

## HOW HORMONES AFFECT BREAST CANCER RISK



### Birth control pills (oral contraceptives)

Current or recent use of birth control pills slightly increases breast cancer risk. However, this risk is quite small because the risk of breast cancer for most young women is low

Once a woman stops taking the pill, her risk goes down. Over time, this risk even goes away. Most studies have looked at breast cancer risk with older, higher dose forms of the pill. The effects of lower-dose birth control pills are still under study.

If you take birth control pills, talk with your doctor about its risks and benefits.

Hormones are chemicals made by the body that control how cells and organs work.

Estrogen is a female hormone made mainly in the ovaries. It's important for sexual development and other body functions. From your first monthly period until menopause, estrogen stimulates normal breast cells.

A higher lifetime exposure to estrogen may increase breast cancer risk. For example, your risk increases if you start your period at a young age or go through menopause at a later age. Other hormone-related risks are described below.

### Menopausal hormone therapy

#### Pills

Menopausal hormone therapy (MHT) is also known as postmenopausal hormone therapy and hormone replacement therapy. Many women use MHT pills to relieve hot flashes and other menopausal symptoms. MHT should be used at the lowest dose and for the shortest time needed to ease menopausal symptoms. Long-term use can increase breast cancer risk and other serious health conditions. There are 2 main types of MHT pills: estrogen plus progestin and estrogen alone.

**Estrogen plus progestin MHT**  
Estrogen plus progestin MHT pills are used by women who still have a uterus. MHT pills increase breast cancer risk. Once a woman stops taking them, her risk goes down over time.

**Estrogen alone MHT**  
Estrogen alone MHT pills are used by women who don't have a uterus (have had a hysterectomy). Some studies show estrogen alone MHT pills may increase breast cancer risk, but others don't. More research is needed.

The U.S. Food and Drug Administration (FDA) recommends women use the lowest dose that eases symptoms for the shortest time needed.

Any woman currently taking or thinking about taking MHT pills should talk with her doctor about the risks and benefits.

#### Vaginal creams, suppositories and rings

Vaginal forms of MHT do not appear to increase the risk of breast cancer. However, if you've been diagnosed with breast cancer, vaginal estrogen rings and suppositories are better than vaginal estrogen creams.

#### Patches

Whether hormone patches affect breast cancer risk is under study.

**Note:** MHT is different from hormone therapies used to treat breast cancer or reduce risk (which act as "anti-hormone" therapies).

For more information, visit [komen.org](http://komen.org) or call Susan G. Komen's breast care helpline at 1-877 GO KOMEN (1-877-465-6636) Monday through Friday, 9 AM to 10 PM ET.

## Resources

**Susan G. Komen®**  
1-877 GO KOMEN  
(1-877-465-6636)  
[komen.org](http://komen.org)

## Related educational resources:

- [Risk Factors and Risk Reduction](#)
- [Breast Cancer & Risk](#)

The list of resources is only a suggested resource and is not a complete listing of breast health and breast cancer materials or information. The information contained herein is not meant to be used for self-diagnosis or to replace the services of a medical professional. Komen does not endorse, recommend or make any warranties or representations regarding the accuracy, completeness, timeliness, quality or non-infringement of any of the materials, products or information provided by the organizations referenced herein.

## But what about...

the link between estrogen and breast cancer?

Some breast cancer cells need estrogen to grow. When estrogen attaches to special proteins called estrogen receptors, the cancer cells with these receptors grow. Estrogen receptor-positive breast cancers have many cells with hormone receptors and can be treated with hormone therapy.

women who have been diagnosed with breast cancer? Should they avoid MHT?

MHT is not usually recommended for breast cancer survivors because it may increase the risk of breast cancer recurrence (the return of cancer) and cancer in the opposite breast. Talk with your doctor about other ways to help ease menopausal symptoms.

women with a family history of breast cancer?

It's not clear whether or not women with a family history of breast cancer should avoid birth control pills or MHT. This topic is under study. Talk with your doctor about how your family history may affect your risk. Use the family health history tool to record and organize your family health history [www.komen.org/FamilyHealth](http://www.komen.org/FamilyHealth)

the effects of natural hormones on breast cancer?

**Estrogens** are natural hormones that are important in sexual development and other body functions. Higher amounts of estrogen in the blood are linked to an increased risk of breast cancer in women after menopause. Researchers are studying a possible link to breast cancer before menopause.

**Insulin-like growth factor 1 (IGF-1)** is a natural hormone that plays a role in growth and development.

Studies have found higher levels of IGF-1 in the blood may increase the risk of breast cancer. Measures of blood levels of IGF-1 may one day help estimate breast cancer risk.

**Prolactin** is a hormone mainly produced in the pituitary gland (a small gland near the brain). It plays a role in breast growth and the production of milk during breastfeeding. Women with higher blood levels of prolactin may have a higher risk of breast cancer than women with lower levels. Measures of prolactin blood levels may one day help estimate breast cancer risk.

**Androgens** (such as testosterone) are natural hormones that are important in sexual development. Higher amounts of androgens in the blood may be linked to an increased risk of breast cancer in women.