

ENDOCRINOLOGY & DIABETES UNIT

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GLUCAGON FOR SEVERE LOW BLOOD SUGAR (HYPOGLYCEMIA)

What is glucagon?

Glucagon is a hormone made by the pancreas. It is used to treat severe low blood sugar. It raises the blood sugar by sending a signal to the liver to release stored sugar.

For glucagon to be effective, a person must be eating carbohydrates regularly in their diet.

You can get glucagon from your pharmacy. Glucagon is now available as injectable or for nasal administration. Your pharmacy may need to order these products, and it can take a few days.

- Injectable glucagon is manufactured by Eli Lilly (Lilly Glucagon™) and by Novo Nordisk (GlucaGen® HypoKit). It should be stored at a controlled room temperature of 20-25°C (68-77°F).
- 2. BaqsimiTM (Eli Lilly) is glucagon powder given into the nose for people 4 years of age and above. It can be stored up to $30^{\circ}C$ (86°F).

When should I give glucagon?

Use glucagon when your child is having a severe low blood sugar. Your child may be:

- unconscious
- having a seizure
- so uncooperative that you cannot give juice or sugar by mouth

If your child is unconscious or having a seizure, turn them on their side.

How do I give injectable glucagon?

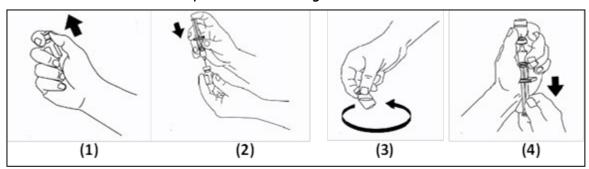
Injectable glucagon is given the same way as an insulin injection, except that the needle is longer. Injectable glucagon comes as a kit, which includes:

- A small bottle that has 1 milligram (mg) of glucagon. The glucagon is a dry powder.
- A syringe that is filled with 1 mL of sterile liquid.

Follow the steps below:

- 1. Remove the cap from the bottle.
- 2. Inject the liquid from the syringe into the dry powder bottle.
- 3. Roll the bottle gently to dissolve the powder. Do not shake the bottle.
- 4. Draw the fluid back into the syringe.
- 5. Inject glucagon into the side of the thigh.

- 6. Your child may take 10-20 minutes to respond fully.
- 7. Once your child is alert, give juice or other fast-acting sugar.
- 8. After the fast-acting sugar, give your child some longer-acting carbohydrate. This is to stop the blood sugar from dropping too low again.
- 9. If your child is not alert and able to swallow after 15 minutes, give another dose of glucagon or call 911.
- 10. Contact your family doctor or your diabetes team before giving the next dose of insulin. Your child's insulin dose may need to be changed.



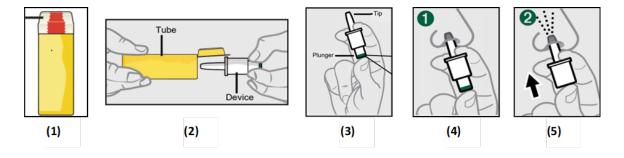
Use the glucagon solution as soon as it is mixed.

How much injectable glucagon should I give my child?

If your child is:	Give this much glucagon:
Under 2 years of age	Your doctor will tell you how much to give. Write this down here:
2 to 5 years of age	$\frac{1}{2}$ bottle ($\frac{1}{2}$ cc or $\frac{1}{2}$ mg)
6 years of age or older	1 bottle (1 cc or 1 mg)

BagsimiTM (glucagon nasal powder 3 mg): for kids 4 years of age and above -1 dose):

- 1. Remove the shrink-wrap by pulling on the red stripe.
- 2. Open the lid and remove the device from the tube.
- 3. Hold the device between fingers and thumb (do not push yet!)
- 4. Insert the tip into the nose until your fingers touch the outside of the nose.
- 5. Push the plunger firmly until the green line is no longer showing.



Are there any side effects of using glucagon?

Your child may have an upset stomach or vomit after getting glucagon. This can last up to 24 hours.

See also our handout Mini-Dose Glucagon to Prevent Serious Hypoglycemia.

Glucagon has an expiry date!

Check the expiry date on your supply of glucagon. Make sure your supply is never out of date. Keep this handout with your glucagon kit.

Novo Nordisk's product monograph for GlucaGen®: www.paladin-labs.com/our_products/PM_GlucaGen_EN.pdf

Eli Lilly Canada has an online tutorial on how to use injectable Lilly Glucagon™: www.lilly.ca/en/kaltura-integration/glucagon.aspx

Eli Lilly Canada online instructions for using Baqsimi™ www.baqsimi.ca/en/consumer/how-to-use-baqsimi