What can delay language development?

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Let’s take a look at the most unusual combination of seemingly unrelated bits of physical development that supports language development in babies and children. Research at the Mind Moves® and BabyGym® Institutes has shown that baby speaks easier once the following has taken place:

- breast feeding
- rolling
- upright posture
- breathing
- lengthening of the calf muscles
- the separation of the thumb from the other four fingers
- hearing language…not via the Television.

**Breast feeding**

Breast feeding is nature’s way of developing the muscles in the cheeks, lips and tongue. When baby latches well the lips close nicely around the nipple to develop muscle tone in the lips. When the tongue cups around the nipple the tongue muscles get a workout along with the cheek muscles to create enough suction to maintain a constant flow of milk. This is not only true of breastfeeding, the suckling muscles of a bottle fed baby who uses the correct shape and size teat, gets the same workout.

Have you counted how many times a baby sucks during a feed? Multiply that number by the number of feeds a day, and multiplies that number with the number of days baby has been feeding. Now it is easy to see that many hours of ceaseless suckling is early preparation for clear pronunciation a little bit later. **Sucking** a dummy, blanky or thumb is not the same as **suckling** – the action is different. Sucking-to-sooth is good for emotional development, but it can hinder language development if it continues too long.

**A walking baby says:**

I’m ready to learn to walk and to talk.

Breast feeding on both sides makes baby aware of the two sides of her own body – the left side and the right side. Swopping arms mid a bottle feed does the same. Feeding while holding baby in the same arm for an entire feed is making baby aware of one side only, but it is still better than not holding baby at all or feeding baby while propped on his side. Have you noticed that most people feed babies holding them in the left arm? It’s clever – holding a
baby close to your heart helps with rhythmic feeding, but remember to swap sides to develop the language brain.

**Rolling**

Rolling develops the left and right sides of the brain and that is why babies need to roll in both directions. Without awareness of both sides of the body (due to feeding from the same side every time), baby only tends to roll to the one side. One-sided rolling means one-sided brain development – both sides will develop the one side just much more /less than the other side. Some years ago the Nobel Prize was awarded for mapping the functions of the left and right brain, which tells us that rolling to the left and to the right, is beneficial to whole brain development.

**Did you know?** The one side of the brain is more verbal (words) while the other side of the brain focuses more on the non-verbal parts of language (tone, underlying emotion)? Baby needs two strong sides to develop speech and language.

Rolling also develops the midline – the same midline that a child needs to cross (six and a bit years later) to be able to read and write. Crossing the midline comes naturally to a baby when she can sit up without a supporting chair and when she starts to crawl.

Read ARTICLE: Crawling / Creeping: is it important?

Crossing the midline between the left and right brain comes easily when a walking ring doesn’t interfere with baby’s crawling. Avoid walking rings and encourage baby to crawl for as long as possible.

So, feeding develops the mouth and rolling, sitting and crawling develops the language parts of the brain. Now baby needs to breathe properly to prevent stuttering and delayed language development.

**Breathing**

Breathing starts the moment a baby is born. Rhythmic breathing naturally starts when baby is feeding. But when baby is upset or anxious and breathing is shallow, it creates havoc while feeding. Shallow breathing disturbs the feeding-trio: suck-swallow-breathe. Baby gobbles, swallows wind; swallows milk on wind; gets anxious; gobbles more; tummy goes into a tight knot and feeding becomes a reflux/colic nightmare. Speech therapist will tell you there is a link between smooth feeding and smooth speaking; poor or halted feeding and poor or halted speech. Never despair – it is never too late to establish rhythmic breathing.

Read ARTICLE: How early sucking impacts on later speech development

**Calf muscles**

A baby can breathe shallowly for many reasons – because she: is very hungry, feels unsafe; experiences too many new smells, hears too many sounds, sees too many people; is traumatised; feels rejected; has an anxious mommy; and many other reasons. Babies, just like...
mommies, have an inbuilt stress response to prepare them to survive. Babies yell and fling their arms and legs wide open; their mouths go dry and their tummies tie into a knot. Have you experienced this when stressed?

The moment a baby feels unsafe (for whatever reason), her breathing shallows, her calves pull up until her knees are close to her tummy; her mouth goes dry and her tummy feels funny. A ‘funny tummy’ can mean cramps, diarrhoea or constipation. None of these things improve feeding; and in an older toddler it hinders speech development.

When the calf muscles are on red alert the language brain is not as active as the survival brain. If a baby or toddler constantly feels unsafe and unsecure, the calf muscle may actually shorten resulting in toe-walking.

Rest assured that all babies go through a period of toe-walking, normally when they are not completely ready to walk properly yet. You may have seen this when a baby cruises around furniture? When babies walk without shoes, and when they have fun with mom and dad and relax, the heels gradually lower and the calf muscles lengthen. As the calf muscles lengthen, the speech centers of the brain get a boost.

**Thumb separation**

Just before the calf muscles lengthen, the thumbs start to move away from the rest of the fingers so baby can pull herself up – first into a sitting position and months later into a standing position. **Early standing discourages crawling.**

International research (Goddard, 2008; Blakemore & Frith, 2005) shows that when the thumb moves away from the other four fingers, it coincides with language development.

Look at your hand: When the thumb moves away from the other fingers, it creates a capital L to remind us that thumb separation = Language development.

The weight on the hands of a crawling baby spontaneously separates the thumb and fingers to develop muscle tone in the hands and builds connections in the speech centre of the brain. You only have to look at your own mouth in the mirror while applying mascara to see the link between the mouth and the hands! The link between the hands and mouth (in preparation for speech and applying mascara many years later) does not start with crawling, it already starts with feeding and can be seen when baby instinctively and rhythmically pumps with the hands while suckling.

So, sucking develops the **mouth**; while rolling, sitting, crawling and thumb separation boost the **language centers** of the brain; finally relaxed calves and rhythmic breathing keeps the **survival brain at ease**.

But if a baby doesn’t hear language, baby will not speak; If baby hears many languages and only the Television, baby will learn to speak, but not at as well as when baby is exposed to one language at a time. Baby needs attention. Baby needs mom and dad’s
undivided and close-up attention to see their faces and to mimic their mouth movements, eye movements and sound. Clever nerve cells called mirror neurons help baby to mirror or mimic, so be selective about your baby’s role models when it comes to language.

What if mom and dad speak different languages?

If mom and dad speak different languages baby gets the wonderful opportunity of learning two languages at the time, all of this while the brain is most ready to learn a language; **BUT** mom and dad must be consistent and each parent must speak the chosen language only – no mixing. Baby’s brain is clever and will create two files – one for mom’s language and one for dad’s language. If mom and dad mix the language they speak with baby, baby’s brain creates a mixed file. The same is true when for instance the home language is Afrikaans or Zulu and the day-care language is English. If they ONLY speak English at school and ONLY speak the mother tongue at home – no problem. Baby’s brain will create a home language file and a school language file.

**Language is the tool of thought**

Without language it is difficult for baby or a child to say what she needs; it is difficult to make friends; it is difficult to learn; it is difficult for the brain to develop as well as it can. But it is never too late to develop language.

To prevent your baby from suffering from this delay when growing up, take note of the following:

- Have your baby’s ears checked regularly – a lack of hearing delays language development
- Make eye contact and talk with your baby even if she cannot understand a word…she is learning about non-verbal language
- When you talk to baby, give baby a chance to respond, babies do respond with mouth movements, smiles and babbling
- Show pleasure when baby responds
- Do not be fooled into thinking that skipping a milestone or reaching milestones earlier than others is a sign of intelligence
- Repetition builds a better brain
- BabyGym has scientifically been designed to develop the brain block for block without any pressure to perform. Visit the BabyGym website for more information on how to help your baby: [www.babygym.co.za](http://www.babygym.co.za).
- **Attending** BabyGym is not enough. **Doing** BabyGym every day until baby walks and talks really builds a better brain!

**How do I know if my child of older than 3 has a language problem?**

Problems with speech and language can be observed when you recognise three or more of these behaviours:
- feeding as a baby was difficult
• speaking started later than the guidelines provided earlier in this article
• child gulps rather than swallows and burps often
• child dribbles or lips are often wet
• child is quiet, reserved and seldom heard
• mouth is mostly open
• breathing is uneven and shallow
• stammers, stutters
• omits sounds when speaking
• battles to sequence sounds
• substitutes sounds e.g. l for r, f or v for th, t for c or k
• battles with grammar
• the speed, rhythm and volumes of speech is unusual
• only you can understand him
• you tend to speak for him. (De Jager, 2010)

Read ARTICLE: My child doesn’t talk, HELP!

What can you do to help your child?

If your child of over 3 years shows 3 or more signs of language development delays listed above, seek professional help from a speech therapist, an audiologist, an occupational therapist, a neuro-developmental physiotherapist or a Mind Moves Instructor. In the absence of professional help, the following Mind Moves are from Mind Moves – moves that mend the mind (De Jager, M. 2009) and have been found helpful to improve receptive and expressive language.

🌟 Lip Workout
Pucker up the lips and hold for a count of eight. Say "cooeee"; pull the lips into a wide smile while stretching the “eeee” sound for the count of eight.

This move improves muscle tone in and around the lips for clear pronunciation.

🌟 Leg workout
Sit on chair and straighten both legs forward, while resting the heels of the feet on the floor. Raise both legs off the floor. Flex and point both feet and notice any tightness in the calf muscles. Rest the left leg on the floor and flex the right foot, hold it for a count of eight in the flexed position. Relax the foot. Repeat the move at least three times. Rest the right leg on the floor and flex the left foot, hold it for a count of eight in the flexed position. Relax the foot. Repeat the move at least three times.

This move as well as climbing up a ladder, horse riding or walking on the heels lengthen the calf and hamstring muscles, reduce hyperactivity and improve impulse control.

🌟 Palm Stretch
Extend the fingers as wide as possible for a count of eight, and then relax. Make a tight fist, hold for a count of eight, and relax. Breathe slowly while doing the move.
This move improves muscle tone in the hands, penmanship, fine motor control and bilateral integration. It also promotes fluent speech.

🌟 **Finger Fight**

Push the forefinger against the thumb, maintaining the pressure for a count of eight, then let go. Alternate fingers until all four fingers have had a turn.

This move differentiates the parts of the hands. It also improves muscle tone in both of the hands, penmanship, fine motor control and communication skills.

🌟 **Rise and Shine**

Fling the arms wide open while breathing in deeply and slowly. Close the arms over the chest in a hug; breathe out and deeply and slowly. The parent may simultaneously hug from behind.

This move boosts relaxation, rhythmic breathing and a sense of wellbeing.