

**METHODS USED IN STIMULATING SPEECH DEVELOPMENT  
IN CHILDREN**

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*Speech therapy is an interdisciplinary study. Therefore, it should not be surprising that it draws from various disciplines. The key role in the process of supporting speech development is played not only by people, but also by the methods and programs that they implement in their work.*

Proper development of speech has influence on the global development of a child's personality. A child discovers the surrounding world thanks to the ability to understand speech. The ability to produce speech allows children to express their observations, emotions, desires. Speech development in children is accelerated by frequent verbal contact. Negligence in this matter may cause speech delay or speech impediment. Speech disorders occur when the phonetic norm of a given language is disrupted. These disorders include a wide array of norm deviations, starting with small problems in producing sounds of speech, up to serious disorders that hinder contact with the environment and cause maladaptation of an individual to social life. Speech disorders do not include features of early child speech, which are a normal sign of its immaturity. Parents can provide their child with optimal conditions for proper speech development from the very moment of birth. They spend most of the time with the child and therefore have the greatest opportunity to influence his or her development. They are also the first and the most important role models, which the child will try to follow. The role of teachers in developing speech is also considerable, especially when it comes to young children who spend most of the day in school. Combining the activities of teachers and parents results in improvement of speech development, which in turn contributes to child's verbal communication skills.

The progress of the author's research in the preparation of the article significantly affected or made factual basis for research, information, and ideas that they contain particular materials the following publications:

- M. Młynarska, T. Smereka Psychostymulacyjna metoda kształtowania i rozwoju mowy oraz myślenia w Logopedia. Teoria i praktyka red. M. Młynarska, T. Smereka Agencja wydawnicza a Linea Wrocław 2005, s. 131–156);
- E. Wianecka, Manualne torowanie głosek (MTG), wyd. 1, 2008;
- L. Girolametto, E. Weitzman IT Takes Two To Talk – The Hanen Program for parents; Early language intervention though caregiver training w: Treatment of language disorders in children, red. R. McCauley, M. Fey, P.H. Brookes Publishing, Baltimore 2006, s. 77–103;
- Red. J. J. Błeszyński Alternatywne i wspomagające metody komunikacji Impuls, Kraków 2008.

Research conducted by speech therapist shows that over 60 % of pre-school and primary school children needs aid in achieving proper articulation. Because of that, stimulation of speech development has become a part of methods and therapeutic programs used by specialists. Perceiving speech development stimulation as an opportunity to reveal developmental possibilities in the field of speech stems from the

postulates of humanistic psychology. Speech therapy is an interdisciplinary study. Therefore, it should not be surprising that it draws from various disciplines. The key role in the process of supporting speech development is played not only by people, but also by the methods and programs that they implement in their work.

There are many methods that may be used both to support and to develop speech in children. I will briefly describe some of them.

#### 1. Psychostimulating method of formation and development of speech and thought

Programs and methods that support speech development include *Dyna-Lingua M. S.* method, former known as *Psychostimulating method of formation and development of speech and thought*, designed by a speech therapist M. Młynarska and a psychologist T. Smereka. The psychostimulating method is universal, because it is not limited to one type of disorder. The main aim of this method is to elicit and reinforce spontaneous verbal activity (SVA), which occurs when a child talks because he or she wants to, without any additional reinforcement or instructions. Spontaneous verbal activity may present itself in two forms: expressive and communicative. The expressive form is a verbal expression of thoughts, feelings, sensations and other psychological states. The communicative form, on the other hand, consists of statements aimed at other people. For the SVA to appear, four initial conditions must be met:

1. Proper anatomical structure of the central nervous system, sensory organs and speech organs;
2. Proper functioning of the abovementioned systems;
3. Proper speech stimulation from the social environment;
4. Basic psychological comfort, resulting from good health and feeling of physical and social safety of a child.

Three types of activities are used to elicit or reinforce the SVA in children treated with this kind of therapy. These include:

1. Activities aimed at diminishing limitations in the SVA. These include the following techniques:
  - energizing exercises;

- voice and breathing exercises;
- vibration exercises.

2. Activities aimed at reinforcing the motivation to speak, which include:

- “thinking out loud”, which is the foundation of this method;
- paratheatrical games;
- visual, sound, verbal, motion incentives that support the elicitation or reinforcement of connotations between words and senses;
- thematic games.

3. Activities aimed at facilitating speech, such as:

- rhythmic gestures;
- motion creations;
- self-expressive techniques;
- articulation exercises specific for this method.

Speech impediment may be a potential stress factor not only for the child who suffers from it, but also for his or her family. The psychostimulating method makes use of two main sources of positive psychic energy of a child, thus creating a joyful climate of therapy. It draws from a specific technique of positive influence on body and mind – psychostimulating relaxation. It reduces the so-called muscle blockades in order to relax tension of muscles in particular parts of the body (neck, shoulders, abdomen), which occurs as a result of chronic stress caused by problems with communication.

Energizing exercises – they are based on patterns of animal behaviors or human activities. Body movement is controlled by a holistic image, which facilitates integration and coordination of the muscle apparatus. The set of the energizing exercises consists of three groups of activities:

- warm-up – a preparation for play;
- body position exercises – they are supposed to give the child a feeling of firm position of its feet on the ground;
- coordination exercises – they raise awareness of and control over motion, improve the cooperation of both cerebral hemispheres.

Voice and breathing exercises – they should follow relaxation. These are done in the supine

position, on a stool or on a vibration board. During the exercise the child produces the sound aaa or uuu, while the therapist presses on the lower parts of the child's ribs (so-called push-ups). There follows another vibration exercise, so-called 'little hammers' – the therapist gently taps the child with fists on the back, going up and down the spine. The child produces a sound which starts vibrating. This is funny and interesting for children and quite often ends in laughter, which amplifies vocal resonance. This exercise allows to set the voice and helps to reinforce diaphragmatic or lower ribs breathing, which is the best type of breathing when it comes to mental comfort.

'Thinking out loud' technique – during the session the therapist has to speak all the time, describe and comment on the current situation, activities, pictures. Some of the sentences or words that we want to embed in the echoic memory of the child should be repeated many times. We can also use thematic or paratheatrical games.

Rhythmic gestures and motion creations which involve extensive, smooth movement of hands that accompany speaking. Each of the vowels has its own gesture, which is presented during the class. When children practice the articulation of words, they make the gestures. Rhythmic gestures are supposed to support the flow of speech, the melody and the rhythm. They highlight the role of vowels, thus improving the whole clarity of speech.

Speech therapy method should include such forms of exercises and activities which engage parts of the brain responsible for speech. The form of the exercises and activities has to be directly connected with speech. They can be implemented even in children with speech impediments such as stuttering or in children who do not speak at all. The forms and techniques should be adjusted to individual needs and abilities of a child.

### **Verbotonal method**

The aim of therapy for small children, especially those with hearing impairment, is to elicit voice production and to stimulate residual hearing through auditory training. One of the ways to do it is the verbotonal method created by

P. Guberina. The verbotonal method is aimed at and used in children with hearing impairment, from the moment of diagnose up to the moment they enter school. This method is based on the relation between speech and movement. It makes use of sound amplification devices which improve the quality of hearing. These include: SUVAG units, microphones, headphones, pelota and vibrating floor. Each vowel and consonant is associated with a prop used for eliciting and reinforcing a particular sound. For example, the vowel [u] is associated with a spinning top, the vowel [e] – with cups, and the consonant [f] with a feather. Children make their own associations between an object, a prop and a sound (e.g. uuu), and quite often when they see a given object they produce the sound associated with it on their own. The therapy with the verbotonal method includes working on the body, developing proper tension and relaxation of muscles. Each exercise should start with tension and relaxation, but the last element of the series of movements should express the tension of a given syllable. Body movements are used not only to produce syllables, but also to understand sentences without the need to read lips. Another technique used in the verbotonal method is the musical rhythm. The phonetic rhythm is accompanied by movements. The rhythm is based on a combination of nursery rhymes and body movements and is appropriate for the articulation and perception of speech sounds. The method makes use of the natural rhythm of nursery rhymes, because they constitute a rhythmical, musical stimulation.

The aim of the musical rhythm is to create a correlation between the articulation and the sound. The child may not pronounce the sound or mispronounce it, but he or she potentially has the ability to repeat rhythm. At the beginning, the child works on elicitation of voice and its proper setting, on prosody of speech.

The verbotonal method makes use of a special set of exercises which influence motor development of the child and its sense of balance.

### **It takes two to talk Program**

*It takes two to talk Program* was designed by a speech therapist Alaya Manolson in the Canadian Hanen Centre in Toronto. The pro-

gram is aimed at parents of young children, from birth to pre-school age who have been identified or may be suffering from language delay resulting from developmental disorders or disruptions. The main techniques used in the program are observation, waiting and listening. To facilitate entering into the process of linguistic communication it is recommended for the parents to maintain eye contact with the child, stay physically close and follow the child's lead and encourage his or her interests, without imposing physical activity upon them. The program emphasizes the importance of keeping balance between the amount of adult's speech and children's speech. Important techniques used in this program include: signaling who should be speaking next, asking proper questions, naming objects, repeating statements and explaining things.

#### **In-Depth Cellular Music Therapy**

In-Depth Cellular Music Therapy makes use of the natural sound wave. It is a newly-discovered, highly effective method of curing even the most severe illnesses. This method allows fighting around 250 various disorders and brings inner peace and joy, because the feeling of happiness appears along with the vibration of sound. The sound waves of particular frequencies are produced by simple instruments — tuning forks. Everybody can use them, regardless of their knowledge of music or the severity of illness. This makes tuning fork an easy and pleasant therapy tool which is completely safe and has no side effects. The techniques of In-Depth Cellular Music Therapy were designed on the basis of physics, where the ENERGY acts as the dominant force. The therapy is based on tuning body cells and organs to their scientifically discovered frequency of health — a balanced frequency found in a suitable tuning fork. The cancer cells are weak and undergo oncolysis because of the LACK OF TUNING to particular frequencies. These destructed tumor cells are then removed from the body with toxins. Healthy cells remain intact, and even nourished. Thanks to that this method is non-invasive, brings positive results to all the body cells and therefore, improves the general state of a person almost immediately.

In-Depth Cellular Music Therapy may be used in treating:

- speech disorders and speech impediments
- dyslexia
- ADHD
- autism
- genetic defects, etc.

#### **Castillo Morales Orofacial Regulation Therapy**

The most common rehabilitation method for orofacial disorders is the orofacial regulation therapy created by Castillo Morales, an Argentinean rehabilitation specialist. Patients who qualify for this kind of therapy show:

- breathing disorders;
- sucking, swallowing, chewing disorders;
- tongue protrusion disorders;
- excessive production of saliva;
- wrong position of the jaw.

In general, the Castillo Morales method may be used in treatment of all neuromotor orofacial dysfunctions, starting from the first days after birth. This method combines the elements of sensory rehabilitation, speech and gymnastics exercises, activation of mimic muscles in seven face trigger points and jaw orthopedic treatment.

Working with young children should be based on an individual speech disorders prevention program, which should include the following activities:

1. Stimulation of the sensory-motor coupling, with particular emphasis on the sense of balance, proprioceptive system and exteroceptive sensation.
2. Vibration massage which relieves abnormal muscle tension.
3. Physical therapy that stabilizes body posture and stimulates the orofacial area.
4. Intraoral stimulation which recreates the reflexes in the orofacial area (e.g. after removing a probe).
5. Exercises with the vestibular oral screen which regulate nasal breathing and improve tension of the orbicularis oris muscle.
6. Forming the ability to eat properly in children with abnormal muscle tension.
7. Regulation of muscle tension with the use of infant massage.

This method is applied mostly in children with genetic and neurological defects (e.g. Down syndrome, cerebral palsy and other developmental disorders). It can also be used in adults with facial asymmetry or facial nerve paralysis. Proper therapeutic manipulation helps to relax and normalize tension in the abovementioned muscle groups and allows to coordinate the process of speech with breathing.

This method not only improves oral functions, but also has influence on the general improvement of a child's physiognomy. Using this method enhances the functioning of articulation organs and facilitates the development of speech.

Techniques used in therapy:

- touching
- brushing
- rubbing
- vibrations
- pressure

The Castillo Morales method consists of:

- modeling — exercises that prepare particular muscle groups for massage
- therapeutic exercises:
  - which prepare for proper swallowing,
  - which stimulate the neuromotor face trigger points and therefore activate mimic muscles and evoke movements connected with swallowing, chewing, articulation, closing lips and tongue retraction.

Neuromotor face trigger points:

1. Glabella point
2. The most external point of the orbicular rim
3. Alare point
4. Upper lip point
5. Labial angle vertex
6. Chin point
7. Oral bottom point



(Pictures from the website: <http://poradnik-logopedyczny.pl/komunikacja-alternatywna/komunikacja-alternatywna/244/fonogesty.html>)

The effects of the Castillo Morales method include:

- regulation of breathing;
- regulation of body muscles tension and orofacial muscles tension;
- closing mouth;
- control over saliva production;
- retraction and lifting of the tongue;
- activation and improvement of sucking, chewing and swallowing;
- improvement of the articulation.

**Resume.** Above presented a few methods that may be used in speech therapy for children to stimulate the development of speech or to improve the situation of children with speech disorders. Above all, these methods are an opportunity for those patients (both adults and children), for whom traditional speech therapy proved to be unsuccessful. A comprehensive therapeutic program may help such people and open new doors for modern speech and language therapy.

It has to be made perfectly clear that it is not about rejecting traditional speech therapy methods. It is, however, worth introducing innovative methods that enhance our 'gray matter', improve the effectiveness of therapy and speed up the expected progress. This approach seems to be very up-to-date — not only because patients need it, but also because it allows to reduce the cost of treatment.

*Analyzed a few methods that may be used in speech therapy for children to stimulate the development of speech or to improve the situation of children with speech disorders. It is shown that the methods are an opportunity for those patients (both adults and children), for whom traditional speech therapy proved to be unsuccessful.*

*Проаналізовано кілька методів, які можуть бути використані в логопедії для дітей, щоб стимулювати розвиток мови або для поліпшення становища дітей з порушеннями мови. Показано, що методи є можливістю для тих пацієнтів (дорослих і дітей), щодо яких традиційна логопедія виявилася безуспішною.*

*Проанализированы несколько методов, которые могут быть использованы в логопедии для детей, чтобы стимулировать развитие речи или для улучшения положения детей с нарушениями речи. Показано, что методы являются возможностью для тех пациентов (взрослых и детей), в отношении которых традиционная логопедия оказалась безуспешной.*

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