

Glucagon

Definition of Glucagon:

Glucagon is a hormone secreted by the alpha cells in the pancreas, and it has the opposite effect of insulin. Glucagon increases blood sugar levels in the body by breaking down the sugars stored in the liver.

Other Names for a Glucagon Injection:

Emergency glucagon injection.

How a Glucagon Injection Works:

After injecting the body with glucagon, it travels through the bloodstream, signaling the liver to release glucose into the blood. It takes around 10-15 minutes for blood sugar levels to go back to normal after the injection.

Uses:

It is used to treat severe hypoglycemic episodes, where the patient is unable to treat themselves, or if blood sugar levels do not increase, even after following the "15-15 rule". It is also used when the patient exhibits the following symptoms:

- Fainting.
- Convulsions.
- Inability to eat any foods containing sugar.
- If blood sugar levels do not rise after consuming sugar.

Glucagon Injection Sites:

Glucagon is given just like an injection of insulin in the following sites:

- The upper outer part of the arms.
- The upper outer part of the thighs.

- The abdominal area away from the navel.
- The upper part of the buttocks.

The Components of a Glucagon Kit:

- A syringe with a clear liquid.
- A vial of glucagon powder.

The Proper Way to Give a Glucagon Injection:

Before the injection:

- Place the patient in the recovery position to help them breathe.
- Seek immediate medical attention if the patient stays unresponsive after the injection.
- Do not leave the patient alone.
- If the patient is unconscious or having a seizure, do not put anything in their mouth or between their teeth.

How to use a glucagon injection:

The liquid is withdrawn into a syringe (100 units/mL)

- The liquid is mixed with the powder until the solution becomes consistent.
- The solution is then withdrawn into a syringe and injected under the skin in the same way insulin shots are administered and in the same injection sites.
- The glucagon dose for individuals over 10 years is (1 mg), and the dose for children under 5 years is (0.5 mg).
- As soon as the person wakes up, give them something to eat.

After the injection:

- Return the needle to the kit so you can dispose of it later. Avoid putting the cover back on the needle.
- Keep the patient on their side to avoid suffocation because glucagon can lead to vomiting.
- As soon as the patient starts feeling better, give them a fast-acting source of sugar (such as: fruit juice), followed by a snack or meal containing slowly absorbed carbohydrates (such as: bread).

Glucagon Dosage:

Adults and children weighing more than 25 kg are injected with the entire content of the needle. Children weighing under 25 kg are injected with only half the amount.

How to Store a Glucagon Injection:

Glucagon can be stored in the refrigerator or at room temperature. Make sure it is in a dry place and away from direct sunlight, as well as extreme heat or cold.

General Guidelines:

- All members of the family should learn how to use a glucagon injection.
- All instructions should be read carefully.
- Make sure that the liquid inside the syringe is clear (before it is mixed with the powder).
- Check the expiration date of the injection once every month.
- Re-check the expiration date before use.
- If the contents of the injection have expired and the patient has a low blood sugar level, then you must seek medical help immediately.



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- If the patient does not wake up within 15 minutes, give them another dose of glucagon and contact emergency services immediately.
- Do not worry about the risks of an increased dose of glucagon on the patient's body.

Clinical Health Education Department
For more information, please contact us by [email](mailto:Hpromotion@moh.gov.sa)
Hpromotion@moh.gov.sa