



# SPEECH DELAY: A VIEW OF THE PROBLEM

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## ABSTRACT

The problem of late development of speech activity in young children without pronounced mental pathology is becoming more and more relevant every year (Borovtsova L.A. et al., 2015 Vatoropina S.V. et al. 2015). As a rule, all children after three years of age, whose speech is characterized by extremely limited use of linguistic means, are diagnosed with general speech underdevelopment (according to P.E. Levina).

At the same time, the mechanisms of this disorder may be different. Insufficient knowledge of the clinical forms of speech underdevelopment, as well as the similarity of their manifestations, makes it difficult to differentiate the tempo delay of speech development and its impaired variant. Speech therapy intervention in these cases is often built without taking into account the clinical uniqueness of children and the mechanisms of delay in speech development, which, accordingly, reduces the effectiveness of the work carried out. At the same time, any phenomenon subjected to scientific analysis must be determined by its most characteristic features, distinguishing it from other similar phenomena. (Guseva A.Yu. 2022)

**KEYWORDS:** delayed speech development, motor alalia, sensory alalia, aphasia, neurological disorders.

## PURPOSE

The purpose of this article is to systematize the accumulated medical and pedagogical experience in understanding the structure of the above problem.

Available studies indicate that the time of emergence and features of speech development are largely determined by the level of formation of the child's sensorimotor and cognitive spheres. In addition, the formation of speech at an early age occurs in constant interaction with other functions.

Delayed speech development of various origins does not ensure the formation of basic language functions: communicative, cognitive and regulatory, which leads to a delay in the development of cognitive processes. (Zakhodyakina K.Yu. 2023)

The etiology of speech pathology in children is multifactorial: on the one hand, various biological causes (intoxication, infections, metabolic disorders, injuries, etc.) can play an important role, which lead to disturbances in the rate of development of brain mechanisms or cause cerebral organic damage (Chutko L. S. et al., 2015; Malinina E.V., 2016; Zuccarini M. et al., 2017; on the other hand, unfavorable social factors, including educational conditions, increased demands placed on the child, including early start of education (Pontoppidan M. et al., 2017).

The first years of life are decisive for the formation of speech, since at this age the most intensive development of cortical speech zones occurs. A variety of unfavorable factors operating

during this period can affect the development of the child's speech. (Karpenko E.S. 2022)

In most cases, severe speech delay is accompanied by impaired visuospatial skills and/or motor clumsiness. Speech development typically improves as the child grows older, but mild developmental delays often remain for life. Delay in speech development is several times more common in boys than in girls. Developmental delay is characterized by a family history of similar or related disorders, suggesting an important role for genetic factors in the etiology of many (but not all) cases.

The total prevalence of mental retardation in the general structure of mental illnesses in children is 8–10% [7]. Delayed speech development is one of the types of delayed psychospeech development. Currently, there is an increase in the prevalence of speech delay, but there are no accurate statistics to estimate it.

It is customary to divide the delay of psychospeech development into primary and secondary. Primary delay is formed when there is structural damage to the brain or disruption of its function for various reasons. Secondary delay occurs against the background of a primarily intact brain in chronic somatic diseases (heart disease, etc.), accompanied by cerebral insufficiency [10]. As a rule, such a delay is systemic in nature and is distinguished by an algorithm: "the norm is minus 1, in rare cases minus 2 epicrisis periods," while the primary delay is characterized by uneven development.



There are also terms general and systemic speech underdevelopment. General speech underdevelopment is a delay in speech development in a child with normal intelligence. Systemic speech underdevelopment is a speech disorder against the background of underdevelopment of other higher mental functions. In the first years of life, due to the immaturity of the nervous system, children often experience maturational features of motor and psycho-speech functions. Therefore, usually in early childhood we can talk about a general delay in psychomotor development with a greater severity of the lag in the psycho-emotional or psycho-speech sphere [1].

### f80.1. Expressive Speech Disorder

A disorder of speech development as a result of immature speech function in the cerebral cortex is called alalia. Motor alalia is the absence of active speech in a person with a developed passive vocabulary and an unimpaired volume of understandable speech. Sensory alalia is the inability to perceive and understand spoken speech. Total (sensorimotor) alalia is a violation of the perception and reproduction of speech.

The diagnosis is made when the severity of the delay in expressive language development is beyond normal variations for the child's mental age (although it may often be slightly below average). The use of nonverbal cues (such as smiles and gestures) and "inner" speech, reflected in imagination or role-play, is relatively intact; the ability to communicate socially without words is intact. The child will strive to communicate, despite the speech impairment, and to compensate for the lack of speech with gestures, facial expressions or non-speech vocalizations. However, co-occurring disturbances in peer relationships, emotional disturbances, behavioral disturbances and/or hyperactivity and inattention are common.

### f80.2. Receptive Speech Disorder (Sensory Alalia)

Sensory alalia is a specific developmental disorder in which the child's understanding of speech is below the level corresponding to his mental age, expressive speech is also noticeably impaired, and a defect in verbal-sound pronunciation is not uncommon. Diagnostic criteria: • inability to respond to familiar names (in the absence of non-verbal cues) from the 1st birthday; • failure to identify at least some common objects by 18 months; • inability to follow simple instructions by age 2 years.

Delayed speech development, especially alalia, is often initially mistaken for deafness. These conditions are differentiated using audiometry. The child is presented with various sounds and, if he hears them, is asked to press a key, which is recorded by the sensor. Changes in audiometry are characteristic of sensorineural hearing loss. However, this study is not always reliable, as it requires active participation from the child. In children with a negative attitude, misunderstanding of the task, or attention deficit hyperactivity disorder, the audiogram is uninformative.

## CONCLUSIONS

Thus, the diagnosis of speech disorders should be based on the results of diagnostic training and the following examination algorithm.

1. Consultation with a neurologist, neurological status.
2. Consultation with a psychologist, assessment of intellectual development, assessment of non-verbal intelligence.
3. Audiometry and auditory evoked potentials.
4. Electroencephalography (routine and sleep-assisted) to detect some cases of subclinical epileptic seizures that adversely affect cognitive function.
5. Neuroimaging (magnetic resonance imaging of the brain, computed tomography of the skull, temporal bones).
6. Consultation with a geneticist with special genetic tests.

Against the background of developmental and correctional activities, children with delayed speech development, as a rule, require medicinal support from time to time, which reliably improves the results of correctional work [2]. The feasibility of medicinal support for children with speech delays is associated with the presence of a large number of concomitant neurological and behavioral characteristics [6].

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