

Hypo/Hyperglycemia Administrative Guideline

History	Signs and Symptoms	Differential
<ul style="list-style-type: none"> Recent illness or infection Past medical history <ul style="list-style-type: none"> Insulin pump? Pertinent medication history <ul style="list-style-type: none"> PO or Sub Q interventions Recent treatments Treatment compliance 	<ul style="list-style-type: none"> Altered mental status Kussmaul breathing Polyuria Tachycardia Weakness 	<ul style="list-style-type: none"> Stroke Head injury/Trauma Drug usage ETOH usage



B Assess mental status/GCS
Assess prehospital stroke screen as indicated
O₂ to maintain sat ≥ 94%
Vital Signs

Hypoglycemia
(FSBS < 60)

Hyperglycemia
(FSBG > 250)

B Administer **oral glucose** 1 tube (25g)
ONLY IF ALERT AND ABLE TO SWALLOW
May repeat x 1

P IV/IO access
Cardiac monitor

P Administer **Dextrose 10% (D10) 1 mL/kg**
(max dose 250 mL) IV/IO
May repeat x 1 for continued symptomatic hypoglycemia

If unable to establish IV access, administer **glucagon 0.1 mg/kg** (max 1 mg) IM/IN. May repeat x 1 after 10 min

P IV/IO access
Cardiac monitor

Consider **NS/LR fluid bolus 10 mL/kg over one hour**

Pediatric patients:
New onset hyperglycemia in pediatric patients requires ED evaluation

B Reassess VS,
mental status,
FSBG

Consider **Treat and Release AG**
Consider **BLS Transport Thresholds**

Education/Pearls

Symptoms vary broadly in patients with hypoglycemia and hyperglycemia. Hypoglycemia may cause patients to feel anxious or exhibit diaphoresis, tachycardia, or hypotension; others are asymptomatic. Many patients with hyperglycemia are also asymptomatic and do not need prehospital treatment of their hyperglycemia, especially if chronic. Other patients may feel thirst, urinate frequently, or experience malaise; even others progress to developing acidosis or altered mental status from complications of hyperglycemia in such diseases as diabetic ketoacidosis and hyperosmolar hyperglycemic state.

Evaluate patients for causes of their glucose level abnormalities, as it may represent an underlying process, like infection, trauma, or other illness. Patients who have developed diabetic ketoacidosis (DKA) related to elevated blood sugar may benefit from fluid administration; these patients often appear ill, and exhibit a constellation of symptoms (e.g. polyuria, polydipsia, weakness, dizziness, abdominal pain, tachypnea).

Hypoglycemia: Patients may be considered for release without transport or further EMS treatment per the **Treat and Release AG**. If patients do not meet the following criteria, they are at increased risk of decompensation.

Consider consultation with medical direction for patients that do not meet all of the following criteria:

- Not actively vomiting/is tolerating oral intake
- Patient had adequate response to single dose of dextrose - with VS in BLS range, normal mentation, and FSBG within normal limits.
- Patient has no acute conditions other than hypoglycemia (chest pain, shortness of breath, intoxication, liver disease, kidney disease, or febrile illness).
- Patient only on short acting insulin or premixed analog (e.g. NovoLog® 70/30 or Humalog® 70/30)
- Patient is not taking oral agents (other than metformin) for blood glucose control.
- Patient released to competent adult
- Patient or legal guardian refuses transport or patient and providers agree transport is not indicated

Hypoglycemia in patients with insulin pump:

- ALOC/AMS – stop insulin pump or disconnect at insertion site.
- GCS 15 & able to take oral glucose – leave connected with pump running.

Hyperglycemia: Patients may benefit from fluid administration; a 10 mL/kg bolus is indicated, especially in the setting of dehydration.

- Multiple boluses of fluid may be harmful to patients in DKA; however, if the patient is exhibiting signs of shock or decreased perfusion, treat per **Shock AG**.
- Avoid administration of narcotics or anxiolytics in the setting of DKA, as tachypnea is important to maintaining the patient's precarious acid-base status.
- In young patients with diabetes or suspected new-onset diabetes, **administer fluid slowly** to minimize the chance of developing cerebral edema.

Treat and Release Hypoglycemia - Guideline

