

## Listening with Ling Six



“How do I know what my child hears?” This question is asked often by parents of young children using listening devices (hearing aids and cochlear implants). Audiologists and other service providers can discuss an individual’s test results but parents’ observations also help describe how a child is benefitting from a listening device.

One type of parent observation is the Ling Six-Sound Test. It is suggested this be done daily when a child puts on his listening device. This informal assessment, *named for Dr. Ling*, can determine how consistently a child is responding to sound at low, mid and high frequencies (pitch). It can also indicate the distances that a child hears speech sounds.

When parents do a Ling Six check daily they can be immediately aware of differences in responses that may be due to changes in a child’s hearing levels or how the listening device is working. If families suspect there is a problem, keeping a brief record can help with reporting on changes in devices or listening abilities.

- How adults can do this quick test:
1. Be on the same level as the child
  2. Place the palm of one hand horizontally about 4 inches from speaker’s mouth so the child cannot see when the adult speaks or what sound is being vocalized.
  3. Pronounce the six sounds in a normal tone of voice at every distance.

Care is taken not to get into a rhythm while saying these sounds. One sound is said and after one or two seconds, another is said and then a different (but very short) amount of time occurs before another sound is said. This is to avoid forming a pattern or rhythm where the child automatically responds even if the sound is not heard.

In the beginning adults can model for a child how to respond to the sounds. The response expected will depend on a child’s developmental level, access to sound and listening age (how long he has benefitted from a cochlear implant or hearing aid). Doing this test quickly and providing encouragement for listening regardless of accuracy will help the child enjoy this task and anticipate praise for trying.

A young listener can be taught to respond to the sounds by turning his body or head and later, by pointing to his ear. As a child becomes older, he might respond to the sounds by dropping a block (or other object) into a bucket or by raising his hand.

Children who are starting to vocalize might imitate some Ling Six Sounds. Parents can choose daily routines and play where these sounds fit naturally to give a child practice hearing and using them. An adult can say a specific sound such as “ahhh” when flying a toy airplane or “mmmm” when stirring with a spoon. By pausing and waiting after the sounds the adult gives the child an opportunity to imitate what he has heard. In time, the child might say these sounds spontaneously.

A child who is an experienced listener might repeat the Ling Six Sounds as they are said. (See box for specific sounds.) This indicates that he not only hears the sounds, but he discriminates the difference between them. When a child has two listening devices, the Ling Six can be done

| <u>Sound</u> | <u>Example of sound in a word</u> |
|--------------|-----------------------------------|
| ah . . . . . | (as in father)                    |
| oo . . . . . | (as in moon)                      |
| ee . . . . . | (as in key)                       |
| sh . . . . . | (as in shoe)                      |
| s . . . . .  | (as in sock)                      |
| m . . . . .  | (as in mommy)                     |

for them separately and together depending on a child's tolerance for the length of the check.

When helping a child learn to respond, the adult might say the Ling Six sounds from 3 or 4 feet. After responses are consistent for at least a week, the sounds could be checked at one distance and then again at a distance of 3 or 4 additional feet. At every distance adults continue to speak at a normal conversational volume. Over time, parents will have a sense of what distance is usually accessible for a child and can start just a little further out for the first check and move inward to make it a quick and successful experience for the child. With an advanced listener, the Ling Six might be checked at distances up to 40 feet.

The Ling Six helps check speech sounds at different pitches. A low frequency (pitch) sound is /m/, a mid-frequency sound is /a/ and a high frequency sound is /s/. Speech sounds also vary by speaker and within languages and dialects. A child who hears Ling Six sounds has access to sounds of spoken language. Depending on his hearing level and listening devices, a child may respond to some or none of these sounds.

With Ling Six results, a parent can answer these questions:

1. What speech sounds does my child respond to (detect)?
2. What speech sounds can my child repeat (discriminate)?
3. At what distances does he detect and/or discriminate speech sounds?

Hearing levels are indicated on the audiogram for each sound from a distance of six feet when said by a male voice. Moving closer can make listening easier. As distance is halved, sound is increased (made louder) by 6 decibels (dB). The /o/ sound on the audiogram at 45 dB would be 51 dB from a distance of 3 feet, and therefore easier to hear. When parent and staff check a child's hearing using the Ling Six and see where these sounds are on an audiogram, it can help them understand the child's hearing levels.

Using the Ling Six and audiogram information families will know what speech sounds to encourage their child to listen for and use to build spoken language skills. Parents can share their observations with service providers to help determine appropriate support for their child. Teachers can apply this information to create a school environment that promotes a child's listening skills. Speech-language therapists can see how his auditory skills are developing. Audiologists can include these results when reviewing what listening devices will be most helpful. Everyone can use the Ling Six as a simple check to be sure a child with a hearing aid or cochlear implant can start his day ready to listen.

