

steroids & diabetes

Corticosteroids (steroids) are hormones similar to those naturally occurring in the body that are produced to fight stress, injury and disease. They are useful anti-inflammatory medications and can be used to treat asthma, arthritis, dermatitis and to prevent nausea during medical procedures such as chemotherapy. These steroids are different to the anabolic steroids often used to build muscle mass, for example by weight lifters.

What are some common names used for corticosteroids?

<i>Chemical name</i>	<i>Brand names</i>
Betamethasone acetate	Celestone chronodose (injection)
Cortisone	Cortate (tablet)
Methylprednisolone	Depo-Medrol or Depo-nisolone, Solu-Medrol (injection)
Hydrocortisone	Solu-Cortef (injection)
Fludrocortisone	Florinef (tablet)
Hydrocortisone	Hysone (tablet)
Triamcinolone	Kenacort-A (injection)
Prednisolone	Panafcort or Panafcortelone, Predsone or Predsolone, Solone (tablet) Predmix or Redipred (oral liquid)
Dexamethasone	Dexmethsone (tablet)

Certain forms of steroids can affect blood glucose levels in people with and without diabetes. Often people who have diabetes and are taking large doses of steroids prescribed by their doctor for a medical condition, need to temporarily commence or increase diabetes tablets or insulin injections.



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What effect can steroids have on blood glucose levels?

If you have type 1 or type 2 diabetes and are taking steroids, you may find it harder to control your blood glucose levels. Steroids raise blood glucose levels in three ways:

1. They block the action of your insulin which causes insulin resistance.
2. Less glucose is able to move out of the bloodstream to be taken up by the muscles. This results in a high blood glucose level.
3. They cause the liver to start releasing extra glucose into the bloodstream.

Inhaled steroids used for asthma have not been found to affect blood glucose levels. However your blood glucose levels can start to rise within a few days of commencing oral steroids and will change depending on the time, dose and type of steroid you are taking. A steroid injection into the joint or muscle may cause blood glucose levels to rise soon after administration and its effects may last from 3 to 10 days. If your blood glucose levels do start to rise, you should see your doctor or diabetes educator for advice on how to adjust your insulin or diabetes tablets accordingly.

Why is it important to reduce high blood glucose levels?

High blood glucose levels can make you feel unwell, tired or lethargic, thirsty and increase urination. Controlling blood glucose levels will improve these symptoms plus reduce your risk of:

- infections such as urinary tract infections and thrush;
- emergencies such as Diabetic Ketoacidosis (DKA) in type 1 diabetes and Hyperglycaemic Hyperosmolar State (HHS) in type 2 diabetes;
- long term complications such as kidney disease.

Does steroid therapy have any other side effects?

Like all medication, steroids can have side effects. You should **never** stop taking your steroid medication without your doctor's advice. Your doctor has prescribed steroid medication with the belief that it is the most appropriate form of treatment for you. Therefore, the benefits will usually outweigh the potential side effects.

Side effects that relate to the management of your diabetes can be:

- increased hunger
- weight gain
- urinary tract infections

To find out about other possible side effects of steroids, talk to your doctor or pharmacist and ask them for the consumer medicine information sheet for your prescribed medicine.

How to manage your diabetes and steroid therapy

- Tell the doctor prescribing the steroids that you have diabetes and whether you are on insulin or diabetes tablets.
- Increase the number of times you test your blood glucose levels and record all results to identify patterns. See your doctor or diabetes educator with any concerns.
- Do regular physical activity (refer to the *Physical activity and type 2 diabetes* information sheet).
- Follow a healthy eating plan (see a dietitian).
- See a dietitian to discuss carbohydrate intake and good food choices.
- Consult a diabetes educator for ongoing education and support.
- Ask your doctor about a Home Medicines Review, a government funded service to people in the community living at home which assists in the quality use of medicines. In collaboration with the GP, a pharmacist reviews the consumer's medication regimen in a home visit, providing education to the person about their condition/s and the appropriate use of all their medication, including prescription and non-prescription items.

Points to remember when starting steroid therapy

- **Never** stop taking your steroid medication abruptly. Steroids should only be reduced by your doctor – slowly and gradually.
- The effects of oral steroid medication usually subside within 48 hours of stopping the medication.
- The effects of steroid injections can last anywhere between 3 and 10 days.
- Steroids can cause raised blood glucose levels or diabetes in people who have not previously been diagnosed. Therefore they should be closely monitored by their doctor.

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Useful contacts

Health professionals who can help you to manage your diabetes and steroid therapy include your doctor and/or endocrinologist, diabetes educator, dietitian and/or pharmacist. Listed below are other useful contacts:

- Your State or Territory Diabetes Organisation on 1300 136 588 or go to their website as listed below.
- Australian Diabetes Educators Association at www.adea.com.au for general information or referral to relevant health professionals.
- Dietitians Association of Australia on 1800 812 942 for advice about a healthy eating plan and other dietary requirements or go to www.daa.asn.au
- National Prescribing Service: Medicines Line on 1300 888 763 for independent information on prescription, over-the-counter, herbal and natural medicines by a qualified pharmacist or go to www.nps.org.au

Would you like to join Australia's leading diabetes organisation?

- > Dietary services
- > Educational literature
- > Free magazines
- > Product discounts
- > Children's services
- > Support groups

For more information phone **1300 136 588** or visit your State/Territory Organisation's website:

ACT	www.diabetes-act.com.au	NSW	www.diabetesnsw.com.au
NT	www.healthylivingnt.org.au	QLD	www.diabetesqld.org.au
SA	www.diabetessa.com.au	TAS	www.diabetestas.com.au
VIC	www.diabetesvic.org.au	WA	www.diabeteswa.com.au

The design, content and production of this diabetes information sheet has been undertaken by the eight State and Territory member organisations of Diabetes Australia Ltd listed below:

- > Diabetes Australia – NSW
- > Diabetes Australia – Queensland
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- > Diabetes SA
- > Diabetes Australia – Victoria
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- > Diabetes WA
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