

Auditory Training for SLPs  
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## The SLP's Role: Intervention

### Auditory Training

Central Resources/Compensatory Training (i.e., Language Strategies Cognitive Strategies, & Metacognitive Strategies)\*\*

Instructional Modifications & Learning Strategies

Workplace, Recreational & Home Accommodations

\*\* Supports treatment for frequently co-occurring speech/language & cognitive/communicative difficulties

## NEURAL PLASTICITY

= "the alteration of nerve cells to better conform to immediate environmental influences with this alteration often being associated with behavioral change."

Musiek 1996

## Key Animal & Human Studies on AT

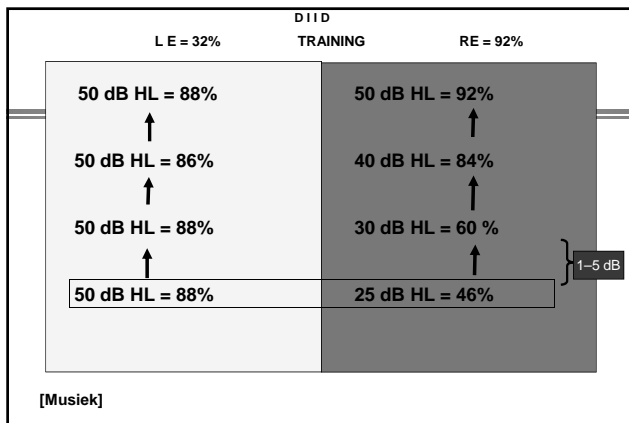
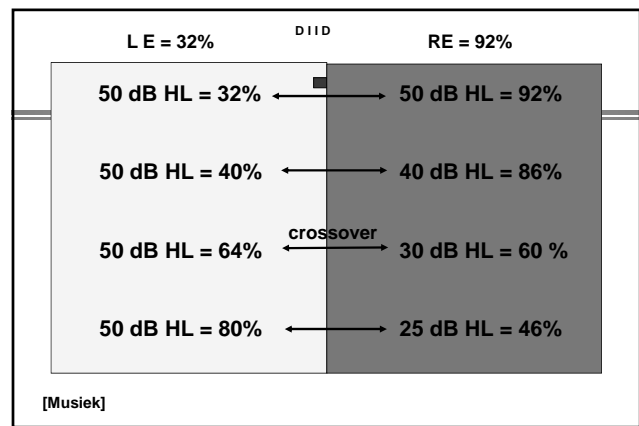
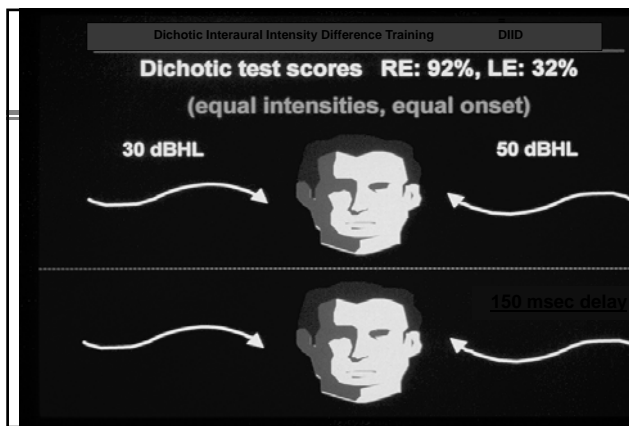
- Hebb, 1949 - LTP
- Hassmannova et al. 1981
  - RNA, EPs
- Knudsen 1988
  - Barn Owl localization
- Recanzone et al. 1993
  - Frequency discrimination & anatomical alteration

## Key Animal & Human Studies on AT

- > Jirsa, 1992
  - Gen AT, P300
- > Kraus & Tremblay
  - CV discrim., MMN, bio map
- > Tallal et al., 1996
  - Temporal training
- > Foxtan et al., 2004
  - Temporal sequences

## Which Skills To Target?

- > Diagnostic Results
- > Functional Impact Based On Multidisciplinary Assessment
- > Developmental Synchrony



## Coupling Formal & Informal AT

Example: Auditory Closure

### Formal

- Distorted (filtered, compressed, interrupted) speech recognition

### Informal

- Derive meaning of unknown words from context (i.e., vocabulary building via auditory-verbal closure)
- Parse words/phrases based on duration and juncture (e.g., nitrate v. night rate; OB ject v. ob JECT)
- Sentence Completion

### Informal Auditory Training Activities For Young Children

- *Go Fish* (Card games)
- Telephone ("Gossip" game)
- Barrier game (Guess Who; build or draw)
- Nursery rhymes
- Reading aloud (Poetry)
- Simon Says (Vigilance; following directives)

### Informal Auditory Training for Young Children

- Same/Different
- Listen and Repeat (Ear Training)
- Compare and Contrast (The cow says *moo*, The sheep says *baa*.)
- Keyboard/Cadence (Rhythm) Replication/Position Identification (Vary speed, number components, note separation\*)
- Follow Directives (Vary speed, clarity, competition)
- \* More Difficult Task if Hold Pitch Constant

### Auditory Training Games: Vigilance, Sequencing, Memory, & Integration

- Simon/Pocket Simon
- Bop-It/Bop-It Extreme
- Cheer Leader
- Dance Machine

### Informal AT Multimodal Interhemispheric Transfer

- Sound-Symbol Association
- Writing to Dictation
- Verbally Describe Picture While Drawing
- Singing
- Link Emotion of Facial Expression to Prosody of Message
- Picture Pointing (By Non-Dominant Hand) to Auditory Command
- Verbal Identification Via Tactile Cues By Non-Dominant Hand
- Left-Sided Motor Response to Verbal Command