

# Steroids

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**This Infosheet explains what steroids are, how they are used in myeloma, how they are given and their possible side-effects.**

## What are steroids?

Steroids are drugs which mimic certain hormones in the body that help to regulate and control the way the body develops and functions. There are several types of steroids. Those used in the treatment of myeloma are known as glucocorticoids. These steroids can suppress the immune system and prevent inflammation.

## How are steroids used to treat myeloma?

Steroids are known to be effective in killing myeloma cells. While they may be used on their own (as a monotherapy), steroids enhance the activity of other anti-myeloma treatments and are therefore commonly used in combination with other drugs.

High-dose steroids can also be useful as an effective initial treatment for patients who have poor kidney function at diagnosis.

As steroids are anti-inflammatory drugs, they can also help to reduce the pain associated with myeloma bone disease.

In addition, their ability to control myeloma activity without damaging normal bone marrow stem cell function can be of great value.

### What steroids are available to treat myeloma?

Dexamethasone and prednisolone are the steroids most commonly used in treating myeloma.

Dexamethasone is very effective at killing myeloma cells when used in high doses (20mg or 40mg per day for 4 days out of the month). Some patients may find it difficult to cope with the side-effects associated with high doses of dexamethasone, therefore it is sometimes necessary to adjust the dose to make it more tolerable.

Prednisolone is also effective at killing myeloma cells and the side-effects associated with prednisolone are generally less severe in most patients.

### How are steroids given?

Steroids can be given either orally (in tablet form) or intravenously (into the vein). The steroids used

in myeloma are usually given orally.

Tablets should be taken with food, usually breakfast, or milk to help protect the lining of the stomach from irritation. As the doses used in myeloma are often high, several tablets may have to be taken at once.

### What are the possible side-effects of steroids?

Side-effects of steroids vary according to the dose and each individual patient's reaction to steroids may be different. It is important to remember that side-effects, if any, are temporary and can often be prevented or managed. They should resolve when the steroid treatment is stopped.

Common side-effects include:

- **Mood changes:** Mood swings, anxiety, tearfulness, irritability can be side-effects of steroids. Mood changes can be more apparent when taking higher doses, and when alternating between periods on and off steroids
- **Difficulty sleeping:** You may have difficulty sleeping when taking steroids. It may help to take steroids in the morning so that the effect of the steroid

has lessened somewhat by bedtime. Alternatively, some patients might find it better to take them right before bed, so they are asleep before the full effect of the steroid is felt. It may take some trial and error before you find the best time to take them

- **Stomach pain:** Steroids can damage or irritate the lining of the stomach and can sometimes cause stomach ulcers. You will be given antacid medication to prevent stomach problems. If you experience any stomach pain or vomit blood you must inform your doctor or nurse immediately
- **Increased blood sugar:** Steroids may increase the levels of sugar in the blood temporarily. If you are diabetic you may require more frequent monitoring of your blood sugar levels and/or changes in insulin or other medication
- **Increased risk of infection:** Steroids can suppress the immune system, particularly if given in high doses or long-term. It is important to report any signs of infection such as high temperature, productive cough or any area of swelling or inflammation to your doctor or nurse

- **Increased appetite:** Steroid treatment can make you feel hungrier and want to eat more. It is therefore possible to put on weight during steroid treatment. If this is a particular problem it might be worth asking to see a dietician at the hospital

- **Muscle weakness and muscle wasting:** Steroids can cause muscle weakness and muscle wasting in some patients. Muscle cramps can occur for a short time after stopping steroids

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For more information, see the **Diet and nutrition** and **Infection** Infosheets from **Myeloma UK**.

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### Future directions

Steroids form an important part of the management of myeloma, generally in combination with other drugs. As steroids can often increase the response rate of other treatments, they continue to prove useful in combination with established anti-myeloma treatments, such as thalidomide, bortezomib (Velcade®) and lenalidomide (Revlimid®).

Clinical trials are currently investigating whether alternative combinations of these drugs would be beneficial to some myeloma patients, and research

continues to focus on how to reduce the side-effects associated with steroids.

### About this Infosheet

The information in this Infosheet is not meant to replace the advice of your medical team. They are the people to ask if you have questions about your individual situation. All Myeloma UK publications are extensively reviewed by patients and healthcare professionals prior to publication.

### Other information available from Myeloma UK

Myeloma UK has a range of Essential Guides, Infoguides and Infosheets available covering many areas of myeloma, its treatment and management. To order your free copies or to talk to one of our Myeloma Information Specialists about any aspect of myeloma, call the **Myeloma Infoline: 0800 980 3332** or **1800 937 773** from Ireland

The Myeloma Infoline is open from Monday to Friday, 9am to 5pm and is free to phone from anywhere in the UK and Ireland. Information and support about myeloma is also available around the clock at [www.myeloma.org.uk](http://www.myeloma.org.uk)

For a list of references used to develop our resources, visit [www.myeloma.org.uk/references](http://www.myeloma.org.uk/references)

Published by: Myeloma UK  
Publication date: August 2008  
Last updated: April 2017  
Review date: April 2019

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**Myeloma Awareness Week 21 - 27 June**