

Medication: Glucagon	PDN: 6936.06	Last Updated: August 21 2025	PMD: Andrew Travers*	PDC: Teena Robinson*	Page 1 of 2
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GLUCAGON (injection)

1.0 Classification

- Antihypoglycemic

2.0 Mechanism of Action

- Stimulates the release of glycogen from the liver, which is broken down to glucose and increases blood sugar levels.

3.0 Indications

- Patients with signs of hypoglycemia and a blood glucose level less than 4.0 mmol/L who are unable to take oral glucose and an IV cannot be established.

4.0 Contraindications

- Known hypersensitivity
- Pheochromocytoma
- Insulinoma

5.0 Precautions

- Do not dilute powder or solution with normal saline.
- Patients taking beta-blockers may have a greater increase in both heart rate and blood pressure when given glucagon, but this will be temporary.
- Glucagon may lose its ability to increase blood glucose or may cause hypoglycemia if administered with indomethacin.
- Intravenous administration of dextrose is preferred for patients taking sulfonylureas as the pharmacological effects of sulfonylureas can last a long time.

6.0 Route

- May be given IM or Subcut

7.0 Dosage

Adult

- 1 mg IM mid-deltoid, repeat in 15 minutes if necessary.

Pediatric (greater than or equal to 20 kg)

- 1 mg IM or Subcut mid-deltoid, repeat in 15 minutes if necessary.

Pediatric (less than 20 kg)

- 0.5 mg IM or Subcut mid-deltoid, repeat in 15 minutes if necessary.

8.0 Supplied

- 1 mg glucagon (powder) and 1 mL of diluting solution

9.0 May Be Given By

- PCP/ACP/CCP

10.0 Adverse Effects

- Nausea/vomiting
- Allergic reaction
- Hypokalemia

11.0 Special Notes

- Hypoglycemia for non-diabetic children is different.
 - Neonate < 2.5 mmol/L
 - Infant/Pediatric < 3.3 mmol/L
- Supplementary carbohydrate should be given as soon as possible.
- Glucagon is very unlikely to work in a non-diabetic because the hypoglycaemia is a result of depleted glucose stores, rather than too much insulin.
- Consider consulting the Atlantic Canada Poison Centre in the setting of suspected overdose.
- Though glucagon can be used as an antidote for beta-blocker overdose, it requires high doses which are most often unavailable in the pre-hospital setting.
- Pregnancy category B [if there is a clinical need for it, Category B drugs are considered safe to use]

12.0 References

- Altered Level of Consciousness Clinical Practice Guideline
- Eli Lilly Canada Inc. Product Monograph

*Electronically Signed

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