Steroid therapy for brain tumours

Information for patients
How can steroids help when you have a brain tumour?

The symptoms a person with a brain tumour may experience depend on the position of the tumour in the brain. 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 an collection of fluid in the brain tissue, called cerebral oedema.

Some people experience headaches and nausea (feeling sick) which can indicate that there may be some swelling around the tumour and pressure inside the skull.

Steroid medication reduces cerebral oedema and can improve symptoms.

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 controls the amount of natural corticosteroid it needs to function normally, with the adrenal glands producing corticosteroids in small quantities.

When you have cerebral oedema (swelling), the body requires more corticosteroid than it can produce naturally. Your doctor may prescribe artificial corticosteroid (steroid medication) to reduce the swelling around your tumour and improve your symptoms. Steroid medications do not treat the tumour. The steroid medication most commonly prescribed to treat cerebral oedema is dexamethasone.

The steroids used to treat cerebral oedema are different from anabolic steroids which are used by some athletes to build muscle.
When will steroids be prescribed?

- when cerebral oedema (swelling) is seen on your brain scan
- around the time of surgery
- around the time of radiotherapy
- around the time of chemotherapy
- any time you are experiencing problems which are thought to be caused by cerebral oedema.

What are the side effects of steroids?

The side effects may vary from person to person and are usually more noticeable when you are on a higher dose or when you have been taking them for a while. Below is a list of the more common side effects with advice on how to cope with them:

Problems with sleeping (insomnia)
You may be asked to take steroids up to four times per day. As you are advised to reduce the amount of steroid that you are taking, stop the latest dose in the day. For example, if you take steroid four times a day (breakfast, lunch, dinner, supper), we advise you to reduce this to three times per day (breakfast, lunch, dinner).

If you need to take steroids once a day, always take your tablets in the morning.

Irritation of the stomach lining
You will be prescribed a medication to protect your stomach lining. Take your tablets with food or a glass of milk. Tell your specialist nurse or doctor if you experience heartburn or indigestion.
Changes in your mood
Steroids can affect your mood. You may feel irritable, agitated or depressed. You may have mood swings. This should return to normal when the dose is reduced, or the steroid treatment finishes. Please discuss any concerns about this with your specialist nurse or doctor.

Increased appetite leading to weight gain
You may experience an increased appetite and cravings for sweet food. Try to eat a healthy, balanced diet, although some weight gain may be unavoidable. Ask your specialist nurse if you want information on healthy eating. Your appetite should return to normal after steroid treatment has stopped.

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. The symptoms of this include increased thirst and passing urine more often. Inform your specialist nurse or doctor if this is happening to you.

A simple blood test can measure your blood sugar levels. Occasionally, medication may be required to control your blood sugar level. Your blood sugar levels usually return to normal after steroid treatment finishes.

If you were a diabetic before you began to take steroids, you will need to monitor your blood sugars closely and your doctor may need to make changes to your diabetic medication.

Fluid retention
If you experience fluid retention (puffiness or swelling) in your legs or a bloated feeling in your stomach, seek advice from your specialist nurse or doctor.
Muscle weakness in the upper arms and legs (thighs)
Steroids can sometimes cause a weakness which is known as ‘proximal myopathy’. You may notice that it is more difficult to perform daily activities such as climbing the stairs or getting out of a chair. This is more likely to be a problem if you have been taking steroids for a number of weeks or months.

It is important that you do not confuse weakness which may be due to your tumour or cerebral oedema with steroid related weakness. If you are uncertain as to the cause, your specialist nurse or doctor can advise you.

Increased risk of infection and delayed healing
Steroids can affect your immune system and increase your risk of infection. Oral thrush (fungal infection), urine or chest infections can occur.

Interruptions to the menstrual cycle
Your menstrual cycle may become irregular. This usually returns to normal once steroid treatment has finished. It is not advisable to become pregnant when you are taking steroids.

Inform your specialist nurse or 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.

Please inform your specialist nurse or doctor if you think you have been exposed to measles, shingles or chicken pox as additional treatment may be required.

There are a number of less common, but well-known, side effects associated with steroid use. If you think you may have a symptom caused by taking steroids, please let your specialist nurse or doctor know.
Additional information

Do not stop taking steroids abruptly. 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. Your doctor will advise you on this.

You will be given a steroid card if you have to take steroids at home. This card should be carried with you at all times so that in an emergency a doctor will know that you are having steroid treatment. It is also important to inform your dentist that you are having steroid treatment if you need any dental work.

Things to remember about steroid tablets

- Keep the tablets in a safe place where children cannot reach them as steroids could harm them.
- Do not flush them down the toilet or throw them away. Keep them safe in case you require them in the future.
- If you are sick after taking a tablet, tell your doctor as you may need to take another one.
- If you forget to take your tablet, do not take a double dose. Let your specialist nurse or doctor know.