Midlife—located between the ages of 40 and 60—is an ongoing time of transition. For most women, the midlife years are a time of increased feelings of physical and emotional well-being. Midlife offers many women a greater sense of control over many parts of their lives. It may be a time for you to establish new goals beyond those of your youth and think about where to go next in your life. Maybe your children are older—even living on their own—giving you free time you have not had in years. You may switch to a new career, go back to school, become active in your community, or take up new hobbies.

Your body changes at midlife, too. Usually beginning in your mid-40s, you enter a transition phase called perimenopause. Perimenopause is a time of gradual change in hormone levels and menstrual cycles. In general, perimenopause lasts from age 45 years to age 55 years, although the timing varies among women. During this time, the
**ovaries** get smaller and produce less **estrogen**. Other changes occur in your body, as well. Because these changes happen slowly over time, you may not be aware of them.

**Menopause** is defined as the absence of menstrual periods for at least 1 year. On average, the age at which American women have their last menstrual period is 51 years.

Perimenopause and menopause are natural events. Although all women go through the same basic changes, each woman feels and copes with these changes differently. Some women have mild symptoms during perimenopause, while for other women symptoms may be more severe. No two women seem to experience perimenopause in exactly the same way.

It is a good idea to approach menopause fully informed and with a positive mind-set. By knowing what to expect, you can take steps to ease symptoms and prevent health problems later in life.

**Your Menstrual Cycle**

During your childbearing years, monthly changes in two hormones—estrogen and **progesterone**—bring about your menstrual period. Estrogen and progesterone are made by the ovaries. The ovaries also make other hormones, including the male hormone testosterone.

The ovaries contain thousands of eggs. Each month, an egg matures and is released by an ovary. This process is called **ovulation**. Only about 400 eggs are released over a woman’s lifetime. The rest are absorbed into the body.
During the first part of the cycle, the hormone estrogen is released by the ovaries. Estrogen causes the endometrium—the lining of the uterus—to grow and thicken to prepare the uterus for pregnancy. In the middle of the cycle, ovulation occurs. Following ovulation, levels of progesterone begin to increase. If the woman does not become pregnant, estrogen and progesterone levels decrease. The decrease in progesterone triggers menstruation, or shedding of the lining.

During perimenopause, the ovaries begin to make less estrogen. Some months, there is not enough estrogen to thicken the uterine lining. Ovulation may not occur, and you may skip a menstrual period. A woman can be sure she has entered menopause when she has not had a menstrual period for 1 year. However, a woman is not completely without estrogen after menopause. It continues to be made by other glands and by body fat, but there is less of it than before menopause.

Symptoms and Effects
Some women compare perimenopause to *puberty*—another time when the body undergoes major changes. You may have only a few symptoms, or you may have many. Symptoms may be mild, or they may be severe.

**Menstruation**

In your 40s, changes in hormone levels can cause changes in your menstrual cycle. The number of days between periods may increase or decrease. Your periods may become shorter or longer. Menstrual bleeding may get heavier or lighter. You may begin to skip periods. Some months your ovaries may release an egg; some months they may not. Although changes in menstrual bleeding are normal as you near menopause, they still should be reported to your health care provider. Abnormal bleeding can sometimes be a sign of other problems. See your health care provider if you have any of the following symptoms:

- Bleeding between periods
- Bleeding after sex
- Spotting at anytime in the menstrual cycle
- Bleeding that is heavier or lasts for more days than usual
- Bleeding after menopause

**Hot Flashes**

As you approach menopause, you may start having *hot flashes*. Hot flashes are one of the most common and uncomfortable symptoms of perimenopause. A hot flash is a sudden feeling of heat that rushes to the upper body and face. The skin may redden like a blush. You may break out in a sweat. A hot flash may last from a few seconds to several minutes or longer.

Hot flashes may occur a few times a month or several times a day, depending on the woman. Some women will get hot flashes for a few months, some for a few years, and some not at all. Some women continue to have hot flashes into their 60s and 70s.

Hot flashes can happen anytime—day or night. Those occurring during sleep, called night sweats, may wake you up and leave you tired and sluggish the next day. Even though hot flashes are a nuisance and sometimes are embarrassing, they are not harmful (see box “How to Handle Hot Flashes”).

How to Handle Hot Flashes

If you have hot flashes, you can take steps to improve your comfort:

- Try to pinpoint what triggers the hot flash and avoid it if you can. You may find that hot drinks like tea or coffee, spicy foods, or alcoholic
Sleep Problems

Sleep problems are a common problem for perimenopausal women. You may have insomnia (trouble falling asleep), or you may wake up long before your usual time. Night sweats may disrupt your sleep. It is not known if sleep changes are a part of growing older, the result of hormone changes, or a combination of both.

Perimenopausal women may not get enough rapid eye movement (REM) sleep. REM sleep is when dreaming occurs. Without REM sleep, you will not feel rested. When normal sleep rhythms are broken, a woman's moods, health, and ability to cope with the changes she is experiencing may be affected. She may have trouble concentrating or become depressed.

If you are having trouble falling or staying asleep at night, try the following suggestions:

- Stay on a schedule. Go to bed and wake up at the same time every day, including weekends.
- Eat regular meals at regular times. Avoid late meals and filling snacks
- Limit caffeine, which is found in coffee, tea, chocolate, and cola drinks. Caffeine stays in the bloodstream for up to 6 hours and can interfere with sleep. Therefore, consume as little as possible, and limit it to the morning or early afternoon.
- Avoid nightcaps. Alcohol may make you feel drowsy, but it also affects the pattern of REM and non-REM sleep and may cause you to wake up often during the night.
- Exercise regularly, but not within 3 hours of bedtime. In general, people who are fit tend to sleep better.

Vaginal and Urinary Changes

As estrogen levels decrease, changes take place in the vagina. Over time, the vaginal lining gets thinner, dryer, and less elastic. Some women have vaginal burning and itching. It may take longer for the vagina to become moist during sex. Vaginal dryness may cause pain during sex. Vaginal infections also may occur more often. Ways to manage vaginal changes are discussed in the section “Sexuality.”

The decrease in estrogen may thin the lining of the urinary tract and weaken supporting tissues. As a result, you may need to urinate more often. Also, the urinary tract may become more prone to infection.
Bones

Bones are always changing. Old bone is broken down and removed by the body, and new bone is formed. From childhood until age 30 years, bone is formed faster than it is broken down. The bones become larger and denser. After age 30 years, the process begins to reverse: bone is broken down faster than it is made. This process continues for the rest of your life. A small amount of bone loss after age 35 years is normal in all women and men. It usually does not cause any problems. However, during the first 4–8 years after menopause, women lose bone rapidly. This rapid loss occurs because of the decreased levels of estrogen. The estrogen produced by the ovaries before menopause protects bone tissue.

If too much bone is lost, it can increase the risk of osteoporosis. Osteoporosis causes bones to become too thin and weak, which can result in a break and disability. Some later signs of osteoporosis are back pain or tenderness, slight curving of the upper back, and loss of height. When spinal bones weaken and collapse under the weight of the upper body, they can cause a pronounced curve or hump in the back.

To prevent bone loss and reduce the risk of osteoporosis, you should focus on building and keeping as much bone as you can before menopause. You can do that by getting plenty of calcium and exercise.

Women younger than 50 years need 1,000 mg of calcium a day. Women 50 years and older need 1,200 mg of calcium a day. Milk and other dairy foods are good sources. Other good sources of calcium are listed in Table 1. You can also take a daily calcium supplement.

Vitamin D helps the body absorb calcium. Your body makes vitamin D on its own if you get 15 minutes of sunlight each day. But many women do not get enough vitamin D every day. Also, the body’s ability to make vitamin D from sunlight decreases with age. Women should get 400–800 international units of vitamin D daily. The best sources of vitamin D are fatty fish such as salmon and tuna.

### Table 1. Calcium-Rich Foods

<table>
<thead>
<tr>
<th>Food</th>
<th>Amount</th>
<th>Calcium (milligrams)</th>
<th>Fat (grams)</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole</td>
<td>8 oz</td>
<td>288</td>
<td>8.0</td>
<td>150</td>
</tr>
<tr>
<td>1%</td>
<td>8 oz</td>
<td>300</td>
<td>2.6</td>
<td>102</td>
</tr>
<tr>
<td>2%</td>
<td>8 oz</td>
<td>297</td>
<td>4.7</td>
<td>121</td>
</tr>
<tr>
<td>Skim</td>
<td>8 oz</td>
<td>302</td>
<td>0.4</td>
<td>86</td>
</tr>
<tr>
<td>Yogurt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>-----</td>
<td>-----</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Plain fat-free</td>
<td>8 oz</td>
<td>452</td>
<td>0.4</td>
<td>127</td>
</tr>
<tr>
<td>Plain low-fat</td>
<td>8 oz</td>
<td>415</td>
<td>3.5</td>
<td>144</td>
</tr>
<tr>
<td>Fruit low-fat</td>
<td>8 oz</td>
<td>314</td>
<td>2.6</td>
<td>225</td>
</tr>
<tr>
<td><strong>Cheese</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American</td>
<td>1 oz</td>
<td>124</td>
<td>8.9</td>
<td>106</td>
</tr>
<tr>
<td>Cheddar</td>
<td>1 oz</td>
<td>204</td>
<td>9.4</td>
<td>114</td>
</tr>
<tr>
<td>Cottage, 1% low-fat</td>
<td>1 cup</td>
<td>138</td>
<td>2.3</td>
<td>164</td>
</tr>
<tr>
<td>Mozzarella, part skim</td>
<td>1 oz</td>
<td>147</td>
<td>6.1</td>
<td>80</td>
</tr>
<tr>
<td>Muenster</td>
<td>1 oz</td>
<td>203</td>
<td>8.5</td>
<td>104</td>
</tr>
<tr>
<td>Parmesan, grated</td>
<td>1 tbsp</td>
<td>69</td>
<td>1.5</td>
<td>23</td>
</tr>
<tr>
<td>Ricotta, part skim</td>
<td>1/2 cup</td>
<td>337</td>
<td>9.8</td>
<td>171</td>
</tr>
<tr>
<td>Ricotta, whole milk</td>
<td>1/2 cup</td>
<td>257</td>
<td>16.1</td>
<td>216</td>
</tr>
<tr>
<td><strong>Ice Cream</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanilla, 10% fat</td>
<td>1 cup</td>
<td>176</td>
<td>14.3</td>
<td>269</td>
</tr>
<tr>
<td>Vanilla, 16% fat</td>
<td>1 cup</td>
<td>151</td>
<td>23.7</td>
<td>349</td>
</tr>
<tr>
<td>Orange sherbet</td>
<td>1 cup</td>
<td>103</td>
<td>3.8</td>
<td>270</td>
</tr>
<tr>
<td>Vanilla ice milk, hard</td>
<td>1 cup</td>
<td>176</td>
<td>5.6</td>
<td>184</td>
</tr>
<tr>
<td>Vanilla ice milk, soft serve</td>
<td>1 cup</td>
<td>274</td>
<td>4.6</td>
<td>223</td>
</tr>
<tr>
<td><strong>Seafood</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oysters, raw</td>
<td>12</td>
<td>76</td>
<td>4.2</td>
<td>116</td>
</tr>
<tr>
<td>Sardines with bones, canned in oil, drained</td>
<td>4</td>
<td>184</td>
<td>5.6</td>
<td>100</td>
</tr>
<tr>
<td>Pink salmon with bones, canned</td>
<td>3 oz</td>
<td>181</td>
<td>5.1</td>
<td>118</td>
</tr>
<tr>
<td>Shrimp, canned, drained</td>
<td>3 oz</td>
<td>50</td>
<td>1.7</td>
<td>102</td>
</tr>
<tr>
<td><strong>Vegetables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bok choy (Chinese cabbage), raw</td>
<td>1 cup</td>
<td>74</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Broccoli, fresh, cooked</td>
<td>1 cup</td>
<td>178</td>
<td>0.4</td>
<td>46</td>
</tr>
<tr>
<td>Food</td>
<td>Serving Size</td>
<td>Calcium (mg)</td>
<td>Phosphorus (mg)</td>
<td>Potassium (mg)</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>-----------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Broccoli, frozen, cooked</td>
<td>1 cup</td>
<td>94</td>
<td>0.2</td>
<td>50</td>
</tr>
<tr>
<td>Soybeans, mature, boiled</td>
<td>1 cup</td>
<td>175</td>
<td>15.4</td>
<td>298</td>
</tr>
<tr>
<td>Collards, fresh, cooked</td>
<td>1 cup</td>
<td>148</td>
<td>0.3</td>
<td>27</td>
</tr>
<tr>
<td>Turnip greens, fresh, cooked (leaves and stems)</td>
<td>1 cup</td>
<td>198</td>
<td>0.4</td>
<td>30</td>
</tr>
<tr>
<td><strong>Other Foods</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tofu</td>
<td>1 cup</td>
<td>260</td>
<td>11.8</td>
<td>366</td>
</tr>
<tr>
<td>Orange</td>
<td>1</td>
<td>56</td>
<td>0.1</td>
<td>65</td>
</tr>
<tr>
<td>Almonds</td>
<td>1 oz</td>
<td>80</td>
<td>14.7</td>
<td>167</td>
</tr>
<tr>
<td>Calcium-enriched orange juice</td>
<td>8 oz</td>
<td>300</td>
<td>0</td>
<td>120</td>
</tr>
<tr>
<td>Calcium-fortified cereal</td>
<td>1 cup</td>
<td>600</td>
<td>1</td>
<td>110</td>
</tr>
</tbody>
</table>

Just as muscles get stronger with regular exercise, so do bones. Active women have higher bone density than women who do not exercise. Regular weight-bearing exercise, done three to four times a week, is a good way to strengthen bones and slow bone loss. Weight-bearing exercise includes activities where muscles and tendons put extra pressure or tension on the bones. The extra pressure stimulates the bones to make new bone tissue. Brisk walking, hiking, stair stepping, tennis, and running are all good weight-bearing exercises. Lifting weights also improves bone strength. Balance exercises can be helpful as well. Balance training may help you avoid falls, which could lead to broken bones.

All postmenopausal women 65 years and older should have a bone mineral density (BMD) test. Postmenopausal women younger than 65 years should have a BMD test if they have risk factors for fracture (see box “Risk Factors for Bone Fractures”). The BMD test measures the amount of bone in the spine, hip, wrist, or other bones. Measuring one area can give information about bone density in other parts of the skeleton. Based on the results of the BMD test and other risk factors, medications or other measures, such as increasing calcium intake, getting more exercise, quitting smoking, and limiting alcohol, may be recommended.

### Risk Factors for Bone Fractures

Certain factors increase the risk of bone fractures in postmenopausal women:

- Personal history of fracture
- Family history of osteoporosis
- Caucasian race
- Dementia
Cardiovascular disease kills more women than any other cause of death. It accounts for slightly more than 33% of all deaths in women each year. More women die from cardiovascular disease, which includes heart disease and stroke, than from all forms of cancer combined. About 450,000 women die from cardiovascular disease each year compared with 72,000 from lung cancer and 40,500 from breast cancer.

After menopause, a woman’s risk of heart disease and stroke increases. Women who have not reached menopause have a far lower risk of cardiovascular disease than men. The natural estrogen produced by a woman’s body protects against heart attacks and stroke. When less estrogen is made after menopause, women lose much of this protection.

Midlife also is the time when risk factors for heart disease are more common. These include high cholesterol, high blood pressure, smoking, a high-fat diet, diabetes, being physically inactive, and being overweight. Heart disease is almost twice as likely to strike inactive people than people who exercise regularly. The best exercises to strengthen your heart and lungs are brisk walking, running, swimming, and other aerobic activities.

Sexuality

Sexuality is an important part of life. Sex can give you a feeling of well-being and bring you closer to your partner. You can continue to enjoy an active sex life well after menopause.

Physical Changes

When estrogen levels are low, vaginal tissue gets thinner and dryer. These changes may cause discomfort during intercourse. Water-soluble or silicone-based lubricants sold over-the-counter can help moisten the vagina. Having regular sex may help, too. An active sex life increases blood flow to the genitals and may help you prevent some of the vaginal changes associated with aging.

It may help to remember that sex does not just mean sexual intercourse. Sex can include many other activities, such as kissing, fondling, oral sex, and mutual
masturbation. If sexual intercourse is not comfortable, activities not involving intercourse can be satisfying for both you and your partner.

**Changes in Sexual Response**

Lack of interest in sex—or lack of desire—is the most common sexual concern reported by women. Desire is often present in new relationships but tends to decrease as time goes on. A lack of desire before having sex is normal for some women. They may not feel a desire to have sex until they begin to engage in sex and become aroused. However, if you have no interest in sex at all, and this lack of interest is a problem for you and your partner, you may want to seek a solution, either on your own, with your partner, or with the advice of your health care provider. Lack of sexual desire also can be a sign of *depression*.

Your sexual response may change as well. As you age, sexual arousal takes longer. It is important to talk with your partner about what you are feeling and what excites you. You may want to spend more time on foreplay or try new positions.

Some postmenopausal women enjoy sex less than they used to. However, many women say their sex lives are better after menopause. The worry of pregnancy is gone, and they feel more confident and adventurous. A couple may have more time to focus on each other. A wide array of sexual “how-to” books, videos, and devices are available to try together. You may find that sex is more enjoyable than ever.

**Sexual Changes in Men**

Sexual problems in your partner may affect your sex life. As men age, they may take longer to get aroused. Their erections may become less rigid, as well. These changes are normal and should not affect sexual satisfaction.

Some men, however, cannot keep an erection long enough for intercourse. This condition is called *erectile dysfunction (ED)*. Almost all men have trouble with ED at some time in their lives. ED may be caused by certain diseases, such as diabetes, as well as certain drugs and surgery. ED also can be related to stress, fear, depression, or emotional problems.

Many treatments are available for ED. These treatments include medications, devices such as penile implants, and surgery. If your partner is experiencing ED and it is affecting your sex life, see a health care provider.

**Emotional Concerns**

The constant change of hormone levels during perimenopause can affect a woman's emotions. Some women have mood swings or have symptoms of depression. Some women report memory lapses and poor concentration during perimenopause. It is not clear whether these changes are due to changing hormone levels, or whether they are
caused by the natural effects of aging on the brain. These problems do not affect every woman. However, for those affected, it may be hard to cope.

**Lifestyle Changes**

Losses, new demands, and changes in routines are common at midlife. Your children may be entering their teen years—a time of challenges. After more than a decade of closeness, your kids may pull away, talk with you less openly, or act in a way that is moody or hostile. These changes are unsettling, to say the least. If your children are grown and out of the house, you may feel less needed.

About 2.5% of all babies born in the United States are to women aged 40 years and older. Becoming a mom at midlife—no matter how joyful an event—is a big adjustment. You may find yourself juggling a job, child care, household chores, and feedings at 3 am. If you are a single mother, the challenges are even greater.

You may be caring for aging parents in addition to your other responsibilities. Your roles may reverse, and you find yourself “parenting your parents.” Today, nearly 22 million Americans are caring for aging parents. Women who have not had children or never married also face changes at midlife. They may be concerned about their future and lack support in confronting challenges.

Despite these challenges, midlife often is still a rewarding phase of life. You are better equipped emotionally to handle problems than at any other time. You have wisdom and know how to manage things. Midlife may reveal strengths you never knew you had.

**How to Cope**

The best thing you can do to get through midlife’s rough spots is reach out for help. Talking with others is reassuring. If you open up to a friend, you may find she is facing the same fears and stresses. Counseling and support groups exist for everything from grief and divorce to career changes.

If you are bothered by unsteady emotions or mental lapses, talk to your health care provider. Most likely you are not “going crazy,” as many women fear, but instead are dealing with the symptoms of perimenopause. Often these symptoms occur at a time when life’s pressures can be greatest: raising teenaged children, caring for aging parents, and managing career responsibilities. There are therapies that can help, including exercising regularly, using stress-control methods, and getting more sleep. **Antidepressants** can help even out moods. Sometimes, just knowing what is wrong can bring relief.

**Hormone Therapy**

**Hormone therapy** can be helpful for treating the symptoms of perimenopause. There are risks and benefits of hormone therapy. Many of the risks are related to a woman’s health and family history. If you are thinking about taking hormone therapy, it is
important to learn as much as you can and discuss your options with your health care provider.

**Types of Hormone Therapy**

Hormone therapy can be given in different ways. Your health care provider may prescribe hormone therapy that is taken as follows:

- Orally (by mouth)
- Vaginally (cream, pill, suppository, or ring)
- Transdermally (through the skin with a patch, gel, or spray)
- Sublingually (a pill placed under the tongue)
- By troche (a lozenge that is placed between the cheek and gum until it dissolves)
- Under the skin (pellets)

For women who have not had a hysterectomy (who still have a uterus), there are two types of hormone therapy:

1. Continuous-combined therapy—Estrogen and progestin are taken every day. It is common to have irregular bleeding the first few months. The bleeding decreases with time. In most women, it stops within 6 months.
2. Cyclic therapy—Estrogen is taken throughout the cycle and progestin is added for certain days in the month. The exact times may vary. During the time when estrogen is taken alone, you may have some bleeding.
**What Is Hormone Therapy?**

Hormone therapy involves taking hormones to supplement those that the body makes much less of after menopause. Hormone therapy means to take estrogen and, if you have never had a hysterectomy and still have a uterus, progestin as well. Progestin is a form of progesterone. Taking progestin helps reduce the risk of cancer of the endometrium that occurs when estrogen is used alone. If you do not have a uterus, estrogen is given alone, without progestin. Estrogen plus progestin is sometimes called “combined hormone therapy” or simply “hormone therapy.” Estrogen-only therapy is sometimes called “estrogen therapy.”

Estrogen comes in several forms. “Systemic” forms include pills, skin patches, gels and sprays that are applied to the skin, and other forms. With systemic therapy, the estrogen is released into your bloodstream and travels to the organs and tissues where it is needed. If progestin is prescribed, it can be given as a pill, patch, or gel. Progestin can be taken separately or combined with estrogen in the same pill or in a patch (see box “Types of Hormone Therapy”). Women with vaginal dryness may be prescribed “local” estrogen therapy in the form of a vaginal ring, tablet, or cream. These forms release small doses of estrogen into the vaginal tissue and relieve dryness.

Oral contraceptives (birth control pills) also contain estrogen and progestin, but in higher doses. During perimenopause, oral contraceptives offer birth control and help regulate the menstrual cycle. Oral contraceptives should not be used in women 35 years and older who smoke or who have high blood pressure because of an increased risk of cardiovascular problems, including heart attack and stroke.

**Benefits of Hormone Therapy**

Hormone therapy has many benefits:

- Estrogen with or without progestin relieves hot flashes, night sweats, and sleep problems.
- Low doses of local estrogen therapy help relieve vaginal dryness and irritation.
- Estrogen with or without progestin prevents the bone loss that occurs early in menopause. It also has been shown to prevent hip and spine fractures.
- Combined hormone therapy (but not estrogen-only therapy) may reduce the risk of colon cancer.

**Risks of Hormone Therapy**

As with any treatment, hormone therapy is not without risks. Hormone therapy may increase the risk of certain types of cancer as well as increase the risk of other conditions:

- Estrogen therapy causes the lining of the uterus to grow and can increase the risk of uterine cancer. Adding progestin decreases the risk of uterine cancer.
- Estrogen therapy with or without progestin is associated with a small increased risk of heart attack. This risk may be related to age, existing medical conditions, and when a woman starts taking hormone therapy. It appears that women in early menopause who are in good heart health are at low risk of heart attack and can consider combined hormone therapy for the relief of menopause symptoms.
- Estrogen therapy with or without progestin is associated with a small increased risk of stroke and **deep vein thrombosis (DVT)**. Some research suggests that the non-pill forms of therapy (patches, sprays, rings, and others) have less risk of causing DVT than the pill forms. Also, low doses of estrogen do not cause an increased risk of stroke.
- Women who take combined hormone therapy are more likely to develop breast cancer than women who do not take combined hormone therapy. Although the increase in risk is small, it increases the longer a woman is taking hormone therapy. The increased risk goes away when a woman stops the therapy. Estrogen-only therapy may not increase the risk of breast cancer, but research results are conflicting.
- There is a small increased risk of gallbladder disease associated with estrogen therapy with or without progestin. The risk is greatest with pill forms of therapy.

**Side Effects**

Combined hormone therapy may cause vaginal spotting. Some women may have heavier bleeding like that of a menstrual period. Your health care provider may try adjusting your dosage to minimize bleeding. Other side effects that women taking hormone therapy have reported include fluid retention and breast soreness. This soreness usually lasts for a short time.

**Alternatives to Hormone Therapy**

Many women are interested in therapies other than conventional hormone therapy to treat menopause symptoms.

**Antidepressants.** Although most women do not get depressed during menopause, there is treatment available for women who do. Antidepressants called selective serotonin reuptake inhibitors (SSRIs) can help lessen mood symptoms in some menopausal women. These drugs also have the added benefit of helping to relieve hot flashes in some women.

**Gabapentin.** This drug is used to treat seizures. It has been shown to reduce hot flashes in postmenopausal women.

**Plant-Based Alternatives.** Only a few of these substances have been studied for safety and effectiveness. Also, the way that these products are made is not regulated. There is no guarantee that the product contains effective doses of the substance or whether they contain unsafe ingredients. The following plant-based therapies are some of those that have been used for treatment of menopause symptoms:
- Soy—Some soy products contain high amounts of isoflavone. Isoflavone is a phytoestrogen, also known as a plant estrogen. Plant estrogens act like a weak form of estrogen in the body and are thought to help reduce hot flashes and other menopause symptoms. Research results are conflicting about their effectiveness, and they may have the same risks as other types of estrogens. But there may be a role for soy products in preventing bone loss after menopause.

- Black cohosh—This North American plant has been used to treat perimenopause symptoms such as hot flashes, sleep disorders, and depression. No reliable evidence is available to show that it is effective in reducing these symptoms.

- Wild yam—Wild yam (and Mexican yam) is available in extracts, tablets, and creams. There is no proof that yams can relieve symptoms of menopause. Although there is a hormone-like substance found in some yams, a woman would have to eat a large amount of raw yam to reach a level that would relieve symptoms.

**Bioidentical Hormones.** Bioidentical hormones are hormones from plants that are combined together (compounded) by a pharmacist using instructions from a doctor. These hormones have the same risks as hormone therapies approved by the U.S. Food and Drug Administration and may have additional risks because of the way that they are made. There is no scientific evidence that these compounded hormones are safer or more effective than standard hormone therapy.

**Deciding Whether to Take Hormone Therapy**

Hormone therapy can help relieve some of the symptoms that affect women at menopause. However, it is important to weigh both the benefits and the risks for your individual situation. Before making a decision about hormone therapy, talk to your health care provider about what may work best for you based on your symptoms and your personal and family medical history.

In general, hormone therapy use should be limited to the treatment of menopausal symptoms at the lowest effective dose for the shortest amount of time possible. Continued use should be reevaluated on a yearly basis. Some women may require longer therapy because of persistent symptoms.

**A Healthy Lifestyle**

Women in their 30s and 40s can make key lifestyle changes to decrease their risk of health problems when they get older. Perimenopause is a good time to start taking care of your health if you have not been doing so all along. You will feel more in control if you take charge. These activities include practicing good health habits and playing an active role in your health care.

**Eat a Healthy Diet**

Eating a healthy diet will help you look and feel better. It also will lower your risk of certain diseases, including osteoporosis and heart disease.
It is important to eat a well-balanced diet that includes vegetables, fruits, and grains. You also should limit your intake of fatty foods and sweets. Fat intake should be less than 30% of daily calories.

As noted earlier, a calcium-rich diet can help keep your bones strong. If you cannot get enough calcium from food, you can take calcium supplements or antacids that are high in calcium. These are sold over-the-counter in pharmacies and many grocery stores.

**Exercise**

Making exercise a part of your life can pay off in many ways. Exercise can help you lose weight and keep it off. Aerobic exercise helps protect against heart disease and diabetes, and weight-bearing exercise helps prevent osteoporosis. Regular exercise also has the following benefits:

- Gives you more energy
- Relieves stress
- Increases muscle strength and flexibility
- Helps you sleep better
- Improves circulation
- Lowers blood pressure

Exercise makes you look and feel better. If you are not used to strenuous physical activity, check with your health care provider before you start an exercise program, especially if you are overweight or older than 40 years.

To get a good cardiovascular workout, you need to exercise at your target heart rate for 30 minutes or more on most days of the week. Your target heart rate varies depending on your age (Table 2)

Even moderate exercise will improve your health. If it is hard to fit exercise into your busy schedule, there are things you can do to be more active. For example, try the following:

- Whenever possible, walk rather than drive.
- Take the stairs instead of the elevator.
- Get off the bus a few stops early.
- Walk during your lunch hour.

**Table 2. Target Heart Rate for Women**

To find your target heart rate, look for the age category closest to your age and read the line across. Your maximum heart rate is usually 220 minus your age. Your target heart rate is 50–85% of the maximum. When you first start exercising, aim for the lower end of the range.
Maintain a Healthy Weight

Weight gain is not so much a result of menopause as of middle age. About 2 out of 3 women aged 35–65 in the United States are overweight. Women have about 25% body fat, compared with 15% for men. This extra fat makes it easier for women to gain weight and harder to lose it.

Also, as women get older, they tend to lose muscle. Muscle loss slows down how fast the body burns calories. So, if you do not take in fewer calories as you approach midlife, you may gain weight. It is not uncommon for women to gain 5 pounds during menopause and have a “thicker” waistline. Carrying around too much weight can decrease your energy and increase your risk of some diseases. Overweight people are more likely to have heart disease, high blood pressure, diabetes, high cholesterol, and backaches.

Body mass index (BMI) is a measure of body fat and can be used to assess your weight status (Table 3). To calculate your BMI, divide your weight in pounds by your height in inches squared. Multiply this number by a conversion factor of 703. To check your BMI, go to the BMI calculator at http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi. Retrieved July 20, 2010.

In order to lose weight, you must take in fewer calories than you burn during activities such as exercise. Stay away from crash diets. To lose weight safely, work with your health care provider. A healthy rate of weight loss is 1–2 pounds a week.

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Target Heart Rate (beats per minute)</th>
<th>Average Maximum Heart Rate (beats per minute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>100-170</td>
<td>200</td>
</tr>
<tr>
<td>25</td>
<td>98-166</td>
<td>195</td>
</tr>
<tr>
<td>30</td>
<td>95-162</td>
<td>190</td>
</tr>
<tr>
<td>35</td>
<td>93-157</td>
<td>185</td>
</tr>
<tr>
<td>40</td>
<td>90-153</td>
<td>180</td>
</tr>
<tr>
<td>45</td>
<td>88-149</td>
<td>175</td>
</tr>
<tr>
<td>50</td>
<td>85-145</td>
<td>170</td>
</tr>
<tr>
<td>55</td>
<td>83-140</td>
<td>165</td>
</tr>
<tr>
<td>60</td>
<td>80-136</td>
<td>160</td>
</tr>
<tr>
<td>65</td>
<td>78-132</td>
<td>155</td>
</tr>
<tr>
<td>70</td>
<td>75-128</td>
<td>150</td>
</tr>
</tbody>
</table>


Table 3. Weight Status by Body Mass Index (BMI)

<table>
<thead>
<tr>
<th>Weight Status</th>
<th>BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>&lt;18.5</td>
</tr>
<tr>
<td>Normal/Healthy</td>
<td>&lt;18.5-24.9</td>
</tr>
</tbody>
</table>
If you have hot flashes, you can take steps to improve your comfort:

- Try to pinpoint what triggers the hot flash and avoid it if you can. You may find that hot drinks like tea or coffee, spicy foods, or alcoholic drinks seem to bring on some of your hot flashes. They also may be set off by stress, hot weather, or a warm room.
- Dress in layers. You can remove pieces of clothing at the first sign of a flash to feel cooler.
- Keep your office or home thermostat low. Have a fan handy—some hand-held types are small enough for your purse.
- Exercise regularly. Some research suggests that women who exercise have fewer and less intense hot flashes.
- See your health care provider. You may benefit from hormones or other therapies he or she can prescribe.

Changing your eating habits and eating a healthy diet should not stop once you lose the extra weight. To keep it off, you need to maintain these healthy habits. It helps if you approach weight loss as a lifestyle change.

**Do Not Smoke**

Smoking can shorten a woman's life by as many as 15 years. Women who smoke also increase their risk of osteoporosis. Smoking increases the risk of heart disease and cancer of the **cervix** and **vulva** in women, and multiplies the risk of lung cancer 12 times. One study suggests that women who smoke enter menopause 1.7 years earlier than non-smoking women. Even the children of smokers can be affected by being exposed to secondhand smoke.

When you quit smoking, you reverse the ill effects that smoking has on your body. Within 20 minutes of your last cigarette, your blood pressure and heart rate decreases. Within a few days, your sense of smell and taste improves. Within 3 months, your circulation improves and breathing gets easier. Within 1 year, your risk of a heart attack is cut in half. Within 5 years, your risk of stroke decreases to nearly that of a non-smoker. After 15 years, your heart disease risk is that of a non-smoker.

If you do not think you can quit “cold turkey,” cut down slowly at first. Try these approaches:

- Smoke only one half of each cigarette.
- Decide ahead of time how many cigarettes you will smoke during the day and only carry those with you.
- Each day, delay lighting your first cigarette by 1 hour.
- Stop buying cigarettes by the carton.
- Limit yourself to smoking a cigarette only after each meal or snack.
Once you decide to quit, avoid thinking about how hard it might be. Focus on your reasons for quitting—to improve your health, protect your family, or save money. Tell your family and friends that you plan to stop smoking and set a target date.

When that day comes, throw out all your cigarettes and get rid of your ashtrays and lighters. Clean your clothes to free them of the cigarette smell. Keep busy by going to the movies, exercising, or taking long walks.

If you feel you cannot quit on your own, ask your health care provider for help. He or she can assist you or refer you to a stop-smoking program. Your health care provider may prescribe medication to help you quit. You also may wish to try nicotine chewing gum or patches to help wean you from smoking. Nicotine gum and patches can be bought without a prescription in your local pharmacy.

Limit Alcohol Intake

Drinking alcohol poses special concerns for women. A woman who drinks the same amount as a man is affected more. A woman's body contains less water to dilute the alcohol and her stomach has less of the key enzyme that digests it. When you drink, the alcohol slows your reflexes and affects your judgment and memory. One important reason why perimenopausal women should watch their drinking is that alcohol interferes with bone growth and calcium absorption.

Moderate drinking—defined as one drink a day for women—may be fine. Heavy drinking can increase your risk of drinking-related problems, such as alcohol abuse and alcohol dependence (alcoholism). Physical problems, such as high blood pressure, damage to the heart muscle, some types of cancer, and liver damage, also are associated with heavy drinking.

Get Regular Health Care

Routine health care, even if you are not sick, can help detect problems early. It also gives you and your health care provider a chance to talk about ways to avoid problems later in life.

You should visit your health care provider once a year to have regular exams and tests. Certain tests should be done regularly for all women in specific age groups (Table 4).

During a routine exam, your weight and blood pressure will be checked and your skin and body overall may be examined to be sure everything is normal. During a routine gynecologic exam, your health care provider will check your breasts for lumps or discharge, check your abdomen to see if there are any problems with your ovaries or uterus, inspect your vulva and vagina, and may examine your rectum.

Table 4. Your Periodic Health Evaluation (Ages 40–64 Years)
<table>
<thead>
<tr>
<th>Tests</th>
<th>Description of Test</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal cancer screening</td>
<td>Screening tests to look for cancer of the colon and rectum</td>
<td>Colonoscopy every 10 years (beginning at age 50 years) is the preferred method.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>African Americans should begin screening at age 45 years.*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other methods include the following tests:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Yearly fecal occult blood test (FOBT) or fecal immunochemical test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Flexible sigmoidoscopy every 5 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Double contrast barium enema test every 5 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Computed tomography every 5 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fecal DNA test (interval unknown)</td>
</tr>
<tr>
<td>Fasting glucose testing</td>
<td>A test to measure the level of glucose (a sugar that is present in the blood and is the body’s main source of fuel) because high levels could be a sign of diabetes mellitus</td>
<td>Every 3 years after age 45 years</td>
</tr>
<tr>
<td><strong>Human immunodeficiency virus (HIV) test</strong></td>
<td>A blood test to check for HIV, a virus that can cause acquired immunodeficiency syndrome (AIDS)</td>
<td>All women should be screened periodically.</td>
</tr>
<tr>
<td>Lipid profile assessment</td>
<td>A blood test that checks levels of cholesterol</td>
<td>Every 5 years beginning at age 45 years</td>
</tr>
<tr>
<td>Mammography</td>
<td>An X-ray of the breast to look for breast cancer</td>
<td>Every 1–2 years beginning at age 40 years; yearly beginning at age 50 years</td>
</tr>
<tr>
<td>Pap test</td>
<td>A sample of cells is taken from the cervix to look for changes that could lead to cancer; this test may be combined with testing for human papillomavirus (HPV) in women aged 30 years and older</td>
<td>Every 2–3 years if you have three normal test results in a row and no relevant health risks; women who have had a negative Pap test result and a negative HPV test result should not be screened again for another 3 years. If you have had a hysterectomy, ask your health care provider if you still need a Pap test.</td>
</tr>
<tr>
<td>Thyroid-stimulating hormone screening</td>
<td>A test to check if your thyroid gland is working correctly</td>
<td>Every 5 years beginning at age 50 years</td>
</tr>
<tr>
<td><strong>Immunizations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herpes zoster vaccine</td>
<td>A shot to help prevent shingles, painful blisters caused by varicella</td>
<td>Once if aged 60 years and older and not previously immunized</td>
</tr>
<tr>
<td>Influenza vaccine</td>
<td>A shot to help prevent the flu (influenza)</td>
<td>Yearly</td>
</tr>
<tr>
<td>Tetanus–diphtheria–pertussis (Tdap) booster</td>
<td>A shot to immunize against the diseases tetanus, diphtheria, and pertussis</td>
<td>Once in place of a tetanus and diphtheria (TD) booster shot that is given every 10 years</td>
</tr>
<tr>
<td>Varicella vaccine</td>
<td>A shot to help prevent chickenpox</td>
<td>One series if not previously immunized or never had chickenpox</td>
</tr>
</tbody>
</table>

*Recommendation of the American College of Gastroenterology.*

During your exam, the health care provider may ask questions about the following:

- Your health history
- Your diet
- Your exercise habits
• Whether you smoke, drink alcohol, or use drugs
• Whether you take any medications
• Your sexual practices to see if you are at risk of sexually transmitted diseases (STDs) or pregnancy

Your regular health care also may include eye exams. Nine out of 10 women between the ages of 40 years and 64 years wear glasses or contact lenses to help them see better for reading and other close-up activities. Dental checkups are important, too. You should visit your dentist regularly to have your teeth and gums cleaned. Gum disease, a problem that can lead to tooth loss, is more common as you get older.

Do Self-Exams

Throughout the year, there are exams you can do yourself to find possible problems early. One of these is the breast self-exam. Being familiar with the usual ridges and bumps in your breasts may make it easier for you to notice any changes.

Checking your entire body for skin changes also is a good idea. Exposure to the sun or use of tanning lamps can increase the risk of skin cancer. Look for redness, swelling, or any abnormal change. Inspect any moles or freckles and see your health care provider if they show any changes. A good way to remember these changes is to think ABCD:

• **A**symmetry—One half is unlike the other half
• **B**order—Irregular or poorly defined border
• **C**olor—Color varies from one area to another; shades of tan and brown, black; sometimes white, red, or blue
• **D**iameter—Size is greater than that of a pencil eraser (6 millimeters).

Use Birth Control

Although your menstrual periods may become less predictable as you get closer to menopause, pregnancy is still possible. Even having other signs of perimenopause, such as hot flashes, does not mean you cannot get pregnant. About 75% of pregnancies in women older than 40 years are unplanned. You are not completely free of the risk of pregnancy until 1 year after your last period.

It is important to use a form of birth control that fits your needs. Many options are open to you:

• Hormonal methods—pills, the patch, vaginal ring, implant, or injections (safe for women older than 40 years who are healthy and do not smoke)
• Intrauterine device (IUD)
• Barrier methods—the sponge, diaphragm, male condom, female condom, and spermicides
• Sterilization—blocking, sealing, or cutting the fallopian tubes for women and **vasectomy** for men
Not having sex at certain times in the menstrual cycle is a natural family planning method used by some women. This method of birth control is not reliable during perimenopause if your menstrual cycle is irregular.

Get Preconception Counseling

The number of women having a child after age 40 years is increasing. Women who get pregnant in their 40s can have safe pregnancies and healthy babies. However, it may be more difficult to become pregnant and risks are increased for both the woman and her baby.

If you are planning a pregnancy late in your childbearing years, be aware that the risk of problems increases with a woman's age. Preconception counseling with your health care provider is recommended so you can discuss the risks and how to have the healthiest pregnancy possible.

Practice Safe Sex

Everyone who is sexually active is at risk of getting an STD. Some STDs, such as syphilis or chlamydia, usually can be cured. Others have no known cure. Among these is acquired immunodeficiency syndrome (AIDS), a life-threatening disease caused by human immunodeficiency virus (HIV).

The best protection from STDs is for a couple to have sex only with each other. If either of you does have sex with others, make sure to use a latex condom every time. Limit your number of partners and ask about their sexual history. Avoid sex if you or your partner suspect either of you has an STD.

Finally...

There was a time when no one talked about perimenopause and menopause; this time of midlife transition was a mystery to most women. Today, you can find a wealth of information on these topics. Talk with your health care provider and learn as much as you can. That way, you can look ahead to the next stage of life with confidence. If you feel good about yourself, make wise choices, and lead a healthy lifestyle, you will be better able to cope with this time of life.

Glossary

**Acquired Immunodeficiency Syndrome (AIDS):** A group of signs and symptoms, usually of severe infections, occurring in a person whose immune system has been damaged by infection with human immunodeficiency virus (HIV).

**Antidepressants:** Medications used to treat depression.

**Body Mass Index:** A measure of a person's weight in relation to height.
**Cervix**: The opening of the uterus at the top of the vagina.

**Colonoscopy**: An exam of the entire colon using a small, lighted instrument.

**Computed Tomography (CT)**: A type of X-ray procedure that shows internal organs and structures in cross section.

**Deep Vein Thrombosis (DVT)**: A condition in which a blood clot forms in veins in the leg or other areas of the body.

**Depression**: Feeling of sadness for periods of at least 2 weeks.

**Diabetes Mellitus**: A condition in which the levels of sugar in the blood are too high.

**Endometrium**: The lining of the uterus.

**Erectile Dysfunction (ED)**: The inability in a man to achieve an erection or to sustain it until ejaculation or until intercourse takes place.

**Estrogen**: A female hormone produced in the ovaries that stimulates the growth of the lining of the uterus. *Fecal Occult Blood Test (FOBT)*: A test of a stool sample for blood, which could be a sign of cancer of the colon or rectum.

**Hormone Therapy**: Treatment in which estrogen, and often progestin, is taken to help relieve some of the symptoms caused by the low levels of these hormones.

**Hot Flashes**: Sensations of heat in the skin that occur when estrogen levels are low; also called hot flushes.

**Human Immunodeficiency Virus (HIV)**: A virus that attacks certain cells of the body’s immune system and causes acquired immunodeficiency syndrome (AIDS).

**Human Papillomavirus (HPV)**: The name for a group of related viruses, some of which cause genital warts and are linked to cervical changes and cervical cancer.

**Hysterectomy**: Removal of the uterus.

**Menopause**: The time in a woman's life when the ovaries have stopped functioning; defined as the absence of menstrual periods for 1 year.

**Osteoporosis**: A condition in which the bones become so fragile that they break more easily.

**Ovaries**: Two glands, located on either side of the uterus, that contain the eggs released at ovulation and produce hormones.
**Ovulation:** The release of an egg from one of the ovaries.

**Perimenopause:** A transitional phase before menopause that usually extends from age 45 years to 55 years.

**Progesterone:** A female hormone that is produced in the ovaries and matures the lining of the uterus. When its level decreases, menstruation occurs.

**Progestin:** A synthetic form of progesterone that is similar to the hormone produced naturally by the body.

**Puberty:** The stage of life when the reproductive organs become functional and secondary sex characteristics develop.

**Sexually Transmitted Disease (STD):** A disease that is spread by sexual contact, including chlamydia, gonorrhea, human papillomavirus infection, herpes, syphilis, and infection with human immunodeficiency virus (HIV, the cause of acquired immunodeficiency syndrome [AIDS]).

**Sigmoidoscopy:** A test in which a slender device is placed into the rectum and lower colon to look for cancer.

**Vasectomy:** A method of male sterilization in which a portion of the vas deferens is removed.

**Vulva:** The external female genital area.

This Patient Education Booklet was developed by the American College of Obstetricians and Gynecologists. Designed as an aid to patients, it sets forth current information and opinions on subjects related to women's health. The average readability level of the series, based on the Fry formula, is grade 6–8. The Suitability Assessment of Materials (SAM) instrument rates the pamphlets as “superior.” To ensure the information is current and accurate, the pamphlets are reviewed every 18 months. The information in this pamphlet does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to the institution or type of practice, may be appropriate.

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