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## Information for Parents and Professionals: **Auditory Processing Differences**

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# A Compilation of Information for Parents and Teachers

*The Lewis Clinic of Princeton and Mercer Medical Speech and Hearing Center*

## **Language Differences**

1. Child's speech may present unusual pauses and sound/syllable/phrase repetitions during expression.
2. Child may interpret and use parts of speech incorrectly (e.g., pronouns, verbs, plural nouns, articles, adjectives, prepositions, etc.).
3. Child may have difficulty understanding, processing and using "wh" questions-what, when, where, etc.
4. Child's naming of objects may be inaccurate while recognition of vocabulary is intact.
5. Child may rearrange sounds, syllables and/or word order-reversal, transposition, translocation.
6. Child may produce very simple sentences. They may speak in sentence fragments and/or dysfragmented verbal images and ideas.
7. Child may prefer nonverbal solitary play.
8. Child may not understand vocabulary in verbal or reading context, resulting in inconsistent and/or unreliable comprehension.
9. Child may have difficulty understanding figurative language (e.g. jokes, puns, proverbs, funny stories, nonsense rhymes, etc.).
10. Child may have difficulty with problem solving, organization or thought, sequencing, classifying, and learning abstract concepts needed for academic subjects such as math (e.g., many-all, except, either, either-or, neither-nor, same, etc.)
11. Child may be perceived as too slow and/or too fast to respond. The child may seem confused, withdrawn, inattentive, obstinate, rude, always one to respond inappropriately or call out, etc.
12. Child may have difficulty understanding and expressing verbal and nonverbal emotions. The child may misunderstand the speaker and the intended message. As a consequence, this may result in poor judgement or confused responses on the child's part.

## **Auditory Attention/Figure-Ground Differences**

1. Child may be unable to focus attention or remain "on task" for an appropriate period of time.
2. Child may be easily distracted by extraneous sounds in the classroom and elsewhere.
3. Child may be unable to block out background noise and attend to single voice.
4. Child may have short attention span.
5. Child's response may be delayed or the child may not answer unless his/her name is called several times.

## **Auditory Discrimination Differences**

1. Child may be unable to distinguish similarities and differences in sounds.
2. Child may have difficulty distinguishing parts of words (e.g., beginning, middle, end).
3. Child may have difficulty with rhyming activities.
4. Child may confuse similar sounds and/or similar sounding words (e.g. m for n, d for t, b for p, e for i, cat for cap).

## **Auditory Memory Differences**

1. Child may have difficulty following directions given in classroom and elsewhere.
2. Child may have difficulty in recalling sounds that match letters.
3. Child may have difficulty remembering or saying the names of familiar people or objects, their address, date of birth, etc.
4. Child may have difficulty learning rote sequences (e.g., alphabet, days of week, months of year, math facts, multiplication tables).

## **Auditory Sequential Memory Differences**

1. Child may have difficulty recalling directions in sequential order.
2. Child may have difficulty recalling events of story in order.
3. Child may have difficulty recalling rote sequences (e.g., months of year, multiplication tables, etc.) in order.
4. Child may have difficulty understanding temporal concepts (e.g., first and last, start and stop, beginning, middle and end, next, etc.).
5. Child may have difficulty describing objects by its parts.
6. Child may rearrange sounds/syllables of words or phrases heard (e.g., millwind for windmill, emeny for enemy).

A child may demonstrate intelligence and aptitude for dynamic and creative thinking but fail to develop the mechanics of verbal expression and/or auditory processing that allow him/her to communicate these abilities.

Children with global auditory processing Differences who are at risk in two or more areas of auditory functioning may have difficulty with any of the following:

- a. General receptive language ability
- b. Listening comprehension and retention
- c. Direction following
- d. Rapid-fire speech or instruction
- e. Speech-noise distractions which compete in the child's learning environment
- f. Auditory attention, targeting, tracking and concentration
- g. Auditory sequencing and organization
- h. Auditory memory-echolia, immediate recall, active-working memory, etc.

- i. Auditory closure, tuning in and out while listening
- j. Selective memory for words and/or names
- \*k. Extremes and/or inconsistencies of speech delivery - unpredictable and/or otherwise inappropriate voicing, vocal dynamics and/or voice modulation.
- \*l. Speech, conversation and/or instruction for example, that is too loud, too intense, too continuous, repetitive or wordy, etc.

\* Children may be startled, confused, frustrated, overwhelmed, possibly even fearful or otherwise may feel helpless when they are unable to process verbal communication or instruction reliably.

## Glossary of Auditory Processing Terms

<u>Localization:</u>	The ability to locate auditorily the source of a sound. This ability requires binaural stimulation.
<u>Binaural Synthesis:</u>	The ability to integrate centrally incomplete stimulus patterns presented simultaneously or alternately to opposite ears.
<u>Figure Ground:</u>	The ability to identify a primary signal or message in the presence of competing sounds. Auditory figure/ground can be a monaural or binaural task.
<u>Memory:</u>	The ability to listen with one ear while ignoring stimulation of the opposite ear. Diagnostic listening, as a binaural separation task, requires the listener to attend to and report back different signals presented simultaneously to two ears.
<u>Blending:</u>	The ability to form words out of separately articulated phonemes.
<u>Discrimination:</u>	The ability to determine whether two acoustic stimuli are the same or different. In speech, auditory discrimination is the ability to recognize fine differences that exist among phones.
<u>Closure:</u>	The ability to perceive the whole (word or message) when parts are omitted.
<u>Attention:</u>	The ability to persist in listening over a reasonable period of time.
<u>Association:</u>	The ability to establish a correspondence between a nonlinguistic sound and its source.
<u>Cognition:</u>	The ability to establish a correspondence between a linguistic sound and its meaning. Cognition is the highest level of auditory perception and results from a summation of all auditory (and all sensory) tasks.
<u>Receptive Language:</u>	Incoming language; listening, auditory decoding-encoding ability, memory.
<u>Verbal Expression:</u>	Outgoing or spoken language; word choice/usage, grammar, syntax, sequencing, organization, relatedness of ideas.