RadiotherapyA red line under the title of this fact sheet.

Radiotherapy, or radiation treatment, uses high energy rays to destroy tumour cells while causing as little damage as possible to surrounding cells. Radiotherapy may be used where surgery isn’t possible, or after surgery to remove any remaining cells. It can also be used to prevent a tumour   
from returning.

# In this fact sheet:

* How radiotherapy treatment is planned
* The treatment mask
* The treatment procedure
* After treatment
* Answers to some common questions that you may have   
  about radiotherapy

## Planning

Your [radiotherapy](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F,frameless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_R) treatment is carefully planned to ensure that it hits as many of the tumour cells as possible, while avoiding as much of the healthy tissue as possible.

A team of medical specialists work together to plan your treatment. Great consideration is given in the planning stage to ensure that the radiotherapy destroys as many tumour cells as possible, while avoiding as much healthy tissue as possible.

Usually an additional [CT](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F,frameless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_C) (Computerised Tomography) scan and sometimes an [MRI](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F,frameless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_M) (Magnetic Resonance Imaging) scan are needed to plan the treatment. These may be done wearing a treatment mask which creates a three dimensional image showing the shape and location of the tumour.

Together, the image and measurements from the scan help the medical team plan your treatment. Sometimes an additional imaging machine called a simulator is used either to plan simple brain treatments or to check the complex treatment planned from the CT scan.

## Treatment mask

It’s important that you stay very still during the treatment so that the radiotherapy rays go to the correct place. To help you stay still, you’ll have a treatment mask designed specifically for you to wear each time you have treatment. You can breathe easily in the mask but some people do find wearing it claustrophobic.

### Purpose of the mask:

* The mask is specific to your face and head. It helps keep you in the same position each time you have radiotherapy, ensuring that the rays reach the correct place each time.
* During the planning stage, your radiographer may make ink marks on the mask to help position you more easily each time you have treatment.

### How the mask is made:

* You’ll be taken to the ‘mould room’ at the hospital. It takes around 30 minutes to make the mask.
* Different hospitals use different materials to create the mask, including thermoplastic, Plaster of Paris and Perspex.
* The material is smoothed on to your face. You may feel it warming as it sets. Gaps are left for your eyes, nose and mouth so that you’re able to breathe easily.
* The mask only needs to be worn during the planning and when you have radiotherapy. You don’t need to wear it at other times.

## Treatment

Your treatment is planned to suit your individual needs. An example of a typical plan is once daily treatments Monday to Friday with a break at the weekend. Each treatment is called a ‘fraction’.

During treatment you will lie on a couch with the radiotherapy machine above you. Staff will take some time positioning you to ensure that the radiotherapy goes to the correct place.

Your mask will help to keep you in position. Your radiographer attaches it to the couch for the duration of the treatment.

Before the radiotherapy machine is switched on, staff will leave the room. This is to prevent over-exposure to radiation as they give a number of treatments each day. They will be nearby though and easily able to hear and see you should you need them.

## After treatment

If you are having radiotherapy as an outpatient, you will be able to go home after each session. If you’re in hospital for another treatment, you can return to your ward.

Once the whole course of treatment is complete, you will have regular check up appointments to monitor its effects.

It is likely that you will experience some side effects. Some of these will be temporary and gradually fade once the treatment has finished although hair loss is, unfortunately, often permanent.

## Who will my medical team consist of?

Your treatment is planned very carefully to ensure that it’s as effective as possible. The team will consist of specialists, always including a clinical oncologist (specialising in radiotherapy and [chemotherapy](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F,frameless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_C)), a radiographer (trained in using X-ray equipment) and a physicist (who you would not usually meet, but who specialises in radiation).

## Will my treatment be painful?

No, you can’t feel radiotherapy and you won’t feel any heat from it either. You will hear the machine though which can be quite noisy.

## How long does the treatment take?

It varies depending on your individual treatment plan, but each treatment (‘fraction’) can take anywhere from between a few seconds to a few minutes. As it’s so important for the radiotherapy to go to the right place, staff will spend some time positioning you beforehand. The period of time over which your radiotherapy is spread varies from person to person but it’s common for it to last for around 4-6 weeks.

## What are the typical side effects?

You may find it helpful to ask your doctor about the side effects you might experience. Some of the common side effects include:

### Tiredness

It is very common to feel tired during your treatment and, as the weeks of radiotherapy go on, you may feel progressively more so. This may be because your body is using its resources to repair any damage to healthy cells caused by the radiotherapy. It may also be because of all the journeys you are making to and from the hospital. Unfortunately, the feeling of tiredness does not immediately stop once the treatment stops, but may continue for a number of weeks afterwards. Let yourself rest or nap when you need to without feeling that you must fight the tiredness. You may also find a short, gentle walk from time to time helpful.

### Hair loss

You will lose some hair during radiotherapy, but this will only be from the places where the beam enters and leaves your head. If, however, you have whole brain radiotherapy, you are likely to experience hair loss from your whole head.

Hair loss usually starts around 2 or 3 weeks after treatment. Although   
re-growth is possible, loss is unfortunately often permanent.

If hair does re-grow, it will not normally be as thick as it was. Hats and wigs or hairpieces are some practical suggestions for coping with hair loss. You can talk to your radiographer about where you are most likely to lose hair.

### Feeling nauseous

If you have radiotherapy to the lower part of your brain, you may feel nauseous or actually be sick following your treatment. This can start from around an hour after treatment, and last some weeks. Your radiotherapist can give you anti-sickness tablets to manage this.

Generally, side effects other than hair loss gradually disappear within around 6-12 weeks. If you’re concerned about any of your side effects, please talk to your doctor about them.

## Will I need to give up work?

It’s likely that you’ll need to take some time out of work during treatment and for at least a little while afterwards. When exactly you go back to work must be your decision - it’s important that you don’t feel pressurised to do so too soon and that you do what feels right for you. Some people find it helpful to return to work as soon as possible as it gives them something else to focus on. For others, it’s months before they feel ready. You can talk to your medical team about returning to work.

## Will I be radioactive after my treatment?

No. The radiation comes from the machine and does not stay inside your body. You do not need to take special precautions when you leave the hospital - it is safe to be around others, including children.

## Will I need to stay in hospital for my treatment?

Generally, you’ll be given radiotherapy as an outpatient, which means going into the hospital for each radiotherapy treatment (‘fraction’). There is the possibility, however, that you’ll need to stay in hospital overnight, for example if you are also having another treatment such as chemotherapy or if you are unwell, please remember to speak to your doctor.

## Where can I find a wig or headwear?

There are lots of different styles of wig to choose from, including synthetic (monofibre) and human hair wigs. You can also buy headscarves and other headwear. While we cannot recommend specific companies, below are some companies that sell wigs and headwear:

[**Cancerwigboutique.com**](http://www.cancerwigboutique.com/)   
This is an online directory that lists numerous companies selling wigs   
and headwear.

**Chemotherapy Headwear**   
Sells a range of hats and headscarves for people experiencing hair loss following chemotherapy. [www.chemotherapyheadwear.com](http://www.chemotherapyheadwear.com/) / 0208 742 2345

**Direct Wigs**   
Sells a range of both ladies’ and gents’ wigs, hair pieces and headscarves  
[www.directwigs.co.uk](http://www.directwigs.co.uk/) / 01793 632152

**4myhead.com**An online shop for hats, scarves and wigs for cancer patients.   
[www.4myhead.com](http://www.4myhead.com/) / 07505 028 099

You can get free synthetic wigs on the NHS if:

* you're under 16, or under 19 and in full-time education
* you're a hospital inpatient
* you're a war pensioner and the wig is for your accepted disablement and you have a valid war pension exemption certificate

You're entitled to help if you:

* get Income Support
* get Income-based Jobseeker's Allowance
* get Income-related Employment and Support Allowance
* get Pension Credit Guarantee Credit
* are named on or entitled to an NHS tax credit exemption certificate
* are named on a valid HC2 certificate

Ask your clinical nurse specialist or staff at the hospital you are being treated at for more information.

**Disclaimer:**

The Brain Tumour Charity provides the details of other organisations for information only. Inclusion in this factsheet does not constitute a recommendation or endorsement.

# What if I have further questions?

If you require further information, any clarification of information, or wish to discuss any concerns, please contact our Support and Information Team.

* Call 0808 800 0004 (free from landlines and most mobiles including 3, O2, Orange, T-mobile, EE, Virgin and Vodafone)
* Email [support@thebraintumourcharity.org](mailto:support@thebraintumourcharity.org)
* Join our online forums at [www.thebraintumourcharity.org/forums](http://www.thebraintumourcharity.org/forums)

# About us

The Brain Tumour Charity makes every effort to ensure that we provide accurate, up-to-date and unbiased facts about brain tumours. We hope that these will add to the medical advice you have already been given.

Please do continue to talk to your doctor if you are worried about any medical issues. We are the UK’s leading brain tumour charity. We fund scientific and clinical research into brain tumours and offer information and support to those affected, whilst raising awareness and influencing policy.

We rely 100% on charitable donations to fund our vital work. If you would   
like to make a donation, or want to find out about other ways to support us including fundraising, leaving a gift in your will or giving in memory, please visit us at [www.thebraintumourcharity.org](http://www.thebraintumourcharity.org) or call 01252 749043.

# About this fact sheet

This fact sheet has been written and edited by The Brain Tumour Charity’s Support and Information Team. The accuracy of medical information has been verified by a leading neuro-oncologist. Our fact sheets have been produced with the assistance of patient and carer representatives and up-to-date, reliable sources of evidence. If you would like a list of references for any of the fact sheets, or would like more information about how we produce them, please contact us.

# Radiotherapy

# Your notes



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