

# Menopause

## Changing Approaches to "The Change" in Life

### Overview of this handout

- Summary.
- Description of perimenopause symptoms.
- Description of menopause and conditions found in older women (osteoporosis, coronary heart disease, breast and colon cancer).
- Discussion of hormone replacement therapy, including risks and benefits.
- Discussion of drug treatment options beyond hormone replacement therapy.
- Summary of treatment options for *all* peri- and postmenopausal women.
- Comments about complementary medicine approaches.
- Review of controversies in drug treatments.
- Provision of a framework for helping women decide what to do.

### Summary

*Perimenopause* is the 2 - 8 year period before menstruation stops, when estrogen and progesterone levels fluctuate and decline. Symptoms often include irregular periods, mood swings, sleep disturbance, vaginal dryness and hot flashes. Many of these symptoms are short-lived, although some women will experience them for years. Management of perimenopause includes healthy lifestyle choices, appropriate vitamin and mineral supplements, and may include birth control pills, herbs and/or other medications for specific symptoms.

*Menopause* is the time after menstrual periods stop altogether, when estrogen and progesterone levels decline. Perimenopause symptoms may persist. Long-term consequences of the hormone decline include bone density loss and vaginal thinning. Postmenopausal women have increased risk of heart disease, colon cancer, breast cancer and changes in cognitive function. Management of menopause includes healthy lifestyle choices, vitamin and mineral supplements, and may include hormone replacement therapy, herbs and/or non-hormone medications.

*Hormone replacement therapy* continues to be studied regarding its overall benefits and risks for menopausal women. Some reports appear to be conclusive while others are suggestive but need further evaluation. Some results apply to postmenopausal use of estrogen and progestin combined (HRT); other results apply to estrogen only (ERT). The table below summarizes the best evidence to date. All benefits and risks below have been shown in research trials to be "statistically significant" (not likely to be due to chance), but the magnitude of the difference (how many women experience the outcome) differs across studies and for the various outcomes.

#### Confirmed benefits

- ↕ Hot flashes
- ↕ Vaginal dryness
- ↕ Spine and hip fractures
- ↕ Colon cancer

#### Possible benefits

- ↕ Alzheimer's
- ↕ Mood, sense of well-being
- ↕ Skin elasticity and tone

#### Confirmed risks

- ↕ Breast cancer (HRT)
- ↕ Coronary heart disease (heart attacks)
- ↕ Blood clots (stroke, leg & lung clots)

#### Possible risks

- ↕ Ovarian cancer (ERT)

In deciding how to manage their menopause, women should first review their own risks of the various conditions of aging, based on their personal health and family history. Women should consider the potential risks and benefits of available medications or therapies. Women should talk with their health care providers to weigh all their options and to make informed choices.

**What is menopause?** “The permanent cessation of menstruation resulting from loss of ovarian follicular activity” (World Health Organization definition). Ovaries decrease production of estradiol (the main estrogen in premenopausal women) but continue lower production of estrone (a weaker estrogen). Ovarian production of testosterone is stable, but overall body levels drop because of decreased production elsewhere. *Perimenopause* is the 2 - 8 year period before menopause and the first year after last menstruation. *Postmenopause* is the time starting after last menstruation, thus overlapping slightly with perimenopause. In the United States, the average age at menopause is 52 years, so women spend up to one-third or more of their lives in postmenopause.

#### **Why consider taking hormones at menopause?**

- To reduce symptoms of menopause.
- To lower risk of spine and hip fractures.
- Possibly to lower risk of colon cancer.

#### **Why NOT take hormones at menopause?**

- Perimenopause symptoms are not always a problem.
- Unpleasant side effects.
- Health risks of medicines.
- Benefits of hormones reported in early studies are not always confirmed in later studies.

**Decisions to treat menopause with medications are based on one’s personal risk profile, including behavior, habits, family history, race, age and medical history.**

## **THE MAJOR CONDITIONS OF WOMEN IN MENOPAUSE**

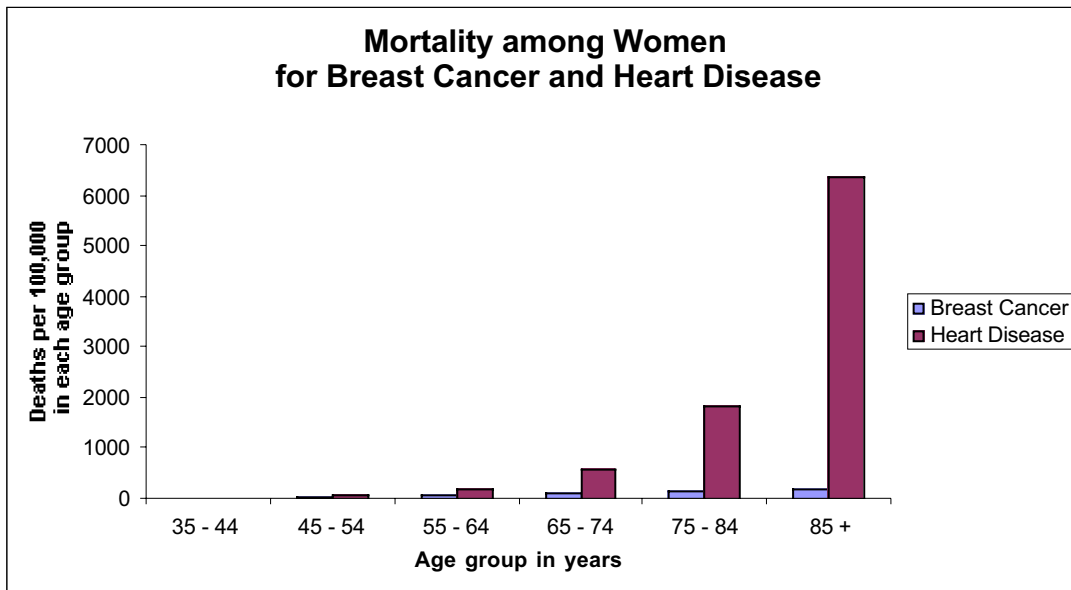
### **Osteoporosis**

Osteoporosis makes bones brittle and more likely to break. It is more formally defined by the World Health Organization as “low bone mass and ... deterioration of bone tissue, which lead to increased bone fragility and ... fracture risk.” By age 80, women have lost 35 - 40% of the bone mass they had as young adults. The average age for hip fracture is 80 years. Osteoporotic fractures are extremely common, about 1.5 million cases a year, more common than the *combined* risk of breast, uterine and ovarian cancer. Of those who fracture a hip, 20% will die within the year, and 30 - 50% will require nursing home placement or continued help at home. The highest fracture rates occur in white women (two to three times higher than for Asian, Latina or African American women).

### **Coronary Heart Disease (CHD)**

CHD is the narrowing of coronary arteries because of spasm or buildup of plaque, which contains cholesterol. This narrowing leads to heart muscle dysfunction or muscle death (heart attack). Although many women are aware of breast cancer as an important cause of death, fewer are aware of the greater prevalence and impact of heart disease in women.

The chart and table below compare death rates among U.S. women from heart disease and breast cancer (data from the National Center for Health Statistics). Death rates for breast cancer are slightly higher than for heart disease among younger women, but in all older age brackets, deaths from heart disease are significantly more common. Overall, three in 10 women die from coronary heart disease, 12 times more than the number of women dying from breast cancer.



<u>Cause of Death</u>	<u>35 - 44 yrs</u>	<u>45 - 54 yrs</u>	<u>55 - 64 yrs</u>	<u>65 - 74 yrs</u>	<u>75 - 84 yrs</u>	<u>85 + years</u>
Heart Disease	16	60	210	601	1837	6363
Breast Cancer	17	44	79	109	145	198

## HORMONE REPLACEMENT THERAPY IN MENOPAUSE

Until 2002, the “first-line” drug thought to be most effective to both prevent osteoporosis and coronary heart disease and to decrease the symptoms of menopause was estrogen replacement therapy (ERT). When used with a progestogen (progesterone or a progestin, a synthetic progesterone-like drug), the combined treatment is called hormone replacement therapy (HRT). But major findings from at least two recent studies, including the 1998 Heart Estrogen and Progestin Replacement Study (HERS) and the 2002 Women’s Health Initiative study (WHI) call into question the benefit-risk balance of HRT. What is the evidence? What are the alternatives to hormone replacement?

### Assessing the Benefits and Risks of Estrogen Use

Many studies have assessed the benefits and the risks of estrogen treatment for the diseases associated with menopause. (See separate table: *Selected Epidemiological Studies of Hormone Therapy for Osteoporosis or Heart Disease*.) With its first results published in July 2002, **the WHI study is the largest and most extensive study on the benefits and risks of HRT.** Here 16,600 healthy postmenopausal women were randomly assigned to take a placebo versus two hormones in combination: Premarin, (conjugated equine estrogens) plus Provera,. Neither the women nor their doctors knew who was taking hormones and who was taking the placebo. The women were followed for 5 years on average and were monitored for clinical outcomes, including heart disease, stroke, blood clots, breast cancer, colon cancer, hip fracture and spine fracture. The women in the two groups were similar in age and health status, so the outcomes can be attributed more confidently to the use of the medication rather than characteristics of the women.

#### What are the main results of the WHI study?

**None of the positive or negative clinical outcomes are different from what has been reported in various other studies, but the high quality of the study compels us to consider its conclusions.** The women who took the hormones were more likely to experience heart attacks, strokes, other blood clots and invasive breast cancer. Women taking hormones were also less likely to experience hip and spine fractures and colon cancer. **The increased or decreased number of cases of each condition was small,** but statistical analysis shows that the differences were not likely due to chance. The study was stopped three years ahead of schedule because of the increase in breast cancer cases among the HRT users. Differences in several

outcomes between the two groups became apparent after the first year of the study. Death rates were not different between the two groups.

The table below details the clinical outcomes in the WHI study, comparing the hormone and placebo groups, showing the frequency of each outcome that would occur among 10,000 women observed for one year.

Outcome	Hormone	Placebo	Annual number of <u>extra</u> cases in hormone users	Annual number of <u>fewer</u> cases in hormone users
Coronary Heart Disease	37	30	7 more	—
Stroke	29	21	8 more	—
Other Blood Clots	34	16	18 more	—
Invasive Breast Cancer	38	30	8 more	—
Colon Cancer	10	16	—	6 fewer
Hip and Spine Fracture	10	15	—	5 fewer

## BENEFITS OF HORMONE REPLACEMENT THERAPY

### Estrogen to Treat Perimenopausal Symptoms

Many studies show that estrogen decreases or eliminates hot flashes, maintains vaginal tone and lubrication, levels out mood, improves memory and other cognitive function, and maintains skin elasticity. These benefits continue to be evaluated in new studies.

### Estrogen to Prevent Osteoporosis

Virtually all studies confirm this benefit of estrogen. A World Health Organization summary of studies regarding osteoporosis and hip fracture concluded that women who take estrogen for more than seven to 10 years have a 50% lower risk of hip or wrist fracture and a 75% lower risk of vertebral fracture.

### Estrogen to Lower Risk of Colon Cancer

Several studies, including the Nurses' Health Study and the WHI showed that those currently using ERT or HRT have a significantly lower risk of colorectal cancer.

## SIDE EFFECTS OF HORMONE REPLACEMENT THERAPY

Breast tenderness, menstrual bleeding, headaches and nausea can occur. Sometimes these symptoms are eased by changing the dose or kind of estrogen used.

## RISKS OF HORMONE REPLACEMENT THERAPY

### Estrogen and Coronary Heart Disease

At least 33 observational studies reviewed postmenopausal estrogen use and coronary heart disease. These studies compared women who chose to take hormones versus those who did not. Most studies show up to 50% lower rate of coronary heart disease for women using HRT. A major concern about these observational studies is whether the women who chose to take HRT differed from the non-hormone users in characteristics that would have affected their risk of coronary heart disease.

In contrast are two recent, randomized controlled trials, where comparable groups of women were assigned randomly to take HRT or placebo. In the HERS study, women with previous heart disease and taking HRT had *more* blood clots in the lungs and legs than women on placebo during the first three years of treatment, and *lower* rates of these complications by the fourth and fifth years of the study. In the WHI study described earlier, women without previous heart disease taking HRT had more heart attacks throughout the study, beginning during the first year of HRT.

## Estrogen and Endometrial Cancer

Endometrial cancer (of the lining of the uterus) affects 3 women out of 100 not on estrogen. The median age of cancer detection is 68 years. Women who use ERT *without progestogen* have an increased risk of endometrial cancer, up to seven times higher than for women not on ERT. The endometrial cancer induced by estrogen is less likely to be fatal than that which occurs in women not taking estrogen. *When a progestogen is added to ERT, there is no increased risk of endometrial cancer.* Therefore, women who have a uterus and are prescribed estrogen during menopause are also given a progestogen to prevent endometrial cancer.

## Estrogen and Ovarian Cancer

Ovarian cancer affects 1 out of 55 women, with 23,000 new cases each year in the United States. It accounts for 4% of all cancers in women but 20% of all cancer deaths in women.

A 2002 study reported ovarian cancer rates in women who had previously been enrolled in the Breast Cancer Detection Demonstration Project, comparing those who chose to take hormones (either ERT or HRT) versus those who chose not to take hormones. Increased rates of ovarian cancer were found among women using ERT for 10 years or more. Among 10,000 women observed for one year, this study found that ERT users would experience 7 ovarian cancers vs. 4 ovarian cancers among the women not taking hormones. Women who took HRT did not experience significantly more ovarian cancers.

## HRT and Breast Cancer

Breast cancer affects approximately 1 in 9 American women, at an average age of 69. One-third of women diagnosed with breast cancer will die of the disease. For reasons not understood, women who develop breast cancer while on HRT have lower mortality than women not on hormones. In general, the risk of death is much greater in younger (premenopausal) women than in women who develop breast cancer later in life.

The WHI study of 2002 comparing placebo versus HRT was stopped early because of the increased number of invasive breast cancers found in the women taking HRT. The results indicated that among 10,000 women observed for one year, 37 cases of breast cancers would be detected among HRT users versus 30 among women taking placebo. However, another arm of this same study continues – among women without a uterus, half taking ERT (estrogen without progestin) and half on placebo. In this ERT versus placebo group, there is no report to date of more breast cancers in either group. Final results should be ready in 2005.

The WHI study of HRT and breast cancer supports earlier findings from data pooled from many smaller studies about breast cancer risk, although some of these studies evaluated ERT while others evaluated HRT. The Collaborative Group on Hormonal Factors in Breast Cancer concludes that “the risk of having breast cancer diagnosed is increased in women using ERT and increases with longer duration of use. This effect ... largely ... disappeared ... about 5 years (after ceasing estrogen use).”

**How much increased breast cancer risk?** The lifetime risk of getting breast cancer increases with the number of years on estrogen replacement therapy.

<u>Years of Estrogen Use</u>	<u>Lifetime Risk of Developing Breast Cancer</u>	<u>Percent of Women Developing Breast Cancer</u>
None	1 woman in 9	9
5	1 woman in 8	12
10	1 woman in 7	14
15	1 woman in 6	16

## The Role of Progestins in Breast Cancer

The WHI study supports earlier findings that Provera<sup>®</sup> increases the risk of breast cancer beyond the risk conferred by estrogen alone. Women who have a uterus and take estrogen must take progesterone or a (synthetic) progestin to reduce their risk of endometrial cancer. We do not know if using newer versions of these agents or taking them on different schedules or doses will decrease the risk of breast cancer while continuing to protect against endometrial cancer.

## BEYOND HRT: OTHER PRESCRIPTION DRUGS FOR MENOPAUSE

### For Symptoms of Perimenopause

In addition to standard HRT, other medications may ease the symptoms of perimenopause. Herbs are discussed in the “complementary medicine” section.

1. “Extra low dose” *birth control pills* (e.g. Lo Estrin<sup>®</sup>) can help bridge the time between perimenopause and postmenopause to help provide contraception, regulate menses (which typically become irregular before ceasing altogether) and ease perimenopausal symptoms. Low dose pills are usually stopped around age 52 and may be replaced by ERT or HRT at that time.
2. *SSRI* (selective serotonin reuptake inhibitor) drugs may help with mood swings. Examples include fluoxetine (Prozac<sup>®</sup>), paroxetine (Paxil<sup>®</sup>), sertraline (Zoloft<sup>®</sup>) and citalopram (Celexa<sup>®</sup>).
3. *Progestogens* (e.g. Provera<sup>®</sup> and Prometrium<sup>®</sup>) taken orally may decrease hot flashes, although they can cause depression, weight gain and breast tenderness. Other new progestogens may cause fewer of these side effects. Some women choose to use over-the-counter progesterone cream for perimenopausal symptoms, although no studies confirm effectiveness here.
4. *Estrogen vaginal creams* have been proven to help ease vaginal dryness and loss of elasticity and may decrease problems with urinary stress incontinence (leaking during coughing or laughing).
5. *Androgens* (male hormones such as methyl testosterone or nandrolone) may increase libido and improve vaginal tone, but current studies do not confirm their safety and efficacy.
6. *Clonidine* is a blood pressure medication occasionally prescribed for hot flashes. It has been shown to decrease hot flashes for up to 8 weeks in women with breast cancer who are taking tamoxifen, a drug with anti-estrogen effect.
7. *Vaginal lubricants* (many kinds, over the counter) may ease vaginal dryness.

### For Osteoporosis

1. *Bisphosphonates* include alendronate (Fosamax<sup>®</sup>), residronate (Actonel<sup>®</sup>), and etidronate (Didronel<sup>®</sup>). These drugs prevent bone reabsorption or loss and are prescribed to prevent or treat osteoporosis. They must be taken on an empty stomach and can cause esophageal irritation. These drugs stay in bone permanently and no studies on long-term safety have been completed. Estrogen taken along with a bisphosphonate may provide added benefit to bone density.
2. *Raloxifene* (Evista<sup>®</sup>) appears to help build bone slightly in early postmenopausal women, but not as well as estrogen or alendronate. Raloxifene is in a class of drugs called selective estrogen receptor modulators (SERMs). Different SERMs appear to vary in their estrogen promoting and estrogen inhibiting effects on different tissues. Potential benefits of raloxifene are not yet confirmed, nor are the risks of long-term use. Raloxifene may be especially promising for women at higher risk of breast cancer, because the drug suppresses growth of breast cancers and has favorable effects on serum cholesterol. It can also worsen hot flashes.
3. *Calcitonin* (Miacalcin<sup>®</sup> injection or nasal spray) is a salmon-based version of a hormone secreted by the parathyroid gland. It inhibits bone reabsorption and slightly increases bone density. Tested primarily in women who already have osteoporosis, it also prevents bone loss. It also may decrease pain from osteoporotic fractures. No studies on long-term safety are complete. Other forms of parathyroid hormone may become available in the next few years.
4. *Fluoride*. Short-acting preparations are no longer used because they did not consistently decrease fracture rate. New slow-release preparations may be safer but efficacy is not yet confirmed.

## For Heart Disease

The WHI and HERS studies do not support using HRT to prevent coronary heart disease in women with or without a history of prior heart disease. Heart disease prevention should focus first on healthy lifestyle. Medications may be necessary to treat risk factors such as hypertension, diabetes and adverse serum lipids (e.g. elevated LDL cholesterol and triglycerides and low HDL cholesterol). Because the incidence of heart disease in women rises sharply after menopause, cholesterol screening for women typically begins at perimenopause.

## TREATMENT OPTIONS FOR ALL PERI- AND POSTMENOPAUSAL WOMEN

### Lifestyle Enhancement:

Common-sense advice for everyone includes: don't smoke, do exercise (a good goal is 30 minutes every day, but every bit helps), correct visual/hearing problems and lose excess weight.

### Healthy diet:

#### Increase Consumption of:

Antioxidant foods (fruits + veggies)

Fiber

Soy (beans, tofu)

Omega-3 fatty acids (many fishes, grains, beans, tofu)

Calcium-rich foods (non-fat milk, yogurt)

#### Decrease Consumption of:

Alcohol (keep to less than 1 drink/day average)

Soft (carbonated) drinks

Animal protein

Saturated and polyunsaturated fats (butter, cottonseed oil)

Caffeine

### Vitamin and mineral supplements for bone health

**Vitamin D:** 200 IU daily until menopause, then 400 IU daily to enhance calcium absorption and bone retention. This is particularly important for housebound people with little exercise or sun exposure. Note that sunscreens block the synthesis of Vitamin D in skin.

**Calcium:** 1000 mg of calcium daily if on estrogen; 1500 mg of calcium daily if not on estrogen.

### Vitamins as antioxidants

Free oxygen radicals are byproducts of metabolism that are implicated in several diseases of aging. Various antioxidants are proposed to neutralize free radicals. The quality of studies investigating these agents varies, so the benefits and optimum doses are not well confirmed. Moderate doses are recommended, and many of these can be found in a single daily multivitamin.

*Vitamin E* (400 IU/every other day)

*Vitamin A* (5000 IU daily)

*Vitamin B complex* (including folate, 1 mg daily, and niacin, 100 mg daily) may decrease mood disturbances of peri- and postmenopause. Higher doses of niacin can worsen hot flashes.

*Vitamin C* (best dose is unknown; the U.S. recommended daily allowance is approximately 80 mg). When used with calcium supplements, high doses of Vitamin C may precipitate kidney stones. Doses over 1000 mg are not recommended.

## “COMPLEMENTARY” MEDICINE APPROACHES TO MENOPAUSE

There are many complementary medicine disciplines active in the United States: naturopathy, Chinese medicine, homeopathy, chiropractic and acupuncture, to name a few. Some of practitioners of these disciplines are state licensed (e.g. acupuncture and chiropractic in California). They often combine body work (such as acupuncture, chiropractic or “energy” work) with herb supplements. In this context, “herbs” means plants used as medicines that are available without prescription. Few rigorous scientific studies have been done on herbs, and doses and preparations are not standardized. Herbs are not regulated by the U.S. Food and Drug Administration and so are not required to be proven effective. Use herbs cautiously; always get their names and contents and discuss them with your clinician.

1. *Plant estrogens* (known as *phytoestrogens*) were first discovered in 1946, when sheep grazing on red clover became infertile. Phytoestrogens are found in soybeans, yams, peas, papayas, cucumbers and black cohosh. Women eating 1 to 3 cups of tofu or 1/4 to 1/2 cup of soy nuts daily have lower total cholesterol and triglycerides and fewer breast cancers. However, studies have not confirmed that the phytoestrogens in soy, called isoflavones, account for these good outcomes.
2. *Progesterone* is found in wild yams (sometimes called “natural” progesterone) and has been added to skin creams. Little of this progesterone may be absorbed when eaten, and absorption through the skin is hard to confirm. Progesterone creams should not be confused with “natural” progesterone pills available only by prescription (e.g. Prometrium<sup>®</sup>).
3. *St. John’s wort* is an herb available without prescription. It has been shown to be more effective than placebo for mild depression. It is being studied for this purpose in comparison to SSRI drugs, but it has been shown to be ineffective for major depression. St. John’s wort can interfere with metabolism of other drugs. It may increase blood pressure and cause extra sensitivity to sunburn.
4. *Kava* is a root that has been suggested for anxiety or insomnia. But this drug has a poor safety profile and may cause irreversible liver damage.
5. *Black cohosh* is a root available in the United States as Remifemin<sup>®</sup>. Published studies comparing it to placebo show no benefit in reducing hot flashes, although it decreased sweating slightly.
6. *Red clover* has not demonstrated benefit in decreasing hot flashes or vaginal changes of menopause.
7. *Don Quai* is a root typically available in mixtures with other herbs. Although reported to have an estrogen-like effect, studies do not show any benefit for hot flashes or vaginal menopause changes. It may increase bleeding tendencies.

## CONTINUING QUESTIONS ABOUT MEDICATION TREATMENTS FOR MENOPAUSE

The more we study, the more we learn ... and the more questions arise, including the following:

1. What is the best dose or regimen for a medicine? Many studies do not compare different doses or ways of taking the medication under study. We presume that the lowest dose necessary for a desired benefit is best.
2. When to start treatment? If a woman has few risk factors, why not wait until she is older to start therapies to prevent illnesses of advanced age? Are women ever too old to start medications?
3. When (if ever) to stop treatment? For example, the benefits of medications to build bone density may be lost after treatment is stopped, so treatment for osteoporosis is recommended *lifelong*. But we have no studies on the long-term safety of these drugs.
4. Are “natural” or newer synthetic hormone choices safer and/or more effective? How important is it to supplement with the exact substance made by the human body (e.g. progesterone) versus a substitute (e.g. Provera<sup>®</sup>)? In the case of estrogen, the type of estrogen made naturally by the body changes through menopause (e.g. less estradiol, more estrone), so which one(s) should be replaced? Will different dosing schedules (e.g. alternating days of medication) be safer and/or more effective?

## HOW TO DECIDE WHAT YOU SHOULD DO FOR PERIMENOPAUSAL SYMPTOMS

Treatment for perimenopausal symptoms is short-term (usually less than 5 years). We would hope that shorter use of hormones confers less risk, but studies have not adequately settled this issue. The WHI study found increasing risk of adverse outcomes beginning in the first year of HRT use, but note that the women in the WHI study were already in menopause. So...what should you do?

1. Assess your symptoms and how much they bother you: hot flashes, insomnia, mood swings, vaginal dryness, change in libido, urinary stress incontinence, “fuzzy” thinking.
2. Assess your values regarding Western and complementary medicine, your patience with symptoms that may ease in the future without intervention, and your willingness to take hormones or other prescription medications or herbal remedies, based on the known risks, benefits and uncertainties.

## HOW TO DECIDE WHAT YOU SHOULD DO TO MANAGE CONDITIONS OF MENOPAUSE

Recent studies contradict earlier theories that HRT prevents heart disease, so a history of heart disease or risk factors for heart disease should not encourage you to take HRT. If you have been taking HRT for “heart protection,” please discuss with your doctor whether or not to continue HRT.

### 1. Assess your risk factors for the major conditions associated with menopause and aging.

A principal benefit of HRT continues to be osteoporosis prevention, and a key risk is breast cancer – so you should balance your personal risk factors for these two conditions, especially if you are considering taking HRT (see table below). Medications to prevent osteoporosis should be considered lifelong. Therefore, concerns about long-term risks of HRT are greater. You want to be sure that you are at increased risk for osteoporosis before you consider taking medications.

#### RISK FACTORS FOR OSTEOPOROSIS

Family history of osteoporosis  
 Advanced age  
 Fracture after age 50  
 Height loss of more than 1 inch  
 Caucasian  
 Underweight  
 Menopause before age 45  
 Various antiseizure medications (e.g. Dilantin)  
 Absence of periods from athletics  
 Rare exercise  
 Lifetime dieting or anorexia  
 Smoking  
 Thyroid hormone replacement in high doses  
 Long-term steroid medication (e.g. prednisone )

#### RISK FACTORS FOR BREAST CANCER

Personal history of breast cancer  
 Breast cancer in mother, sister or daughter  
 First period before age 13  
 First pregnancy completed after age 30  
 Menopause after age 50  
 Overweight  
 History of chest radiation or many chest X-rays  
 No full-term pregnancies  
 High dose birth control pill use > 10 years  
 Rare exercise

### 2. Consider whether you have medical conditions that would increase the risk of side effects or harm from certain medicines.

For example, Fosamax<sup>®</sup> can cause or worsen esophagitis; and estrogen can cause or worsen liver or gall bladder disease, blood clots, endometriosis or migraine.

### 3. Assess your personal values.

- Although all the conditions associated with menopause and aging merit attention, your own feelings and priorities about each one may differ. Which ones concern you most?
- What are your feelings about taking medications over the long term?
- Are you willing to undergo surveillance tests required while on medications (e.g. mammography, bone density study, possible endometrial biopsy)?
- What can you do to maximize your lifestyle? Can you take vitamin and mineral supplements regularly, eat healthy foods, exercise regularly, limit alcohol intake, avoid smoking?

### 4. Finally (and initially), talk with your doctor about your risks, concerns and choices.

Remember that no decision is irreversible. All choices about whether to treat and which treatments to use should be revisited regularly. Reconsider your decision in light of your own changing risks, your response to treatment or lack of treatment, new medications and new research findings.

## **WHERE TO LEARN MORE**

The Palo Alto Medical Foundation's Web site provides a wide variety of regularly updated health information: [pamf.org](http://pamf.org)

### **Palo Alto Medical Foundation's Health Resource Centers**

The centers are staffed by health educators and trained volunteers. They have a variety of books and videos, anatomic models, CD-ROMS, and health-related Internet access. They are free and open to the public for browsing and questions.

Community Health Resource Center  
Palo Alto Medical Clinic  
650-614-3200

Family Health Resource Center  
Fremont Center  
510-623-2231