This booklet explains the different ways to stop the ovaries from working as part of treatment for breast cancer. It discusses the options and what they involve.
We hope this booklet answers your questions and helps you discuss the options with your specialist team. We recommend that you read this booklet together with our Treating breast cancer and Younger women with breast cancer booklets.

**What is ovarian suppression?**

Some breast cancers are stimulated to grow by a hormone called oestrogen. When this happens it’s known as oestrogen receptor positive (or ER+) breast cancer.

Before the menopause, oestrogen is mainly produced by the ovaries. If the ovaries are removed, or if they are stopped from working, there’s less oestrogen in the body to stimulate the cancer to grow. This is called ovarian suppression. Small amounts of oestrogen will still be produced by fat cells.

You might hear different terms for ovarian suppression such as ovarian function suppression and ovarian ablation. These all mean stopping the ovaries from making oestrogen, either permanently or temporarily. We use the term ovarian suppression in this booklet.

**Who may benefit from ovarian suppression?**

Ovarian suppression may be recommended if you’ve not yet reached the menopause (pre-menopausal) and your breast cancer is oestrogen receptor positive. It’s not used in women who are already post-menopausal.

Ovarian suppression can be used to reduce the risk of the breast cancer coming back or a new breast cancer developing.

Recent research suggests that some younger women (40 years and below) who remain pre-menopausal after chemotherapy may benefit most from ovarian suppression. Older pre-menopausal women may not get as much benefit from ovarian suppression after chemotherapy.

Ovarian suppression is less likely to be used in women who are not recommended to have chemotherapy, but may be an option for some women who choose not to have chemotherapy.

It may also be used to try to protect your fertility during chemotherapy.
It’s sometimes used to treat secondary breast cancer (when breast cancer cells spread to other parts of the body).

Your specialist team should discuss what treatment they recommend for you and why.

**What does ovarian suppression involve?**

Ovarian suppression can be achieved by:

- hormone therapy (drugs)
- surgery
- radiotherapy.

Your specialist team should help you decide which is best for you. Using hormone therapy is the only way of achieving ovarian suppression that may not be permanent. This may be something to consider when making your decision, especially if you want to have children.

**Hormone therapy**

Some drugs stop the ovaries from making oestrogen. They interfere with signals from the brain that control how the ovaries work. One of the drugs most commonly used is goserelin (Zoladex).

**Goserelin**

Goserelin comes as an implant (a small pellet) in a pre-filled syringe. It’s given as a subcutaneous (under the skin) injection into your abdomen (tummy). 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’s usually given every 28 days (four weeks).

Some women find the injection uncomfortable. If so 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’ll 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.

If you have primary breast cancer, goserelin is usually given for two to five years.

If you have secondary breast cancer, you’ll be given goserelin for as long as it keeps the cancer under control.
Will ovarian suppression using goserelin affect my periods?

Goserelin causes periods to stop temporarily. Your periods are likely to stop after the first or second injection. 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 their periods don’t start again after they finish treatment.

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

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

If you’re sexually active with a man use non-hormonal or barrier methods 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. Your GP (local doctor), practice nurse or local family planning advisory service can advise you about contraception.

If you’re concerned about going through an early menopause or would like to have children after your treatment, you can discuss with your specialist team how long to have goserelin. For more information on this drug, see our Goserelin (Zoladex) booklet.

Ovarian suppression combined with tamoxifen or aromatase inhibitors

Ovarian suppression achieved by goserelin or surgery (see below) is often combined with other hormone therapies used to treat breast cancer, such as tamoxifen or aromatase inhibitors.

Aromatase inhibitors are normally only recommended for post-menopausal women but can be given to pre-menopausal women alongside goserelin.

Your specialist team will discuss with you what they recommend and why.

Surgery to remove the ovaries (oophorectomy)

An operation to remove the ovaries is called an oophorectomy. The fallopian tubes, which are close to the ovaries, are usually removed at the same time.
It can usually be done as ‘keyhole’ surgery using a laparoscope (a flexible thin tube with a camera lens attached) to look into the abdomen. Three small incisions (cuts) are made, one near the belly button, one near the bikini line and one on the side of the abdomen.

It’s done under general anaesthetic, usually as a day case but some people stay in overnight.

Sometimes it isn’t possible for the ovaries to be removed with ‘keyhole’ surgery. Instead they’re removed through a short incision made below the bikini line.

Any type of surgery has possible complications. These may include pain, bruising, swelling and infection. Your specialist team should tell you more about the likelihood of these and discuss any concerns you have.

Removing the ovaries will mean an immediate and permanent menopause. Your periods will stop straight away.

**Radiotherapy to stop the ovaries working**

This is much less commonly used for ovarian suppression than hormone therapy or surgery.

Radiotherapy is given as an outpatient over a few days. It causes a permanent menopause but affects the ovaries more slowly than surgery. It may take up to three months before your periods stop completely and you could still become pregnant until this happens.

Possible side effects of radiotherapy to the ovaries include diarrhoea, feeling sick, abdominal discomfort and tiredness. These may start during or just after the radiotherapy and can last for a few weeks.

**What are the side effects of ovarian suppression?**

During a natural menopause the ovaries stop producing oestrogen and many women get menopausal symptoms such as hot flushes, night sweats, vaginal dryness and loss of sex drive.

Ovarian suppression achieved by hormone therapy, surgery or radiotherapy is more likely to cause menopausal symptoms than a natural menopause. Menopausal symptoms, especially if sudden and/or intense, can affect how you feel about yourself as a woman and may have an impact on both you and your partner. As well as the symptoms mentioned above, you may experience weight gain, joint pain and stiffness, tiredness and nausea.
Not everyone will have every symptom and there are ways of lessening the side effects. Your specialist team will be able to tell you more about ways you can reduce the effects of ovarian suppression.

For further information you can also see our booklets Menopausal symptoms and breast cancer and Your body, intimacy and sex.

In the long term, there is some concern that women who have an early menopause (the average age is around 52) because of treatment for breast cancer are more at risk of heart disease and osteoporosis (thinning of the bones) in later life. Guidance recommends that women (especially those under 45) with primary breast cancer having ovarian suppression treatment are offered a bone density scan (DEXA scan). For information on reducing the risk of osteoporosis see our Osteoporosis and breast cancer treatment booklet.

Your specialist team will be able to discuss with you the benefits and risks of ovarian suppression for you.

Coping with the effects of ovarian suppression

A diagnosis of breast cancer is usually stressful. For some women the addition of an early menopause brought on by treatment can make this a particularly difficult time. Going through the menopause prematurely can create feelings of loss, and make you feel isolated from women your own age.

Some women find it difficult to come to terms with facing permanent infertility after surgery to remove the ovaries or going through the menopause while having goserelin. However you feel, remember you don’t have to cope on your own. Your specialist team is there to provide information and support.

Sharing your feelings with someone who has had a similar experience can be helpful. Breast Cancer Care runs specific services for younger women with breast cancer. These include dedicated online discussion Forums and opportunities to meet other young women face to face at our Younger Women Together events.

For more information see our booklet Care and support for younger women with breast cancer.

You can also call us free on 0808 800 6000.
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

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 or phone the Helpline. We can help you decide which of our services are right for you.
Other organisations

The Daisy Network

PO Box 183, Rossendale BB4 6WZ
Recorded helpline: 0845 122 8616
Email: daisy@daisynetwork.org.uk
Website: www.daisynetwork.org.uk

Voluntary support group for women who experience a premature menopause, including information exchange and informal telephone support by members.

The Younger Breast Cancer Network (UK)

www.facebook.com/YoungerBreastCancerNetwork

This is a private Facebook group for young women who’ve had breast cancer. It allows you to chat privately with other women from the UK and Ireland who’ve had breast cancer diagnosed before the age of 45.
Notes
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.

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Please accept my donation of £10/£20/my own choice of £

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**Donate online**
You can give using a debit or credit card at www.breastcancercare.org.uk/donate

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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

Ovarian suppression and breast cancer 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

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](http://www.breastcancercare.org.uk) or call us free on 0808 800 6000 (Text Relay 18001).