

Criteria for Hearing Screening

Audiometric Screening

1. Pure-tones should be screened monaurally with earphones. ASHA standards for audiometric screening recommend:
 - a. 1000 Hz, 2000 Hz, 4000 Hz - at 20 dB HL for children (to 18 years)
 - b. 1000 Hz, 2000 Hz, 4000 Hz - at 25 dB HL for adults
2. The screening is failed if any one stimulus presentation is missed at the screening level.
3. The examiner must be sure that these recommended screening levels can be heard in the test environment by a person with normal hearing. Check yourself if you have normal hearing. Many test environments are inadequate because of ambient noise levels that are too loud.

Immittance Screening (make an appointment with Audiology for assistance)

1. Tympanometry should be completed on both ears whenever possible.
2. This screening is failed if:
 - a. maximum compliance (the pressure peak) occurs at less than -150daPa
 - b. static compliance is less than .2ml.
 - c. tympanometric configuration is flat
 - d. ear canal volume is inappropriate
3. Any failure should be reported for verification of recommendations.

Recommendations

1. With failure of both pure-tone and immittance screenings, a medical consultation and follow-up audiologic evaluation or re-screening is recommended.
2. With failed pure-tone screening and normal immittance, refer for a complete audiologic evaluation.
3. With normal pure-tone screening and a flat tympanogram, recommend medical consultation.
4. With normal pure-tone screening and significant negative pressure, schedule for an immittance check only 1-2 weeks later.
5. With failed pure-tone screening and negative pressure, a medical consultation and follow-up audiologic evaluation or re-screening is recommended.
6. If earphones could not be used for pure-tone screening, refer for an audiologic evaluation.
7. If the pure-tone screening is normal but immittance could not be completed (i.e., child was uncooperative, adult had excessive wax accumulation), attempt to re-screen 1-2 weeks later, if possible but no return visit is required.
8. If pure-tone screening takes longer than 20 minutes, try immittance screening. May need to reschedule for audiologic evaluation.

SAMPLE REPORTING OF SCREENING RESULTS

1. Normal results:
 - a. John passed both pure-tone audiometric and immittance screenings bilaterally. His hearing appears to be adequate for communication.
2. Normal audiometric results, abnormal immittance:
 - a. Flat tympanograms
 - i. John passed a pure-tone audiometric screening bilaterally, but immittance test results indicated flat tympanograms in each ear. Although his hearing appears to be adequate for communication, immittance screening results suggest the possible presence of middle ear dysfunction bilaterally. It is recommended that John receive an otolaryngological consultation as soon as possible to assess the significance of these screening results.
 - b. Significant negative pressure
 - i. John passed a pure-tone audiometric screening bilaterally but immittance test results
 - ii. indicated significant negative middle ear pressure reflective of Eustachian tube dysfunction bilaterally. His hearing appears to be adequate for communication. However, it is recommended that John return in 1-2 weeks for a check of immittance data to ensure that his negative pressure has resolved.
3. Failed audiometric screening, normal immittance:
 - a. John failed a pure-tone audiometric screening bilaterally. However, immittance test results indicated normal middle ear function in both ears. The possibility that John possess a communicatively significant hearing loss should be ruled out. Therefore, it is recommended that John receive a complete audiologic evaluation as soon as possible.
4. Failed audiometric screening, abnormal immittance:
 - a. John failed both the pure-tone audiometric and immittance screenings. Tympanometric results indicated flat tympanograms bilaterally. These findings suggest the possibility of a communicatively significant hearing impairment and the presence of bilateral middle ear dysfunction. It is recommended that John receive an immediate otolaryngological consultation and a complete audiological evaluation following any indicated medical treatment.
5. Could not test:
 - a. John was seen for a pure-tone audiometric screening on 9/9/08. Attempts to do audiometric testing under headphones were unsuccessful. It is recommended that John be seen for a complete audiological evaluation.