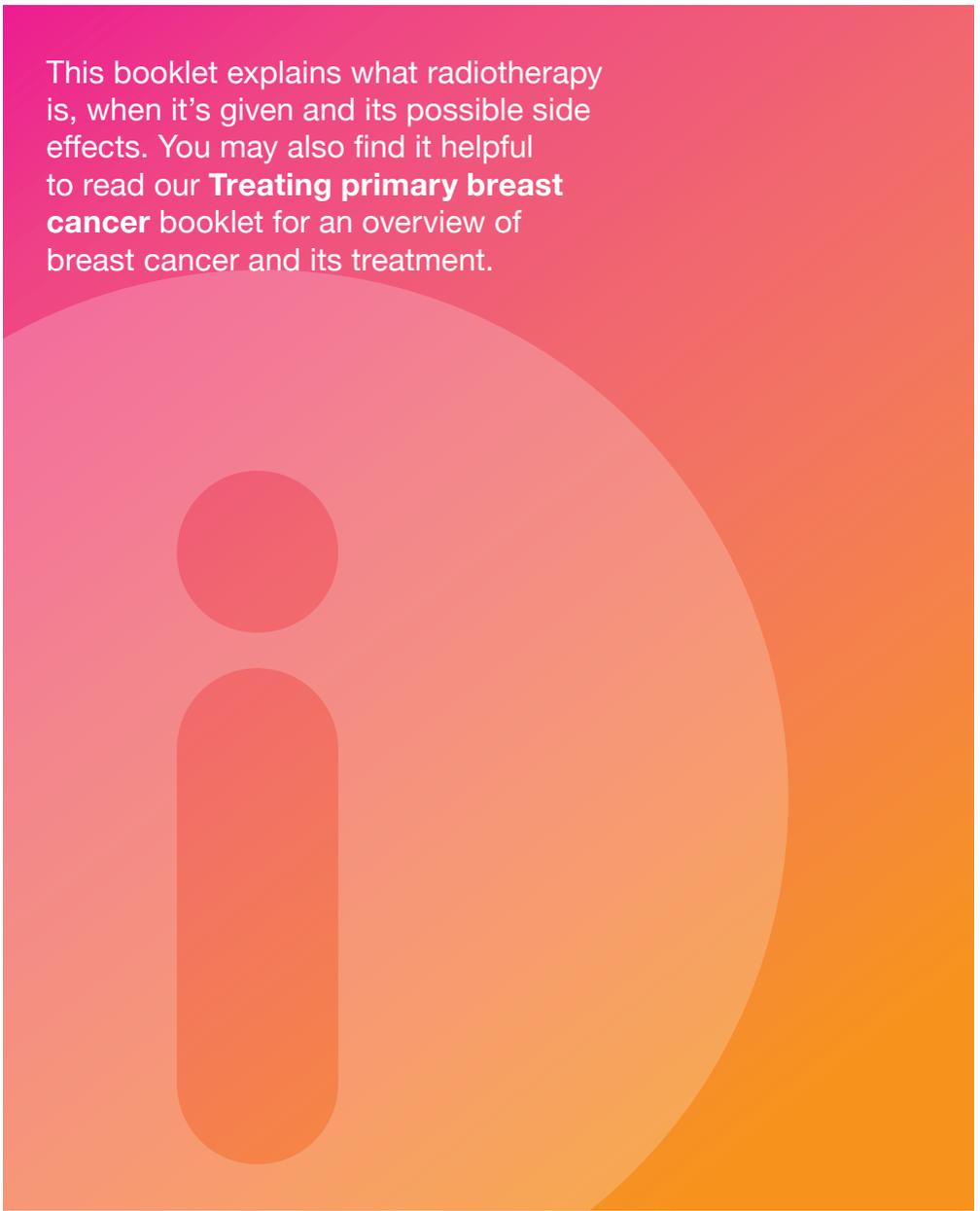


Radiotherapy

for primary breast cancer

breast
cancer
care

This booklet explains what radiotherapy is, when it's given and its possible side effects. You may also find it helpful to read our **Treating primary breast cancer** booklet for an overview of breast cancer and its treatment.



This information is by Breast Cancer Care.

We are the only specialist UK-wide charity that supports people affected by breast cancer. We've been supporting them, their family and friends and campaigning on their behalf since 1973.

Today, we continue to offer reliable information and personal support, over the phone and online, from nurses and people who've been there. We also offer local support across the UK.

From the moment you notice something isn't right, through to treatment and beyond, we're here to help you feel more in control.

For breast cancer care, support and information, call us free on **0808 800 6000** or visit **breastcancercare.org.uk**

The logo for Breast Cancer Care, featuring the words "breast", "cancer", and "care" stacked vertically. "breast" and "cancer" are in a pink color, and "care" is in an orange color. The font is a bold, sans-serif typeface.

**breast
cancer
care**

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What is radiotherapy?

Radiotherapy uses high-energy x-rays to destroy cancer cells.

It's given to destroy any cancer cells that may have been left in the breast and surrounding area after surgery. You may hear this called adjuvant radiotherapy.

Radiotherapy is given using specialist machines.

This booklet is about radiotherapy for primary breast cancer. This is breast cancer that has not spread beyond the breast or the lymph nodes (glands) under the arm.

When is radiotherapy given?

Radiotherapy is given after surgery to reduce the risk of breast cancer coming back in the breast, chest area or lymph nodes.

Your specialist or breast care nurse will tell you when you can expect to start radiotherapy.

If you're having chemotherapy after surgery, radiotherapy is usually given after the chemotherapy.

Radiotherapy may be delayed for a medical reason, for example if you need to wait for a wound to heal or if you develop a seroma (a collection of fluid that sometimes forms under a wound after an operation).

Radiotherapy may not be suitable if:

- you have previously had radiotherapy to the same area
- you have a medical condition that could make you particularly sensitive to its effects
- you're pregnant

Which areas are treated?

When deciding which areas to treat and how, your treatment team will consider factors such as the location, grade, size and stage of your cancer.

You can find out more about how decisions about your treatment are reached in our booklet [Understanding your pathology results](#).

After breast-conserving surgery

If you had breast-conserving surgery (a wide local excision or lumpectomy) you will usually have radiotherapy to the remaining breast tissue on that side.

Radiotherapy is usually given to the whole breast.

However, your specialist may consider giving radiotherapy to the area of the breast where the cancer was removed if the risk of the cancer coming back is low and you're going to be taking hormone therapy for at least five years. This is known as partial breast radiotherapy.

After a mastectomy

If you had a mastectomy for an invasive breast cancer, your specialist may recommend you have radiotherapy to the chest wall.

This may be the case if:

- the cancer was large or near the chest wall
- there's a high risk that cancer cells may have been left behind after surgery
- cancer is found in the lymph nodes under the arm
- you have a type of cancer called inflammatory breast cancer

If you're going to be having breast reconstruction, radiotherapy may affect the timing and type of reconstruction. See our **Breast reconstruction** booklet for more information.

Radiotherapy to the lymph nodes

Radiotherapy can be given to the lymph nodes under the arm to destroy any cancer cells that may be present there.

It may also be given to the lymph nodes in the lower part of the neck around the collarbone, or in the area near the breastbone (sternum).

If radiotherapy to the lymph nodes is recommended, your specialist will explain why.

How is radiotherapy given?

Radiotherapy can be given in several ways and using different doses. How it's given will depend on your treatment plan.

The total dose you receive is split into a course of smaller treatments (called fractions), usually given daily over a few weeks.

It's carried out by people trained to give radiotherapy, known as therapeutic radiographers.

Radiotherapy is not available in every hospital, but each breast unit is linked to a hospital that has a radiotherapy department.

External beam radiotherapy

External beam radiotherapy is the most common type of radiotherapy used to treat primary breast cancer.

X-rays are delivered by a machine which directs a beam of radiation at the breast.

The x-rays from external beam radiotherapy do not make you radioactive, so when you leave the treatment room you can safely mix with other people, including children.

Intensity modulated radiotherapy (IMRT)

Intensity modulated radiotherapy (IMRT) is another way of giving external beam radiotherapy.

The dose (intensity) of radiotherapy can be varied (modulated), allowing different amounts of radiation to be given to different areas. The risk of side effects is lower with IMRT because healthy tissue in the area gets a lower dose of radiation.

IMRT is not available in all radiotherapy treatment centres.

Volumetric modulated arc therapy (VMAT)

This is a type of IMRT. The radiotherapy machine rotates round the area being treated, continuously changing the shape and intensity of the radiation beam.

Other ways of giving radiotherapy

The following types of radiotherapy are less commonly used and are not widely available, but may be discussed with you.

Intraoperative radiotherapy

Intraoperative radiotherapy uses low-energy x-rays given from a machine in the operating theatre during breast-conserving surgery.

Radiotherapy is given directly to the area inside the body where the cancer was, once it has been removed. Usually a single dose of radiation is given in one treatment, but it may be necessary to have a short course of external beam radiotherapy to the rest of the breast.

Intraoperative radiotherapy is not suitable for everyone and is not standard treatment.

Brachytherapy

Brachytherapy involves placing a radiation source inside the body in the area to be treated. It's usually only given as part of a clinical trial.

Narrow, hollow tubes or a small balloon are put in the body where the breast tissue has been removed. Radioactive wires are inserted through the tubes or into the balloon. The radioactive wires may be left in place for a few days or inserted for a short time each day.

Depending on the type of brachytherapy you have, you may need to have your treatment as an inpatient and be kept in a single room for a short time due to the radiation. If brachytherapy is an option your specialist will discuss it fully with you.

How long will radiotherapy last?

Radiotherapy is usually given for a total of three weeks.

Treatment is given every day from Monday to Friday, with a break at the weekend. If there's a bank holiday during this time, you'll usually be given an extra session at the end to make up for the one missed.

Depending on local guidelines and your personal situation, your radiotherapy may be given in a slightly different way. For example, you may have a smaller daily dose over a longer period of time. Alternatively, your treatment team may recommend five daily treatments over one week (Monday–Friday).

For several years, clinical trials have been looking at giving radiotherapy over shorter periods. One large trial has recently confirmed that people who received the shorter regime (five daily treatments of radiotherapy in a week compared to fifteen daily treatments over three weeks) have similar results. The trial found that giving radiotherapy over the shorter time period was as safe and as effective as the longer period. The trial results so far are based on people who were followed up for five years in the two groups. The results following people up for ten years are to be published shortly.

Based on these trials, radiotherapy experts believe shortening some people's treatment is an acceptable way to be treated.

Your appointments may be arranged for a similar time each day so you can settle into a routine but this isn't always possible.

If you have a holiday booked, tell your specialist or therapeutic radiographer before or at your planning appointment so that together you can decide what arrangements to make.

Before treatment starts

You'll first see your specialist to talk about your treatment. Once the details of the treatment, its benefits, risks and potential side effects have been explained to you, you'll be asked to sign a consent form.

An appointment is then made to plan your treatment. There may be some questions you want to ask your treatment team – we have included a list of suggestions in this booklet.

When you have your first appointment with the specialist you may be asked to take part in a clinical trial. For more general information on clinical trials see our website, or go to cancerresearch.org.uk for listings of current UK trials.

Questions you may want to ask your treatment team

- Why are you recommending radiotherapy for me?
- What are the benefits and risks?
- What are the side effects?
- Which area will be treated?
- How is treatment given?
- How long will the radiotherapy take and how often will each treatment be given?
- How long will I have to wait before starting treatment?
- Will having radiotherapy affect my reconstructed breast or my options for breast reconstruction in the future?
- What is my risk of lymphoedema (see page 19)?
- Are there any clinical trials for radiotherapy I could take part in?

Treatment planning

Treatment planning helps identify the exact area to be treated and the most effective dose of radiation, while limiting the amount of radiation to surrounding tissues.

A number of people will be involved in planning your treatment.

Treatment planning is usually done using a CT (computerised tomography) scanner. A CT scanner takes x-ray images which help your team plan the exact area to be treated.

The planning session will take between about 15 minutes and an hour.

You'll need to lie very still while your arms are positioned above your head and supported in an arm rest. You may be asked to raise only the arm on the side being treated.

If you have a pacemaker or implantable cardioverter defibrillator (ICD), or you think you might be pregnant, tell your specialist or therapeutic radiographer before or during your planning appointment.

Marking the area

When the exact area of treatment has been decided, it's important to have a record of this to help position you precisely for each treatment.

To do this, permanent ink markings (tattoos) are made on your skin. It's usually done by making three tiny dots using a pinprick of ink. If you're concerned about this, ask your therapeutic radiographer if any other options are available.

Some women prefer to have their radiotherapy tattoos removed after finishing their treatment. However, tattoo removal is not routinely available on the NHS and the results can vary.

Regaining arm movement

It's important that you've regained your arm movement after surgery and can comfortably raise your arm above your head before you start radiotherapy. This is so treatment can be given to the whole breast or chest area.

After surgery it can be difficult or painful to lift your arm above your head and keep it there. If this is the case, talk to your breast care nurse or ask to see the physiotherapist, who'll be able to advise you about exercises to improve the movement in your arm. You could also try taking some pain relief before each appointment to help you feel more comfortable holding the position.

Our [Exercises after breast cancer surgery](#) leaflet can help you regain arm and shoulder movement after surgery.

During treatment

Once the planning and marking up is complete, your radiographer will arrange with you when to come for your first treatment.

Getting into position

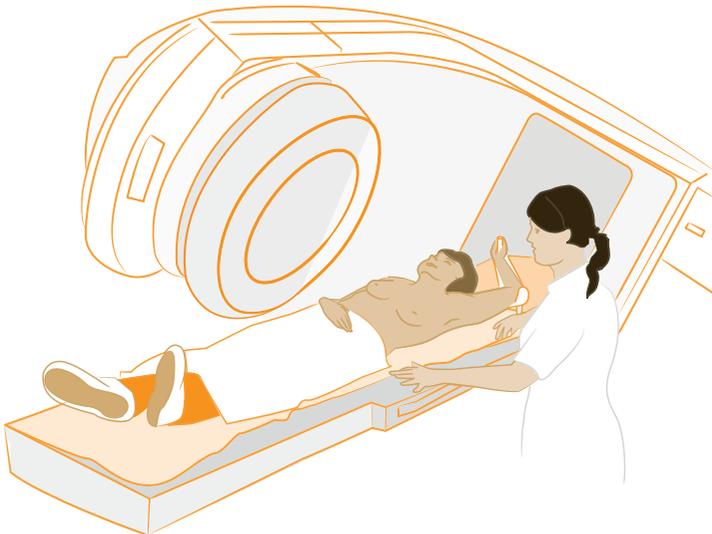
You'll be asked to undress above the waist and you'll be given a gown to wear. It can be helpful to wear a top that's easy to take off and put on.

You'll lie down on the treatment couch with your arms or arm above your head. The therapeutic radiographer will adjust the gown to expose the area to be treated. They'll help position you carefully, so that each time you have treatment you're in exactly the same position you were during the treatment planning.

Having radiotherapy

You'll need to stay very still during treatment, but you can breathe normally.

Radiotherapy to the breast or chest wall is usually given from a number of different angles. The radiographer will reposition the machine for each angle.



The radiotherapy machine makes a buzzing noise while in operation. The machine may come quite close to you and even touch you. However, you won't feel the treatment being given, although you may feel a little uncomfortable staying in the treatment position.

Treatment takes only a few minutes.

Although you'll be left alone in the room, cameras will allow the radiographers to watch you on a television screen. Most radiotherapy departments also have an intercom system so that you and the radiographers can talk to each other.

The radiographers treating you will check how you are before each treatment. They can also answer any questions you have. They'll give you advice on side effects and arrange an appointment with your specialist or breast care nurse if necessary. Alternatively, appointments to see a member of your treatment team may be arranged during treatment so you can ask questions and discuss any concerns.

Breath hold technique

This can help protect the heart from being affected by radiotherapy given to the left side.

It involves taking a deep breath in and holding it for a short time. Your therapeutic radiographer will tell you how and when to hold your breath.

It's done both at the treatment planning appointment (see page 11) and at each external beam radiotherapy appointment.

Your need for breath hold will be assessed and simple coaching instructions will help you maintain a suitable breath hold.

Not everyone having their left side treated will need or be able to use this method, and there are other ways to protect your heart that your specialist can talk to you about.

Breast boost

Your specialist may recommend a boost of radiotherapy to an area where invasive breast cancer was removed following radiotherapy to the whole breast.

If you're going to have a boost, it's given at the end of treatment, usually as five to eight extra sessions.

If you're having IMRT (see page 8), the boost can be given by planning the radiotherapy to deliver a higher dose to this area at the same time that the breast is being treated.

Side effects of radiotherapy

Radiotherapy causes side effects because it affects healthy tissue as well as cancer cells.

Most side effects are temporary, but some may be permanent and some may appear months or years after treatment finishes.

Different people react differently to radiotherapy and as treatment progresses you'll have a better idea of how it's affecting you.

Immediate side effects

Immediate side effects may also be called early or acute side effects. They occur during treatment and up to six months after treatment has finished.

Skin reactions

Most people have some redness around the area being treated.

The skin may also:

- become pinker or darker over time
- feel tender, dry, itchy and sore
- peel or flake as treatment goes on
- blister or become moist and weepy

Skin reactions usually begin around 10 to 14 days after starting treatment, but can happen later or after it has finished.

Your treatment team will monitor any side effects and advise you how to take care of your skin according to the type of reaction you have.

Let your treatment team know if you develop a skin reaction. Most skin reactions are mild and should heal within three to four weeks of your last treatment, but some may need treating or monitoring more closely.

Caring for your skin during radiotherapy

It's important to look after your skin during treatment. This will help prevent infection, reduce pain and help keep the area being treated comfortable.

You will usually be given specific skincare instructions by your radiotherapy team, but the following tips are what most radiotherapy centres advise.

Washing the skin

Wash the treated area gently with warm water and pat the skin dry with a soft towel.

Skincare products

If you want to use anything on the skin in the treatment area, discuss this with your therapeutic radiographer first.

Sodium lauryl sulphate, which is found in certain creams, can irritate the skin. It's best to avoid creams and products containing it.

You can usually use soap and deodorant that suits your skin, unless your treatment team has told you not to.

Heat and cold

Avoid exposing the treated area to extremes of temperature such as hot water bottles, heat pads, saunas or ice packs during treatment.

Taking care in the sun

Avoid exposing the treated area to the sun while having radiotherapy and until any skin reaction has settled down.

The skin in the treated area will remain sensitive to the sun for some time after treatment. Use a sunscreen with a high sun protection factor (SPF). Apply the cream under clothes too as it's possible to get sunburnt through clothing.

Swimming

You may be advised by your treatment team to avoid swimming during treatment and shortly afterwards. This is because skin changes from radiotherapy can be irritated by chlorine or chemicals in the pool. Also swimwear can cause friction at the treatment site.

Clothing, bras and prostheses

Friction or rubbing from clothing can cause or worsen skin reactions. Wearing clothing made from natural fibres, such as a soft cotton bra or vest, may help. Alternatively, you may prefer to go without a bra.

You'll usually be advised not to wear an underwired bra until your skin heals.

If you've had a mastectomy and wear a silicone prosthesis, you may find it more comfortable to wear the soft, lightweight prosthesis (softie or cumfie) you used straight after surgery. You can find more about this in our booklet [Breast prostheses, bras and clothes after surgery](#).

Swelling (oedema) of the breast

Your breast or chest area may appear swollen and feel uncomfortable. This usually settles within a few weeks after treatment. If it continues after this time, talk to your specialist or breast care nurse as you may need to be seen and assessed by a lymphoedema specialist (see page 19 for more information).

Pain in the breast or chest area

You may have aches, twinges or sharp pains in the breast or chest area. Although these are usually mild, they can continue for months or even years, but they usually become milder and less frequent over time.

You may also have stiffness and discomfort around the shoulder and breast or chest area during and after treatment. Continuing to do arm and shoulder exercises during your radiotherapy and for several months afterwards may help minimise or prevent any stiffness or discomfort. See our [Exercises after breast cancer surgery](#) leaflet for arm and shoulder exercises that can help with stiffness or discomfort.

You can find more tips on managing pain after treatment in our [Moving Forward](#) book.

Hair loss in the armpit

Radiotherapy to the armpit will make the underarm hair fall out on that side. Men having radiotherapy will lose the hair on the area of the chest that's being treated.

Hair usually starts to fall out two to three weeks after treatment has started and it may take several months to grow back. For some people, hair lost from radiotherapy may never grow back.

Sore throat

If you have treatment to the area around your collarbone or near your breastbone, you may develop a sore throat or discomfort when swallowing. If this happens, talk to your radiographer, specialist or breast care nurse.

It may help to take simple pain relief in liquid form, particularly before eating, until the discomfort improves.

Tiredness and fatigue

You may feel very tired during or after your treatment.

Travelling to and from hospital can be tiring. However, many people find they can still manage their daily tasks as usual and some continue to work throughout their treatment.

Fatigue (extreme tiredness) is a very common side effect of cancer treatment. It may start or become worse after radiotherapy has finished. If you have also had chemotherapy, you may already be experiencing fatigue by the time you start radiotherapy.

To help you manage fatigue, you can:

- tell your doctor about the fatigue, as its cause may be treatable
- keep a fatigue diary – recording your level of fatigue every day can often help you identify causes of fatigue and plan activities
- plan your days so you have a balance of activity and rest
- do small amounts of physical activity each day; even just a short walk can help
- accept that you may have good days and bad days
- prepare for a special occasion by getting some rest beforehand
- try to eat well – if your appetite is poor, it may help to eat smaller amounts more often and drink plenty of fluids to keep hydrated. You could also ask to be referred to a dietitian for advice
- accept offers of help from other people to save your energy for things you enjoy

Lymphoedema

Lymphoedema is swelling of the arm, hand, breast or chest area caused by a build-up of fluid in the surface tissues of the body. It can occur as a result of damage to the lymphatic system, for example because of surgery or radiotherapy to the lymph nodes under the arm and surrounding area.

Lymphoedema can occur at any time after treatment, sometimes years later.

If the arm, hand, breast or chest area on the side where the radiotherapy or surgery were carried out swells or feels uncomfortable and heavy, contact your breast care nurse or GP.

Lymphoedema is a long-term condition, which means that once it has developed it can be controlled but is unlikely to ever go away completely.

For more information see our [Reducing the risk of lymphoedema](#) booklet. If you develop lymphoedema you may find it useful to read our [Living with lymphoedema after breast cancer](#) booklet.

Change in breast shape, size and colour

If you've had radiotherapy after breast-conserving surgery, the breast tissue on the treated side may feel firmer than before, or the breast may be smaller and look different.

Although this is normal, you may be concerned about differences in the size of your breasts, or worry that the difference is noticeable when you're dressed.

You can discuss this with your breast surgeon to see if anything can be done to make the difference less noticeable. You can also talk to your breast care nurse or call our Helpline on [0808 800 6000](tel:08088006000) to discuss how you feel about your new shape.

Tenderness over the ribs

Tenderness can occur over the ribs during treatment. In some people, this discomfort may continue but it usually improves gradually over time.

Late side effects

Some side effects can develop months or years after the end of radiotherapy. However, improvements with the equipment and accuracy in marking the exact areas to be treated have made many of these side effects much less common.

Serious side effects are very rare and experts agree that the benefits of the treatment in reducing the chances of breast cancer returning outweigh the risk of possible side effects.

Radiotherapy to the breast or under the arm can cause hardening of the tissue. This is known as fibrosis. If the fibrosis is severe, the breast can become noticeably smaller as well as firmer. This is rare but may happen several months or years after radiotherapy has finished.

Under the skin you may see tiny broken blood vessels. This is known as telangiectasia. It's permanent and there's no treatment for it.

Sometimes after treatment to the breast or chest wall area, part of the lung behind the treatment area can become inflamed, causing a dry cough or shortness of breath. This usually heals by itself over time. More rarely, fibrosis of the upper lung can occur, causing similar side effects.

Although particular care is taken to avoid unnecessary radiotherapy to the tissues of the heart, if radiotherapy is given on the left side you may be at risk of heart problems in future.

Breath hold technique (see page 14) is thought to reduce the risk of any possible damage to the heart and lungs.

Other side effects that can occur later include:

- weakening of the bones in the treated area, which can lead to rib and collarbone fractures
- damage to the nerves in the arm on the treated side, which may cause tingling, numbness, pain, weakness and possibly some loss of movement
- developing another type of cancer in the future

If you're concerned about any of these late side effects, speak to someone in your specialist team.

Drugs and supplements during radiotherapy

If you are going to be taking hormone therapy, some specialists may suggest waiting until the radiotherapy is finished. This is so you don't have to deal with side effects from two treatments at the same time.

Tell your specialist about any drugs you're taking or considering taking. This includes vitamin and mineral supplements, herbal remedies and any treatments that are bought over the counter.

The evidence isn't clear whether supplements such as vitamins, particularly high-dose antioxidants (including vitamins A, C and E, co-enzyme Q10 and selenium), are harmful or helpful during your radiotherapy.

Because of this uncertainty, many specialists recommend that people avoid taking high-dose antioxidant supplements during radiotherapy.

Transport and costs

Most people feel able to drive themselves to and from their radiotherapy appointments.

Whether you drive or use public transport, travelling to and from your treatment or paying for parking can be expensive, but help may be available.

If you come by car, you may be able to have a special hospital pass which means you won't have to pay parking fees while having your radiotherapy.

If you claim benefits or are on a low income, you may be entitled to help with petrol costs or bus or train fares. Alternatively, there may be community transport services in your area or organisations with volunteer drivers who give people lifts to and from hospital.

Macmillan Cancer Support (macmillan.org.uk) produces a booklet called *Help with the cost of cancer*, which outlines what you may be entitled to. You can also find out about help with health costs on the NHS website nhs.uk.

If you think going to appointments will be difficult because of the cost or other travel issues, talk to your radiographer or breast care nurse to find out what help might be available. If you have a local cancer information centre, they may be able to tell you if any financial help or voluntary community transport is available in your area.

Coping emotionally

Being told you need radiotherapy can cause a range of emotions. Many people feel reassured that everything possible is being done to treat their breast cancer. Some people feel upset, frightened or have difficulty adjusting to what's happening to them and may be worried about their planned treatment. Fear of the unknown is common, so finding out as much as possible about your radiotherapy may help you cope better.

Many centres have times when you can visit the radiotherapy department beforehand so you know what to expect. You can ask your breast care nurse about arranging a visit.

If you're feeling low, tired or anxious at any point during or after your treatment, remember there are people who can help you. Tell your radiographer, specialist, breast care nurse or GP how you're feeling so that they can offer help and support. Let family and friends know too.

You can also call us free on **0808 800 6000** to talk to our expert team.

After treatment finishes

Once you've finished treatment it may take some time to get back to your everyday routine. Try not to expect too much of yourself in the early days and weeks after your treatment and give yourself time to heal and regain your strength. You may continue to feel tired for some time, but gradually you'll start to feel better. For some people, this may take several months and sometimes longer.

For many people, radiotherapy is the last hospital-based treatment and the end goal they focus on, and getting there can feel like real progress. But some people also feel isolated, low and fearful, especially when their regular hospital appointments stop.

Our Moving Forward course and book are for anyone living with and beyond breast cancer. They provide information on a wide range of topics that may be relevant to you, from ongoing side effects of treatment to worries about the cancer coming back or going back to work.

You may find it helpful to share your feelings with someone who has had a similar experience to you. You can do this at a local breast cancer support group, online on the Breast Cancer Care Forum or through our Someone Like Me service.

BECCA, the Breast Cancer Care app, gives you information, support and inspiration to help you move beyond breast cancer, presented on easy-to-use flashcards. It's available for iPhone and Android phones.

Visit breastcancercare.org.uk or call **0808 800 6000** to find out more.

Four ways to get support

We hope this information was helpful, but if you have questions, want to talk to someone or read more about breast cancer, here's how you can.



Speak to our nurses or trained experts. Call our free Helpline on **0808 800 6000** (Monday to Friday 9am–4pm and Saturday 9am–1pm). The Helpline can also put you in touch with someone who knows what it's like to have breast cancer.



Chat to other women who understand what you're going through in our friendly community, for support day and night. Look around, share, ask a question or support others at forum.breastcancercare.org.uk



Find trusted information you might need to understand your situation and take control of your diagnosis or order information booklets at breastcancercare.org.uk



See what support we have in your local area. We'll give you the chance to find out more about treatments and side effects as well as meet other people like you. Visit breastcancercare.org.uk/in-your-area

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.

Donate today and together we can ensure that everyone affected by breast cancer has someone to turn to.

Donate online

Donate using your debit or credit card breastcancercare.org.uk/donate

Donate by post

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

I enclose a cheque/PO/CAF voucher made payable to **Breast Cancer Care**

Name _____

Address _____

_____ Postcode _____

Email address _____

Telephone _____

In addition, we'd love to keep you updated about our work and provide you with other opportunities to get involved with Breast Cancer Care. Please tell us how you would like to hear from us (by ticking these boxes you confirm you are 18 or over)

- I'd like to hear from you by email
- I'd like to hear from you by text message or SMS
- Please do not contact me by post
- Please do not contact me by telephone

We never give your information to other organisations to use for their own purposes. To change your preferences, or find out more information on how we use your data, please view our privacy policy at breastcancercare.org.uk or contact supporter services on 0345 092 0800.

Please return this form to Breast Cancer Care, Freepost RRRKZ-ARZY-YCKG, Chester House, 1-3 Brixton Road, London SW9 6DE

Breast Cancer Care is a working name of Breast Cancer Care and Breast Cancer Now, a charity registered in England and Wales (1160558) and Scotland (SC045584).

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About this booklet

Radiotherapy for primary 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 breastcancercare.org.uk/publications



We welcome your feedback on this publication: breastcancercare.org.uk/feedback



For a large print, Braille or audio CD version:

Phone **0345 092 0808**

Email publications@breastcancercare.org.uk



Breast Cancer Care and Breast Cancer Now are uniting to create one charity for everyone affected by breast cancer. Our aim is that by 2050, everyone who develops breast cancer will live and be supported to live well.

From research to care, our new charity will have people affected by breast cancer at its heart – providing support for today and hope for the future. We'll find ways to prevent the disease, improve early diagnosis, develop new treatments, campaign for better care, and support people with the physical and emotional impact of breast cancer.

For breast cancer care, support and information, call us free on **0808 800 6000** or visit **breastcancercare.org.uk**

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