University Hospitals
EMS Training & Disaster Preparedness Institute

Pharmacy PHRiday

Week 24 | June 12, 2026 | Oral Glucose

Welcome to UH EMS-Institute's Pharmacy Phriday. In this installment, we continue our focus on medications available in both our standard drug boxes and the EMT drug boxes. The medication highlighted today is oral glucose.

Diabetic emergencies are one of the most common endocrine emergencies EMS will encounter. Of those groups of emergencies, hypoglycemia is probably the most common. The condition often presents as an altered mental status (AMS) complaint. Remember, there can be many causes of AMS. A thorough assessment and exam should consider all differential diagnoses, including hypoglycemia.

Blood glucometry, a skill approved for the EMT-level provider, is often used to confirm the provider's suspicion of a hypoglycemic event but is not required for treatment. If blood glucose analysis is not available or not working properly, but the patient presents with signs and symptoms of hypoglycemia, trust your assessment and treat the patient accordingly. Untreated hypoglycemia can result in serious and permanent brain damage and other life-threatening conditions.

With glucometry results, the provider can tailor the treatment to the actual emergency. Ranges for glucose levels per the UH protocol are as follows:

- Hypoglycemia <70 mg/dl
- Normal glucose 70-250 mg/dl
- Hyperglycemia >250 mg/dl

Keep in mind that not every patient follows these guidelines! Some patients may be symptomatic outside of these parameters and will still require treatment.

Oral glucose is one of the first treatments considered in our UH protocols for a patient presenting with hypoglycemia. (Do not forget the basics of airway, breathing, circulation, etc., as well as the need to shut off wearable insulin pumps if the patient has one.)

Oral glucose is a medication to reverse hypoglycemia in conscious patients. EMTs, AEMTs, and Paramedic-level providers may administer this medication. It is a glucose-elevating agent in the form of a fast-acting carbohydrate gel that is rapidly absorbed through the oral mucosa and the GI tract and then distributed to tissues to raise blood glucose levels. To administer oral glucose, the patient MUST be conscious and alert, and have a positive gag reflex to ensure the medication can be swallowed and to prevent possible aspiration.

The dosing for oral glucose in the adult patient is one tube (15-37.5 grams), and in the pediatric patient, a half tube (7.5-18.75 grams). The medication can be given using a tongue depressor to administer the gel between the cheek and gum, or allow the patient to self-administer using the tube itself. The patient should be reassessed in 5-10 minutes, including vital signs, and repeat glucometry.

Many patients experiencing hypoglycemia will have a rapid improvement following the administration of oral glucose or other dextrose medications. Many of those patients often want to refuse further care. Be sure the patient has the capacity to refuse further treatment or transport, defined by our UH protocols as "Lucid and capable of making an informed decision, alert to person, place, time, and event."

It is important to understand and relate to the patient the real possibility that their blood glucose levels may drop again. Patients taking oral hypoglycemic medications, such as Metformin, Glipizide, and others, may experience that drop due to the short duration of the glucose or dextrose administered and the half-life of the oral medications they take to control their diabetes. Other complicating factors that may require emergency department evaluation, such as chest

pain, dyspnea, injuries related to falls, seizures, and intoxication, should also be considered and discussed with the patient deciding to refuse transport.

If the patient continues to refuse further care and transport, the provider should encourage the patient to eat a meal high in carbohydrates and attempt to leave them in the care of a friend or family member. Also, be sure to document all details of the encounter thoroughly.

Till our next episode, stay safe!