Menopause is defined as a woman’s final menstrual period and confirmed when she has not had a period for a year (in the absence of other causes). It marks the end of fertility. Natural (spontaneous) menopause results as the ovaries produce less estrogen and progesterone, hormones that regulate menstruation. For most women, menopause is a natural biological change that is a part of aging. Some women, however, reach menopause well before the average age of 51.

### How Menopause Affects Your Body

Before a woman permanently stops having periods, there is usually a transition period called perimenopause that lasts for several years. During that time, the hormonal changes leading to menopause—including low progesterone and fluctuating estrogen levels—can cause many symptoms. Common symptoms include:

- Skipped menstrual periods or heavier than usual flow some months
- Vaginal dryness or itching
- Hot flashes; night sweats
- Waking during the night
- Mood swings; irritability

Over time, low estrogen levels can have an impact on your health. Long-term complications related to estrogen decline may include:

- Osteoporosis (thinning and brittle bones)
- Heart disease
- Thinning vaginal tissues and painful intercourse
- Thinning of the lining of the urethra, the outlet for the bladder, and problems with frequent or urgent urination
- Possible changes in memory or other mental abilities

Early menopause poses concerns for women in terms of both short-term symptoms and long-term complications.

### Causes and Concerns of Early Menopause

Early menopause can result from a medical condition or can be induced (brought about) by surgery or cancer treatment.

- Primary ovarian insufficiency (POI), also called premature ovarian failure, is the loss of normal function of the ovaries before the age of 40. POI may be related to genetic changes or autoimmune disorders, but often the cause is unknown. Some women with POI have periods off and on for years until they stop menstruating permanently. Although women with POI are much less likely to get pregnant than other women their age, pregnancy is still possible.
- Surgery to remove both ovaries will induce menopause. Such surgery is sometimes used to treat or prevent ovarian or breast cancer or to treat other conditions such as endometriosis, uterine fibroids, or pelvic inflammatory disease. By removing the ovaries, levels of hormones that fuel these conditions are greatly reduced. Hysterectomy (removal of the uterus) does not cause menopause if the ovaries are left, but periods will stop and levels of female hormones may change.
- Chemotherapy, the use of powerful drug therapy to treat cancer, affects not only cancer cells but also healthy cells throughout the body. The ovaries are very susceptible to damage by chemotherapy. This means they may no longer produce healthy eggs or the female hormones that regulate menstruation.
- Radiation therapy is also commonly used to treat cancer. Unlike chemotherapy, it is targeted to the location of the cancer, but it can affect healthy cells in the same area. Radiation to the pelvic area is especially likely to induce menopause since the ovaries are located there.

Women with induced menopause tend to have more severe symptoms since they have a sudden and dramatic loss of estrogen, unlike women whose estrogen levels decline over several years during natural menopause. Women with early menopause live more years of their life with lower levels of estrogen than do women who enter menopause later in life. This means they are at greater risk for diseases associated with lack of estrogen. These factors may affect a woman’s choice about treatment.

### Hormone Therapy for Early Menopause

#### Benefits and risks of hormone therapy

Hormone therapy (HT) is the most effective treatment for menopausal symptoms. For women with a uterus, HT includes estrogen and progesterone. Estrogen alone is used for women who have had a hysterectomy—they don’t need progesterone, which protects against uterine cancer. Besides relieving symptoms, HT also helps prevent osteoporosis.

Some women are fearful of HT because of reports of increased risk for breast cancer, heart disease, and stroke. The increased cardiovascular risk applies mainly to older, postmenopausal women on HT. Research suggests that women under 60 who start hormone therapy within a few years of menopause may actually
have a slightly reduced risk of heart disease. For many women with early menopause, the benefits of HT outweigh the risks. Women with breast cancer, heart disease, or a history of blood clots should not take hormones, however.

Because the risks of estrogen use increase with age, the FDA recommends the lowest dose that relieves symptoms for the shortest time needed to address treatment goals. In women with early or induced menopause (except for those with breast cancer), HT is usually continued until a woman reaches the age of natural menopause, when she and her doctor can reassess her treatment needs. No information is available concerning the benefits or risks of long-term treatment in women with POI.

**Types of Hormone Therapy**

Systemic HT, which has effects throughout the body on many different organs, addresses all the symptoms of menopause. Systemic HT is available in many forms: pills, patches applied to the skin, a gel, a lotion, a mist, and a vaginal ring.

For vaginal symptoms only, estrogen treatment can be directly applied to the vagina or vulva (the external genitalia) in the form of a cream, tablet, or low-dose ring. This local treatment may have fewer risks than systemic treatment since less estrogen is absorbed, but long-term safety studies are needed.

Many women are turning to bioidentical hormones, which are formulated (made in a laboratory) to have the same chemical structure as the hormones your body makes. The term “bioidentical” has come to refer to custom-made products prepared by compounding pharmacies. These products are not regulated by the U.S. Food and Drug Administration (FDA), so are not tested for purity, potency, effectiveness, or safety.

The Endocrine Society warns against the use of compounded bioidentical hormones. A number of FDA-approved bioidentical hormone preparations are available that provide more reliable dosing and quality.

**Alternatives to Hormone Therapy**

Many women use alternatives to hormone therapy to help them manage their menopausal symptoms. These include:

- **Healthy lifestyle:** Some menopause symptoms can be managed by eating a well-balanced diet, exercising regularly, and avoiding smoking and excessive use of alcohol, caffeine, and other products that can worsen hot flashes, sleep disturbance, and irritability.
- **Paced breathing exercises, acupuncture, yoga:** A number of women have reported successful control of hot flashes with these techniques.
- **Prescription medications:** Drugs such as gabapentin, selective serotonin reuptake inhibitors (SSRIs), or serotonin norepinephrine reuptake inhibitors (SNRIs) have shown some success in treating hot flashes. As with any drug, discuss possible risks of these medications with your doctor.
- **Nonprescription options:** Some women find relief of hot flashes with plant-based preparations such as black cohosh or phytoestrogens, although research studies suggest they are no more effective than placebo (an inactive substance).
- **Vaginal lubricants and moisturizers:** These over-the-counter products may help with vaginal dryness and painful intercourse.

Alternatives that address the long-term risks of menopause are also available. These include:

- **Healthy lifestyle:** In addition to helping relieve symptoms, a healthy lifestyle is key to preventing chronic disease.
- **Calcium and vitamin D:** To preserve bone health after menopause, women need an adequate intake of calcium (1,200 to 1,500 mg, divided into three doses throughout the day) along with vitamin D (at least 1,000 International Units per day).
- **Bisphosphonates:** These medications decrease the rate of bone loss and prevent fractures.
- **Statins:** Statins lower unhealthy levels of fats in the blood and help prevent heart or blood vessel disease.
- **Selective estrogen receptor modulators (SERMs):** This class of medication acts like estrogen in some body tissues and blocks the effect of estrogen in others. The type that is active in bone tissue prevents bone loss and spine fractures.

**Choosing the Approach That’s Right for You**

Talk with your doctor or other health care provider about the severity of your symptoms and the best approach to treatment. In consultation with your doctor, weigh the benefits and risks of hormone therapy. If you will be undergoing induced menopause, talk with your oncologist, gynecologist, and reproductive endocrinologist about fertility preservation if that is one of your concerns, and whether you can take estrogen after your surgery.

**Making the Most of Your Doctor Visit**

- Document and prioritize your symptoms, including how often you have them and how severe they are.
- Learn about hormone therapy in general ahead of time.
- Think through your own comfort level with the risks and benefits of hormone therapy.
- Document your family health history.
- Come to your doctor’s office with a list of questions prepared.

For information about menopause and to find a reproductive endocrinologist, visit www.hormone.org.