Using Mini-Doses of Glucagon

What is glucagon?

Glucagon is a hormone made by the body. Its role is to raise low blood glucose. But in people with diabetes, the body cannot make enough glucagon when blood glucose is low. When glucose level drops, a glucagon shot can help bring it back to target level.

You should use a full dose of glucagon in an emergency, when a person is unconscious or cannot eat carbohydrates (foods that contain sugar). But there are times when a smaller dose of glucagon will help as well.

Why would I need a mini-dose of glucagon?

Sometimes people have trouble raising their blood glucose, even when they are alert and able to eat or drink. This may occur during times of heavy exercise or when sick with the stomach flu.

The first step is always to eat or drink a fast-acting carbohydrate (such as orange juice). If you have an insulin pump, you may also turn the basal rate down or off for a short time. If blood glucose remains low, a mini-dose of glucagon should help.

For example, an 8-year-old child with diabetes has a stomach virus. Her blood glucose has been 60 to 80 all morning. She has nausea (feels sick to her stomach) and vomiting—she cannot keep fluids or foods down. In this case, a mini-dose of glucagon will help raise the child’s blood glucose, and it will not cause more nausea or vomiting.

How should I give a mini-dose of glucagon?

Prepare the glucagon as you would in an emergency: Mix all of the liquid with the powder. Then, use an insulin syringe (30 units) to draw up the correct amount of glucagon. The amount will be based on your child’s age. (See chart below.)

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<th>Age</th>
<th>Glucagon Dose</th>
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<tr>
<td>Less than 2 years</td>
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After you give the shot, blood glucose should rise by 60 to 90 points. This rise should last for about an hour.
If blood glucose remains low (less than 80) after 20 minutes, double the dose and give another shot. (For example, if your child is eight years old, give 16 units.)

After that, you may keep giving shots with a double dose every 1 to 2 hours as needed.

Remember, you will still need your background (basal) insulin to prevent ketones. If you have questions about how much insulin to take, call your diabetes care team.

How long can I keep using the mixed glucagon?

You may use it for 24 hours. After that, throw it away.

Remember, if a person with diabetes is unconscious or does not respond to you, give a full dose of glucagon:

- For kids less than 44 pounds (20 kg): 50 units (0.5 ml)
- For kids or adults 44 pounds (20 kg) or more: 100 units (1 ml)

For more about glucagon, low blood glucose or sick-day management, please go to NetClinic at www.netclinic.com, or call your diabetes care team.

References
