

Mini-Dose Glucagon

Glucagon is a hormone that raises blood sugar. It makes the liver release stored sugar into the blood to raise blood sugar.

Glucagon is mostly used to treat severe low blood sugars. In some cases, a small dose of glucagon can be given to treat mild low blood sugars. This can reduce the need to go to the Emergency Room.

Do not use Mini-Dose Glucagon if your child is having severe low blood sugar. For seizure, loss of consciousness, or severe low blood sugar, give the full dose of glucagon and call 911.

You may need to use mini-dose glucagon along with a diabetes sick day plan. If your child has vomited repeatedly or is dehydrated, please contact your diabetes provider.

Symptoms for Use

- Child has a diagnosis of diabetes and is awake and alert with mild low blood sugar.
- Child is unable to eat or absorb enough carbohydrates to keep blood sugar in normal range because of nausea, vomiting, or diarrhea.
- Unable or unwilling to eat after insulin has been given and blood glucose trending low.

Supplies

You will need:

- Glucagon Emergency Kit*
- Insulin syringe
- Glucose monitoring supplies

*Mini-dose glucagon cannot be given with forms of glucagon other than the Glucagon Emergency Kit.

How to Prepare and Give

1. Prepare the glucagon kit according to package directions (inject the full volume of liquid into the vial of glucagon powder and swirl gently to mix).
2. Draw up the correct dose into an insulin syringe. (See dosing guide).
3. Inject glucagon under the skin.
4. Check blood sugar 30 minutes after giving dose. If blood sugar is less than 100 mg/dL at 30 minutes, give double the initial dose of glucagon.
5. Keep checking blood sugar every 30-60 minutes. You can repeat the effective glucagon dose up to 3-5 times (every 30-60 minutes) as needed to keep blood sugar 70-100 mg/dL.

Dosing Guide

Your provider will tell you how much mini-dose glucagon to give your child. It will often be 1 unit per year of age as shown. At age 15 and older, 15 units is the most you can give.

Age 0 to 2:

- Dose = 2 Units

Age 3 to 15:

- Dose = 1 unit for every year of age (Example: 3 years old = 3 units)

Age over 15:

- Dose = 15 units - no more

Keep the vial of glucagon in the refrigerator between doses and throw out at 24 hours.

If your child can tolerate small amounts of liquid, encourage frequent small sips of sugary drinks.

When to Call

Contact Your Child's Diabetes Provider if:

- Your child continues to vomit.
- Blood sugar remains <70 mg/dL after 3 doses of mini-dose Glucagon.
- You are unsure of what to do.

Your child may need to be seen in the emergency room or be admitted to hospital if there is no improvement.

Replace your glucagon emergency kit as soon as possible.

Reference

Haymond, M.W. & Schreiner, B. (2001). Mini-dose glucagon rescue for hypoglycemia in children with type 1 diabetes. *Diabetes Care*, 24(4): 643-645.

Hartley, M., Thomsett, M.J., & Cotterill, A.M. (2006). Mini-dose glucagon rescue for mild hypoglycaemia in children with type 1 diabetes: The Brisbane experience. *Journal of Pediatrics and Child Health*, 42(3): 108-111.

McGill, D.E. & Levitsky, L.L. (2016). Management of hypoglycemia in children and adolescents with type 1 diabetes mellitus. *Current Diabetes Reports*, 16:88.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 6/2022 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#7481.