





Steroid therapy





About this information sheet

This fact sheet will help you understand what steroids are and how they may help manage symptoms caused by your brain tumour or treatment.

It's very likely that you'll be given steroids at some point during the course of treatment for your brain tumour. Steroids, sometimes called corticosteroids, are used to help reduce swelling (inflammation) that can happen in the brain due to a brain tumour or after surgery or other treatments for a brain tumour. Steroids will be prescribed to manage the symptoms of your brain tumour.

How can steroids help with your brain tumour?

The symptoms of a brain tumour depend on the location in the brain and size of the tumour itself. Symptoms include weakness on one side of the body, memory problems or difficulty with speech and language. These symptoms are sometimes made worse when there is swelling around the tumour, caused by a collection of fluid in the brain tissue, called cerebral oedema. The swelling puts pressure on surrounding tissues and can cause symptoms such as headaches, sickness and seizures (fits). Oedema can also occur following surgery or radiation therapy. Steroid medication reduces cerebral oedema and can improve symptoms. You may also be prescribed anti-seizure medications along with your steroid medication.

What are steroids?

Steroids are naturally occurring hormones.
The steroids produced by the body are called corticosteroids and their actions are very

complex. Your body regulates the amount of natural corticosteroid it needs to function normally. Corticosteroids help control various functions, such as inflammation (swelling) when our body is injured. Sometimes our bodies don't produce enough steroids to reduce the swelling. This can happen if the brain is 'injured' by the growth of a tumour, or after surgery or other treatments for brain tumours.

Steroids used to treat used to treat cerebral oedema are corticosteroids – hormones produced by the adrenal glands. They are not the same as the anabolic steroids used by athletes to build muscle.

When are steroids prescribed?

Steroids may be prescribed when cerebral oedema is seen on your brain scan.

After diagnosis

As steroids are fast-acting drugs, this could mean that some of the effects caused by your tumour may improve quickly.

Before or after treatment

If you have radiotherapy or surgery as part of your treatment you may be given steroids afterwards to help bring down swelling caused by these treatments. If you have chemotherapy or radiotherapy, a small amount of steroids may be given if you feel sick (have nausea).

If a tumour comes back or treatment is unsuccessful

Steroids are also given to help manage symptoms if a tumour has come back after treatment or when a tumour is found to have already spread at first diagnosis. They may be prescribed as part of palliative care treatment.

Steroids help to manage the symptoms of a brain tumour rather than treat the tumour itself. Therefore, if your symptoms reduce after having steroids, it doesn't necessarily mean that the size of the tumour has reduced.

How are steroids taken?

Steroids can be taken in different ways including:

- By mouth tablets or by liquid medicine.
- Intravenously (IV) by injection into a vein or, very rarely, into the muscle (They are only likely to be given by injection if you are unable to swallow tablets or liquid).

The most common way to take steroids is in tablet form. If you have difficulty swallowing the tablets speak to your doctor. They may refer you to a Speech and Language Therapist (SLT or SALT), who can help with swallowing difficulties.

What happens if I forget to take a dose of my steroid medication?

If you find it difficult to remember to take your steroid medication ask a family member or friend to help. It can help to set an alarm to remind you (and others who are likely to be with you), or leave yourself a note. Establishing a routine by taking your steroids at the same time each day may also help you remember.

- If you vomit after taking a tablet, tell your doctor as you may need to take another one.
- If you do miss a dose DO NOT take a double dose next time. You MUST speak to your doctor or a member of your healthcare team.

Stopping your steroid medication

You must continue to take steroids for as long as your doctor tells you to. If long-term steroids are stopped suddenly withdrawal effects can occur, so it is very important to take the prescribed dose at the times recommended by your doctor. When the steroid treatment is over, the dose will be reduced gradually.

What are the side-effects of steroids?

Steroids can cause a wide range of unwanted effects. The benefits of steroid use almost always outweigh their potential side-effects when they are prescribed. The side-effects may vary from person to person and may be more noticeable when you are on a higher dose or when you have been taking them for a while.

If you have any questions about the pros and cons of steroids, please talk to your doctor.

Common side-effects

Difficulty sleeping (insomnia)

You may find it difficult to sleep when you are taking steroids. Let your doctor know. They may suggest taking the steroids early in the day to minimise disruption to your sleep pattern. It's generally recommended that you don't take steroids too late in the day. Establishing a regular night-time routine, avoiding bright light in the evening hours and avoiding caffeine in the afternoon and evening may help with your sleep.

Irritation of the stomach lining

If you are taking steroids in tablet form take them with food or a glass of milk. This helps prevent irritation to the stomach lining, which can cause stomach ulcers. You will be prescribed a medication to protect your stomach lining. You should avoid the use of non-steroidal anti-inflammatory drugs (Ibuprofen, naproxen) or aspirin unless directed by your doctor. Tell your specialist nurse or doctor if you experience heartburn or indigestion.



Changes in your mood

Emotional effects are common with steroids. You may feel anxious, irritable or depressed. You may experience mood swings. This should return to normal when the dose is reduced, or the steroid treatment finishes.

Rarely, some people can experience what is referred to as steroid-induced psychosis. It is important to know that this usually only happens when given a high-dose in hospital.

If you're worried about your behaviour, talk to your doctor. You may be referred to a counsellor or psychologist to help you manage mood swings or behavioural changes.

Increased appetite

You may experience an increased appetite and cravings for sweet food. Eating more will obviously lead to weight gain. Try to eat a healthy, balanced diet including filling but low calorie foods, such as vegetables. Some weight gain may be unavoidable. Speak to your doctor if you want information on healthy eating. Once you stop taking steroids your appetite should return to normal. You can ask your doctor for a referral to a dietician if you are concerned about weight gain and for advice on healthy eating.

Steroids can also cause the redistribution of body fat in an unusual pattern. This can lead to the build-up of fat at the back of the neck (resulting in a small hump), around the midriff, or on the face, making your features more rounded (sometimes referred to as 'moon face'). These effects should reduce quickly after you've finished your course of steroids.



Increased blood sugars, increased thirst and frequent urination

The body regulates the levels of sugar in your blood using insulin. Steroids can affect your blood sugar level causing a type of diabetes to develop. During your course of steroids, your blood sugar levels may be monitored using a simple blood test. If you were a diabetic before you began to take steroids doctor may need to make changes to your diabetic medication.

Speak to your doctor without delay if you:

- Feel thirstier than usual.
- Need to urinate more often, especially at night.
- Notice your urine has changed smell.

Menstrual changes

You may find that your periods become irregular or stop. This usually returns to normal once steroid treatment has finished.

Fluid retention

You may experience fluid retention (puffiness or swelling) in your hands and feet or a bloated feeling in your stomach. Avoid sitting in one place for too long or crossing your legs.

It may help to raise your feet when you sit or lie down. Speak to your doctor about reducing sodium (salt) in your diet as this may help.

Side-effects from long-term steroid use

Skin thinning

You may find that you bruise more easily, and your skin may feel thinner. Skin thinning is usually temporary and disappears after the dose is reduced or your steroid medication is stopped.

Muscle wasting

Steroids may cause weakness in the muscles of your legs, arms, neck and chest. You may experience increased difficulty getting up from a chair or toilet or difficulty climbing stairs. When the steroids are stopped, some people may have muscle cramps for a short time. Ask your doctor about exercises that may help strengthen your muscles, or for a referral for physical therapy. Speak to your doctor if you experience muscle or joint pain.

Effects on the eyes

If you have to use steroids for a long time, it can lead to increased pressure in the eyes (known as ocular hypertension).

You may find that your vision becomes a bit blurry. This is usually temporary. It is important to go to the opticians regularly, to monitor for any signs of these side-effects.

Increased risk of infection and delayed healing

Steroids can impair your body's ability to fight infections. Oral thrush (fungal infection), urine or chest infections can occur. Look at your tongue and inside your mouth each time you brush your teeth.

If you notice a thick white coating on your tongue or white spots on the roof of your mouth and back of your throat contact your doctor. Medication can be prescribed to treat oral thrush. If you develop a fever, chills or body aches contact your doctor.

You may be more prone to respiratory infections including pneumonia. Inform your doctor without delay if you have any breathing difficulties.

Bone thinning

Taking steroids for a long time can lead to bone loss, osteoporosis (bone thinning) and broken bones. Try to eat a diet that includes plenty of fruits and vegetables and choose foods to get the calcium you need. Speak to your doctor if you have any concerns. They may be able to prescribe a calcium supplement. Take precautions to avoid falls.

Inform your doctor if you experience:

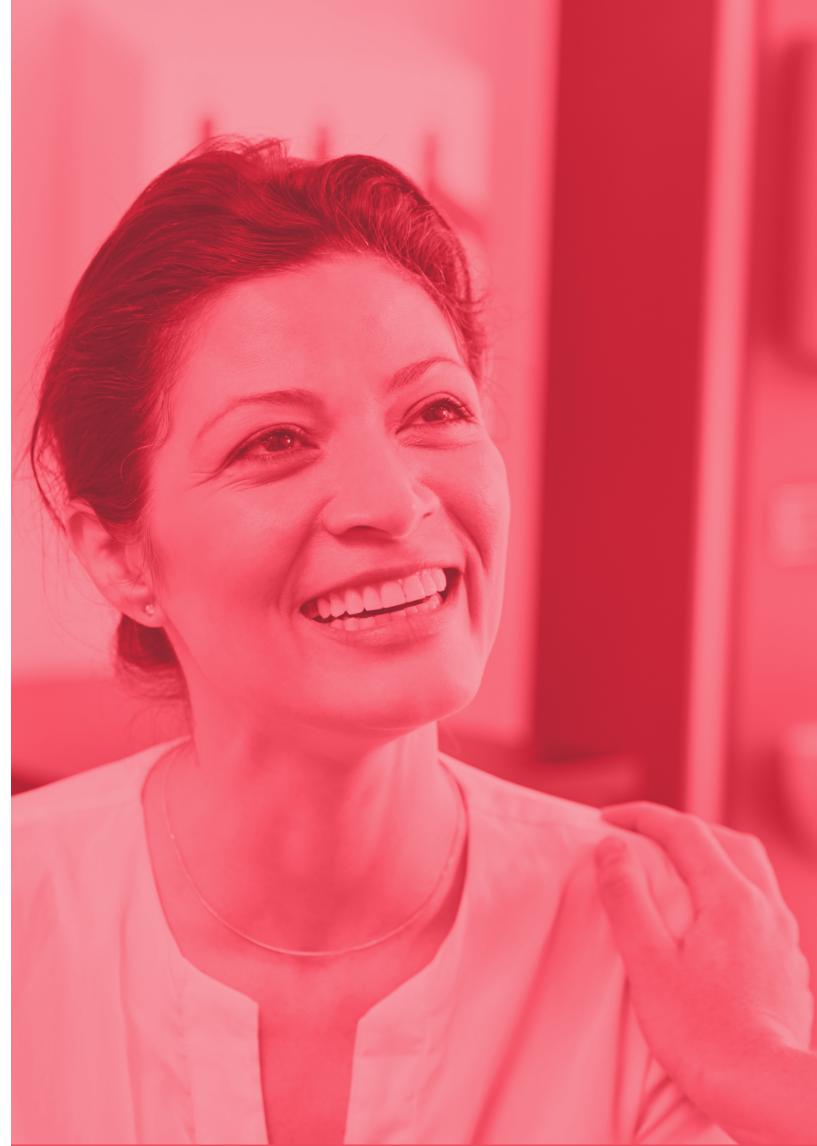
- A raised temperature.
- Flu-like symptoms.
- Delayed healing of wounds or cuts.
- Pain or stinging when you pass urine.
- Persistent cough.
- A sore mouth.

Coping with side-effects

If you are experiencing any difficulties after starting steroids please speak to your doctor, a family member or friend. Your doctor may have useful suggestions on how to reduce the side-effects.

Brain Tumour Support NZ can organise a Support Friend to contact you so you can talk about any concerns you may have.







Disclaimer

This guide reflects current recommendations from international clinical guidelines for the management of primary adult brain tumours. It is not intended to take the place of medical advice. A patient's GP or specialist may provide them with new or different information which is more appropriate to their needs.

New Zealand does not have its own set of clinical practice guidelines for the management of brain tumours.

New Zealand doctors will typically refer to international guidelines, from organisations such as: the UK's National Institute for Health and Care Excellence (NICE); the European Society of Medical Oncology (ESMO); Cancer Council Australia; and the USA's National Comprehensive Care Network (NCCN). Links to these international guidelines can be found in our Online Resources directory.

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