

CAUSES OF RHINOLALIA, ITS MANIFESTATIONS, AND TREATMENT METHODS

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Annotation: *In this article, different forms of rhinolalia speech defect, its own information about its characteristics and the reasons for its origin.*


Key words: *rhinolalia, speech defects, logopedic correction, articulatory gymnastics, breathing exercises, speech therapy, early diagnosis, Rhinolalia, rhinolalia speech defect, speech disorders, open rhinolalia, closed rhinolalia, mixed rhinolalia, congenital clefts, cleft palate, cleft lip.*

The history of studying rhinolalia has come a long and arduous path. Rhinolalia, which is explained by cleft lip and palate, has been a problem for various branches of medicine and speech therapy, including dentists, orthodontists, and psychoneurologists. In rhinolalia, speech develops late, that is, the first words appear at the age of two and later. Speech acquires its own qualitative characteristics. Impressive speech develops relatively normally, while expressive speech undergoes significant changes. First of all, it should be noted that patients have poor speech intelligibility.

As a result of the defective position of the tongue in the white space, consonant sounds are formed due to changes in the position of the tip of the tongue and excessive activation of the facial muscles. Such changes in the position of the tip of the tongue are relatively permanent, and interact with the articulation of certain sounds.

In recent years, programs aimed at early diagnosis and prevention of various diseases have been improved in Uzbekistan. Rhinolalia is a complex speech defect that occurs as a result of congenital clefts of the lip and palate and has a serious impact on the child's speech, pronunciation and socialization processes. Speech is a cognitive process that affects the communicative activity of people and the processes of socialization. Currently, the study of the types of speech defects and their comprehensive characteristics is gaining importance in correctional pedagogical activities. Rhinolalia speech defect, like other speech defects, is a complex defect that has its own characteristics and requires early diagnosis. Due to congenital clefts of the lip and palate, the child's nutrition, his physiological and phonational breathing are more or less disturbed, the nature of the facial muscles changes, phonemic hearing decreases, and a pathological condition of the language





is observed. Naturally, all this affects the child's pronunciation characteristics and the formation of his speech.

The violation of the pronunciation side of speech in rhinolalia has its own specific and very clear signs. In particular, this applies to the pronunciation of sounds, since open nasal phonation occurs in both open rhinophony and dysarthria. However, the specific formation of sounds in rhinolalia does not occur in other speech pathologies.


Normalization of the motor function of the articulation organs is a prerequisite for the education of correct pronunciation. When starting to pronounce consonants, it is necessary to adhere to a certain order. Correction begins with the formation of articulatory sounds that are voiceless: these are the labial-dental fricative *f* and the labial-labial explosive *p* sounds.

The articulation of these sounds begins with a silent demonstration of the sound, the name of the phoneme is not said. The child is not told what sound pronunciation will be learned with it. At this point, usually the pathological pronunciation stereotype is so strongly entrenched that the child pronounces this sound as before. To prevent the repetition of defective articulation, the articulation is also shown voiceless when other consonants are added later.

Making the sound *F*. The child is asked to bring the lower lip closer to the upper teeth and then exhale in a directed long way. This type of exhalation should be well practiced in advance at the preparatory stage. In children with cleft palate, if the mobility of the soft palate muscles is low, and exhalation through the mouth is weak and short, it is necessary to pinch the nostrils on both sides to reduce the passage of air into the nasal passages. Only in this way can the necessary pressure be created in the mouth and help the child feel the necessary kinesthesia. This method is used in the initial exercises (2-3), and in each subsequent exercise, mechanical assistance is gradually reduced and finally brought to the level of a slight touch with the hand. Thus, it will be possible to reduce the passage of air into the nose. It is better to try to pronounce the sound directly in the syllable, then you can avoid difficulties in combining it with a consonant.

Pronunciation of the *P* sound. In addition to the involvement of the lingual root in articulation and the presence of nasal emission, the correction of the labial *p* sound can also be difficult due to anomalies in the structure of the dentofacial system. For example, in children with bilateral cleft lip and palate, the mobility of the lips is often limited, the rows of teeth are not sufficiently formed, there is a protrusion of the intermaxillary bone (protrusion forward), and the alveolar ridge is bilateral. Since the correct pronunciation of the *P* sound requires a smooth, effortless closure of the lips, and this closure is completed by a single exhalation, the pronunciation of this sound causes certain difficulties. It takes a long time to form a lip articulation that is as close to the norm as possible. To form the





articulation silently, the child is asked to show how he kisses his mother, pouting her lips. When the skill of performing this movement is developed, it is moved to imitating shooting from a gun. The speech therapist shows the child how to shoot a gun and asks him to demonstrate these movements. To perform this exercise, it is necessary to be able to exhale directed air through the mouth. When performing this exercise, it is necessary to control hearing. For this purpose, a narrow-necked glass bottle is used. It is brought close to the child's lips. If a specific noise is made when the air stream enters the bottle, the exercise is considered to have been performed correctly.

Some speech therapists suggest pronouncing the sound P while inflating the lungs. It is not advisable to use this method, since it leads to the strengthening of incorrect kinesthesias that are not characteristic of the normal pronunciation of the sound [P]. The child gets used to pronouncing the sound P while inflating the lungs, and as a result, additional work will have to be done to eliminate these movements.

After the appearance of the whispered p, it is switched to pronouncing it with a voice. This requires pronouncing the sound more strongly. The speech therapist will first show how this is done.

The formed pronunciation skills are strengthened during static and dynamic respiratory gymnastics:

standing, arms open to the sides, the body is bent down, inhale, exhale, pronounce the consonant a-fa; the same exercise is performed with the sound p;

standing, hands are lowered, fingers are clenched and inhale, then, while exhaling, bend down and at the same time pronounce the following chain of syllables: [fa]-[fo]-[fe]-[fi]-[fu]. Syllables with the sound P are strengthened in the same way.


Such gymnastics, in addition to automating sounds, also helps to strengthen the breath through the mouth and strengthen the skills of bone-abdominal breathing. Bending down, the child activates the work of the diaphragm muscles, thereby prolonging the exhalation through the mouth.

Later, children can increase the chain of syllables to two, and then three times in one exhalation.

Pronouncing the sound T. The full articulation of the lingual, explosive sound T is hindered by various disorders in the dental row. Pronouncing the sound T begins with preparatory exercises, which help to move the tongue to the front of the oral cavity.

The sound is made by imitating “spitting”. To induce the correct kinesthesia, the child is asked to spit out bread crumbs that are on the tip of the tongue. However, in the initial training, this exercise is difficult to perform even with mechanical assistance. Due to prolonged use of pathological pronunciation skills, the child develops a stable swallowing articulation, that is, instead of “spitting”, “coughing” occurs, because in this case the tip of





the tongue lies at the bottom of the oral cavity, and the defective sound is formed due to the work of the root of the tongue. It is explained to the child that our tongue does not want to hide in the nest, but wants to go out to play. To induce the correct kinesthesia, the child is offered to spit out the bread crumbs on the tip of the tongue sticking out of the mouth. Thus, the tactile analyzer is activated. If even then the breath exhaled from the mouth is not enough, then the bread crumbs will remain on the tongue, and the child can feel it. Only if the breath exhaled from the mouth is long and directed, the crumbs will fly off the tip of the tongue.

In subsequent exercises, you can gradually move from “spitting” to silent pronunciation of the sound t. At this stage of the work, you will have to perform more complex articulatory movements than “spitting”. It is required to smile with the teeth visible, that is, it is necessary to remove the lip articulation.


Only after the child has fully consolidated the formed kinesthesias, you can move from silent articulation to vocal pronunciation of t. The work is carried out using auditory control. For this, you can use a glass container with a thin mouth. The mouth of the container is brought close to the child’s lips during exhalation. If the child is directing the air flow correctly, a characteristic whistle will be heard from the mouth of the bottle.

The transition to posterior articulation of the teeth can be particularly difficult in a child, since children born with a congenital cleft of the upper lip and palate often suffer from malocclusion of the dentition, and in some cases may be born without upper teeth. In order to achieve better results in the work with them, it is possible to use visual control. In this case, it is explained to the child that he does not want to play with his tongue, but, on the contrary, wants to hide in a nest. The correct position of the tongue can be checked using a mirror.

Because the child's tongue is spread out and flat in the oral cavity, the way it works when pronouncing lingual consonants from the side changes slightly: the front of the tongue does not form a connection with the alveoli (the sockets in the jaw bones where the roots of the teeth are located), and the air flow is directed from the side.

After that, the child tries to blow so that a characteristic hissing sound is heard, which is caused by the friction of the air against the edges of the front teeth. In some cases, children with rhinolalia have a decrease in the tone of the tongue muscles. The weakness and flaccidity of all tongue muscles, especially the paralysis of the tip of the tongue, leads to the fact that the child cannot press the tip of the tongue against the lower teeth with sufficient force, while bending the front of the tongue surface downward. As a result, instead of correctly performing the posterior articulation of the teeth, the child’s tongue lies passively in the back of the mouth and cannot form the necessary groove between the tip of the tongue and the front upper teeth. To form the necessary articulation position, plastic





sticks stuffed with candy or crackers can be used. The stick is placed in the middle of the tongue and pushed back behind the teeth, so that a thin groove (ditch) is formed between the tip of the tongue and the upper teeth. Directing the air flow along this channel, the child achieves the formation of the desired whistling sound.

Disorders in the pronunciation of sliding sounds can persist due to the underdevelopment of the dental arch. The temporary absence of lateral teeth associated with the alveolar ridge leads to the formation of additional noise when pronouncing these sounds. Experience shows that if the bite is normalized, this defect can disappear.

The articulation of noisy consonants in most cases has pathological features characteristic of rhinolalia. The raised back of the tongue and the exhaled breath from the larynx give these sounds a specific character. The tasks of corrective work in pronouncing noisy consonants include establishing the correct position of the articulation organs and achieving a directed exhalation through the mouth.

In the work on the automation of sounds, it is necessary to strictly adhere to the sequence, that is, to move from simple speech types to more complex ones. The lexical material gradually becomes more complicated.

The work begins with repeating words after the speech therapist. Repetition of syllables cannot be called automation in the full sense, since in most cases the sound is called directly in the syllable itself. Later, children are offered to repeat quick sayings, stories, poems together with the speech therapist. Tasks on retelling the mastered material, composing a story based on a picture or a series of pictures are considered more complex tasks.


It is not easy to choose didactic material for the automation of sounds in children with rhinolalia, because first labial and explosive prelingual sounds are introduced into speech. Noisy and gliding sounds are absent in the child's pronunciation at this time. When automating sounds, it is necessary to avoid syllables, phrases and texts that contain sounds that the child pronounces defectively.

The effectiveness of the results of a comprehensive approach to the correction of speech defects associated with rhinolalia has been confirmed. Articulation exercises, respiratory gymnastics and methods of controlling sound production help to improve pronunciation and speech skills in children. This approach is important in increasing the socialization of children and improving their quality of life.

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