

## Hormone therapy — an overview

Do not confuse hormone therapy, with postmenopausal hormone use (hormone replacement therapy). *Hormone therapy* is used for treating some breast cancer and stops hormones from getting to these cells. *Postmenopausal hormones (estrogen and progesterin)* are used for short-term relief of menopausal symptoms. Postmenopausal hormone use has declined since recent studies have shown a link to breast cancer risk.

## Hormones and breast cancer

When a woman is diagnosed with breast cancer, tests are done to find out if the cancer is positive for estrogen and progesterone receptors. If a cancer is found to have either of these receptors, hormone therapy is recommended as an adjuvant (after surgery) therapy to help prevent the spread or recurrence of breast cancer.

Hormones flowing in your bloodstream can attach to breast cancer cells and help those cells grow and multiply. The purpose of hormone therapy is to prevent hormones from being produced and/or attaching to cancer cells that may remain after surgery so they don't promote cancer growth.

There are several types of hormone therapies. The first type involves the use of a prescription drug, such as tamoxifen. Tamoxifen attaches to the estrogen receptor inside the breast cancer cells and prevents your natural hormones from stimulating cancer cell growth.

Another type of hormone therapy involves stopping the ovaries from producing estrogen, the hormone that may promote breast cancer growth. If the ovaries are removed by surgery, or their function turned off with a hormone therapy, then these hormones are greatly reduced.

Newer hormone therapies are aromatase inhibitors (AI) which prevent fat, muscle cells and the adrenal glands from producing estrogen in postmenopausal women.

## Related terms

**Adjuvant therapy** — cancer treatment, such as chemotherapy, hormone therapy or aromatase inhibitor, used in addition to surgery

**Aromatase inhibitor** — stops certain hormones from turning into estrogen in postmenopausal women

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

**Estrogen or progesterone receptor** — specific proteins in a breast cancer cell that, if present, show that estrogen or progesterone may stimulate cancer growth

**Hormone** — a substance that aids the body in regulating body functions

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

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

**Progesterin** — a synthetic progesterone-like ingredient found in postmenopausal hormone drugs

**Tamoxifen** — an antiestrogen drug used as hormone therapy for the treatment of breast cancer and as prevention for women at higher risk for breast cancer

## Types of hormone therapy drugs

Hormone therapy is used in both early stage and metastatic breast cancer. If hormone therapy is a treatment option for you, your doctor will consider many factors before deciding which specific treatment to prescribe. These factors may include: your age, the size of your tumor, whether your tumor has estrogen or progesterone receptors, if you are premenopausal or postmenopausal and the stage of your breast cancer. Your doctor should discuss these factors with you. The table below describes a few of the current hormone therapy drugs. But remember, research continues on many others that may prove to be helpful treatments in the future.

Drug (Brand name)	Who it is typically used for
tamoxifen (Nolvadex)	pre or postmenopausal women with estrogen or progesterone receptor-positive breast cancer or as prevention for women at higher risk
anastrozole (Arimidex)	postmenopausal women with early stage estrogen or progesterone receptor-positive cancer
letrozole (Femara) examestane (Aromasin)	postmenopausal women with early stage estrogen or progesterone receptor-positive cancer following tamoxifen
toremifene (Fareston)	women with estrogen or progesterone receptor-positive cancer
megestrol acetate (Megace)	premenopausal and postmenopausal women with breast cancer metastases
goserelin (Zoladex)	premenopausal women with early stage or advanced stage breast cancer

## Questions to ask your doctor

*Is hormone therapy the right treatment for me?*

*Which hormone therapy is best for my situation?*

If you are not sure about the answers to these questions, take a few moments to write down your questions. Make a second copy of the questions for your doctor, and then go over them together at your next appointment. Being informed will help you feel better about the treatment choices you make.

Below are a few questions to get you started:

- Was my breast cancer estrogen receptor (ER+) or progesterone receptor (PR+) positive? If so, what does this mean?
- Is hormone therapy right for me? If so, which type?
- What are the side effects of this treatment?
- Is there anything I can do to ease the side effects?
- What tests will I need to monitor for side effects?
- Will I need preventive treatment for side effects?
- How long will I be on this treatment?
- Will I need another treatment besides hormone therapy? If so, what is it? Why do I need it?

### Related fact sheets in this series:

- Aromatase Inhibitors
- Clinical Trials
- Making Treatment Decisions
- Tamoxifen
- Treatment Choices — An Overview