

# DIAGNOSTIC AUDIOLOGY OVERVIEW

## Quick Reference Guide

When infants with hearing loss receive timely and appropriate diagnostic services and early intervention services, they have positive speech, language, and listening outcomes.

- Ideally, the newborn screening is completed before a baby is 1 month of age.
- If a baby does not pass the newborn screening, the next step is diagnostic audiology. The initial diagnostic tests must be completed as soon as possible so that any potential hearing loss can be diagnosed before 3 months of age.
- A baby identified with a hearing loss should be fit with amplification (if appropriate) and enrolled in an early intervention program well before 6 months of age.

The diagnostic evaluation is performed by a pediatric audiologist. The audiologist performs a series of tests (described below) to determine if a hearing loss exists, and if so, the type (part of the auditory system affected), degree (severity of hearing loss) and configuration (frequencies/pitches that are affected) of the loss.



## Key Components

### 1. Case History

The audiologist will collect information about family history of hearing loss and conditions that occurred during pregnancy, such as maternal illnesses, complications during labor or delivery, and whether or not the infant spent time in the NICU.

### 2. Otoscopy

An inspection of the external ear canal, surrounding tissue, and eardrum to check for abnormal development or active pathologies/foreign bodies that require medical attention.

### 3. Otoacoustic Emissions (OAE)

Tests the function of the outer hair cells in the inner ear by measuring an echo given off by those hair cells in response to sound.

### 4. Tympanometry

Tests the condition of the middle ear and the mobility of the eardrum by creating air pressure variations in the ear canal.

### 5. Auditory Brainstem Response (ABR)

Electrophysiological measurement that allows the audiologist to accurately and reliably obtain hearing levels in infants.

### 6. Counseling Family

The audiologist will counsel the family on the results of the diagnostic evaluation at the end of the appointment.