



Rancho Los Amigos National Rehabilitation Center

Communication Disorders Department - Audiology

Policy and Procedure

SUBJECT: OTOACOUSTIC EMISSIONS (OAEs)

Policy No.: 409.1
Supersedes: January 2000
Revision Date: February 2022
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PURPOSE

To outline procedures for OAEs.

POLICY

Otoacoustic emissions (OAEs) are sounds generated by the cochlea that can be detected in the external auditory canal. OAE testing is a quick, noninvasive and objective measure used to assess the presence of peripheral (cochlear) pathology across a specified frequency range of 1000-8000 Hz. OAEs are usually present in those with normal hearing; an absence of these emissions may be indicative of a cochlear or middle ear pathology.

Diagnostic applications of OAE testing are as follows:

- a. Infant hearing screening programs
- b. Assessing hearing acuity in children
- & Assessing hearing acuity in hard-to-test populations (e.g., malingers, individuals with multiple disabilities).
- d. Detecting effects of ototoxic drugs on the cochlea
Evaluating noise-induced outer hair cell damage
- e. Site-of-lesion testing (cochlear vs. retrocochlear)

Transient Evoked Otoacoustic Emissions (TEOAEs) and/or Distortion Product Otoacoustic Emissions (DPOAEs) are used to assess cochlear function.

PROCEDURES

1. TEOAE testing may be performed after an audiologic assessment has been attempted and/or completed and further evaluation is indicated.
2. DPOAE testing may be conducted in instances where frequency-specific information is needed to appropriately diagnose cochlear status.