

Speech and Language Developmental Milestones

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What are speech and language?

Speech and language are tools that humans use to communicate or share thoughts, ideas, and emotions. Language is the set of rules, shared by the individuals who are communicating, that allows them to exchange those thoughts, ideas, or emotions. Speech is talking, one way that a language can be expressed. Language may also be expressed through writing, signing, or even gestures in the case of people who have neurological disorders and may depend upon eye blinks or mouth movements to communicate.

While there are many languages in the world, each includes its own set of rules for phonology (phonemes or speech sounds or, in the case of signed language, handshapes), morphology (word formation), syntax (sentence formation), semantics (word and sentence meaning), prosody (intonation and rhythm of speech), and pragmatics (effective use of language).

How do speech and language normally develop?

The most intensive period of speech and language development for humans is during the first three years of life, a period when the brain is developing and maturing. These skills appear to develop best in a world that is rich with sounds, sights, and consistent exposure to the speech and language of others.

There is increasing evidence suggesting that there are "critical periods" for speech and language development in infants and young children. This means that the developing brain is best able to absorb a language, any language, during this period. The ability to learn a language will be more difficult, and perhaps less efficient or effective, if these critical periods are allowed to pass without early exposure to a language. The beginning signs of communication occur during the first few days of life when an infant learns that a cry will bring

food, comfort, and companionship. The newborn also begins to recognize important sounds in his or her environment. The sound of a parent or voice can be one important sound. As they grow, infants begin to sort out the speech sounds (phonemes) or building blocks that compose the words of their language. Research has shown that by six months of age, most children recognize the basic sounds of their native language.

As the speech mechanism (jaw, lips, and tongue) and voice mature, an infant is able to make controlled sound. This begins in the first few months of life with "cooing," a quiet, pleasant, repetitive vocalization. By six months of age, an infant usually babbles or produces repetitive syllables such as "ba, ba, ba" or "da, da, da." Babbling soon turns into a type of nonsense speech (jargon) that often has the tone and cadence of human speech but does not contain real words. By the end of their first year, most children have mastered the ability to say a few simple words. Children are most likely unaware of the meaning of their first words, but soon learn the power of those words as others respond to them.

By eighteen months of age, most children can say eight to ten words. By age two, most are putting words together in crude sentences such as "more milk." During this period, children rapidly learn that words symbolize or represent objects, actions, and thoughts. At this age they also engage in representational or pretend play. At ages three, four, and five, a child's vocabulary rapidly increases, and he or she begins to master the rules of language.

What are speech and language developmental milestones?

Children vary in their development of speech and language. There is, however, a natural progression or "timetable" for mastery of these skills for each language. The milestones are identifiable skills that can serve as a guide to normal development. Typically, simple skills need to be reached before the more complex skills can be learned. There is a general age and time when most children pass through these periods. These milestones help doctors and other health professionals determine when a child may need extra help to learn to speak or to use language.

How do I know if my child is reaching the milestones?

The following links will send you to a checklist that can determine if your child's speech and language skills are developing on schedule. Choose the appropriate age bracket for your child. You should talk to your child's doctor about anything that is checked "no."

What should I do if my child's speech or language appears to be delayed?

You should talk to your family doctor if you have any concerns about your child's speech or language development. The above checklist should help you talk about your concerns. Your doctor may decide to refer you to a speech-language pathologist, a health professional trained to evaluate and treat people who have speech, language, voice or swallowing disorders (including hearing impairment) that affect their ability to communicate. The speech-language pathologist will talk to you about your child's communication and general development. He or she will also evaluate your child with special speech and language tests. A hearing test is often included in the evaluation because a hearing problem can affect speech and language development.

Depending upon the test results, the speech-language pathologist may suggest activities for home to stimulate speech and language development. These activities may include reading to your child regularly; speaking in short sentences using simple words so that your child can successfully imitate you; or repeating what your child says, using correct grammar or pronunciation. For example, if your child says, "Ball baybo" you can respond with, "Yes, the ball is under the table." This allows you to demonstrate more accurate speech and language without actually "correcting" your child which can eventually make speaking unpleasant for him or her.

The speech-language pathologist may also recommend group or individual therapy or suggest further evaluation by other health professionals such as an audiologist, a health care professional who is trained to identify and measure hearing loss, or a developmental psychologist.

What research is being conducted on developmental speech and language problems?

Scientists are examining a variety of issues related to speech and language development. Brain imaging studies are defining the relationship between exposure to speech and language, brain development, and communication skills. Genetic studies are investigating the likelihood that at least some speech and language problems may be inherited or passed down from parents to their children. Additional studies are characterizing inherited communication disorders. The effect of frequent ear infections on the development of speech and language is also an area of investigation. Other scientists are distinguishing types of speech and language errors to determine which ones may be overcome by maturation alone and which will need some type of intervention or therapy. Another area of study is the effect of speech and language development on later school performance. Further research is

characterizing dialects that belong to certain ethnic or regional groups. This knowledge will help professionals distinguish a language difference or dialect (which should be preserved to help an individual identify with a group) from a language disorder, which may require treatment.

Where can I get more information?

NIDCD maintains a directory of organizations that can answer questions and provide printed or electronic information on developmental milestones. Please see the list of organizations at www.nidcd.nih.gov/directory.

Use the following keywords to help you search for organizations that are relevant to developmental milestones:

- [Speech-language pathologists](#)
- [Auditory-oral communication](#)
- [Early identification of deafness in children](#)

For more information, additional addresses and phone numbers, or a printed list of organizations, contact:

NIDCD Information Clearinghouse

1 Communication Avenue
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Contact Information Updated April 2001



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