

Glucagon

Classification

Pancreatic hormone and insulin antagonist

Indications

- PCP: Suspected or confirmed hypoglycemia where IV access is unavailable
- ACP: Suspected beta- or calcium channel-blocker overdose

Contraindications

Allergy or hypersensitivity
Pheochromocytoma

Adult dosages

- PCP: Suspected or confirmed hypoglycemia where IV access is unavailable
 - 5-1.0 mg IM/SC
- ACP: Suspected beta- or calcium channel-blocker overdose
 - Contact CliniCall to discuss dosing strategies

Pediatric Considerations And Dosing

[Follow weight-based dosing](#)

- PCP: Suspected or confirmed hypoglycemia where IV access is unavailable
 - If < 25 kg: 0.5 mg IM/SC
 - If > 25 kg: 1.0 mg IM/SC
- ACP: Suspected beta- or calcium channel-blocker overdose
 - Contact CliniCall to discuss dosing strategies

Mechanism Of Action

Glucagon accelerates the conversion of glycogen to glucose in the liver, elevating blood glucose levels. It is only effective in treating hypoglycemia if liver glycogen is available.

Pharmacokinetics

Intramuscular or subcutaneous:

- Onset: 8-10 minutes
- Peak: 20-30 minutes
- Half-life: 3-6 minutes
- Duration: 19-32 minutes

Adverse Effects

Nausea and vomiting can be common. Glucagon can also transiently increase blood pressure and heart rate.

Overdose

Excessive parenteral administration of glucagon can cause nausea, vomiting, and diarrhea. Ingestion of glucagon is unlikely to result in symptoms, as it is rapidly destroyed by the gastrointestinal tract.

Warning And Precautions

Glucagon **must** be reconstituted with the supplied diluent. Do not attempt to reconstitute or administer with normal saline.

In patients with pheochromocytoma, glucagon can cause a release of catecholamines that leads to significant hypertension and tachycardia, and may provoke an intracerebral hemorrhage.

Drug Interactions

Hypoglycemia produced by excessive alcohol consumption is unlikely to be reversible with glucagon.

