

Patient information from BMJ

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Cushing's syndrome caused by medication

Cushing's syndrome is caused by high levels of a hormone called cortisol. It often results from long-term treatment with drugs called corticosteroids. Most people recover well when this is dealt with.

What is it?

Cushing's syndrome is caused by high levels of a hormone called **cortisol**. The medical term for this is hypercortisolism. The main symptom of Cushing's syndrome is weight gain. The condition is more common in women than in men.

The most common cause of Cushing's syndrome is long-term treatment with drugs called **corticosteroids**. Doctors often refer to them as just 'steroids' for short.

Corticosteroids are used to treat pain and inflammation (swelling). They are used for many medical conditions, including arthritis (which causes swollen joints) and asthma (which causes swelling in parts of the lungs).

While they are effective treatments for many people, corticosteroids can cause problems in some people who take them for many months or years. These problems include diabetes and Cushing's syndrome.

Cushing's syndrome can be serious. This is usually because the weight gain that happens with the condition increases the chances of serious problems affecting the heart and blood vessels (cardiovascular disease). Cushing's syndrome can also lead to diabetes, high blood pressure, and weaker bones.

A less common cause of Cushing's syndrome is when the high level of cortisol is caused by an internal problem, such as a tumour. For more information see our information on *Cushing's syndrome caused by an internal problem*.

What are the symptoms?

One main symptom of Cushing's syndrome is weight gain, especially around the middle, the upper back, between the shoulder blades, and in the face. Other symptoms that sometimes go along with the weight gain can include:

Cushing's syndrome caused by medication

- Stretch marks on the skin
- Skin that is thin and bruises easily
- Long healing times for broken skin (such as with cuts, grazes, and insect bites)
- Extreme tiredness
- Muscle weakness.

The symptoms can also affect men and women differently. For example, if you are a woman you might notice:

- Increased body hair or facial hair
- Changes in your menstrual periods: for example, your periods may become irregular, or might stop completely.

If you are a man you might notice that:

- You are less interested in sex
- You find it more difficult to get an erection.

But having some or even all of these symptoms doesn't always mean that someone has Cushing's syndrome. So your doctor will ask you questions about your medical history, and especially about whether you have ever taken corticosteroids, and for how long.

If you are not taking corticosteroids your doctor will also want to do some tests. These might include testing your saliva or your urine for high levels of cortisol. If the results suggest that you might have Cushing's syndrome your doctor might refer you to a specialist (called an endocrinologist) for more tests to make sure.

What treatments work?

Reducing your steroid dose

The main treatment for Cushing's syndrome is to slowly reduce the amount of steroid medication you take to the lowest possible dose that treats the condition that you are taking the medications for.

But you only do this under your doctor's supervision. Don't make any changes to the way you take your medications without talking to your doctor. This is because it is dangerous to stop taking corticosteroids suddenly or to reduce your dose too quickly.

Some people get side effects when they reduce their steroid dose, such as diarrhoea, vomiting, and fatigue (tiredness). If you have side effects while reducing your steroid dose, talk to your doctor straight away.

What will happen?

Addressing the problem by working with your doctor to reduce your steroid dose works very well for most people. For example, as cortisol levels return to normal, most people lose most

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or all of the weight that they have put on. This greatly reduces the chance of heart disease and diabetes.

Your bones should also become stronger, meaning that you are less likely to have fractures, and your blood pressure should return to a healthier level.

In people with diabetes, treatment can also lead to better diabetes control. If your diabetes was caused by steroid treatment, treatment may even lead to diabetes being cured altogether.

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