



## EMS System for Metropolitan Oklahoma City and Tulsa 2019 Medical Control Board Treatment Protocols



Approved 9/12/18, Effective 1/15/19, replaces all prior versions

### 16R – GLUCAGON

EMT-INTERMEDIATE 85

ADVANCED EMT

PARAMEDIC

Intramuscular use only – 3A 4I 6B 6D 6E 6F 7A 8A 13D

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**Class:** Hormone

**Actions/Pharmacodynamics:** Glucagon is a hormone produced in the pancreas. When released in times of hypoglycemia, it causes a breakdown of glycogen (stored in the liver) to glucose and inhibits the subsequent synthesis of glycogen from circulating glucose. Both actions increase the blood levels of glucose. Given via the IM route, it is a useful drug in hypoglycemia when IV access is unsuccessful. Glucagon also increases heart rate, myocardial contractility and improves AV conduction in a manner similar to that produced by catecholamines. Its actions are independent of beta blockade and therefore may be useful via IV/IO administration by paramedics for reversing cardiovascular collapse effects of suspected beta blocker toxicity.

**Indications:** Respiratory Arrest (3A)  
Specific Causes of Cardiac Arrest (4I)  
Altered Mental Status (6B)  
Seizure (6D)  
Syncope (6E)  
Dystonic Reactions (6F)  
Behavioral Disorder (7A)  
Poisonings – General Management (8A)  
Complications of Pregnancy (13D)

For all listed situations, indication is hypoglycemia (blood glucose <50 mg/dL) without ability to safely administer oral glucose (due to aspiration concern) and without ability to establish IV access in EMT-I85, AEMT, and Paramedic Scopes of Practice.

Additional indication for beta blocker toxicity with hypotension and bradycardia in Paramedic Scope of Practice.

**Contraindications:** None

**Pharmacokinetics:** Onset 5 – 20 minutes; peak effects in 30 minutes; duration is 1 – 1.5 hours.

**Side Effects:** Dizziness, headache, nausea/vomiting, hyperglycemia.

