Management of Hypoglycemia: Quick Facts

How does treating diabetes in hospice differ from non-hospice?[1-3]

Traditionally, diabetes therapy focuses on tight glycemic control to decrease the long-term risk of developing microvascular complications such as retinopathy, nephropathy, and neuropathy. It's important to recognize that the primary benefit of tight glycemic control is observed only after many years of treatment. **For patients at the end of life where preventing long term complications is not the goal, tight glycemic control increases the risk of hypoglycemia, which is more harmful than hyperglycemia, and is therefore not recommended**. Hospice patients will experience medication changes, disease state progression, and oral intake variability that affect blood glucose levels. In addition, patients may no longer show signs of hyperglycemia and glucose lowering medications and glucose monitoring may no longer be consistent with their plan of care.

What are the signs and symptoms of hypoglycemia?[4]

Headache, confusion, dizziness, personality changes, fatigue, weakness, tiredness, sweating, shakiness, anxiety, high heart rate.

How does patient prognosis affect glycemic goals?[5,6]

- **Advanced disease and relatively stable** - Several months to a year life expectancy: Hyperglycemia may not be a concern but being familiar with signs/symptoms will assist in maintaining a **target fasting glucose ≤ 180 mg/dL.**
- **Impending death** (i.e., organ failure or limited oral intake) - Several weeks or less life expectancy: Decreasing or stopping insulin and sulfonylurea meds is recommended and the **target fasting glucose should be > 180 mg/dL.**
- **Actively dying** (i.e., multiple organ system failures, end of life symptoms such as agonal respirations) - Life expectancy is usually hours to days: Primary focus is comfort and glycemic control is not a priority.
    - Type I diabetes: **Target should be liberal (i.e., <360 mg/dL)** and insulin continued only if patient is prone to diabetic ketoacidosis (DKA)
    - Type II diabetes: All insulin and oral hypoglycemics should be stopped

How is hypoglycemia treated?[7-10]

Blood Sugar (BS)	Oral Intake Status	Therapy	Dose	Route	Relative Cost
≤ 50 mg/dL	Swallowing	Juice or regular soda (not diet)	8 oz (30gm)	PO	$
		Simple carbohydrates (~30gm): -Raisins	4 tablespoons	PO	$
		-Sugar, honey or corn syrup	2 tablespoons	PO	$
		-Nonfat or 1% milk	16 oz	PO	$
		-Hard candies, jellybeans, gumdrops	See package	PO	$
		Glucose tabs (4gram/tab)	8 tabs (32gm)	PO	$
		Glucose gel (15gm/tube)	2 tubes (30gm)	PO	$
	NPO w/ IV access	Dextrose 50% in water (D50W)	50mL (25gm)	IV Push	$$
	NPO w/o IV access	Glucagon	1mg	IM (thigh)	$$$
51mg/dL - 71md/dL	Swallowing	Juice or regular soda (not diet)	4 oz (15gm)	PO	$
		Simple carbohydrates (~15gm): - Raisins	2 tablespoons	PO	$
		-Sugar, honey or corn syrup	1 tablespoon	PO	$
		-Nonfat or 1% milk	8 oz	PO	$
		-Hard candies, jellybeans, gumdrops	See package	PO	$
		Glucose tabs (4gram/tab)	4 tabs (16gm)	PO	$
		Glucose gel (15gm/tube)	1 tube (16gm)	PO	$
	NPO w/ IV access	D50W	25mL (12.5gm)	IV Push	$$
	NPO w/o IV access	Glucagon	1mg	IM (thigh)	$$$

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Monitoring		
Recheck BS after 15 minutes of initial treatment	< 70mg/dL: Repeat protocol and recheck in 15 minutes and notify Doctor.	
	> 70mg/dL: Recheck BS after 1 hour. If < 70mg/dl, repeat protocol and notify Doctor.	

For additional information on this topic, please review these references:

Enclara Pharmacia's "Quick Facts on Diabetes at End-of-Life" available on the client portal. Click here to log in

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2. Munshi MN, Florez H, Huang ES. Management of diabetes in long-term care and skilled nursing facilities: A position statement of the American Diabetes Association. Diabetes Care 2016;39:308–318. PDF link
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4. Medscape Drugs & Diseases: Endocrinology. Hypoglycemia. 2016 Jul 5. Medscape link
5. Angelo M, et al. An approach to diabetes mellitus in hospice and palliative medicine. *J Palliat Med*. 2011;14(1):83-87. Article link
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10. Cheufler JM, Prince-Paul M. The diabetic hospice patient. *J Hospice Palliat Nurs.* 2011;13(6):356-365.