idea of the ticking biological clock should not relate only to the women’s state of fertility, but should focus on the global indicators of women’s health and quality of life” (Journal of the American Academy of Nurse Practitioners, November 1996).

Objectives

At the end of this session you will be able to:

- Define key terms: climacteric, perimenopause, and menopause.
- Discuss at least one effect (peri)menopause has on the brain, mood, and sexuality, eyes, teeth, bone, heart, breast, and colon.
- Identify “uncomfortable symptoms” that are a result of estrogen loss from the body that when experienced together may be referred to as “Menopausal Syndrome”.

Objectives *cont...*

- List strategies for dealing with the changes brought about by menopause.
- Identify traditional medications to treat the symptoms and/or changes associated with menopause.
- Identify alternative/complementary strategies to deal with symptoms and/or changes associated with menopause.

The Climacteric

- Includes Perimenopause and Menopause.
- Psychological and Physiological impact underestimated for years.
- Many life changes accompany the Climacteric especially in the fifth and sixth decades.
- There is a male menopause as well as a female menopause.

“But what do you mean I’m perimenopausal?”

Perimenopause: The years during which women experience the subtle signs of transition, the years that surround the actual milestone of menopause.

Entire period during which the ovaries progressively reduce estrogen production and ovulatory function ceases.

The perimenopause may be asymptomatic for some women.

Symptoms **may include:** menstrual changes, fatigue, irritability, forgetfulness, skin changes, and vaginal dryness.

Menopause (Female)

- Cessation of spontaneous menstrual periods.
- If natural Menopause, no menstrual period for 12 months.
- Normal age range 35-55 years.
- Average US age at Menopause: 51.4 years
- Not reliably influenced by heredity, race,, parity (# of children given birth to), nutritional status... We used to think cigarette smoking was an independent factor as well. We now know...

Menopause and Cigarettes

- ➔ Cigarette smoking may contribute to an earlier menopause by as much as 2 years.
 - ⇨ Circulatory effect
 - ⇨ Direct toxic effect on the ovaries

Menopause (Male)

- Male Menopause (also called viropause or andropause) involves the hormonal, physiological, and chemical changes that occur in all men generally between the ages of 40 and 55, though it can occur as early as 35 or as late as 65. These changes effect all aspects of a man's life.
- Male menopause is, thus, a physical condition with psycho- logical, interpersonal, social, and spiritual dimensions.

Male Menopause

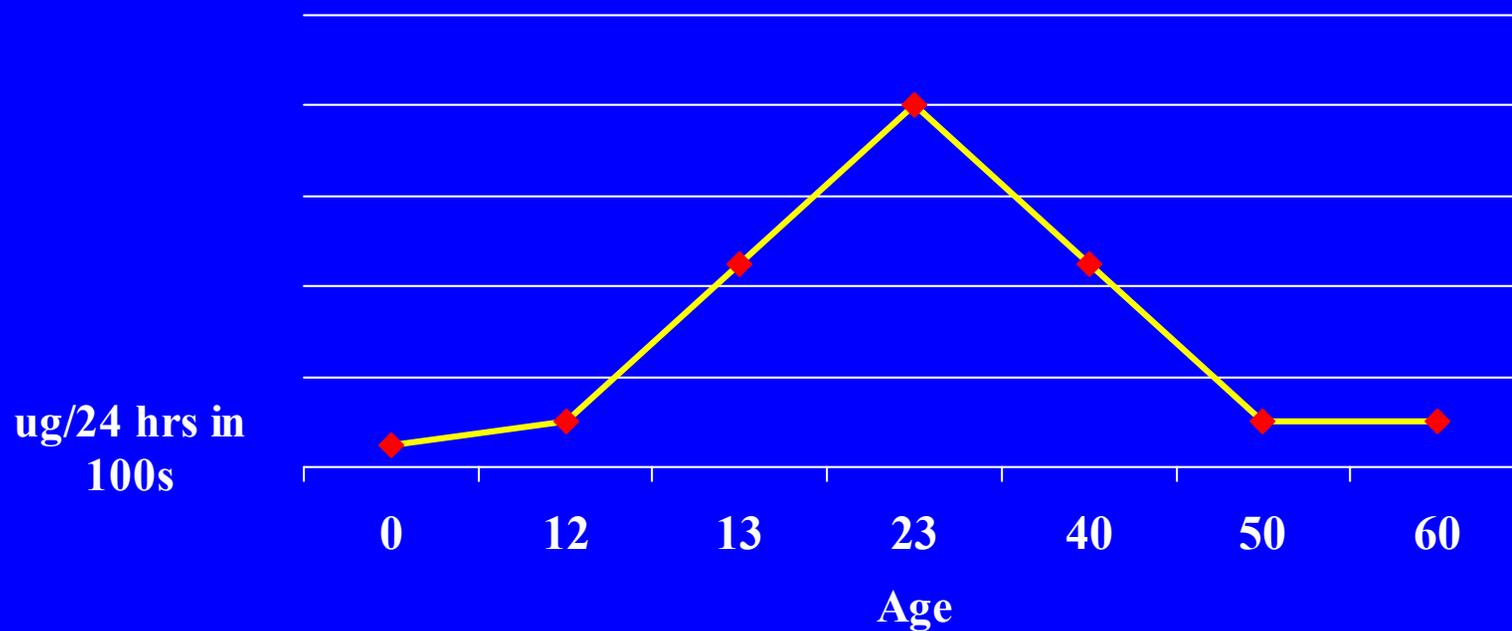
1. Taking longer to recover from injuries or illness
2. Nervousness and irritability
3. Decrease or loss of sexual enjoyment
4. Feeling time is running out
5. Decreased memory and concentration

Male Menopause

6. Increased anxiety or fear
7. Feeling fat, gaining weight
8. Sleep disturbances
9. Indecisiveness
10. Loss of interest and self-confidence

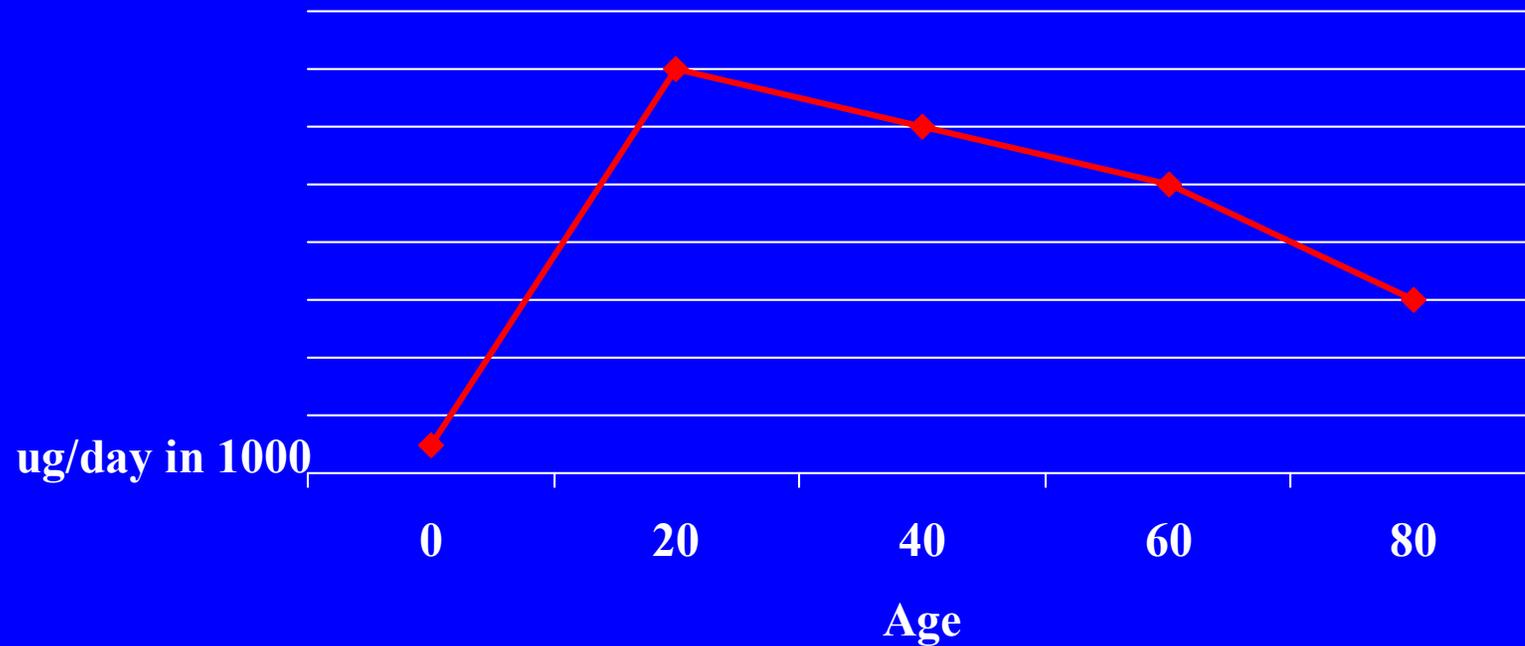
Approximate rates of Estrogen secretion throughout sexual life

Estrogen secretion in urine



Approximate rates of testosterone secretion at different ages

Testosterone secretion



Life Changes Associated with Midlife

1. Hormone-production levels are dropping
2. Sexual vigor/sexual interest is diminishing
3. Physical stamina and strength are decreasing
4. Children are leaving
5. Parents are dying

Life Changes Associated with Midlife cont...

6. Job horizons are narrowing
7. Marriages (Sometimes 2nd and 3rd) are breaking up
8. Friends are getting sick
9. Hopes are being lost
10. Dreams are left unsatisfied

Those uncomfortable symptoms may be Menopausal Syndrome

(Relationship to estrogen may be causal or casual)

Fatigue

Joint and muscle pain

Nervousness

Dizziness

Sweating

Palpitations

Headaches

Insomnia

Depression

Irritability

What do Perimenopause and Menopause feel like?

Weird dreams

Sensory disturbances

New onset of allergies

Bloating

Chills

Aching joints

Sore heels

Crawly skin “formication”

Memory lapses

Bouts of rapid heart beat

Indigestion

Panic attacks

Fluctuations in desire

Sensitivity

Treatment of Symptoms of Menopausal Syndrome

- Estrogen therapy
- Androgens
- Bellargal (phenobarbital, ergotamine, belladonine alkaloids)
- Clonidine hydrochloride
- Verapamil hydrochloride
- Vaginal estrogen cream
- Osteoporosis preventing medications

Treatment of Symptoms of Menopausal Syndrome *cont...*

- ▶ Just a few of the natural remedies available on the market:

primrose oil, vitamin B6, vitamin E,
dong quai, ginger, licorice, nettle, black
cohosh, wild yam

Effects of Aging on Mid-Life

The Brain

- ➔ According to the National Institute on Aging, a woman's risk of Alzheimer's seems to be sharply reduced if they take estrogen during menopause and after.

The Brain cont...

- ➔ There are two theories on how estrogen protects against Alzheimer's :
 - ⇒ Estrogen keeps nerve cells thriving longer.
 - ⇒ Estrogen enables nerve cells to communicate better.

Previous studies have suggested that postmenopausal women who take estrogen think more clearly.

The Brain cont...

Complementary Medicine

➔ Herbal remedies

- ▶ Ginko biloba: **warning**: there is recent information out in the popular media that Ginko may reduce fertility

➔ Vitamins/Antioxidants

- ▶ Vitamin E
- ▶ Selenium

Problems of Mood and Sleep

➔ **Nervousness, irritability, depression**

➔ **Insomnia**

⇨ theory is that “Hot Flashes” awaken the woman

Problems of Sexuality

➔ **Urogenital Atrophy**

⇒ result of decreased estrogen

➔ **Decreased Libido**

⇒ may be result of decreased testosterone; excess level of progestins

Sexuality cont...

Nutrients for Sexual Health

- Vitamin A/Beta carotene complex
- Vitamin C
- Vitamin E
- Magnesium
- Trace Minerals (copper, zinc)
- Essential Fatty Acids

Sexuality cont...

Complementary Medicine for Sexual Health

- Ginseng
- Shatavari (*Asparagaceae racemosus*)

The Eyes

- ▶ In one study, women with the following risk factors were at increased risk for development of cataracts: smoking, extensive exposure to summertime sunlight, regular aspirin use, and estrogen replacement therapy.
- ▶ **Further study is necessary.**

The Eyes cont...

The good news is...

- ▶ Vitamin C supplements of at least 400 mg per day has been linked to a lower incidence of cataract development.
- ▶ Vitamin E supplements have also been linked to lower incidence of cataract development (400 mg per day).

The Mouth

- ▶ Hormonal fluctuations common to women in the Mid-Life years have been implicated in such oral conditions as gingival bleeding, bone loss, **tooth loss**, oral lesions, and oral discomfort.
- ▶ Many women may have osteoporosis and not know it until they have fractured a hip, a wrist, or are told that they have to have **dentures**.

The Mouth

Prevention:

- ➔ Good oral hygiene is important but may not be enough... You may also need to make some dietary adjustments including:
 - ⇒ A diet high in whole grains, vegetables (broccoli, turnips, greens), beans, bean products, and sea vegetables.
 - ⇒ A diet low in refined sugars, and baked flour products.
 - ⇒ Sparing use of red meats, and fruit juices.

Bone

- Osteoporosis is one of the most common conditions that afflict women in the US:
- 1 in 4 white women over the age of 65 are affected.
- Major key is Prevention that begins 40 years before the onset of symptoms.
- There are medications that can help even after Osteoporosis is diagnosed:

Medications for the Prevention and Treatment of Osteoporosis

- **Calcium Supplements**
- **Vitamin D Supplements**
- **Fluoride**
- **Estrogen Replacement Therapy**
- **Calcitonin**
- **Biophosphonates**
 - **editronate**
 - **pamidronate**
 - **alendronate (Fosmax)**
- **Tamoxifen**
- **Raloxifene**
- **Others: Thiazide Diuretics, Androgens**

The Heart

More women die of myocardial infarction (MI) than any other disease.

- ▶ “The manifestations of MI are similar in women and men. The perceived atypical nature of symptoms in women is likely to be largely a factor of their older age at presentation...” (Women and Heart Disease, 1997).
- ▶ 55% of all cardiovascular deaths before the age of 65 years are directly attributable to cigarette smoking.

The Heart *cont...*

Presentation of Myocardial Infarction (MI) in Women:

- ▶ **Silent MI: nearly 1/2 of MIs in women go unrecognized.** Symptoms: fatigue, indigestion, nausea
- ▶ **Although classic symptoms occur in women, atypical symptoms are found more often than in men:**
 - Instead of chest discomfort, **Abdominal pain:** confused with esophagitis, gallbladder disease
 - Difficulty breathing
 - Fatigue
 - Anxiety, tachycardia, chest discomfort
 - Shoulder, neck, upper back pain

Risk Factors for Heart Disease

- Hyperlipidemia
- Family History
- Cigarette Smoking: 55% of all CV deaths before age 65 are attributed to cigarette smoking
- Hypertension
- Diabetes Mellitus
- History of Stroke or peripheral vascular disease
- Other: sedentary lifestyle, stress, premature menopause, absence of ERT after menopause, alcohol abuse, steroid use, endocrine disease, renal disease

Prevention of Heart Disease

- **DON'T SMOKE/QUIT SMOKING**
 - ➔ Cigarette smoking is the single greatest cause of preventable morbidity and mortality in American Women
- Exercise
- Diet
- Control blood pressure and blood sugar
- Lipid-lowering methodologies
- Food Supplements
 - Vitamins C, E, Beta carotene
 - Other important antioxidants: selenium, glutathione, coenzyme Q10, cysteine, and flavanoids
 - Herbs: Hawthorn, garlic

Breast Cancer

- ▶ Most commonly diagnosed nondermatologic cancer in women
- ▶ Second leading cause of cancer-related death among women
- ▶ The incidence rates for breast cancer increased between 1973-1992 most likely due to increased use of screening methods, specifically mammography and clinical breast exams
- ▶ Overall incidence is 110.6 per 100,000 women (113.1 in white women; 101 in black women)

Breast Cancer *cont...*

- ▶ The survival rates for women with breast cancer have increased substantially
- ▶ The death rate in 1992 was 26 per 100,000 women (white women), and 31.2 per 100,000 women (black women)
- ▶ Women in minority populations are less likely than white women to be screened for breast cancer
- ▶ Early detection and appropriate treatment are essential

Lung Cancer

- ➔ Leading cause of cancer death
- ➔ Women who smoke are 12 x more likely to die of lung cancer than women who do not smoke

Colon Cancer

- Accounts for 75,000 new cases of cancer per year in women (second most common form of cancer in men and women)
- Risk increases sharply after age 40, 90% increase after age 50
- Most common cancer in women over age 75 years (more than breast and lung)

Colon Cancer cont...

- ➔ **Risk factors:** age, previously diagnosed colon or GYN cancer; previous adenomatous polyp; family history; inflammatory bowel disease; cholecystectomy; Diet: high fat diet, high alcohol, low fiber consumption

Colon Cancer *cont...*

Screening

Digital Rectal Exam: yearly beginning at age 40

Fecal Occult Blood: yearly beginning at age 50

Flexible Sigmoidoscopy: every 3-5 years
beginning at age 50

Colon Cancer *cont...*

Protective Factors

Diet: DIETARY FIBER

Food Supplements: Beta-carotene, vitamins C and E, and other antioxidants

New: IP6 (inositol hexaphosphate): an important component of cereals and legumes; has been shown to inhibit various cancers in humans and animals, effective treatment for kidney stones, high cholesterol and blood lipids; for prevention take 1-2 grams daily (Albulkalam Shamsuddin, MD, University of Maryland School of Medicine, 1998)

Red Flags

(**OR** Climb down from the table and head for the nearest exit)

- 1 “You’re too young to be going through menopause.”
- 2 “My wife takes these hormones and she is doing fine.”
- 3 “Ask your friends what they use and let me know.”
- 4 “Take this bag of hormone samples and see which one you like the best.”

Red Flags cont...

- 5 “All women your age go through this. It’s just something you have to put up with.”
- 6 “The only problem is your under too much stress.”
- 7 “I don’t start women on HRT until they haven’t had a period for a year.”
- 8 “I always...”
- 9 “I never...”
- 10 “I give up!”

Natural Remedies: What to Watch Out For:

- The FDA lists nine herbs that can cause serious problems including kidney failure and stroke:
 - chaparrel
 - comfrey
 - germander
 - jin bu haun
 - lobelia
 - magnolia
 - ma haung
 - stephanie
 - yohimbe

Hormone Replacement Therapy (HRT): Why Use It?

- **Benefits**

- Alleviation of Hot Flashes
- Alleviation of urogenital atrophy
- Prevention/treatment of osteoporosis
- Reduction of coronary artery disease

- **Risks**

- Endometrial cancer (unopposed estrogen)
- Breast cancer (?)
- Unknown long-term effects of progestins

Hormone Replacement Therapy

- **Estrogen** (Premarin)
- **Progestin** (Provera)
 - opposes some of the actions of estrogens preventing Endometrial hyperplasia
 - used alone may decrease hot flashes
 - can cause water retention and mood changes
- **Androgens** (Testosterone)
 - thought to play an important role in maintaining libido
 - DHEA is a precursor to testosterone and is being studied in women

DHEA

- NEW STUDIES SHOW THE SUPPLEMENTS CAN DECREASE LEVELS OF SO-CALLED GOOD CHOLESTEROL, PUTTING WOMEN AT GREATER RISK OF HEART ATTACK.
- RESEARCHERS ARE TELLING WOMEN TO STOP TAKING DHEA
- IF YOU DON'T WANT TO STOP TAKING DHEA, AT LEAST HAVE YOUR CHOLESTEROL CHECKED.

Benefits of Estrogen Replacement Therapy

Treatment of :

- Hot Flashes
- urogenital atrophy
- affective symptoms: nervousness, irritability, depression
- changes in libido
- decreased sexual response
- osteoporosis
- cardiovascular disease
- literature suggests a beneficial effect in prevention of aging of the skin, Colon Cancer, and Alzheimer's Disease

A Word about HRT and Breast Cancer

In a study published in the New England Journal of Medicine(336 (25): 1769-1775, 1997 June 19);

Conclusion: On average, mortality among women who use postmenopausal hormones is lower than among nonusers; however, the survival benefit diminishes with longer duration of use [> 10 years] and is lower for women a low risk for coronary artery disease.

Estrogen Replacement Therapy (ERT)

Absolute Contraindications to Estrogen

Use include:

- Undiagnosed vaginal bleeding
- Known or suspected pregnancy
- Active thrombosis/thrombophlebitis
- Endometrial adenocarcinoma
- Breast Cancer
- Other estrogen dependent tumors
- Acute liver disease

Relative Contraindications to Estrogen Use

- **History of breast cancer**
- **Uterine fibroid**
- **Endometriosis**
- **Hypertriglyceridemia**
- **Gallbladder disease**
- **Migraine headache**
- **History of thrombosis or thrombophlebitis**

(Handout table 7)

Adverse Effects of Hormone Replacement

- **Nausea**
- **Breast tenderness**
- **Migraine headaches**
- **Mood swings**
- **Abdominal bloating**
- **rash, skin irritation, itching (transdermal patch)**

(Handout Table 11)

Initial Hormone Replacement Therapy Work-up

History and Physical Examination including:

- Pap smear
- Blood chemistry - lipids
- Blood pressure
- Mammogram
- Follicle-stimulating hormone
- Thyroid studies
- Endometrial biopsy (selected patients)

(Handout table 10)

Types of Estrogen

- **Not naturally occurring in women**
 - Conjugated equine estrogen (CEE) (Premarin)
 - ethinyl estradiol (Estinyl)
 - Esterified estrogens are (estrogens derived from soybean and Mexican yam plant sources) (Estratab) (derived synthetically)
- **Naturally occurring in women (Tri-Estrin)**
 - 17 B-estradiol
 - estrone
 - estriol

Types of Estrogen *cont...*

- **Phytoestrogens**

- natural estrogens found in plants such as soybeans, flaxseed, sunflower seeds and oil, alfalfa sprouts
- May act at estrogen receptor sites to block stronger natural estrogens. Once the weaker plant estrogens are in place, the stronger estrogens cannot stimulate tumor growth
- May have reproductive and developmental risks associated with them
- Can have too much of a good thing...

Hormone Replacement Therapy

Routes of Administration

- oral
- transdermal
- transvaginal
- subcutaneous
- intranasal

Products Available

- Estrogen only
- Progestin only
- Testosterone only
- Combination

Hormone Replacement Regimens

- Estrogen is usually given daily or on days 1-25 of the month in doses of 0.3, 0.625, or 1.25 mg/day of conjugated estrogen.
- Dose will vary with type of estrogen used.
- Progesterone dosing varies widely: 2.5 mgs/day; 5 mgs/day on days 14-17 every 3 months; 10 mgs/day on days 16-25 every month.

References on the Web

- Women's Health Resource

<http://www.healthywomen.org>

- Intelligent Health

<http://www.intellihealth.com>

- Health in the City

<http://www.healthcity.com>

- The Center for Complementary & Alternative
Medicine Research in Women's Health

http://cpmcnet.columbia.edu/dept/rosenthal/About_Women.html

For more info, call Christine Wade at 212-305-4755

References on the Web *cont.*

- Women's Health America

<http://www.womenshealth.com>

- US Food and Drug Administration (FDA)

<http://www.fda.gov>

Other References

Information on Women's Health Clearing House

Office of Alternative Medicine

National Institutes of Health

9000 Rockville Pike

Bethesda, MD 20892-2182

Telephone: 1-888-644-6226

Men's Health on the Web

http://www.lycos.com/wguide/network/net_969204.html

[http://www.vix.com/pub/menmag/menowhat,
htm](http://www.vix.com/pub/menmag/menowhat.htm)

The Bottom Line

- **DON'T SMOKE**
- Eat well
- Cut out junk food
- Get regular exercise
- Learn to relax
- Take time out to have fun
- Consider a vitamin/mineral regimen
- Use Hormone Replacement Therapy in consultation with your health care provider
- Stay informed

Questions

?

QUIZ

- What is one effect that menopause may have on the heart; on the bones?
- What are some of the symptoms you may experience during menopause?
- How will you as an individual deal with the changes of Mid Life?
- Name one traditional medication to treat menopausal symptoms; one complementary therapy.