
**Learner Outcomes:**

Readers of this article should be able to:

- Understand the pattern of wideband absorbance (WBA) at ambient pressure (WBA\(_0\)) and at tympanometric peak pressure (WBA\(_{TPP}\)) in ears with negative middle ear pressure.
- Consider application of WBA technology during assessment of eustachian tube function in children.

**CEU Questions:**

1. A single measurement of normal resting middle ear pressure (MEP):
   a. is always indicative of normal eustachian tube function.
   b. can describe the effects of altered MEP on sound transmission through the middle ear.
   c. does not provide indication of pressure regulation function of the eustachian tube.

2. The limitation of Toynbee and Valsalva tests is:
   a. They do not provide serial determination of middle ear pressure.
   b. It is not possible to control relative amounts of overpressure or underpressure generated.
   c. They do not indicate the dynamics of the tubal function.

3. Compensated negative middle ear pressure is:
   a. Negative ear canal pressure equal to the positive shift in the middle ear pressure.
   b. Positive ear canal pressure equal to the negative shift in the middle ear pressure.
   c. Negative ear canal pressure equal to the negative shift in the middle ear pressure.

4. WBA\(_0\) of the eustachian tube dysfunction (ETD) group demonstrated a peak in the frequencies between:
   a. 2.5 and 4 kHz
   b. 0.8 and 1.5 kHz
   c. 0.25 and 2 kHz

5. WBA\(_{TPP}\) of both control and ETD groups was highest between:
   a. 0.25 and 1 kHz
   b. 1 and 4 kHz
   c. 3 and 8 kHz

6. In all the three ETD groups, the difference between WBA\(_{TPP}\) and WBA\(_0\) was largest between:
   a. 0.25 and 1.25 kHz
   b. 1 and 4 kHz
   c. 4 and 8 kHz

7. The frequency region that is optimal for detecting negative middle ear pressure (NMEP) is:
   a. 1 to 4 kHz
   b. 2 to 4 kHz
   c. 0.8 to 2 kHz

8. If the ear canal pressure differs from the MEP, sound transmission is reduced in the:
   a. low frequencies.
   b. mid frequencies.
   c. high frequencies.

9. In ears with otitis media with effusion and NMEP, WBA\(_{TPP}\)
   a. was restored to near normal values.
   b. remained significantly low in the low to mid frequencies.
   c. was better than WBA\(_{TPP}\) in the ETD group.

10. During evaluation of ETD,
    a. measuring WBA\(_0\) alone is adequate.
    b. measuring WBA\(_{TPP}\) alone is adequate.
    c. measuring and comparing both WBA\(_0\) and WBA\(_{TPP}\) should be done.
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