

# MAY 2022 MONTHLY HBOT WEBINAR

## Clinical and Non- Clinical Emergencies and Preparedness

PRESENTED BY THE JACKSON  
PROGRAM



[www.serenagroupinc.com](http://www.serenagroupinc.com)



# EMERGENCY!

- Every emergency should be handled in a calm, collected, comprehensive manner. STOP... take a breath.
- We perform clinical emergency drills quarterly and fire drills semiannually in the hyperbaric center, per SerenaGroup® Policies and Procedures; however, make sure you know what your facility requires to be compliant.
- Emergency drill cards are located on each chamber.
- All drills that are performed should be documented and saved in your center's safety binder.



# Preventing Fires in the Chamber Room

- Mandatory no smoking/oxygen in use signs
- Prohibited items poster easily located
- Grounding (chamber, gurney, wrist strap)
- No floor or low electrical outlets
- Fire drills performed and documented
- Daily and weekly maintenance performed, and any questions, concerns, or inconsistencies reported to the National Safety Director and Hyperbaric Service Technician
- Annual Preventative Maintenance performed by Hyperbaric Service Technician



# Preventing Hypoglycemia

- Check the blood glucose level of diabetic patients pre and post hyperbaric treatment
- Make sure blood glucose is above 100 mg/dL or whatever level the overseeing physician is comfortable with for that patient. 120 mg/dL is SerenaGroup<sup>®</sup>'s ideal pre-treatment number, but not for all patients. Cases in which diabetes is managed, 100 mg/dL may be sufficient, but in an uncontrolled diabetic or a patient that admits to only having had sugary cereal with their insulin that morning, an elevated blood glucose level may be more ideal



# Preventing Oxygen Toxicity

- Treat patients at 2.4 ATA or below to lower the likelihood of oxygen toxicity, unless a higher ATA is required
- Incorporate air breaks in treatment protocols (SerenaGroup® recommends two 5-minute air breaks, 30 minutes apart)
- Know the signs and symptoms of oxygen toxicity
  - Blurry vision
  - Coughing
  - Chest pain
  - Confusion
  - Dizziness
  - Feeling of unease
  - Muscle twitching in hands and face
  - Nausea
  - Seizures
  - Throat irritation
  - Trouble breathing



# Preventing Barotrauma

- Patients should be treated at a standard rate of 1.5 psi/minute unless otherwise ordered by their physician
- Lower the set rate if patients have difficulty equalizing their ears during descent or complain of tooth squeeze, pain in the sinus cavity areas, and/or pain in the ears
- If a patient experiences respiratory distress, abort treatment
- If a patient is complaining of difficulty equalizing, lower the set pressure and wait for the pressure to decrease, guide the patient through equalizing techniques until their ears “pop” or are no longer uncomfortable, then attempt pressurization again. It is suitable to attempt this approximately three times before aborting treatment



# Examples of Emergency Cards

## Oxygen Toxicity

### Premonitory signs & symptoms of oxygen toxicity:

1. Immediately convert patient to air breathing. (Note complaint and time of occurrence)
2. Within 1-2 minutes of patient beginning air breathing, ask patient if complaint has resolved, improved, remained the same or worsened
3. If patient complaint/problem has resolved/improved - have patient complete an entire air break (10 minutes); the decision to continue or abort therapy will rest with the hyperbaric physician. It is important that staff maintain direct visual observation of patient throughout the ascent
4. If patient complaint/problem is unresolved or unchanged return patient immediately to surface pressure while patient continues breathing from air mask
5. With seizure activity DO NOT reduce to increase pressure until free air movement is clearly established

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## Emergency Decompression

### Any situation where it is necessary to have the most rapid access possible to the patient:

1. Set chamber pressure to zero
2. Inform patient
3. Turn master valve to EMERGENCY VENT 3 sec on/3 sec off
4. Open door when pressure indicator shows black
5. Remove patient, proceed as ordered and patient's condition dictates
6. Consider STAT chest x-ray to rule out pulmonary barotrauma

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## FIRE

**RACE = Rescue, Alarm, Contain, Escape/Extinguish**

### In Hyperbaric Facility:

- Put on smoke hood
- Turn Chamber oxygen valve off
- Remove anyone in immediate danger
- Activate hospital alarm
- Contain fire (extinguish with hand held equipment)
- Inform patient
- Turn chamber master valve off - remain by chamber
- When immediate flames contained, open door and remove patient
- Evacuate room and close doors
- Turn off main zone valve (in hall)

### In-Chamber Fire:

- Do not remain at either end of the chamber
- Emergency decompress the chamber
- Turn chamber oxygen valve off
- Activate hospital alarm
- Unplug and/or turn off all electrical equipment
- Notify medical director and nurse manager

### In the immediate/adjacent area:

- Call security
- Ensure doors to the HBO room are closed
- Inform patients and decompress at 5 psi/min
- Evacuate area if warranted
- Resume treatments when possible, and when cleared by hospital emergency personnel

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For further procedural guidelines regarding emergencies and preparedness, review the SerenaGroup® Policies and Procedures located in every center and online at [serenagroupinc.com](http://serenagroupinc.com) on the member's portal. Full page copies of these forms can be found on the member's portal.





# Scenarios

Critical Thinking



# Scenario 1

- You are diving a 65 yo male with ORN who is hard of hearing. You get an alert on your phone that the county where your facility is located is under a tornado warning. You turn on the local news to find out what is going on and you notice that the warning polygon is in the far southern portion of your county and your facility is not in that region of the county. How do you handle this scenario?



## Scenario 2

- You are treating a 55 yo female with a DFU of the right great toe. You ask the patient how she is, and she responds that she is feeling fine today. The patient is currently on treatment number 32. During compression at a normal rate the patient complains of slight pressure behind her eyes and nose that is getting worse. What do you do?

# Scenario 3

- You are treating a 58 yo male with osteomyelitis in his left foot. The patient is a well-controlled Type 1 Diabetic. When you check his blood sugar it reads 120. You ask if he has eaten breakfast and the patient responds that he had a good breakfast with eggs, bacon and toast before leaving his house an hour before arriving to the wound center. Just before his air break you notice the patient is diaphoretic, you pick up the chamber phone and try to wake the patient, the patient opens his eyes but is lethargic and unable to answer you appropriately. How do you proceed?

QUINZ

# Question 1

- Per SerenaGroup<sup>®</sup> guidelines, how often should a fire drill be performed?
  - a. Monthly
  - b. Quarterly
  - c. Biannually
  - d. Yearly



# Answer 1

- c. Biannually

## Question 2

- Name 3 measures taken to prevent fires in the chamber room.



# Answer 2

- Anti-static flooring or cleaner
- Use of hyperbaric only linens
- No floor or low electrical outlets
- No power strips or unauthorized electrical devices plugged in in chamber room
- Fire drills performed and documented



# Question 3

- Who has responsibility for maintaining the Hyperbaric Center's Safety Binder?



# Answer 3

- Safety Director

# Question 4

- An announcement comes over the loudspeaker to initiate lockdown procedures. The hyperbaric technician should \_\_\_\_\_
- a. Emergently decompress the patient (2 minutes)
- b. Decompress the patient at the normal rate of 1.5 psi/min
- c. Decompress the patient at an increased rate as tolerated
- d. Wait for verification of why the facility is being locked down to determine if your area is threatened or at-risk

# Answer 4

- d. Wait for verification of why the facility is being locked down to determine if your area is threatened or at-risk



# Question 5

- If you suspect oxygen toxicity, you should put the patient on an air break and abort the treatment.
- True or False

# Answer 5

- True

# SerenaGroup HBOT Contact Information

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SerenaGroup Education Committee

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# SerenaGroup HBOT Monthly Show Rate

Centers	Program Director	HBO Show Rate
Cleveland Clinic Akron	Nick	
ACMH	Erika	
Berkshire	Sean	
CHI Health CUMC Bergan	Joe	
CHI Health Mercy	Joe	
Deborah	Megan	
Fairview	Jamie	
Henry Ford	Eliece	
Jackson	Dean	
St. Mary's	Katie	
St. Joseph Med Ctr	Christine	
Via Christi	Nancy	
MH The Woodlands	Andrea	
Inspira Health – Elmer	Ally	



# SerenaGroup Upcoming HBOT Educational Courses

## Intro to HBOT Courses

- June 2-5 (Omaha, NE)
- July 7-10 (Monroeville, PA)



# Next Month's Presenter

DATE: June 21, 2022 at 12 pm  
eastern time

PRESENTING: St. Mary's Athens

TOPIC: Diabetes Management for  
the Hyperbaric Patient

