Understanding Alternobaric Vertigo

1.
The vestibular system plays a role in:

○ A. Equalisation of the middle-ear air space
○ B. Translating pressure changes into sound
○ C. Balance and equilibrium
○ D. Equalisation of the outer ear
○ E. Coordinating hearing
None ◉
2.
Alternobaric vertigo (AV) is most commonly associated with a pressure change in what part of the body?

○ A. Inner ear
○ B. Middle ear
○ C. Brain
○ D. Eyes
○ E. Semicircular canals
None ◉
3.
The ear is an interconnected system of air- and fluid-filled spaces. Normally there is a:

○ A. Continual movement of gas between the inner ear and the back of the throat
○ B. Continual exchange of gas between the middle ear and the back of the throat except during swallowing or yawning
○ C. Periodic absorption of fluid in the middle ear, reducing middle-ear pressure
○ D. Periodic fluid movement between the outer and middle ear
○ E. Periodic gas movement into the middle ear such as during swallowing or yawning
None ◉
4.
Nystagmus, a condition often associated with alternobaric vertigo (AV), is defined as:

○ A. A sensation that the body is spinning
○ B. Involuntary rhythmic eye movement
○ C. Vomiting brought on by severe nausea
○ D. A panic response that can occur during an AV event

○ E. Pain caused by excessive pressure on the tympanic membrane
None ⦿
5.
Symptoms of alternobaric vertigo (AV) could be considered dangerous because:

○ A. The diver could panic, prompting an uncontrolled ascent
○ B. Severe symptoms may last for hours, making it difficult to surface safely
○ C. Elevated middle-ear pressure also means more nitrogen is trapped, increasing the risk of middle-ear bends
○ D. Panic could induce hyperventilation, leading to high carbon-dioxide blood concentration
○ E. Perforation of the oval window associated with AV leads to debilitating vertigo
None ⦿
6.
To reduce the likelihood of developing alternobaric vertigo (AV), a diver should use:

○ A. Gentle and frequent active equalisation during descent
○ B. Passive equalisation before descending
○ C. Equalisation techniques once reaching maximum depth
○ D. Ear plugs to help slow the equalisation of pressure in both ears
None ⦿
7.
DAN Europe advises that divers who repeatedly experience alternobaric vertigo (AV) should:

○ A. Take decongestants to make equalising easier
○ B. Use ear plugs to decrease pressure in the outer ear
○ C. Consider using nitrox to reduce damage to the middle ear caused by nitrogen in the breathing gas
○ D. Be evaluated by a medical professional to rule out potentially serious conditions
○ E. Dive no deeper than 9m to avoid excessive pressure changes
None ⦿
8.
Alternobaric vertigo is typically characterized by which of the following symptoms:

○ A. Rapid heart rate lasting several hours
○ B. Severe nausea lasting 24 hours
○ C. Loss of hearing in one or both ears lasting up to several minutes
○ D. Shallow-water blackout
○ E. Spinning sensation lasting a few seconds
None ⦿
9.
The most effective way to handle an alternobaric vertigo (AV) event is to:

○ A. Descend slowly, and maintain eye contact with a fixed visual reference until symptoms subside
○ B. Ascend slowly to the surface until symptoms subside
○ C. Maintain control, and remain at a fixed depth until symptoms subside
○ D. Descend as quickly as possible, and make physical contact with fixed object until symptoms subside
○ E. Equalise actively and frequently until symptoms subside
None ⦿
10.
If a diver experiences ear pain while descending, the ideal response is to:

○ A. Ascend to a depth at which ear pain subsides, then equalise gently while slowly descending
○ B. Ascend slowly, exit the water, and take decongestants before reattempting the dive
○ C. Continue the descend as slowly as possible, and swallow until the ears are equalised
○ D. Find a depth at which the pain is not bothersome, and continue the dive, equalising frequently
○ E. Stop descending, stabilise and continue to attempt equalisation until pain subsides

None ⦿
11.
A diver with persistent difficulty equalising during a descent should:

○ A. Continue the descent, ascending as frequently as necessary to relieve any ear pain
○ B. End the dive, because difficulty descending could increase the chance of later complications
○ C. Shorten the dive, because lengthy descent increases the chance of having alternobaric vertigo
○ D. Slowly surface, completely equalise and reattempt the descent
○ E. Stop descent, stabilise and wait for the Eustachian tube to allow passive equalisation to occur
None ⦿
12.
Reverse block occurs when gas volume in the middle ear:

○ A. Decreases during ascent and is unable to escape
○ B. Increases during descent and is unable to enter
○ C. Decreases during descent and is unable to enter
○ D. Increases during ascent and is unable to escape
○ E. Decreases during descent and is unable to escape
None ⦿
13.
Symptoms of vertigo that persist for more than several minutes are most likely a sign of:

○ A. Severe congestion that requires treatment with decongestants and antibiotics
○ B. Nonrhythmic nystagmus associated with a significant increase in pressure in one ear
○ C. Caloric stimulation brought on by a sudden temperature change in both ears
○ D. Sudden and significant increase in pressure in one middle ear
○ E. Inner ear-barotrauma
None ⦿