

An article taken from the **Menopause & You** online program

Estrogen, Progesterone and Menopause



Dr. Jocelyn Craparo gives a complete overview of the functions of estrogen and progesterone. This is important background in understanding the changes that come with menopause and some of the therapies directed at their treatment.

*Beverley Vaughn, MD
Medical Coordinator, Menopause & You program*



Jocelyn Craparo, MD

*Obstetrics/Gynecology
Bryn Mawr Hospital*

The female hormones estrogen and progesterone are crucial components of a woman's health. Not only do they contribute to a woman's menstrual cycle and ability to bear children, but they have an impact on other areas of the body. As most women know, menopause—when the body no longer produces estrogen—introduces physiological changes. In this article, we want to inform you about the role of estrogen and progesterone in menopause.

Estrogen and Progesterone

Estrogen is produced by the ovarian follicle (ovary) and rises through the early part of the menstrual cycle. Progesterone begins to be produced upon ovulation and is elevated through the remainder of the cycle until it drops just prior to the menstrual flow. Although most of the estrogen and progesterone we make comes from our ovaries, small amounts are produced in other organs.

While estrogen and progesterone are the hormones associated with ovulation and menstruation, it is extremely important to understand the greater scope of their effects on the female body. We begin to experience the influence of these hormones in fetal life and continue to be significantly impacted upon by them until well after menopause.

Many organs of the human body have estrogen and progesterone receptors. These receptors are prominent in skin, bone, breast tissue, the uterine lining, and blood vessels. The dominant hormone is estrogen, accounting for women's secondary sexual characteristics. Estrogen is a factor in the changes that occur in tissues of the breast, vagina, uterus, and other organs.

Progesterone is important mainly for the preparation of the endometrium for implantation of the egg during pregnancy and the maintenance of pregnancy. Progesterone has characteristics that balance and counteract the adverse effects that estrogen can have. For example, some women produce too much

estrogen, thus standing a risk of cancer of the uterus and breast. Supplemental progesterone has been known to aid in managing abnormal uterine bleeding, as well as recurrent pregnancy loss or premature labor.

While progesterone is important, healthcare providers concentrate largely on the effect of estrogen. Let's review what estrogen contributes to a woman's physiology, and how the loss of estrogen at menopause affects the body.

Estrogen and Menopause

Estrogen during the pre-menopausal, childbearing years is responsible for the following in a woman's body:

- Normal skin thickness and elasticity
- Relaxation of blood vessels in the heart, thus protecting a woman from heart attack
- Enhanced calcium absorption, leading to bone strength
- Vaginal function
- Bladder and urethral health

When a woman's ovaries cease to produce estrogen, however, the receptors in various organs are deprived.

It is extremely important to understand the greater scope of estrogen and progesterone's effects on the female body.

(Continued)

An article taken from the **Menopause & You** online program

Estrogen, Progesterone and Menopause

This can occur as a result of natural menopause, premature menopause, or surgical removal of the ovaries prior to menopause.

The following are some of the effects from loss of estrogen:

- Hot flashes
- Skin dryness and wrinkles
- Heart attack
- Bone loss and osteoporosis
- Dryness of the vagina and decreased sexual sensation
- Bladder infections

Treatment options are available if you experience or are at risk for any of these effects, as discussed next.

Treatment Options

Over the past fifty years, the use of estrogen replacement therapy has been the mainstay in the treatment of hot flashes and in the prevention of osteoporosis. Recent controversies over the long-term use of estrogen, however, have led many doctors to recommend alternative therapies for changes associated with menopause and estrogen loss.

For example, supplements, such as calcium and vitamins can be taken for maintenance of bone health. Medications, such as Fosamax and Actonel, are being used to treat osteoporosis. Weight-bearing exercise is recommended for its impact on maintaining bone mass.

Some antidepressants, such as Paxil and Effexor, have been found helpful in relieving hot flashes. Topical estrogen in a variety of forms can be used vaginally to alleviate dryness and restore sexual sensation. Because estrogen and progesterone are naturally reduced in a postmenopausal woman's body, continued exposure to synthetic hormone replacements is of questionable safety. Hopefully, investigators will continue to study and define the complex roles of these hormones. In the meantime, women can work with their doctors to determine the best ways of gaining relief and benefit from medication, lifestyle, and exercise options.

Recent controversies over the long-term use of estrogen have led many doctors to recommend alternative therapies for changes associated with menopause.

This article is part of our Menopause and You library, an online program sponsored by Women's Health Source. To view the entire library of articles, please visit mainlinehealth.org/whs and click on the "Menopause and You" link. To speak with our nurse counselor, call 1.888.876.8764 or email whs@mlhs.org.

Sponsored by
Women's Health Source.



Main Line Health
Well ahead.SM

Lankenau Medical Center | Bryn Mawr Hospital | Paoli Hospital | Riddle Hospital