INTRODUCTION — Menopause is defined as the time in a woman's life, usually between 45 and 55 years, when the ovaries stop producing eggs and menstrual periods end. The average age of menopause is 51 years.

Years before you stop having menstrual periods, changes in your hormone levels can lead to some of the symptoms of menopause. In addition to irregular periods, the most common symptoms are hot flashes, night sweats, mood changes, sleep problems, and vaginal dryness.

Menopause is a normal part of a woman's life and does not always need to be treated. However, the changes that happen before and after menopause can be disruptive. If you have bothersome symptoms, effective treatments are available.

More detailed information about menopause is available by subscription.

AM I GOING THROUGH MENOPAUSE? — A number of terms are used to describe the time before and after you stop having menstrual periods.

- The menopausal transition starts when your menstrual periods first begin to change (become more or less frequent, skipped periods), and ends when you have your final menstrual period. Many people refer to this transition as "perimenopause."

- Menopause occurs when it has been 12 months since your last menstrual period.

- Postmenopause is the time after menopause.

The average age of menopause is 51 years, although the age range can vary between 45 and 55 years. Women who become menopausal before age 40 are considered to have an abnormally early menopause (called premature ovarian failure or primary ovarian insufficiency).

If you are 45 years or older and you have not had a menstrual period in 12 months, there is a good chance that you are menopausal. Most women in this group do not need any lab testing to confirm menopause, especially if they are having menopausal symptoms such as hot flashes or vaginal dryness.

If you are less than 45 years old and you stop having periods or if you have questions about menopausal symptoms, talk to your doctor or nurse. You may need further testing to see if menopause, or another problem, is the cause of your symptoms.

After hysterectomy — If you do not have a uterus (eg, after hysterectomy) but you still have ovaries, it can be hard to know when you are menopausal because you will not have menstrual periods. You may develop menopausal symptoms as your ovaries stop working and your blood levels of estrogen begin to fall. If you are having bothersome symptoms of menopause after hysterectomy, talk to your doctor or nurse.
**MENOPAUSE AND MENSTRUAL PERIODS** — Many women begin to notice changes in their menstrual periods during the menopausal transition (perimenopause). These changes may include:

- Having menstrual periods more or less often than usual (e.g., every five to six weeks instead of every four)
- Having bleeding that lasts for fewer days than before
- Skipping one or more menstrual periods
- Having symptoms of menopause (see 'Menopause symptoms' below)

**Abnormal bleeding** — It can be hard to know if vaginal bleeding is abnormal when you are near menopause. In general, you should see your doctor or nurse if you have the following symptoms:

- Vaginal bleeding more often than every three weeks
- Excessive, heavy menstrual bleeding
- Spotting between your periods
- Vaginal bleeding after menopause (even if it’s just a spot of blood)

Irregular vaginal bleeding may be a normal part of menopause or it may be a sign of a problem. (See "Patient information: Absent or irregular periods (Beyond the Basics)".)

**Menopause and birth control** — Although most women are less likely to become pregnant (without infertility treatment) after age 45, it is still possible, especially if you are having monthly periods and having sex regularly. If you do not want to become pregnant, you should continue to use some form of birth control until you are menopausal. Once you become menopausal, you cannot get pregnant.

- If you are using a hormonal method of birth control, like pills, an injection, a vaginal ring, or a skin patch, talk to your doctor or nurse to find out when you should stop.
- Alternatively, you can switch to a non-hormonal method of birth control (condoms, spermicide) sooner. If you are over 45, using a non-hormonal method of birth control, and you have not had a menstrual period for 12 months, you can stop using birth control altogether.
- If you are using an IUD, you can have it removed when it expires (after 10 years for most copper IUDs, after five years for levonorgestrel IUDs [e.g., Mirena]). You can also ask to have the IUD removed sooner.

**MENOPAUSE SYMPTOMS** — As the ovaries stop working, levels of estrogen fall, leading to the typical symptoms of menopause. Some women have few or no menopausal symptoms while other women have bothersome symptoms that interfere with their life. These symptoms often begin during the menopause transition, before you stop having periods.

The most common symptoms of menopause include:

- **Hot flashes** – Hot flashes typically begin as a sudden feeling of heat in the upper chest and face. The hot feeling then spreads throughout the body and lasts for two to four minutes. Some women sweat during the hot flash and then feel chills and shiver when the hot flash ends. Some women have a feeling of anxiety or heart palpitations during the hot flash. Hot flashes can occur once or twice each day or as often as once per hour during the day and night.

  Hot flashes usually begin well before your last menstrual period. It is not clear what causes hot flashes. Most women who have hot flashes will continue to have them for about four years (on average). (See “Menopausal hot flashes”.)

- **Night sweats** – When hot flashes happen during sleep, they are called night sweats. Night sweats may cause you to sweat through your clothes and wake you from sleep because you are hot or cold. This can happen one or more times per night. Waking frequently can make it hard to get a good night’s sleep. As a result of interrupted sleep, many women develop other problems, such as fatigue, irritability, trouble concentrating, and mood swings.

- **Sleep problems** – During the transition to menopause, some women begin to have trouble falling asleep or staying asleep, even if night sweats are not a problem. Sleep problems can cause you to feel tired and irritable the next day. Effective treatments for sleep problems are available.

- **Vaginal dryness** – As the levels of estrogen in the blood fall before and during menopause, the tissues inside the vagina and urethra (the tube from the bladder to the outside of the body) can become thin and dry. This can cause you to have vaginal dryness or irritation or to have pain or dryness with sex.

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- Depression – During the menopausal transition, some women develop new problems with mood, such as sadness, difficulty concentrating, feeling uninterested in normal activities, and sleeping too much or having trouble staying asleep. Women with a past history of depression can feel more blue moods during the menopause transition. If you have any symptoms of depression or blues that will not go away, talk to your doctor or nurse. There are a number of effective treatments available.

MENOPAUSE TREATMENT — Not all women will need treatment for menopausal symptoms, especially if the symptoms are mild. In fact, there are things you can do on your own that might help you cope with the symptoms you have (table 1). For women whose symptoms are really bothersome, there are several treatment options:

- Postmenopausal hormone therapy – Women with bothersome hot flashes can usually get relief with postmenopausal hormone therapy. For women with a uterus, this would be a combination of estrogen and a progesterone-like medication. Women who do not have a uterus (eg, after a hysterectomy) need only estrogen. Hormone therapy is available in a pill that you take by mouth; a skin patch; a vaginal ring; and a skin gel, cream, or spray.

- Hormone therapy alternatives – If you are bothered by hot flashes but you cannot take or would prefer to avoid hormone therapy, there are alternatives. Although hormone therapy is the most effective treatment for hot flashes, non-hormonal alternatives are a good option for many women.

- Vaginal treatments – There are several treatment options for women with vaginal dryness, including vaginal estrogen.

WHERE TO GET MORE INFORMATION — Your healthcare provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our web site (www.uptodate.com/patients). Related topics for patients, as well as selected articles written for healthcare professionals, are also available. Some of the most relevant are listed below.

Patient level information — UpToDate offers two types of patient education materials.

Ways to cope with menopause symptoms

<table>
<thead>
<tr>
<th>Symptom</th>
<th>What you can do</th>
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<tbody>
<tr>
<td>Hot flashes and night sweats</td>
<td>Dress in layers so you can take off clothes if you get hot.</td>
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<td></td>
<td>Keep the thermostat down and avoid hot drinks, such as coffee or tea.</td>
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<td></td>
<td>Put a cold, wet washcloth against your neck during hot flashes.</td>
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<td></td>
<td>Quit smoking, if you smoke. (Smoking makes hot flashes worse.)</td>
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<tr>
<td>Vaginal dryness</td>
<td>Use lubricants before sex.</td>
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<td></td>
<td>Use Astroglide.</td>
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<tr>
<td>Sleep problems</td>
<td>Go to sleep and get up at the same time every day, even when you don't sleep well. (Taking naps can make the problem worse.)</td>
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<td></td>
<td>Avoid caffeine in the afternoon and don't drink much alcohol.</td>
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<tr>
<td>Depression</td>
<td>Try to stay active. Exercise helps ward off depression.</td>
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<td></td>
<td>Seek social support from women like you.</td>
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