**Defining** as the permanent end of ovulation and menses, menopause is a natural and normal event—not a disease or disorder. Yet menopause symptoms may significantly affect quality of life. This time in a woman’s life can be challenging. What’s more, certain health issues (such as breast cancer risk and breast cancer treatments) may complicate the menopause experience. Women may be confused about menopause and seek guidance about the changes they’re experiencing.

You can help improve their quality of life by providing education and counseling on menopause symptom management, bleeding, and other problems that may arise during this period. By increasing your menopause knowledge base, you can better address patients’ concerns and questions.

**Menopause signs and symptoms**
A wide range of signs and symptoms can occur during the menopause transition and early postmenopausal years. (See Defining menopause-related terms.)

**Vasomotor symptoms**
The most common menopause symptoms are vasomotor and include hot flashes and sweats. A hot flash is a sudden sensation of intense heat starting in the chest or neck area that lasts several minutes. Some women may report a hot sensation that persists throughout the day and varies in intensity. An associated redness of the face and neck is called a hot flush.

**Sleep disturbances**
Sleep disturbances are common during the menopause transition and into the early postmenopausal years. They may range from difficulty falling asleep to frequent awakening throughout the night. Although hot flashes and night sweats may contribute to sleep disturbances, reports of insomnia increase as women reach midlife. Sometimes sleep disturbances don’t result from vasomotor symptoms but from age-related midlife changes or such chronic conditions as arthritis, fibromyalgia, respiratory disease, coronary artery disease, or GI problems.

**Hair, skin, and eye changes**
During midlife, many women experience changes in their hair, skin, and eyes. Thinning of scalp hair and growth of unwanted facial hair probably stem from an increased ratio of androgen to estrogen during this time. Changes in hair growth and hair loss may significantly affect a woman’s body image and self-esteem.

Midlife skin changes may include collagen and elastin loss, dry skin, and acne. Decreased collagen and skin thickness probably result from reduced estrogen levels. Some women experience a 30% to 40% reduction in skin collagen within 5 years after menopause. Xerosis (dry skin), the most common condition related to aging skin, results from decreased oil production in the skin. Some women also develop acne, probably from the increased androgen-estrogen ratio.

Midlife eye changes may include dry eyes, blurred vision, increased

---

**Learning Objectives**
1. Differentiate menopause-related terms.
2. Discuss management of physiologic menopause symptoms.
3. Explain how to promote bone health in menopausal women.
4. Identify at least two strategies for addressing sexuality concerns related to menopause.

---

The author and planners of this CNE activity have disclosed no relevant financial relationships with any commercial companies pertaining to this activity. See the last page of the article to learn how to earn CNE credit.

Expiration: 12/31/16
lacrimation, tired eyes, and swollen and reddened eyes. Presbyopia may arise before menopause and necessitate use of reading glasses by the postmenopausal period. Occular changes, specifically those linked to dry eyes, also may result from decreased androgen levels. (Adequate androgen helps maintain an anti-inflammatory environment in the eye.)

**Memory problems and mood changes**

Sometimes called “brain fog,” memory problems may cause difficulty finding the right words or an overall haziness, similar to what some postpartum women report. Changes in estrogen levels are thought to contribute to memory problems, which usually are transient.

Mood changes associated with the menopause transition and postmenopause most likely result from hormone fluctuations that influence serotonin, dopamine, and norepinephrine—brain neurotransmitters that regulate mood, sense of well-being, appetite, and libido. The risk for depression rises during the menopause transition, especially in women with a history of depression.

**Weight changes**

Many menopausal women report weight changes or inability to lose weight. Although no documented link exists between weight gain and menopause, one study found women gain 5 lbs on average during the menopause transition. Menopause also is associated with increased abdominal fat and decreased lean body mass. Decreased muscle mass is linked to declining hormone levels. Muscle burns more calories than fat, so decreased muscle mass may contribute to difficulty losing weight during menopause.

**Vaginal changes**

Vaginal changes are among the most profound symptoms of the menopause transition and postmenopause and may persist into the postmenopausal years. Such changes include decreased lubrication and vaginal dryness.

Sometimes vaginal changes are more severe and progress to atrophic vaginitis. Resulting from vaginal estrogen loss, atrophic vaginitis is marked by significant vaginal mucosa changes, including a more alkaline pH. Also, the vaginal flora—previously rich in lactobacilli—is replaced by a more diverse flora that includes pathogenic organisms associated with urinary tract infections. As a result, the vaginal walls become thin, pale, dry, and inflamed. These changes can cause pain during intercourse and speculum exams, as well as increased urinary symptoms, such as urine leakage and frequent bladder infections.

**Defining menopause-related terms**

To provide effective teaching, make sure you’re familiar with terms related to menopause.

**Early menopause:** a vague term commonly used to denote natural or induced menopause that occurs well before age 51; includes premature natural menopause (defined below).

**Induced menopause:** menses cessation caused by surgical or medical interventions (including chemotherapy and pelvic radiation) that alter or destroy ovarian function.

**Menopause:** permanent cessation of ovulation and menses. No adequate biological markers predict when menopause will occur or confirm the menopause transition (defined below). A woman is considered menopausal only when she has had no menstrual bleeding for 12 consecutive months. After her final menstrual period (FMP), she is considered postmenopausal.

**Menopause transition:** also called perimenopause; usually begins with menstrual-pattern variations, ends with the FMP, and varies in length. One study found the menopause transition commonly starts about 4 years before the FMP, with hormone levels dropping about 2 years before the FMP.

**Natural (spontaneous) menopause:** absence of a menstrual period for 12 consecutive months, characterized by a natural reduction in ovarian hormone secretion. The last menstrual period before menopause is the FMP. The average age of natural menopause is 51.

**Perimenopause:** see “Menopause transition” above.

**Postmenopause:** time span that starts with the FMP and ends at death, regardless of whether menopause was natural or premature.

**Premature natural menopause:** noninduced menopause occurring before age 40.

**Premature (primary) ovarian insufficiency:** absence of a menstrual period in a woman younger than age 40; may be transient.

**Premenopause:** the entire period before the FMP; in other words, the entire reproductive cycle. However, many people use this term loosely to refer to the time period approaching menopause. Premenopause is not synonymous with peri-menopause or the menopause transition.

**Managing menopause symptoms**

Management should be patient-centered, tailored to the patient’s specific symptoms and risk profile. It may include hormonal and nonhormonal pharmacologic therapies and various nonpharmaceutical approaches. Nurses can play a valuable role in teaching patients about management options, as well as in screening women for menopause symptoms and encouraging them to ask about treatment options. (See Menopause resources for patients and healthcare professionals.)

**Managing vasomotor symptoms**

Hormonal or nonhormonal pharmacologic therapies may be used to ease vasomotor symptoms. The only medications approved by the
Food and Drug Administration (FDA) to treat hot flashes and night sweats are hormonal therapies (HT), such as estrogen and progesterone therapy (EPT) for patients with a uterus, or estrogen therapy (ET) alone for those without a uterus. For women with a uterus, estrogen and progesterone must be used together, because unopposed estrogen may cause abnormal cell growth in the endometrial lining of the uterus.

In 2012, the North American Menopause Society (NAMS) published an updated position statement on HT for postmenopausal women, stating that it remains the most effective treatment for hot flashes and night sweats. But women considering HT should discuss their health history with their healthcare providers. For some women, HT may increase the risk of blood clots, heart disease, stroke, and breast cancer. (See Managing menopause symptoms in women with breast cancer.)

How long can a woman safely use HT? This depends on whether she takes EPT or ET. EPT use longer than 3 to 5 years is linked to an increased breast cancer risk. In contrast, ET use up to 7 years doesn’t increase breast cancer risk, as shown by the Women’s Health Initiative (WHI) study. The risk of stroke and blood clots may rise with the use of HT over time, but the risk is low for healthy women younger than age 60 (fewer than one in every 1,000 women per year on HT).

The much-anticipated Kronos EarlyEstrogen Prevention Study found that EPT initiated soon after menopause relieves menopausal symptoms, appears to be safe, and improves mood, bone density, and several markers of cardiovascular health. The cognitive portion of the study found that women on EPT had improved memory recall.

Women and healthcare professionals alike may be confused by bioidentical hormones, which are molecularly similar or identical to what our bodies naturally produce. In FDA-approved formulations, bioidentical HT is available as estradiol and progesterone. Compounding pharmacies also may produce bioidentical HT, in which case they’re called custom-compounded HT. But these custom-compounded preparations aren’t FDA approved and may not have been tested for effectiveness, safety, dose accuracy, or purity. Also, they have the same risk profile as FDA-approved HT preparations. They’re sometimes prescribed when certain medications are available only as compounded formulations.

For women with a medical history that increases the risks of using HT—including a history of hormone-dependent cancers, such as breast or endometrial cancer, blood clots, or stroke—nonhormonal pharmacologic options may be an option for treating vasomotor symptoms. Although used off-label, these therapies have been addressed in the literature. For instance, serotonin and norepinephrine reuptake inhibitors (SNRIs) are safe and effective in treating menopause symptoms. The SNRI venlafaxine may help decrease hot flashes, night sweats, and depression. A newer SNRI, desvenlafaxine, has been studied extensively and may help reduce hot flashes, night sweats, and depression. Other drugs used off-label to relieve vasomotor symptoms include clonidine and gabapentin. (See Help for hot flashes and night sweats.)

Managing vaginal symptoms
Management of vaginal symptoms may include pharmacologic and nonpharmacologic therapies. The 2007 NAMS position statement recommended topical estrogen as the most effective FDA-approved medication for treating atrophic vaginitis. Available in intravaginal tablets, vaginal rings, and intravaginal creams, it may reverse vaginal epithelial changes and significantly improve atrophic vaginitis.

Topical dehydroepiandrosterone (DHEA) intravaginal ovules also may be an option for atrophic vaginitis. Although not FDA approved and available only from specialized compounding pharmacies, intravaginal DHEA used alone
Managing menopause symptoms in patients with breast cancer

Breast cancer treatments may include chemotherapy and hormone-blocking drugs, which may induce menopause. Women who’ve had these treatments constitute a unique population in terms of menopause symptom management because they can’t safely use hormone replacement therapy. When counseling them, use a patient-centered approach and be sure to cover alternative therapies, such as off-label medications and nonpharmacologic therapies that may help relieve menopause symptoms.

Be aware, too, that some cancer treatments can cause profound atrophic vaginitis, and that topical estrogen is controversial for breast cancer patients. Urge patients to discuss symptoms with their oncology providers, who should help them weigh the risks and benefits of using topical estrogen if needed. Inform them that the DHEA intravaginal ovule may be a good alternative for atrophic vaginitis; it has been shown not to raise serum estradiol (the most potent estrogen in humans) or testosterone levels.

Caring for women with a history of breast cancer requires specialized knowledge and expertise. The author of this article is a certified menopause practitioner who practices in a comprehensive breast center. She has developed a clinic dedicated to helping women with breast cancer manage menopausal symptoms. At the clinic, these patients are assessed for menopausal symptoms, participate in creating a patient-centered care plan, and receive extensive education and counseling.

Managing bleeding irregularities

Some women experience bleeding irregularities throughout the menopause transition. Because menstrual cycles may change with respect to flow, length, and frequency, women may have trouble determining if bleeding is abnormal during this time. Bleeding variations may result from the menopause transition, uterine fibroids, endometriosis, adenomyosis, endometrial hyperplasia, or uterine cancer.

Inform patients that any bleeding after the final menstrual period (FMP) is considered abnormal and should be evaluated. Counsel them to discuss menstrual irregularities with their healthcare providers. Irregular bleeding may be evaluated with an intravaginal pelvic ultrasound exam and in some cases, endometrial sampling (dilation and curettage or endometrial biopsy). Management depends on the cause of bleeding and pathology findings.

Helping women maintain bone health

Healthcare providers should discuss bone health with women during the menopause transition. Menopause is linked directly to bone thinning and osteoporosis. Approximately 5 to 7 years after her FMP, a woman may lose 20% to 30% of her bone mass. Risk factors that contribute to osteoporosis include a thin or small frame, a family history of osteoporosis, a personal history of a fracture after age 40, cigarette smoking, excessive alcohol use, inactivity, and advanced age.

Experts vary on recommendations for bone mineral density (BMD) testing. Some recommend a BMD test within 2 years of the FMP. Others believe women with no known risk factors should begin BMD testing at age 65. Testing may be offered sooner for women who have known risk factors or experience nontraumatic fractures. Counsel women about risks associated with osteoporosis and encourage them to discuss their risks with their healthcare providers.

In 2013, the U.S. Preventive Services Task Force concluded that not enough evidence exists to assess the balance of the benefits and harms of daily supplementation with more than 400 international units (IU) of vitamin D3 and more than 1,000 mg of calcium for primary prevention of fractures in noninstitutionalized postmenopausal women. Also, it recommends against daily supplementation with 400 IU or less of vitamin D3 and 1,000 mg or less of calcium for primary prevention of fractures in these women.

On the other hand, the Institute of Medicine recommends a daily dietary allowance of 1,200 mg of calcium daily for women older than age 50, achieved by eating calcium-rich foods. Most dairy products and calcium-rich foods contain approximately 300 mg of calcium per serving. Calcium may be supplemented in women who don’t get enough daily calcium. Advise patients to space out dietary and supplemental calcium doses during the day because the body can’t absorb more than 500 mg over a 2-hour period.

Addressing sexuality concerns

Women who are postmenopausal or in the menopause transition commonly report decreased libido, reduced sexual functioning, or both. Advise them that pharma-
logic and nonpharmacologic therapies can be used to treat atrophic vaginitis and relieve pain on intercourse. However, no FDA-approved medications currently are available to treat decreased libido in women; studies haven’t confirmed a beneficial effect of estrogen on libido.

Be aware that changes in sexual functioning aren’t considered a problem unless the woman thinks they are. As some women age, they’re content with less sexual activity, whereas others are distressed by their lack of sexual desire.

Offer appropriate counseling for women experiencing sexuality concerns, along with their partners. Counseling should include educating couples about normal age-related sexual responses in women, including decreased lubrication, increased time needed for stimulation and arousal, reduced orgasmic contractions, and decreased clitoral sensitivity. You might suggest that couples take a warm bath before sexual activity, extend foreplay longer to promote arousal, and engage in sex in the morning when energy levels are higher. Inform patients that using alternative sexual positions may increase comfort and stimulation. If appropriate, suggest that patients and their partners consider experimenting with erotic clothing and materials, massage, oral stimulation, and masturbation.

Other nursing considerations
When teaching patients about menopause, emphasize it’s a normal event with varying symptoms, which can be managed effectively through various pharmacologic and nonpharmacologic therapies. As appropriate, follow up with them by telephone to assess the effectiveness of management, help validate their concerns, and provide additional support. Finally, stay up-to-date on the current literature on menopause and women’s health so you can be sure you’re using an evidence-based approach when counseling and educating women.

Selected references

HELP FOR HOT FLASHES AND NIGHT SWEATS

Various products can help women manage vasomotor symptoms without drugs. Here are a few examples.
- The Chillow® Pillow is a pillow insert that uses water to maintain a cool temperature for several hours.
- Cool Off® towels are individual wipes that are cool and soothing.
- Nondisposable cooling towels made of various materials, such as the Chill-Its towel and the Frogg Toggs Chilly Pad towel, cool to a significantly lower temperature than ambient air.
- Special pajamas and sheets made of a moisture-wicking material help maintain dryness during sleep.

To help prevent hot flashes, advise patients to avoid common triggers, such as alcohol, caffeine, spicy foods, tight clothing, hot environments, and cigarette smoking.


Visit www.AmericanNurseToday.com/Archives.aspx for a complete list of selected references.

Lisa Astalos Chism is a nurse practitioner/certified menopause practitioner, doctor of nursing practice, and clinical director of the Women’s Wellness Clinic at the Karmanos Cancer Institute in Detroit and in Farmington Hills, Michigan.
7. Which of the following statements related to memory and mood during menopause is correct?
   a. The risk of depression rises during menopause.
   b. Memory problems tend to persist.
   c. Hormone fluctuations do not contribute to mood changes.
   d. Changes in levels of insulin contribute to memory problems.

8. Which of the following statements about vaginal changes during menopause is accurate?
   a. The vaginal wall becomes moister.
   b. The vaginal wall becomes thicker.
   c. Flora rich in lactobacilli is replaced by a more diverse flora.
   d. A more diverse flora is replaced by one rich in lactobacilli.

9. Which of the following statements about pharmacologic therapy to ease vasomotor symptoms is correct?
   a. In women with a uterus, estrogen and progesterone are given together.
   b. In women with a uterus, estrogen therapy is given alone.
   c. In women without a uterus, estrogen and progesterone are given together.
   d. In women without a uterus, progesterone therapy is given alone.

10. When caring for menopausal women who’ve had breast cancer, keep in mind that:
    a. They should not use off-label medications to relieve symptoms.
    b. Progesterone therapy is recommended.
    c. They can be made by compounding pharmacies, who are required to test for safety, dose accuracy, and purity.

12. Which statement about bioidentical hormones is correct?
    a. They are molecularly similar to what our bodies naturally produce.
    b. They are quite different from what our bodies naturally produce.
    c. They can be made by compounding pharmacies, the product is FDA approved.
    d. They can be made by compounding pharmacies, who are required to test for safety, dose accuracy, and purity.

13. According to the North American Menopause Society (NAMS), the most effective medication approved by the FDA for treating atrophic vaginitis is:
    a. topical estrogen.
    b. topical progesterone.
    c. a serotonin reuptake inhibitor.
    d. a norepinephrine reuptake inhibitor.

14. A patient who has had her final menstrual period tells you she is experiencing intermittent vaginal bleeding. You should advise her to:
    a. make an appointment with her healthcare provider for evaluation.
    b. call her healthcare provider if the bleeding worsens.
    c. start using an off-label vaginal lubricant.
    d. try using a vaginal stimulator to increase circulation.

15. Risk factors for osteoporosis include all of the following except:
    a. history of fracture before age 40.
    b. cigarette smoking.
    c. excessive alcohol use.
    d. a large frame.

16. Which statement about calcium and vitamin D supplementation in postmenopausal women is correct?
    a. The Institute of Medicine recommends a daily dietary allowance of 500 mg of calcium for women older than age 50.
    b. The Institute of Medicine recommends a daily dietary allowance of 800 mg of calcium for women older than age 50.
    c. The U.S. Preventive Services Task Force recommends against daily supplementation with 1,000 mg or less of calcium.
    d. The U.S. Preventive Services Task Force recommends daily supplementation of 400 IU of vitamin D.