

SPEECH AND LANGUAGE



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

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SPEECH AND LANGUAGE

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

Here is a checklist that you can follow to determine if your child's speech and language skills are developing on schedule. You should talk to your child's doctor about anything that is checked "no."

BIRTH TO 5 MONTHS	YES	NO
Reacts to loud sounds.		
Turns head toward a sound source.		
Watches your face when you speak.		
Vocalizes pleasure and displeasure sounds (laughs, giggles, cries, or fusses).		
Makes noise when talked to.		
6 - 11 MONTHS	YES	NO
Understands "no - no."		
Babbles (says "ba-ba-ba" or "ma-ma-ma").		
Tries to communicate by actions or gestures.		
Tries to repeat your sounds.		
12 - 17 MONTHS	YES	NO
Attends to a book or toy for about two minutes.		
Follows simple directions accompanied by gestures.		
Answers simple questions nonverbally.		
Points to objects, pictures, and family members.		
Says two to three words to label a person or object (pronunciation may not be clear).		
Tries to imitate simple words.		
18 - 23 MONTHS	YES	NO
Enjoys being read to.		
Follows simple commands without gestures.		
Points to simple body parts such as "nose."		
Understands simple verbs such as "eat" "sleep."		

SPEECH AND LANGUAGE

Correctly pronounces most vowels and n, m, p, h, especially in the beginning of syllables and short words. Also begins to use other speech sounds.		
Says 8 - 10 words (pronunciation may still be unclear).		
Asks for common foods by name.		
Makes animal sounds such as "moo."		
Starting to combine words such as "more milk."		
Begins to use pronouns such as "mine."		
2 - 3 YEARS	YES	NO
Knows about 50 words at 24 months.		
Knows some spatial concepts such as "in," or "on."		
Knows pronouns such as "you," "me," "her."		
Knows descriptive words such as "big," "happy."		
Says around 40 words at 24 months.		
Speech is becoming more accurate but may still leave off ending sounds. Strangers may not be able to understand much of what is said.		
Answers simple questions.		
Begins to use more pronouns such as "you," "I."		
Speaks in two to three word phrases.		
Uses question inflection to ask for something (e.g., "my ball?").		
Begins to use plurals such as "shoes" or "socks" and regular past tense verbs such as "jumped."		
3 - 4 YEARS	YES	NO
Groups objects such as foods, clothes, etc.		
Identifies colors.		
Uses most speech sounds but may distort some of the more difficult sounds such as l, r, s, sh, ch, y, v, z, th. These sounds may not be fully mastered until age 7 or 8.		
Speaks in two to three word phrases.		
Uses consonants in the beginning, middle, and ends of words. Some of the more difficult consonants may be distorted, but attempts to say them.		
Strangers are able to understand much of what is said.		
Able to describe the use of objects such as "fork," "car," etc.		

SPEECH AND LANGUAGE

Has fun with language. Enjoys poems and recognizes language absurdities such as, "Is that an elephant on your head?"		
Expresses ideas and feelings rather than just talking about the world around him or her.		
Uses verbs that end in "ing," such as "walking," "talking."		
Answers simple questions such as "What do you do when you are hungry?"		
Repeats sentences.		
4 - 5 YEARS	YES	NO
Understands spatial concepts such as "behind," "next to."		
Understands complex questions.		
Speech is understandable but makes mistakes pronouncing long, difficult, or complex words such as "hippopotamus."		
Says about 200 - 300 different words.		
Uses some irregular past tense verbs such as "ran," "fell."		
Describes how to do things such as painting a picture.		
Defines words.		
Lists items that belong in a category such as animals, vehicles, etc.		
Answers "why" questions.		
5 YEARS	YES	NO
Understands more than 2,000 words.		
Understands time sequences (what happened first, second, third, etc.).		
Carries out a series of three directions.		
Understands rhyming.		
Engages in conversation.		
Sentences can be 8 or more words in length.		
Uses compound and complex sentences.		
Describes objects.		
Uses imagination to create stories.		

SPEECH AND LANGUAGE

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.

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