

Glucagon

By Whitney Beaton, MSN, RN, ACCNS-P

Session Objectives

- Review what glucagon is and how it works
- Explain why it is important for patients with diabetes to have a form of glucagon readily available
- Discuss the 3 glucagon products that are currently FDA approved



What is Glucagon?

- Glucagon is a hormone that is produced in the pancreas
- It works to raise blood sugar
 - May think about it as the counter part to insulin (insulin lowers blood sugar)
- Patients who take insulin carry a form of glucagon that can be injected in case they cannot eat or drink to take in sugar (glucose)
 - It is rarely used, but is essential in emergency situations



How does Glucagon Work?

- Glucagon doesn't raise blood sugar on it's own
- Glucagon causes the liver to release stores of sugar into the blood stream to raise the blood sugar levels



When is Glucagon Used?

- When a child has severe low blood sugar and cannot safely take glucose by mouth OR is unconscious
- This does not happen frequently



What Else Do I Need to Know?

- Place the child on their side in case they vomit while unconscious
- If glucagon is given, 911 should be called and the child's parents should be notified
- If the child wakes up and is able to eat or drink, it is okay to give them fluids that contain carbohydrate



Forms of Glucagon



Injectable Glucagon Emergency Kit

- Typically a small red or an orange kit that contains a syringe filled with liquid and a vial with glucagon in powdered form
- The liquid is injected into the vial with powder and then swirled gently to reconstitute the glucagon
- The medication is then drawn into the syringe and administered under the skin or into a muscle
- Typically has a short shelf life (watch expiration dates)
- During an emergency it can be hard to remember how to mix
- Important to review how to use this ahead of time



Baqsimi (Nasal Glucagon)

- FDA approved in 2019
- A dry powdered form of glucagon that absorbs into the mucous membranes in the nose
 - No need to inhale
- Comes in a single-use, ready to administer nasal applicator
- Approved for patients age 4 and older
- Anecdotally, may cause some throat irritation after administration



Gvoke (Premixed Injectable Glucagon)

- Also FDA Approved in 2019
- Premixed glucagon that comes in a ready-to-administer syringe or Hypopen (epipen like device)
 - Available in 0.5 mg or 1 mg doses
- No need for mixing or drawing up



Resources

- AFCH Pediatric Diabetes Website
- UW Health Glucagon HFFY
- Links to videos that review administration
 - Glucagon Emergency Kit
 - Baqsimi
 - Gvoke
- Lilly Glucagon App
- ADA Safe at School Video

