



High blood sugars caused by steroids

Your blood sugars are high because you are taking a medication called steroids. Steroids are used to:

- decrease swelling
- decrease the natural response of your immune system, also called immunosuppression

This handout will help answer questions you may have.

Common names used for steroids

- prednisone
- dexamethasone (Decadron[®])
- cortisone

While on steroids you may also have:

- increased hunger
 - weight gain
 - swelling
 - sleep problems
 - mood swings
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How do steroids affect your blood sugar?

To understand how steroids affect your body, you need to know how insulin works in your body. Insulin is a hormone made by the pancreas. Insulin increases in the blood after you eat. Insulin controls blood sugar by taking the sugar (also called glucose) from the blood and moving it into your body's cells. Steroids can make it hard for the cells in your body to use insulin. This is called insulin resistance. This can cause you to have too much sugar in your blood.

What are the signs of high blood sugars?

When your blood sugar level is high, you may:

- be thirsty, have a dry mouth and skin
- urinate more often
- feel tired or weak
- feel hunger or nausea
- have stomach pains or cramps

Why is it important to decrease your blood sugars?

High blood sugars can increase the chance of infection. This may cause you to take more time to heal. So it is important to keep your blood sugars close to target (see page 5).

Keeping blood sugars close to target can decrease your risk of:

- heart attack
 - stroke
 - nerve damage
 - kidney disease
 - eye disease
 - amputation
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How do you manage your blood sugars?

The 3 main things that will help you manage blood sugars are:

1. Healthy eating
2. Regular physical activity
3. Taking diabetes medications as directed

1. Healthy eating

When you eat food, it breaks down into:

- carbohydrates – affect blood sugar
- protein } have little effect on blood sugar
- fat }

Carbohydrates mostly break down into sugar, which is used as fuel for our body.

Food with carbohydrates:

- Grains and starches:
 - bread, cereal, rice, corn
 - potato
 - legumes, such as kidney beans, chick peas or lentils
- Fruit and some vegetables
- Milk and alternatives
- Sweets and sugars

Healthy eating helps you:

- get better control of blood sugars
 - use your insulin better
 - keep a healthy weight
 - have more energy
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When do I need to eat?

- Eat at regular times.
- Space meals 4 to 6 hours apart.
- Eat 3 meals a day. Some people may benefit from including a healthy snack.

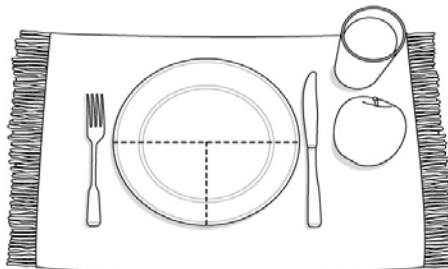


What do healthy servings look like?

Before you put food on your plate, in your mind divide your plate into 3 parts:

- Make $\frac{1}{2}$ of your plate vegetables. Vegetables contain fibre, plenty of vitamins and minerals, and are low in calories.
- Make $\frac{1}{4}$ of your plate grains and starches such as rice, noodles, potatoes, peas, beans or lentils.
- Make $\frac{1}{4}$ of your plate meat and alternatives such as fish, lean meats, low fat cheeses, eggs or tofu.
- Have a glass of milk and a piece of fruit to complete your meals.

Vegetables



Limit sugars and sweets; such as sugar, regular pop, desserts, candies, jams, and honey. Instead:

- choose sugar-free drinks (diet pop, Crystal Light[®] drink mix) or water when thirsty
- use sugar-free jams and jellies, artificial sweeteners, sugar-free gum and sugar-free Jello[®]

If you wish to see a dietitian about healthy eating, speak to member of your health care team

2. Regular physical activity

Physical activity is one of the most important things you can do to manage your blood sugars. When you are active you can:

- lower your blood sugar
- promote weight loss
- improve cholesterol levels and blood flow in blood vessels
- lower stress

Talk with your doctor before starting a new type of physical activity.

3. Taking your medications

Your doctor may prescribe diabetes medications and/or insulin to help bring your blood sugars down to target.

Diabetes medications and/or insulin may cause you to have low blood sugars. See page 7 to learn about low blood sugars.

Why do you need to test your blood sugars?

It is important to test your blood sugars regularly. When you test regularly, you can see the patterns of your blood sugars. You will know if there are certain times of the day when your blood sugars go up or down. This information will help you and your diabetes care team to adjust your treatment plan.

What are blood sugar targets?

Before meals	4.0 to 7.0
2 hours after meals	5.0 to 10.0

Sample of Blood Testing Patterns:

Date	Before Breakfast	2 hours after	Before Lunch	2 hours after	Before supper	2 hours after	Bedtime
May 1	8:00 am 7.2				5:30 pm 3.3		
May 3	8:30 am 5.2	10:30 am 12.3					
May 5			12:00 noon 6.4				9:30 pm 8.4
May 7					6:00 pm 6.1	8:00 pm 7.9	

Discuss with your health care provider the targets and testing times that are right for you.

Continue to take the steroid medication that your doctor recommends for your treatment.

If your blood sugars are high, work with your diabetes care team to adjust your diabetes medications and/or insulin.

Low blood sugar (hypoglycemia)

What is low blood sugar?

Low blood sugar is when your blood sugar is less than 4.0 mmol/L. It is also called **hypoglycemia**.

How do you know you have low blood sugar?

You may feel one or more of these symptoms:

- nervous or irritable
- sweaty
- very hungry
- unsteady on your feet
- a headache
- blurred vision
- shaky, faint or light headed
- weak
- difficulty thinking
- abdominal pain or upset stomach
- slurred speech
- numb or tingling lips, tongue, fingers, feet

If you have one or more of these symptoms, test your blood sugar to see if it is less than 4.0 mmol/L.

If your blood sugar is less than 4.0 mmol/L, you need to treat it right away. If left untreated, your symptoms could get worse and you could pass out.

If you are not able to test your blood sugar, treat your symptoms right away.

How do I treat low blood sugar?

Step 1

- Stop what you are doing.
- Eat or drink 15 to 20 grams of fast-acting carbohydrate.
Choose one of these:
 - 4 to 7 glucose tablets (depending on brand)
 - 3 to 4 teaspoons, cubes or packets of table sugar (may be dissolved in water)
 - 3 to 4 teaspoons of honey
 - $\frac{3}{4}$ cup to 1 cup regular pop (not sugar-free or diet)
 - $\frac{3}{4}$ cup to 1 cup fruit juice
 - 3 to 6 candies (depending on brand)

Step 2

- Sit down and rest for 15 minutes. Check your blood sugar level again.
- If your blood sugar is still less than 4.0 mmol/L or if the symptoms of low blood sugar do not go away, repeat Step 1.



If you have a low blood sugar just before a meal or snack, treat it as described in Steps 1 and 2 and then have your regularly planned meal or snack and medication.

If your next meal is more than one hour away, also have a snack with a starch and protein such as:

- ½ cup of milk plus 2 plain cookies
- ½ cup of milk with ½ cup cereal
- 6 crackers with 1 oz cheese
- 1 slice of bread with 1 tablespoon peanut butter or 1 oz meat or cheese

This will help maintain your blood sugar level until your next meal.

What causes low blood sugar?

- not eating at regular times or missing meals or snacks
- not eating enough food or not eating the right food
- doing more exercise or activity than usual
- taking more diabetes pills or insulin than you need

Talk to your health care team if you have low blood sugars often. Always carry a fast-acting source of carbohydrate with you.

1 teaspoon = 5 mL, 1 tablespoon = 15 mL, ½ cup = 125 mL,
¾ cup = 175 mL, 1 cup = 250 mL, 1 oz = 30 grams