

M7

DIABETIC EMERGENCIES

Among the most common endocrine emergencies that EMS personnel will be called upon to treat are complications of diabetes mellitus. Diabetic disorders should be considered for any patient exhibiting an altered level of consciousness. Diabetic emergencies are true medical emergencies requiring appropriate assessment, proper intervention, and transport.

GENERAL

- personal protective equipment should be utilized as appropriate
- body substance isolation techniques and equipment should be utilized as appropriate
- primary survey
- provide supplemental oxygen based on the patient's presenting condition and vital signs
- consider load and go criteria
- obtain pertinent medical history
 - history of diabetes mellitus
 - medications used in treatment
 - insulin – type, dose, frequency, last taken
 - oral medications – type, dose, frequency, last taken
 - patient's last meal
 - recent illness or injury
 - exercise
 - pregnancy
 - alcohol use
 - past history of diabetes-related reaction
- secondary survey
 - obtain vital signs
- measure blood glucose if trained and certified to measure blood glucose
 - manage documented hypoglycemia as indicated
- monitor the patient's airway if supplemental glucose is given
- have suction ready in the event the patient regurgitates stomach contents
 - suction if necessary
- do not allow the patient to exert him/herself - e.g. walking, standing unassisted to transfer to the stretcher
- initiate transport
 - on scene times should be kept to a minimum
 - treat other life-threatening conditions en route

- transport the patient to the nearest appropriate health care facility
 - notify the receiving health care facility of the patient's status as soon as possible
 - transport patient in a position of comfort, injuries permitting
 - monitor and treat the patient en route
 - additional surveys and treatments should be conducted en route
- report all findings to the receiving facility staff, and document on the patient care report

the conscious patient

- protect the airway
- provide supplemental oxygen

the unconscious patient

- protect the airway
- provide supplemental oxygen (see Unconscious Patient and Airway Management Guidelines)
- place patient in recovery position if possible
- suction secretions as needed

NOTE

suspect hypoglycemia in a patient with

- altered level of consciousness
- confusion
- seizures
- agitation or other behavioral changes
- fatigue or weakness
- patient has not eaten
- patient has taken too much insulin or oral hypoglycemic agent
- patient has cool, moist skin
- hypotension
- tachycardia
- diaphoresis

suspect hyperglycemia in a patient with

- altered level of consciousness
- restlessness
- polyuria, polyphagia, or polydipsia
- nausea or vomiting
- patient has not taken insulin
- patient has over eaten
- patient has an infection
- hot, dry skin
- rapid, weak pulse
- deep, sighing respirations
- “fruity” or “acetone” odor to the breath

- blood glucose testing should be repeated if transport is greater than five minutes
- unconscious patients are to remain NPO, unless specifically indicated by a Treatment Protocol or Guideline
 - EMS personnel trained and certified to treat hypoglycemia may do so as outlined in the Hypoglycemia Treatment Protocol
- under no circumstances should EMS personnel administer insulin, even if the patient requests it
- diabetic patients which have an altered level of consciousness for reasons other than hypo or hyperglycemia
 - EMS personnel must be thorough in history taking and assessment to ensure there is no other cause for altered level of consciousness

Appendix 1: Blood Glucose Values Table

Blood Glucose Reading	Interpretation	Treatment
0.0 - 2.9 mmol/l	Very Low	Treat hypoglycemia*, initiate load and go
3.0 – 3.9 mmol/l	Low	Treat hypoglycemia*
4.0 – 7.0 mmol/l	Normal	Treat signs and symptoms
7.0 – 19.9 mmol/l	High	Treat signs and symptoms
Above 20.0 mmol/l	Very High	Treat signs and symptoms, initiate load and go

*treat hypoglycemia using oral glucose, intramuscular glucagon, or intravenous dextrose if trained and certified to do so

Note:

- EMS personnel are recording a patient's "random" blood sugars – it is typically higher than the patient's usual fasting blood sugar
- "normal" upper range of blood glucose values may vary significantly between individuals
→ any blood glucose reading below 4 mmol/l is considered low and should be treated

Appendix 2: Indications for Measuring Blood Glucose using a Glucometer

EMS personnel must be aware that measuring a patient's blood glucose is only necessary in certain situations. Routine measurement of blood glucose is not indicated and unnecessarily exposes EMS personnel to blood and body fluids.

Measurement of blood glucose using a glucometer (if within scope of practice) is indicated in the following circumstances:

- signs and symptoms consistent with hypoglycemia including:
 - seizure
 - altered level of consciousness
 - known or suspected overdose with insulin or oral hypoglycemic agents
 - suspected ETOH intoxication
 - clinically suspected hypo- or hyperglycemia

NOTES :