

CHAPTER ONE



Welcome to Menopause

In this chapter, we give you an introduction to menopause. We discuss how menopause has been viewed and defined by the medical establishment, as well as the effect of culture and society on the menopause experience. A brief biology lesson will give you the foundation for the options explained in subsequent chapters to manage the symptoms of menopause.

Types of Menopause

Menopause is a normal and universal event. It begins when you have not had a menstrual period for at least 1 full year. If you are female and live long enough, you will inevitably experience this change in hormone production. Clinicians differentiate between types of menopause. The expected cessation of menstruation at midlife is considered *natural menopause*. When periods stop because a woman has undergone an operation in which her ovaries are removed, this condition is referred to as *artificial* or *surgical menopause*. And *premature*

menopause describes menopause that occurs before age 40, and from unknown causes. About 8% of women have a premature menopause.

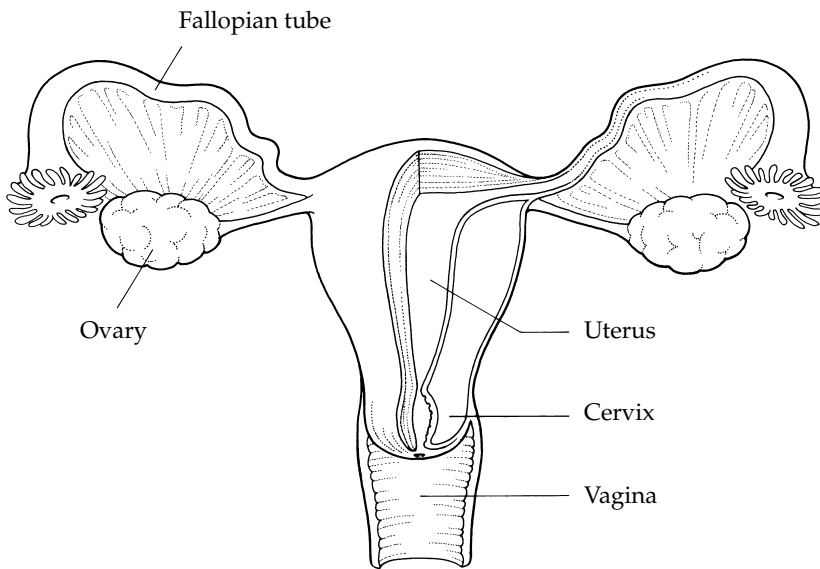
Facts and Figures

Much data have been collected about when menopause is likely to occur, the number of women currently passing through menopause, and so forth. Here are some of the details:

- As the populous baby-boom generation ages, 3500 American women enter the menopausal years—ages 45 to 54—every day.
- Between 1990 and 2010, almost 40 million American women will pass through menopause.
- The average age of natural menopause is 51 to 52.
- By age 55, 95% of American women cease menstruating.
- As many as 25% of women report no discomfort during menopause. Only about 10 to 20% experience discomforts severe enough that they seek medical attention.
- Because women are healthier than they were in the past, they can expect to live one-third of their adult lives post-menopause.
- Although depression has been considered a sign of menopause, no clear causal relationship has been proven.
- Most women report that their sexual relations remain the same or even improve after menopause.

The Normal Menstrual Cycle

Women are lunar creatures. Our hormones ebb and flow according to a monthly rhythm. This rhythm directs the menstrual cycle that occurs approximately every 28 days.

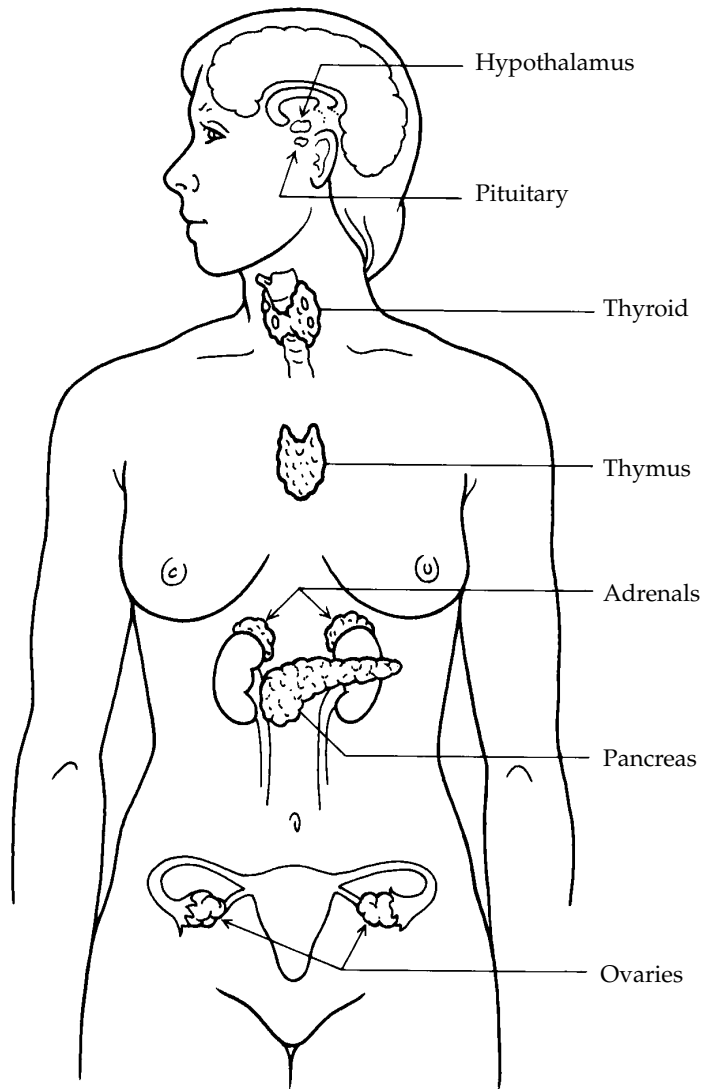


Female Reproductive Organs

The ovaries produce eggs. Every woman has a predetermined number from birth—about 100,000 to 400,000. They are in an inactive form, called a follicle. Hormones produced by the pituitary gland in the brain, follicle-stimulating hormone (FSH) and luteinizing hormone (LH), stimulate the follicles to ripen to produce a fully developed egg. The maturing follicle also begins to produce the two sex hormones, estrogen and progesterone. These hormones prepare the egg to be fertilized but also ready the uterus. Estrogen, which dominates for the first half of the menstrual cycle and declines after ovulation, causes the uterine lining to thicken. Progesterone, which dominates during the second half of the cycle, triggers changes in the uterus to provide a safe haven for a fertilized egg to mature into a fetus.

Only one egg is expelled from the ovaries and has the chance to come in contact with a sperm. If this occurs, the two unite and conception occurs. However, if the egg and the sperm miss each other, the uterus sheds its lining. The substances

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Glands and Organs Influencing Menopause

sloughed off, cells and blood that were meant to nourish the fetus, are known as menstrual flow.

This sequence of events occurs over a month's time, and if conception does not take place, the cycle begins again.

RESEARCH INTO FEMALE HEALTH: PLAYING CATCH-UP

The great majority of research done on human health has focused on males, not females. Some anatomy books at the turn of the 20th century did not even include illustrations of female anatomy. Now, finally, several major long-term research projects on women's health have been launched.

The New England Research Institute is conducting the Massachusetts Women's Health Study, a large study that follows the health of middle-aged women over a 7-year period, focusing on perimenopause and related symptoms. The National Institute of Aging has begun a study that will follow women as they go through menopause. And the National Institutes of Health has launched a massive national research effort to learn more about the causes of disease and death in middle-aged and older women, including heart disease, cancer, osteoporosis, and depression.



Dancing Hormones

Follicle-stimulating hormone (FSH) and luteinizing hormone (LH) are produced in the pituitary and help direct production of estrogen and progesterone in the ovaries. If ovarian output of estrogen and progesterone declines, the pituitary produces more FSH and LH to stimulate and increase production of these two important sex hormones. They are linked in a negative feedback system. If estrogen and progesterone output is excessive, less FSH and LH are produced. This coordinated system is designed to support the development of the egg, fertilization, and implantation of the egg into the wall of the uterus, and to sustain the early stages of pregnancy.

Hormones are powerful compounds because they are chemical messengers. Glands secrete these messenger compounds, which then enter the bloodstream. Hormones are keyed to certain target tissues. When circulating hormones arrive at their destination, they bind to receptor sites, like a key fitting into a lock. This sends a message to the target tissue, which may be another gland. The hormone will trigger the gland to release its own hormone or may directly trigger some chemical reaction. Some hormones cause changes within target tissues in just a few seconds, whereas the effects of others may be felt for days, weeks, or even years. The net effect is that hormones balance and pace various processes within the body.

Sex hormones are called steroid hormones. The major sex hormones are estrogen, progesterone, and testosterone, which are all made by both men and women but in different proportions. In women, estrogen and progesterone are essential for normal reproduction and the menstrual cycle.

Sex hormones are all derived from cholesterol. If you go on a low-fat diet, you may end up with such a low cholesterol level that your production of estrogen and progesterone declines. This is exactly what happens to teenage girls who diet and exercise to become very slim. By losing body fat, they may stop having periods. Conversely, women who are overweight tend to produce extra hormones, which is possibly why carrying extra pounds can be a risk factor for breast cancer.

Hormone Changes in Perimenopause

Here's how it all begins. Around age 40, the ovaries become less and less efficient and produce decreasing amounts of estradiol, the primary form of estrogen a woman's body produces, and progesterone, triggering a disruption in the cycle. This

causes an increase in the production of FSH and LH in an effort to stimulate the ovaries to produce greater amounts of hormones.

As the ovaries and pituitary gland attempt to communicate and adjust, the ovaries may briefly and erratically produce excessive amounts of estrogen or progesterone. Then production will drop again. These highs and lows of hormone levels can lead to PMS-like symptoms, which are typical of perimenopause, the transitional phase that precedes menopause. Perimenopause typically begins 4 to 5 years before the menstrual cycle stops, on average at age 47½. Estrogen may dominate, then progesterone, each triggering certain symptoms. In perimenopause, the ovaries may not produce an egg during certain months and a woman will have an *anovulatory* cycle. If there is no ovulation, no progesterone is produced. This can result in an irregular and heavy menstrual cycle, typical of perimenopause. However, about 10% of women do not really have a perimenopausal phase and instead abruptly cease menstruation.

Estrogen Production Before and After Menopause

Before menopause the ovaries are the primary site of sex hormone production, including estrogen, progesterone, and testosterone. Most of the estrogen produced by the ovaries is in the form known specifically as 17β-estradiol. This type of estrogen makes up 95% of the estrogen circulating in the blood.

With menopause, synthesis of estrogen by the ovaries declines. Estrogen output drops to 40% of premenopausal rates in women 50 to 60 years old and to 20% in most women older than 65. Although the amount is reduced, postmenopausal women do continue to produce some estrogen—a fact that is not appreciated or well understood. One study of

100 postmenopausal women found that the ovaries secrete some estrogens, although relatively small amounts, during the first 4 years postmenopause.

In addition, the adrenal glands function in postmenopause as a natural backup system for estrogen production. The adrenals produce an estrogen precursor, *androstenedione*, which is converted into another form of estrogen, *estrone*. Estrone is a less potent form of estrogen than estradiol. Estrone is mostly formed in the fatty tissue of the lower abdomen, but some is also produced in muscle tissue and bone marrow. In postmenopause the liver converts some estrone to a third configuration of estrogen, *estriol*.

The Social Side of Menopause

Ask any woman and she will tell you that menopause is a life event, full of meaning, a challenge psychologically and socially. For starters, negative attitudes toward menopause and menopausal women have persisted for hundreds of years and have been recorded in medical writing and found throughout literature. These indictments can make menopause feel like a burden, even if a woman isn't troubled by symptoms.

In the late 1700s, as treatments for menopause began to appear in the medical literature, the negative attitudes toward this stage of life showed up in the medical language.

In a treatise on female health in 1845, Colombat de L'Isere wrote:

Compelled to yield to the power of time, women now cease to exist for the species, and hence forward live only for themselves. Their features are stamped with the impress of age, and their genital organs are sealed with the signet of sterility. . . . It is the dictate of prudence to avoid all such circumstances as might tend to awaken any erotic thoughts in the mind and reanimate a sentiment

that ought rather to become extinct . . . in fine, everything calculated to cause regret for charms that are lost, and enjoyments that are ended forever.

In recent times, too, medical literature has painted a grim picture of menopause. In 1963, in an article published in the *Journal of the American Geriatric Society*, entitled, “The Fate of the Nontreated Postmenopausal Woman. A Plea for the Maintenance of Adequate Estrogen from Puberty to the Grave,” the authors wrote that, at menopause, “women acquired a vapid, cow-like feeling called a negative state in which the world appears as through a gray veil, and they live as docile, harmless creatures.”

And an article in the same journal, in 1967, included the following: “Many women are leading an active and productive life when this tragedy strikes. They are still attractive and mentally alert. They deeply resent what to them is a catastrophic attack upon their ability to earn a living and enjoy life.”

Even today, such terms as “ovarian failure” and “vaginal atrophy” are used to describe the change. It is no wonder that many women worry about menopause and fear it. Companies selling products for treatment of menopausal symptoms often make use of these dismal images to help sell their products. Here is a case in point.

Marilyn, a professional and single woman living in New York, found herself in a surgeon’s office after being told she needed a full hysterectomy for fibroid removal; this surgery results in medically induced menopause. While waiting for her appointment in the clinic’s reception area, she thumbed through the only reading material available—promotional literature from a drug company. The brochure informed her that once a woman is menopausal, her vaginal tissues soon become parched and withered, and intercourse is then difficult if not painful. The unstated subtext was only too clear to Marilyn—that from now on, if any man decided to go out with her, it

would be an act of charity! She could kiss her love life goodbye, as well as any prospects of marriage. Marilyn recalls being ushered into the doctor's office and discussing the details of her coming surgery feeling as if she were being prepared for her exit from life!

Menopause Is Linked to Culture

The attitudes you have toward menopause have been, at least in part, shaped by your world. The culture in which you live, what your mother told you about menopause, what your friends say about it, the messages you hear through the media, all shape what menopause means to you.

Sociologists have studied this aspect of menopause, investigating the effect that society and culture have on a woman's experience of the change. In countries where women gain in status at midlife, such as in India, many women report having a relatively uneventful menopause and rarely suffer psychological symptoms. In these societies, older women are appreciated for the wisdom of their years and are considered an asset to society.

In Japan, too, menopause is colored by the culture in which it exists. In this society, driven by the work ethic, menopause problems are often viewed as a luxury disease of modernity, affecting women with too much time on their hands.

And in North America, where menopausal women sometimes experience a drop in status or simply become invisible, menopause is rarely welcomed. The culture celebrates and values youthfulness. Many women, themselves products of the culture, are very sensitive to this attitude. If at the same time children leave home, or husband and wife divorce, the menopausal years become all the more difficult. In these circumstances, the physical and emotional problems a woman has that can be attributed to menopause become difficult to define. Life and the change are intertwined.

Getting On with Your Life

Fortunately, many women are working hard to retire the images of the incapacitated menopausal woman. Women in their 60s go back to school to begin a second career. Many women work energetically well past an expected retirement age. Grandmothers hike up mountains. Sex symbols like Sophia Loren tell their age and smile at us from magazine covers. What's to fear, they ask. Get on with the rest of your life.

With menopause, women reach a plateau. For decades prior to menopause, women live a cyclical life, with steadily rising, then falling hormone levels. Now with menopause, their hormone levels become relatively steady, with the total output declining slowly over several years. Many women report finding new reserves of energy—what anthropologist Margaret Mead referred to as “postmenopausal zest.”

The French have an expression that, roughly translated, means being comfortable in your own skin, which is a good way to go through menopause, in a spirit of self-acceptance. Some women resist menopause, although their body is sending all sorts of messages that a process of change has begun. It is better to face menopause head-on, like a sailboat cutting through the waves. You create less turbulence, you save energy, and you may reach the other side of menopause that much quicker.

Christiane Northrup, M.D., noted author and founder of the Women-to-Women health clinic in Yarmouth, Maine, points out, “The women now approaching menopause are part of the generation that were taught they couldn't trust any normal process of the body. They learned that menstrual flow must be controlled, and God forbid, someone should see a soiled sanitary napkin in the trash can! Even our mothers were systematically taught that breast feeding was not OK.” But she offers another option: “Menopause can be a time of rebirth and redoing yourself from the inside out. By trusting the

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process, you can give yourself a smoother transition and emerge on the other side with everything intact and without delay.”

In addition, accepting menopause can help you let go of your past and give you the opportunity of inventing a new and even grander you! So what are you waiting for? Take action and start by learning more about the signs and symptoms of menopause, the subject of the next chapter.