

## Incidence of Early Childhood Hearing Loss

Permanent hearing loss is the most common birth defect in the United States. Approximately 1 out of every 300 children in the U.S. is born with a significant hearing loss.<sup>1</sup> Most newborns in the U.S. now receive an initial hearing screening prior to hospital discharge.<sup>2</sup>

As a result, some babies may be referred to a pediatric audiologist and fitted with hearing aids by four weeks of age.



The American Academy of Pediatrics recommends periodic hearing screening between birth and school-age because hearing is central to language development, communication and learning.<sup>3</sup>

By school-age, the incidence of permanent sensorineural hearing loss **triples** from:

**1 in every 300, to  
3 in every 300.**<sup>4</sup>

## Advantages of Objective OAE Screening

Subjective methods, such as sound makers or sole reliance on parent interviews, have not proven to be reliable for screening young children for hearing loss.



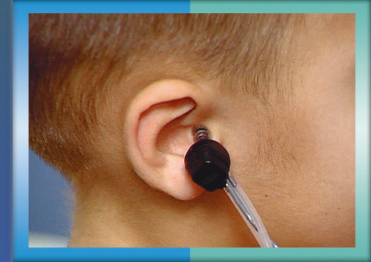
Handheld otoacoustic emissions (OAE) screening is the most practical method for screening infants and toddlers in early childhood settings because it:

- Does not require a behavioral response.
- Can help to detect sensorineural hearing loss and call attention to a wide range of hearing-health concerns.
- Is quick and painless.
- Is often a reimbursable procedure.
- Can be conducted by anyone who is trained to use the equipment and is skilled in working with children.

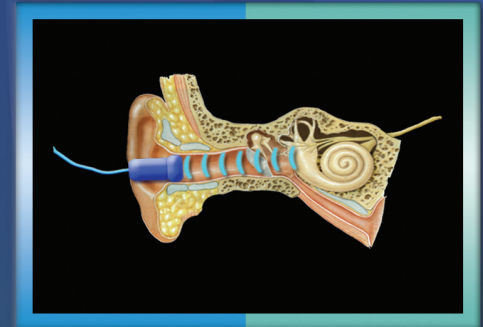
## The OAE Screening Procedure

The procedure is performed with a portable handheld screening unit.

A small probe is placed in the child's ear canal. This probe delivers a low-volume sound stimulus into the ear.



The cochlea responds by producing an **otoacoustic emission**, sometimes described as an echo, that travels back through the middle ear to the ear canal and is analyzed by the screening unit.<sup>5</sup>



In approximately 30 seconds, the result is displayed on the screening unit as a "pass" or a "refer." Children not passing the OAE screening are rescreened and, if no pass is obtained, are referred to a health care provider for middle ear assessment. After the health care provider determines the middle ear is clear, children not passing a subsequent OAE screening are referred to a pediatric audiologist for a complete evaluation.