

# How Hormones Affect Breast Cancer

## The hormone story

Exposure to hormones, specifically estrogen, increases a woman's risk of developing breast cancer. Throughout life, women are exposed to hormones. From their first menstrual period to the onset of menopause, estrogen and progesterone stimulate normal breast cells. It is this lifetime exposure to ovarian hormones that is believed to put a woman at risk for breast cancer. Still, it is not clear if estrogen or other hormones cause breast cancer. What is known is that a woman who begins her menstrual cycle before age 12, has her first child after age 35 or goes through menopause after age 55 has an increased risk of breast cancer. Two other potential risks are described below.

### Oral contraceptives

Results have largely shown that oral contraceptive use slightly increases breast cancer risk. The increased risk disappears 10 years after stopping birth control pills. Recent studies have looked at the effects of lower-dose birth control pills, as well as the low-dose "mini-pill." The risk from the lower-dose pills may be less than the risk from pills that contain more estrogen.

If you are taking some form of oral contraceptives now, the best advice is to check with your doctor about your personal risk.

### Postmenopausal hormone use

During menopause, a woman's body produces much lower amounts of estrogen and progesterone than when she was having periods. Low levels of estrogen may cause hot flashes, bone loss, vaginal dryness and mood swings. To help lessen these side effects, doctors may prescribe postmenopausal hormones. Since this *adds* the lost estrogen (and progestin for women who have a uterus) back into your body the risk for breast cancer may increase. Many studies have looked for a possible link between the use of

postmenopausal hormones and breast cancer. Recent studies have shown that postmenopausal hormones, especially combined estrogen and progestin, can increase the risk of breast cancer. This risk declines over time once the woman stops taking the hormones. Any woman currently taking or considering postmenopausal hormones should ask her doctor about the potential risks and benefits.

## Related terms

**Estrogen** — A hormone produced primarily by the ovaries that aids in developing female sex organs and in regulating monthly menstrual cycles

**Hormone** — A substance that helps regulate body functions

**Menopause** — The time in a woman's life when menstrual cycles stop and the level of estrogen in her body decreases

**Oral Contraceptive** — Hormone-based drugs used to prevent pregnancy or help regulate a woman's menstrual cycle

**Osteoporosis** — A disease in which bones become less dense and may break more easily

**Postmenopausal Hormones** — Hormone-based drugs given to women to help control the effects of menopause

**Progesterone** — A hormone that is released by the ovaries during every menstrual cycle and helps prepare a woman's body for pregnancy

**Progestin** — A synthetic progesterone-like drug.

## But what about...

- the effects of estrogen when breast cancer cells are already present?

Although it still has not been proven that estrogen directly causes breast cancer, estrogen may help some breast cancer cells grow when the tumor is already present in a woman's body.

- the risk of breast cancer for women who are currently taking birth control pills?

Studies have shown that the use of birth control pills slightly increases breast cancer risk.

- women who have stopped using birth control pills? Should they be concerned about their risk of breast cancer?

Once stopped, the risk decreases over time. After 10 years of not using birth control pills, a woman's risk is the same as a woman who never took the pills.

- the benefits of birth control pills in preventing pregnancy, and reducing the risk of ovarian cancer?

Together with her doctor, each woman must weigh the risks and benefits of taking birth control pills — making a decision based on all the information that is available to her.

- the benefits of postmenopausal hormones in reducing the symptoms of menopause and the risk of osteoporosis?

Each woman must weigh the pros and cons of taking postmenopausal hormones. For short-term relief of menopausal symptoms, these are approved therapies. Postmenopausal hormones work best when used at the lowest dose for the shortest amount of time. There are other things you can do to manage these symptoms. Each woman, should look at all the options with her doctor and make an informed decision.

- women who have already been diagnosed with breast cancer? Why are they taken off postmenopausal hormones?

Some doctors are concerned that exposure to additional estrogen may increase a woman's risk of breast cancer recurring. Talk to your doctor about your personal risk.

- women who have a family history of breast cancer?

There is no clear reason to avoid birth control pills or postmenopausal hormones. However, this area is controversial and studies are still ongoing. Talk to your doctor about how your family history may affect your risk.



### Related fact sheets in this series:

- Breast Cancer Risk Factors
- Breast Health Resources
- Medical Vocabulary
- Types of Breast Cancer Tumors
- What is Breast Cancer?