



FACT SHEET

Side Effects of Brain Tumour Radiation Therapy

What are the possible side effects of Radiation Therapy given for Brain Tumours?

These depend on which part of the body is being treated. The possible side effects with external beam radiation therapy for a brain tumour can be divided into three groups:

1. Early side effects
2. Early delayed side effects
3. Long term side effects

It is important to talk to your doctor about any problems you experience.

1. Early side effects of Radiation Therapy

These usually start when you start the radiation therapy. They usually get a bit worse as the treatment course goes on, but then go away a few weeks after the treatment has ended.

Tiredness

Tiredness is often a symptom with any radiation therapy. With a course of treatment for a brain tumour, you are likely to feel more and more tired as the treatment course goes on. Sometimes, people may need to rest and sleep for longer. Usually the tiredness goes on for a few weeks after the radiation treatment has finished. The best way to fight fatigue is to make sure to get adequate rest, eat a healthy diet, and rely on friends and family for support. It will gradually improve.

Skin or Scalp Irritation

The skin around your ears and scalp may become dry, red or tender. The treatment team will give you advice on skin care. Usually, sorbolene cream applied daily to the skin after treatment is all that is needed. It is important not to attempt to treat this side effect on your own, but rather to seek medical treatment as soon as it occurs. The skin will heal after radiation therapy is all finished.

Hair loss

Hair loss only happens in the area of the head that is being treated. You do not lose all your hair. You will usually only lose patches where the radiation beams entered and left your skull.

Sickness

You may feel sick while you are having radiation therapy to the brain. This does not happen to everyone. If it does happen, it usually settles down quickly as your body gets used to the treatment. If sickness does trouble you, your doctor can give easily you anti-sickness tablets to take each day before your radiation treatment.

Worsening brain tumour symptoms

With radiation therapy sometimes brain tumour symptoms can get worse before they get better. This is because the treatment can cause some mild swelling in the treatment area. This increases the pressure in the head and makes the symptoms get worse. You may be given steroids to try to prevent and/or treat these symptoms, but these too will get better in time after treatment has finished.



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2. Early delayed side effects of Radiation Therapy

These can start from a few weeks to a few months after finishing your radiation treatment. Usually there is no special treatment needed, other than time for these symptoms to improve. You may have:

Sleepiness or 'Somnolence syndrome': A rarer complication of radiation therapy to the brain is called 'somnolence syndrome'. This is a very extreme tiredness, where after treatment you sleep nearly all the time. Somnolence syndrome can begin a few weeks after treatment has finished, but this too will also pass in time.

Poor appetite

Tiredness and a lack of energy

Worsening of your brain tumour symptoms

3. Long term side effects of Radiation Therapy

Fortunately, long term side effects only affect a small number of adults. They are less common than they were before because planning of radiation therapy is very precise these days and only the area of the tumour receives high doses of radiation. If you do develop late effects, they can come on from a few months to several years after you were first treated. Unfortunately, these late side effects are usually permanent. They **may** also slowly get worse over a long period of time. Symptoms can be mild, moderate or severe, depending on how much radiation damage there is. You may have:

Problems thinking clearly, or managing tasks you previously found easy

Poor memory and/or confusion

Personality changes

Symptoms you had from your original tumour

Late radiation damage to the brain or "Radiation necrosis"

Because they can be similar, it can be difficult for you and your doctor to tell whether you have symptoms from your tumour coming back or late side effects of radiotherapy. Your doctor may suggest a different x-ray scan (CT/MRI or others) as this can show up the difference between active (tumour) cells and scar tissue or radiation damage, called **radiation necrosis**. If you have mild late effects, you are most likely to have treatment with steroids. Some people need surgery to remove the area of affected tissue.



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Other late effects

In very rare cases, you may develop another brain tumour many years after you were first treated. This is because, although radiation kills cancer cells, it is also a risk factor for developing them. Unfortunately, tumours caused by previous radiotherapy are often malignant and tend not to respond very well to treatment. It really is very rare to get another tumour caused by radiation after radiotherapy for brain tumours, but it can happen.

If your **pituitary gland** in the brain, is near your treatment area, you could develop hormone imbalances in the future. The pituitary gland controls your thyroid gland, sugar and water balance in the body, and also fertility. So there is a possibility you could develop thyroid problems, or diabetes in the future. You can be seen by doctor who specialises in hormones (an endocrinologist) and take replacement hormones to correct any imbalances.