



Massage and Finger Stimulation as a Means of Enhancing a Child's Speech Development

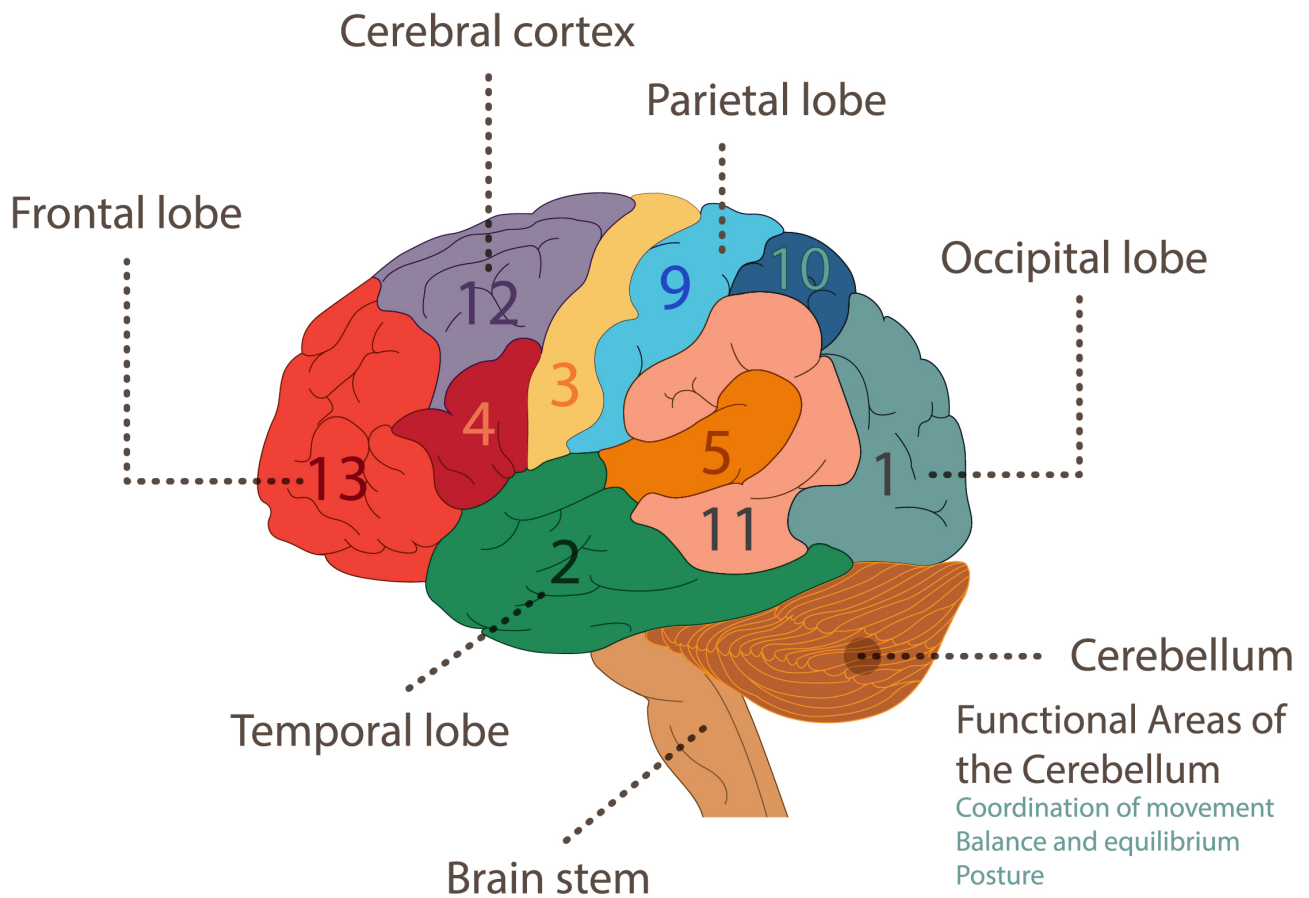
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Every parent wants their child to start speaking early and ensure it happens the best way possible. Speech is an essential stage of a child's development. This is important for communication with the outside world. Below are some of the techniques used by practicing speech development specialists, speech therapists, and occupational therapists. Although children of all ages can participate in these types of exercises, parents will find they will be extremely helpful in encouraging speech production in those with language processing difficulties.

Fine motor skills (like grabbing and pinching) and gross motor skills (like rolling, crawling, and running) are known to strongly influence cognitive development. Experts believe the cognitive and motor development domains are working together as part of a more complex system, all the while dependent on the other. Certain countries have been aware of this connection for centuries; China encouraged the use of small metal balls for manipulating, and Japan has popular hand exercises that involved walnut shells. Improving the strength and coordination of your child's hands will keep them engaged longer in activities.

The part of the brain responsible for speech development is located in the cerebral cortex, known as "Broca's area." Its primary functions are speech production, language processing, and controlling the motor functions involved in producing speech. The diagram of a section of the cerebral cortex presented below clearly shows that the speech zone is part of the motor region (including the area of the brain responsible for the fine motor skills of the fingers). Early delays in motor skills can actually be a predictor for later language delays. Children who reach kindergarten age with fine motor delays are at risk of becoming dependent on adults and developing low self-esteem.

• Anatomy and functional Areas of the Brain •



1

Visual Area:
Sight
Image recognition
Image perception

2

Association Area
Short-term memory
Equilibrium
Emotion

3

Motor Function Area
Initiation of voluntary muscles

4

Broca's Area
Muscles of speech

Because the development of a child's speech is directly dependent on the development of the fingers' fine movements, you can encourage new verbal skills by stimulating these areas. Subtle movements of the fingers bring about neural impulses that spread to the speech zone and boost its activation. Thus, through the stimulation of the fingers' fine motor skills, we can influence the development of the child's speech. The approach to fine motor development depends on the child's developmental age.

Methods and techniques for the development of fine motor skills in babies and pre-verbal individuals

During this period, passive exercises and massaging of the palms and fingers are recommended to stimulate speech development. Below are massage techniques and passive exercises you can do with your child.

IMPORTANT: If you are performing passive exercises for fine motor skills development with babies under two years, keep in mind that a calm and affectionate attitude and a gentle touch are very important for children of this age. Massage and passive exercise can be combined; the duration of the treatment should not exceed 3-5 minutes. The most important thing to remember is that the activity needs to be done regularly, ideally two times daily.

Massage techniques

- Take the child's palm in your hand and stroke starting from the fingertips to the wrist and back.
- Massage each finger thoroughly, starting with the little finger. Move from the nail phalanx to the palm focusing on each joint.
- Massage the fingertips: slight pressure, pats, circular motions.
- Massage the surface of your child's palms in a circular motion with your index finger.
- Take the child's palm in your hand and gently press the center of the palm with your thumb in a circular motion.
- Stroke your index finger along the child's palm's inner surface, starting from the fingertips towards the center of the palm.



Passive finger exercise techniques

Please note: all exercises should be performed at a slow pace and with caution.

Flexion-extension exercises

- Having fixed the child's hand with your palm, bend and unbend the child's fingers.
- Have your child lie their hand on a hard surface, with the palm up. Hold the child's palm with your one hand, and bend and unbend the fingers alternately with the other.
- Have your child lie their hand on a hard surface with the palm down. Carefully, one by one, we raise the fingers up and let them freely drop to the surface or gradually lower the fingers down ourselves.

Rotation exercise

Rotate the fingers in little circles clockwise and counterclockwise.

Vibration exercise

Gently shake each finger, one by one.

Even though the above techniques are encouraged for very young children or pre-verbal individuals, parents and educators could use them with older children as well. Encourage other fine motor development by supplementing the massage and finger exercises with age-appropriate activities.

For very young children, you can provide building blocks, play with squishy toys, or a play gym to lay under and grab at fun objects. Strengthen oral motor muscles by performing oral alerting activities and activating the muscles, such as wiping the face briskly with a cool, wet washcloth or gently tapping your child's mouth playfully. You can also engage them in fun activities such as blowing bubbles, blowing raspberries, or licking popsicles.

Toddlers will have fun engaging in finger-play songs and games, like "Where is Thumbkin?" or "5 Little Monkeys." These finger games use repetition, imitation, and little finger movements to facilitate neuron building between the left and right hemispheres. "Run" your fingers across their arm, tickle, and stroke their hands. Be sure to use expressive facial motions and tone, pause in appropriate places, and narrate your actions for successful play.

Older children might enjoy painting, beading, or modeling with clay. Sensory-based activities, such as sand play, water play, or water beads, are a great way to stimulate fine motor development as well as enhance creativity, strengthen cognitive understanding in activities such as "cause and effect," and regulate the senses.

Spend fun, quality time with your child and try some of these ideas to foster growth in your child's language development.

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