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FOR TECHNICIANS

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Instructions

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3. Your reply card will be marked and you will be advised of your results in a letter from *Tech Talk*.
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Menopause

By Christine Stewart R.Ph., B.Sc.Phm.

Statement of objectives

Upon completion of this lesson, the pharmacy technician will be able to:

1. Understand the different stages of menopause.
2. Describe the symptoms associated with menopause.
3. Understand lifestyle modifications and the nonprescription treatments for menopause.
4. Understand the pharmacy technician's role in assisting menopausal women.

Introduction

In July 2002, the Women's Health Initiative (WHI) formally announced that they were halting the combined hormone replacement arm of their study. They found that women who took estrogen plus a progestin for more than five years were at an increased risk for cardiovascular disease, breast cancer and possibly dementia compared with the placebo group.¹ New insights into the benefits and risks associated with hormone replacement therapy for menopausal women continue to emerge from this and other sources.

Due to the WHI study and its highly publicized results, 3.1 million fewer prescriptions for hormone replacement therapy were dispensed in Canada during 2003, representing a decrease of 26.8% from the previous year.² This has resulted in women seeking non-hormonal alternatives to manage the many changes that occur during menopause. The pharmacist and pharmacy technician are in an ideal position to provide assistance to women as they search for safe and effective alternatives.

Menopause

Menopause is the cessation of menstruation for at least 12 consecutive months. It occurs naturally when the ovaries stop producing estrogen. The average age for menopause is 51;³ however, it can occur anytime between the ages 42 and 56. Given that the life expectancy

for women in North America is more than 80 years, menopause will occur when women have yet to experience more than one-third of their total life span.⁴ Menopause is a normal, natural part of aging—not a medical disease or illness. Terms used to define menopause are outlined in Table 1.

Table 1: Menopause definitions^{3,5}

Natural Menopause	The permanent cessation of menstruation resulting from the loss of ovarian follicular activity. Natural menopause is recognized to have occurred after 12 consecutive months of amenorrhoea (absence of menstruation). Menopause occurs with the final menstrual period, which is known with certainty only in retrospect one year or more after the event.
Perimenopause	The transitional period immediately prior to menopause and the first year after menopause.
Induced menopause	Immediate menopause caused by a medical or surgical intervention that removes or seriously damages both ovaries.
Premature menopause	Menopause that occurs before the age of 40.
Postmenopause	The period of time after the final menstrual period.

Some of the significant changes and troublesome symptoms for which women may seek treatment are discussed in more detail below.

Symptoms

Commonly reported symptoms during perimenopause are summarized in Table 2. Some women may continue to experience these symptoms during postmenopause.

Changes in menstrual periods⁵

As a woman experiences perimenopause, changes in the duration, frequency and amount of menstrual flow are common. About 90% of women experience changes for about four to eight years before menopause is reached. Menstrual cycle changes can be subtle and a variety of possible changes exist. For example, a woman's cycle may get shorter, occurring more often than every 28 days. Bleeding may vary in length, lasting a few days with spotting or flow may be heavier and last longer. It is not uncommon to miss periods altogether. Each woman will notice unique changes to her cycle.

Hot flashes⁷

The vasomotor symptoms associated with menopausal changes are commonly termed "hot flashes". Hot flashes are recurrent, transient episodes of flushing, perspiration, and a sensation ranging from

Table 2: Perimenopausal symptoms^{5,6}

- Hot flashes
- Night sweats
- Vaginal dryness
- Painful intercourse
- Breast tenderness
- Insomnia
- Joint and muscle pain
- Urinary incontinence
- Changes in libido
- Headaches
- Fatigue
- Anxiety
- Mood swings
- Depression
- Memory Loss

warmth to intense heat on the upper body and face. When they occur with perspiration during sleep, they are called night sweats. About 80% of perimenopausal women in Western countries report hot flashes, but the proportion of women is as low as 10% in some East Asian countries.⁸ Hot flashes diminish over time and will stop without therapy. However, the exact timing cannot be predicted. Many women experience hot flashes severe enough to impair their quality of life. These women may seek treatment and, although the therapies do not "cure" hot flashes, they can provide significant relief.

Sleep disturbances⁹

Menopausal women may have difficulty falling asleep, wake often during the night, or wake early. Insomnia is commonly

caused by night sweats but can occur in women whether they have night sweats or not.

Psychological symptoms^{5,6}

Changes in hormone levels may result in moodiness, anxiety, irritability, nervousness or mild depression. However, current evidence does not support an association between estrogen levels during the menopausal transition and the onset of clinical depression.

Vaginal symptoms⁵

Vaginal symptoms usually do not become a problem until several years after the onset of menopause. The decrease in the amount of estrogen causes the lining of the vagina to become thin, dry and less elastic—a condition known as atrophy. Vaginal secretions also diminish, which means there is less vaginal lubrication. Therefore, during intercourse, the vaginal tissues may become inflamed with a risk of tearing, bleeding and pain.

Urinary tract changes⁵

Incontinence (involuntary leakage of urine) and urinary tract infections are more common with aging. Lack of estrogen can cause thinning of the urethra and the surrounding pelvic muscles may become weaker. This may lead to a number of conditions, such as frequency (the need to urinate often), nocturia (waking up at night to urinate), stress incontinence (leakage of urine when

coughing, sneezing or laughing), and urgency (the urgent need to urinate).

Osteoporosis

Osteoporosis is a significant postmenopausal health concern. Osteoporosis causes bones to become weaker, which can result in fractures. It is estimated to affect two million Canadian women and accounts for \$1.3 billion in annual treatment costs.¹⁰ During childhood and adolescence bones grow, reaching their strongest point between the ages of 20 and 30. After that, gradual bone loss occurs gradually for the rest of a woman's life. Bone loss may accelerate due to declining estrogen levels during the first few years after menopause, and over time women may notice a loss of height and curvature of the spine. Women who have other risk factors for osteoporosis may use prescription therapy to prevent osteoporosis. Early detection of bone loss by measuring bone mineral density (BMD) will allow for effective treatments to be started. The primary goal in treating osteoporosis is to prevent fractures by slowing the progression of bone loss, maintaining bone strength and preventing falls.

Goals of therapy

Not all women seek treatment for their menopausal symptoms. Those who do aim to maintain a good quality of life by relieving undesirable symptoms (e.g., hot flashes, and urinary and vaginal symptoms) and to prevent the long-term complications associated with osteoporosis.

Lifestyle modifications

The first step in managing menopausal changes is to maximize healthy lifestyles. Women who have a body mass index (BMI) greater than 30 kg/m² are twice as likely to experience moderate to severe

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Correction Notice. The reviewer of
the March/April CE lesson on regula-
tion and certification was Audrey
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College; Pharmacy Technician
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for the omission.

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hot flashes as women whose BMI is less than 25 kg/m². Cigarette smoking also increases the frequency and severity of hot flashes.¹¹ Regular weight-bearing exercise, stopping smoking and a healthy diet to control weight will not only improve vasomotor symptoms but also will lower the risk of cardiovascular disease, breast cancer and osteoporosis.

Although there is no clinical evidence to support a relationship between the frequency and severity of hot flashes and suggested triggers such as alcohol, caffeine, hot or spicy foods, stress, hot drinks or a warm environment, many women report that avoiding these triggers can help manage their hot flashes. Additional measures such as using a fan, dressing in layers, eating cold foods or beverages and lowering the thermostat will help to lower body temperature.

Kegel exercises may be of value for women who are experiencing incontinence. Kegel exercises involve the contraction and relaxation of the pelvic muscles, with each contraction held for four to eight seconds. These exercises can be repeated several times a day to help strengthen the muscles that control the bladder.

Nonprescription therapy

Vaginal moisturizers and vaginal lubricants are used to treat the discomfort associated with vaginal dryness. Vaginal lubricants can be used prior to intercourse to provide lubrication. Vaginal moisturizers are used on a regular basis (usually three times a week) to maintain vaginal moisture. Moisturizers are not intended to be used prior to intercourse as a substitute for a lubricant.¹²

Natural health products

A number of natural health products (NHPs) claim to reduce the symptoms of menopause. Only recently have controlled clinical trials

begun to emerge to either support or refute these claims. Health Canada is also implementing new guidelines and legislation to ensure the safety and efficacy of NHPs. But until the legislation is in full effect patients have to accept the potential risks of NHPs. In order to treat patients in a safe and effective manner it is essential that appropriate consultation take place with the pharmacist.

Soy (*Glycine max*) and soy isoflavone belong to a group of natural products called phytoestrogens, which are derived from plant sources. In addition to soy, phytoestrogens are commonly found in many foods, such as chickpeas or garbanzo beans, lentils, beans, flaxseed, sunflower seeds and sprouts.

Consuming 20 to 60 grams per day of soy protein, containing 34 to 76 mg of isoflavones, seems to modestly decrease hot flashes in some postmenopausal women. However, not all studies have found that soy helps. Soy extracts in tablet form that provide 50 mg of isoflavones daily may also have some beneficial effects.¹³ Soy may also possibly be effective in reducing the risk of osteoporosis. There is some evidence that women who consume 47 to 62 mg of soy isoflavones per day in the diet have higher BMD.¹⁴ Soy protein has been shown to reduce total cholesterol levels which can lead to cardiovascular risk reduction. Soy has not been shown to be effective in preventing hot flashes in breast cancer survivors and concern still remains that soy may stimulate cancer cells and contribute to endometrial hyperplasia.

Red clover (*Trifolium pratense*) has been promoted and used to treat hot flashes. It contains isoflavones similar to soy however the evidence to support its effectiveness for treating hot flashes and menopausal symptoms is not

Table 3: Useful websites for menopause information

- The North American Menopause Society, www.menopause.org
- Society of Obstetricians and Gynaecologists of Canada, www.sogc.org
- The Canadian Women's Health Network, www.cwhn.ca
- Osteoporosis Society of Canada, www.osteoporosis.ca

conclusive. Some preliminary evidence suggests that red clover may reduce the loss of spinal BMD in pre- and perimenopausal women.¹⁴

Black cohosh (*Cimicifuga racemosa*) is a top selling herb for the treatment of menopausal symptoms and may be of help in alleviating hot flashes, anxiety and mild depression. The specific mechanism of action is not clear; however, black cohosh seems to be safe and well tolerated. Treatment for four weeks is usually required before there is a significant improvement in symptoms. Black cohosh has not been adequately studied for long-term use and therefore treatment should be limited to no more than six months. Even though black cohosh might help some patients, it does not appear to be particularly effective in treating hot flashes in breast cancer survivors.¹⁴

Dong Quai (*Angelica sinensis*) is one of the oldest and most established therapeutic agents used in traditional Chinese medicine for managing menopausal symptoms.¹⁴ It is often used in combination with other herbs. However, when used in combination it is very difficult to ascertain which constituent is producing the effect.

Evening Primrose Oil (*Oenothera biennis*) is often used to manage menopausal symptoms although studies to support its effectiveness have produced conflicting results. It has also been combined with fish oils and calcium for the treatment of osteoporosis.¹⁴

Adequate intake of calcium and vitamin D are essential to help maintain bone mass. If a woman is not meeting her daily requirements of calcium and vitamin D from dietary sources, she will require supplementation. The current Canadian osteoporosis guidelines recommend a daily intake of 1,500 mg elemental calcium and 800 IU vitamin D for women over 50.¹⁵ Foods that provide a source of dietary calcium are milk, cheese, yogurt, salmon with bones, broccoli, almonds, tofu, soybeans and bananas. Milk and some breads are fortified with vitamin D.

Technician's role

The pharmacy technician plays a valuable role in identifying patients who would benefit from consultation with the pharmacist about menopause and osteoporosis. Consider the following suggestions:

- Maintain up-to-date references, pamphlets and brochures on menopause to complement the consultation process. Some useful websites to source these materials can be found in Table 3.
- Ensure inventory of products for menopause are well stocked and displayed.
- Maintain complete, up-to-date patient profiles that include information such as weight, smoking status and medical conditions (e.g., osteoporosis).
- Identify patients (e.g., women who have discontinued hormone therapy or who are purchasing herbal products com-

monly used for menopause) who may benefit from consultation with the pharmacist.

- Assist in the development and execution of menopause clinic days.

Conclusion

With concern about the safety of hormonal products, more women are turning to nonprescription alternatives and natural medicines to alleviate their menopausal symptoms. The pharmacy technician is in an ideal position to offer assistance and referral to the pharmacist in order to address the many questions that women will have.

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QUESTIONS

Please select the BEST ANSWER for each multiple choice question.

1. Which of the following statement(s) is/are correct regarding menopause?

- a. The average age of menopause is 65
- b. Menopause is a disease
- c. Osteoporosis is a significant postmenopausal concern
- d. The life expectancy of North American women is 75 years
- e. Menopause is not a normal process of aging

2. Which of the following statement(s) is/are correct?

- a. Perimenopause is defined as the end of menstruation
- b. Premature menopause occurs after age 40
- c. Menopause is confirmed after 12 consecutive months without a menstrual period or when the ovaries are removed or damaged
- d. Postmenopause is all the years before menopause.
- e. None of the above

3. Which of the following symptoms is/are commonly reported during perimenopause?

- a. Hot flashes
- b. Mood swings
- c. Vaginal dryness
- d. All of the above
- e. A and C only

4. Kegel exercises are:

- a. Excellent exercises for losing weight
- b. Weight bearing exercises
- c. Used to strengthen abdominal muscles
- d. May be of value for women experiencing incontinence
- e. None of the above

5. Phytoestrogens can be found in which of the following foods?

- a. Chickpeas
- b. Lentils
- c. Flaxseed
- d. All of the above
- e. None of a, b or c

6. Black cohosh is:

- a. Used in traditional Chinese medicine

b. Helpful for breast cancer survivors who suffer from hot flashes

- c. A source of Vitamin D
- d. A and B
- e. None of the above

7. Mrs. D is 55 years old and postmenopausal. Her mother recently fractured her hip. Which of the following statement(s) is/are true?

- a. Mrs. D may be at risk for osteoporosis and should consult with the pharmacist
- b. Mrs. D's daily requirement for Vitamin D is 800 IU
- c. Mrs. D should take measures to prevent falls
- d. All of the above
- e. None of a, b or c

8. Which of the following statement(s) is/are true about use of vaginal moisturizers in menopausal women?

- a. Vaginal moisturizers are used prior to intercourse
- b. Vaginal moisturizers are used daily
- c. Vaginal moisturizers are used three times weekly

d. Vaginal moisturizers are not helpful in treating vaginal dryness

- e. None of the above

9. Which of the following NHPs has been used to treat hot flashes?

- a. Soy isoflavones
- b. Soy protein
- c. Red Clover
- d. Black Cohosh
- e. All of the above

10. Which of the following statements is true?

- a. Red Clover contains isoflavones similar to soy
- b. The mechanism of action of Black Cohosh is well understood
- c. The recommended daily intake of elemental calcium for women over 50 is 1000 mg
- d. Evening primrose oil was much better than placebo in relieving hot flashes
- e. In 2003 there was an increase in the number of prescriptions for hormone therapy

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