Goserelin (Zoladex)

This booklet explains what goserelin is, when it may be prescribed, how it works and what side effects may occur. Goserelin is the generic (non-branded) name of the drug and how it’s referred to in this booklet. Its current brand name is Zoladex.
What is goserelin?

Goserelin is a type of hormone therapy used to treat breast cancer.

It’s suitable for women whose breast cancer is sensitive to the female hormone oestrogen. This means that the breast cancer has receptors within the cell that bind to oestrogen and stimulate the cancer to grow (known as oestrogen receptor positive or ER+ breast cancer). All breast cancers are tested for oestrogen receptors using tissue from a biopsy or after surgery.

If your cancer is found to be oestrogen receptor negative, then goserelin will not be of any benefit to you.

Who might be offered goserelin?

Primary breast cancer
Goserelin is used to treat women who haven’t been through the menopause (pre-menopausal) with primary breast cancer. This is breast cancer that started in the breast and has not spread beyond the breast or lymph nodes (glands) under the arm.

For women with primary breast cancer, goserelin may be given on its own or with another hormone therapy such as tamoxifen or drugs known as aromatase inhibitors.

Secondary breast cancer
Goserelin may also be used to treat pre-menopausal women with secondary breast cancer (breast cancer that has started in the breast and spread to another part of the body).

In pre-menopausal women with secondary breast cancer, goserelin may be prescribed either alone or, more commonly, with other types of drugs such as tamoxifen.

Preserving fertility
Chemotherapy can cause damage to the ovaries and affect a woman’s ability to become pregnant. Studies have shown that goserelin may be able to protect the ovaries. A dose of goserelin is usually given just before chemotherapy starts, then every four weeks during
chemotherapy, and a last dose after the final chemotherapy treatment. More research is needed to find out more about the role of goserelin during chemotherapy to preserve fertility.

**Goserelin is not suitable during pregnancy or while breastfeeding.**

**How does it work?**

Before the menopause, oestrogen is mainly produced by the ovaries. As oestrogen stimulates some breast cancers to grow, goserelin works by switching off the production of oestrogen from the ovaries. This is known as ovarian suppression or ovarian function suppression.

Goserelin does this by interfering with hormone signals from the brain that control how the ovaries work. Within about three weeks of the first injection, your oestrogen will be lowered to a level similar to that of a post-menopausal woman. This effect is generally temporary and will only last for as long as you are having goserelin. When you stop having the drug, your ovaries will usually start to produce oestrogen again. However, if you are approaching the age of natural menopause when your treatment finishes, your ovaries may not start working again.

For more information about stopping the ovaries working see our [Ovarian ablation and suppression](#) booklet.

**How is goserelin given?**

Goserelin comes as an implant (a very small pellet) in a pre-filled syringe. It’s given as a subcutaneous (under the skin) injection into your abdomen (tummy). Some people find the injection uncomfortable. If necessary you may be prescribed a local anaesthetic cream to numb the skin before the injection to reduce any discomfort. After the cream has been applied you will need to wait for at least an hour before the area is numb, so it’s important to ask about using this cream before your injection.

For primary breast cancer, it’s recommended that goserelin is given every 28 days (four weeks). The injection is called a ‘depot injection’, which means that the drug is steadily released into the bloodstream over the four weeks. It may be given less frequently for secondary breast cancer. Your specialist can talk to you about this in more detail.
You may be given your first injection as an outpatient at the hospital. After this your GP (local doctor), community nurse or practice nurse may give the injections at the GP surgery or at home if you can’t get to the surgery. It can be useful to make an appointment for your next dose after each injection so it’s given at the right time.

**How long will I be on goserelin?**

If you have primary breast cancer, goserelin is usually given for two years. In some cases it may be given for up to five years.

If you have secondary breast cancer, you will be given goserelin for as long as it keeps the cancer under control.

**Will goserelin affect my periods?**

Goserelin can cause periods to stop temporarily. Most women will start their periods again within three months to a year of having their last goserelin injection. Some women who are approaching their natural menopause while having goserelin may find that their periods don’t start again after they finish treatment.

**Do I need to use contraception while I’m taking goserelin?**

It’s important not to get pregnant while you’re having goserelin because the drug could harm a developing baby. Although your periods may stop or become irregular, you could still become pregnant while having goserelin.

If you’re sexually active with a man, use a non-hormonal method of contraception, such as condoms, Femidoms or a diaphragm. It may also be possible to use a coil (IUD or intrauterine device). However, you would need to discuss this with your specialist as not all types are suitable for women with breast cancer.
What happens if I miss an injection?
If you miss an injection, try to have it as soon as possible.

What are the possible side effects of goserelin?
Everyone reacts differently to drugs and some people experience more side effects than others. As goserelin can be given in addition to chemotherapy or tamoxifen, it’s sometimes difficult to know which side effects are being caused by which treatment.

Common side effects
The most common side effects of goserelin are menopausal symptoms, such as hot flushes, sweats, vaginal dryness, mood changes and a decrease in libido (sex drive). Although these symptoms may be quite intense in the beginning, they usually improve over time.

To find out more about coping with menopausal symptoms, see our Menopausal symptoms and breast cancer booklet. Our booklet Your body, intimacy and sex may also be helpful.

After goserelin has been given, you may notice an area of redness or bruising at the injection site each time, but this should disappear within a few hours. Some bruising may stay for a few days.

Less common side effects
Less common side effects include headaches, mild skin rashes, tingling in fingers and toes (known as parasthesia) and changes in breast size. Some women have also reported weight gain, tiredness and nausea. You may also experience low mood or depression.

During the first month of treatment there may be some vaginal bleeding caused by the withdrawal of the hormone oestrogen.

Changes in blood pressure can also occur. Blood pressure can be higher or lower than normal, but does not normally need treatment or mean that goserelin has to be stopped.

When first starting goserelin treatment, some women notice joint pain and stiffness. This is due to the reduced oestrogen levels and usually improves over time. If it doesn’t, talk to your specialist or breast care nurse.
Lack of oestrogen over a long period of time can cause thinning of the bones (osteoporosis). Guidance in England and Wales recommends that anyone with primary breast cancer having ovarian suppression treatment is offered a DEXA scan (dual energy x-ray absorptiometry) within three months of starting goserelin. A DEXA scan measures bone density. If you’re having goserelin for secondary breast cancer, you can talk to your specialist breast team about whether a DEXA scan is appropriate for you.

If you’re concerned about your risk of developing osteoporosis, talk to your specialist team. For more information see our Osteoporosis and breast cancer treatment booklet.

If you’re given goserelin to treat secondary breast cancer in the bone, you may experience a temporary increase in your symptoms for a short time following the start of treatment (sometimes referred to as ‘tumour flare’).

In rare cases the level of calcium in the blood may temporarily increase. This can cause symptoms such as nausea, vomiting, constipation or drowsiness. If you experience any of these symptoms, contact your specialist team.

If you have persistent side effects from goserelin, tell your specialist team so that they can decide how best to manage them.
Helping you face breast cancer

Treatments for breast cancer can be complex and if you’re wondering where to turn for support in making treatment decisions or coping with side effects, we can help with practical and emotional support.

**Ask us**

Our free Helpline is answered by specialist nurses and trained staff with personal experience of breast cancer. They understand your issues and can answer questions. Or you can Ask the Nurse by email on our website.

Free Helpline **0808 800 6000** (Text Relay 18001)
Monday–Friday 9am–5pm, Saturday 10am–2pm
[www.breastcancercare.org.uk/ATN](http://www.breastcancercare.org.uk/ATN)

**Talk to someone who understands**

Our Someone Like Me service puts you in contact by phone or email with someone else who’s had breast cancer and who’s been trained to help.

Online, you can chat to other people going through breast cancer on our professionally moderated discussion Forum or join a free, weekly Live Chat session.

**In your area**

We provide a variety of services in person across the UK, including:

HeadStrong prepares you for the possibility of losing your hair because of cancer treatment. In a private meeting, trained volunteers talk with you about how to look after your scalp before, during and after treatment. They’ll also share ideas on how to make the most of scarves, hats and other headwear.

Moving Forward Information Sessions and longer courses on adjusting to life after treatment. Both have expert speakers and offer the chance to talk to other people in the same situation as you.

Find out about all our services for people affected by breast cancer at [www.breastcancercare.org.uk/services](http://www.breastcancercare.org.uk/services) or phone the Helpline. We can help you decide which of our services are right for you.
We’re here for you: help us to be there for other people too

If you found this booklet helpful, please use this form to send us a donation. Our information resources and other services are only free because of support from people such as you.

We want to be there for every person facing the emotional and physical trauma of a breast cancer diagnosis. Donate today and together we can ensure that everyone affected by breast cancer has someone to turn to.

Donate by post
Please accept my donation of £10/£20/my own choice of £

I enclose a cheque/PO/CAF voucher made payable to
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We might occasionally want to send you more information about our services and activities

☐ Please tick if you’re happy to receive email from us
☐ Please tick if you don’t want to receive post from us

We won’t pass on your details to any other organisation or third parties.

Please return this form to Breast Cancer Care, Freepost RRKZ-ARZY-YCKG, 5–13 Great Suffolk Street, London SE1 0NS
About this booklet

**Goserelin (Zoladex)** was written by Breast Cancer Care’s clinical specialists, and reviewed by healthcare professionals and people affected by breast cancer.

For a full list of the sources we used to research it:

Phone 0345 092 0808  
Email publications@breastcancercare.org.uk

You can order or download more copies from [www.breastcancercare.org.uk/publications](http://www.breastcancercare.org.uk/publications)

For a large print, Braille, DAISY format or audio CD version:

Phone 0345 092 0808  
Email publications@breastcancercare.org.uk
Breast Cancer Care is the only UK-wide charity providing specialist support and tailored information for anyone affected by breast cancer.

Our clinical expertise and emotional support network help thousands of people find a way to live with, through and beyond breast cancer.

Visit www.breastcancercare.org.uk or call our free Helpline on 0808 800 6000 (Text Relay 18001).

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