

November
2024

HYPERTHERMIC MONTHLY MEETING



TOPIC:

November – Diabetes Management for the
HBOT Patient

PRESENTED BY:

Leslie
ACMH

Diabetes Policy in HBOT

1. Obtain patient's blood glucose level before and after HBOT.
2. Pre treatment minimum = 110mg/dL or higher (within normal limits)
Ideal is 120mg/dL unless otherwise determined by facility or Provider.
3. Pre treatment maximum = will be determined by the facility or attending Provider and on a case-by-case basis. Patients encouraged to keep glucose level under 180mg/dL.
4. Post treatment minimum and maximum will be determined by the facility or Provider on a case by case basis as medically indicated. This will usually correlate with normal highs and lows. Critical highs and lows are not usually recommended for discharge by facilities.

Procedure

1. Take patient's blood glucose level before treatment. If glucose is 110mg/dL or higher (but still normal), continue with HBOT. If glucose level is lower (not a critical low), consider glucose administration.
2. Follow facility protocol for hypoglycemia management. This could be to administer Glucerna, Juven, fruit juice, crackers, sandwich or glucose tablets.
3. Recheck patient's glucose level 15 minutes after administration. If lower than the initial level, the attending provider may refuse the patient's treatment for the day for safety concerns of a hypoglycemic event.

If the glucose level has elevated above 110mg/dL, (or a number the attending provider is comfortable with), continue with HBOT. If glucose has risen, but not as high as need be, with provider approval, you may repeat glucose administration followed by another 15 minute recheck if schedule allows.

Procedure (cont.)

Hypoglycemia

HBOT can lower a patient's blood glucose by as much as 50 points (or more) due to the metabolic response. It is important to ensure glucose levels are high enough to prevent any decrease in levels from becoming a hypoglycemic medical emergency inside the chamber. Also need to take into account the 2+ hour treatment in which patient will be without food.

Treatment for hypoglycemia may include, Juven, Glucerna, juice, crackers and peanut butter, sandwich and/or glucose tablets etc. Follow your facility's protocol for treating hypoglycemia.

Hypoglycemia Signs and Symptoms

- Diaphoresis (excessive sweating)
 - Nausea/vomiting
- Feeling dizzy, weak or fatigued
 - Shakiness,
 - Light headedness
- Color draining from face (pallor)
 - Fainting, loss of consciousness
 - Increased heart rate
- Anxiety, nervousness, irritability
 - Confusion, delirium
 - Blurred vision
 - Seizures
- A sudden feeling of excess hunger (polyphagia)
- Tingling or numbness of the lips, cheeks or tongue

Diabetes Management

It is important that a diabetic patient has a good control of their blood glucose levels. The blood glucose level needs to be at least 110 mg/dL before hyperbaric treatment. Ideal pre HBOT level is 120 mg/dL. Maximum blood glucose levels vary with each facility, but patients are encouraged to keep glucose levels under 180 mg/dL unless otherwise advised by their provider. Both a patient's diet and current medications (and compliance of both) can impact the patient's blood glucose levels.

1. Have patient eat before coming in for HBOT.
2. Explain to your patient that HBOT treatments last more than 2 hours.
3. Educate patient on having a nutritious, balanced meal. Adequate protein can help prevent blood glucose from dropping to low during hyperbaric treatments. Do they know when their blood glucose is dropping?
4. Talk to your patient about what they eat daily, what medications they currently take and the importance of staying hydrated
5. Have patient speak to provider regarding medication regimen if you are finding blood glucose levels are too low prior to treatment.
6. Explain the benefits of managing blood glucose levels to promote wound healing.

Diabetes Education for the HBOT Patient

Hyperglycemia

What about diabetic ketoacidosis?

Symptoms might include:

- Being very thirsty.
- Urinating often.
- Feeling a need to throw up and throwing up.
- Having stomach pain.
- Being weak or tired.
- Being short of breath.
- Having fruity-scented breath.
- Being confused.

Consistently elevated blood glucose levels?

Effects:

- A weaker skin barrier
- Reduced collagen production. This protein stimulates new tissue growth
- Reduced production of growth hormones
- High blood sugars slow down wound healing at the cellular level by:
 - Increasing inflammation in the cells
 - Preventing oxygen and nutrients from energizing cells
 - Impeding the normal functioning of the immune system

SOURCES

2024 SerenaGroup Hyperbaric Safety Manual



QUESTIONS?



A graphic for a quiz. The word "QUIZ" is written in large, bold, yellow letters with a blue outline and a white drop shadow. Above the word are three blue speech bubble icons with yellow outlines: the first contains an exclamation mark, the second contains a checkmark, and the third contains a question mark. The background is a white geometric pattern of interconnected lines. A large yellow diagonal stripe runs from the top right towards the bottom left. On the right side, there is a blurred photograph of a person standing in front of a group of people, some of whom have their hands raised.

QUIZ

QUESTION 1

True or false?

Minimum and maximum glucose levels are the same for each facility.



Answer

False.

Minimum and maximum glucose levels are determined by each facility and/or provider. Always check with your facility's protocol.

QUESTION 2

What are 4 signs and symptoms of hypoglycemia?

OUTPATIENT

Answer

- Diaphoresis (excessive sweating)
- Nausea/vomiting
- Feeling dizzy, weak or fatigued
- Shakiness
- Light-headedness
- Color draining from face (pallor)
- Fainting, loss of consciousness
- Increased heart rate
- Anxiety, nervousness, irritability
- Confusion, delirium
- Blurred vision
- Seizures
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QUESTION 3

What would be the best breakfast option for a patient prior to HBOT?

- A. Donut and a cup of coffee with cream and sugar.
- B. Eggs, whole grain toast with peanut butter and a glass of milk.
- C. Three chocolate chip cookies with juice.
- D. Candy bar and soda.



OUTPATIENT

Answer

B

Options A, C, and D are not appropriate choices. This seems like a very easy question, but choices A, C, and D are common responses when patients are asked what they had for breakfast. Eating high carb, sugary foods prior to HBOT can elevate blood glucose levels. It is important to educate your patient on proper nutrition to avoid hyperglycemia.

QUESTION 4

A diabetic patient is on treatment 15 and has never had issues with confinement anxiety but is now 1 hour into treatment and presenting with anxiety symptoms. His blood glucose was 125 mg/dL upon arrival. What should be your first 3 steps?



Answer

1. Communicate with the patient. Can you solve their issue?
2. Look for signs of other medical emergencies
3. Abort treatment
4. Notify physician
5. Obtain a blood glucose level upon chamber exit

QUESTION 5

What is your hospital's protocol for hypoglycemia management/prevention?



Answer

(Please learn what your hospital's policy is. We all may have different guidelines for how to manage highs and lows)

HOUSEKEEPING

Chamber Logs



2025 Safety Manual



Topic Suggestions

ROUND TABLE?





October Attendance



Attended

- Wellspan Chambersburg
- Henry Ford
- Fairview
- Monroeville
- Inspira
- Jackson Hospital
- The Woodlands
- Mary Greeley Medical Center

Unattended

- Cleveland Clinic Akron General
- ACMH

If you were unable to be present at the meeting, please send a copy or picture of your completed quiz in the safety manual to ageorge@serenagroups.com or 609-202-6152.

COMING UP NEXT MONTH

Topic: Patient Education and Compliance

Presenter: Akron

 Date: 12/3/2024 at 12 pm est.

HYPERBARIC CONTACTS

THANK
YOU!



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