

Crossing the midline - A wonderful way we were created



Written by: Gizelle Kruger

Have you ever wondered how we would have lived if we were not able to cross our midline? All our movements would be similar to that of a robot: stiff and not very practical. Luckily, we were wonderfully made by our Creator to cross our midline. As adults, we cross our midline without even thinking about it – when we get dressed every morning, are flipping through a book, fastening our seatbelt, or preparing a meal. Did you know that we can also cross the midline with our tongue? I am sure while reading that, you’ve just moved your tongue around! We use our tongue to move food from one side of our mouth to the other (Baby Sparks). What a masterpiece we are!

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What is your midline and why is midline crossing important in children?

A simple way to explain it is by drawing an imaginary line vertically down the centre of the body, from the head to the feet. This imaginary line separates the left and the right sides of the body. We cross the midline every time we move a hand, foot, or eye (even our tongue) across this line to do work and activities on the opposite side of the body. Crossing the midline is vital for promoting the coordination and communication of the left and right sides of the brain, enabling us to carry out daily self-care, practical and recreational tasks such as to brush our teeth, get dressed, walk, climb stairs, put on shoes and socks, and just be a normal human being. Gross motor activities such as animal walks, manipulation, and ball skills, to name but a few, also require that a child crosses over their midline.



Crossing the midline is also essential for scholastic skills such as reading and writing. How, may you ask? When a child reads a book, their eyes continually cross the midline as they move across the page, or when following the teacher's writing on the blackboard in the classroom. Thus, midline crossing is essential for visual tracking. During writing tasks, the arm, hand, and eyes move from the writer's left to right side numerous times, crossing the midline. This enables the child to work efficiently, keep up with the pace and not fall behind with the workload.

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When does a child start crossing the midline?

As an adult, crossing the midline comes automatically. The question is, are we born this way? The answer is no, but fortunately, babies start crossing the midline early in life. According to Cheatum and Hammond, in the early stages of development, the midline is like a wall that keeps a child from crossing one arm or leg across the centre of their body into the other half. When a baby is a few months old, he or she will grasp a block in one hand, move it to the centre of their body, and then transfer it to the other hand.

Between 8 and 12 months, most children gain the ability to reach across the midline of their bodies to pick up a toy or snack. This ability may help a baby or toddler to interact more fully with the environment. Even if the hand on one side is occupied, the infant can cross over with the other hand to grasp a new object. Crossing the midline can help a toddler who needs to reach for an object while creeping/crawling, as well as babies who are learning to feed themselves.

When pre-school-aged children have developed lateral preference (dominancy), crossing the midline will happen automatically. Generally, by age 4, children cross the midline with ease. When a child reaches the age of 5 and cannot cross the midline, one should become slightly concerned. It is important to always remember that all children are different and not all developmental milestones are reached at the same time. In some cases, lateral preference (dominancy) is sometimes delayed until a child is about 7 years old. If a 7-year-old child still cannot cross their midline, the child may be considered to have a midline problem (Cheatum and Hammond).



Are there signs that one can look out for if a child may have trouble crossing the midline? Yes, but children often find ways to compensate for what they cannot easily do. This makes it difficult to immediately notice when a child has trouble with this skill and can sometimes therefore be overlooked. Two key facts are mentioned by Cheatum and Hammond to keep in mind when examining children for a possible midline problem.



Firstly, if you ask a child to cross the midline, even though the child might have a midline problem, he or she may be able to do so. This may not be a natural skill or a comfortable movement for the child, who really needs to concentrate to cross the midline. This indicates that the skill is not automatic yet. The second key to remember is that children with a midline problem find crossing their feet or any part of the lower body much easier than crossing their arms. Therefore, one should not assume that a midline problem does not exist, when a child can easily sit cross-legged or walk sideways, crossing the legs.

More signs that a child has trouble crossing the midline are explained by Healthline as follows:

- Younger children consistently use their right hand to reach for things on their right side and their left hand to reach for things on their left side.
- Some children avoid crossing the midline to reach for objects on the opposite side of their bodies. Instead, they rotate their entire trunk to reach the objects without crossing the midline.
- Age-appropriate self-care tasks in older children can become tricky when they cannot cross the midline. Children who cannot cross the midline may show reduced independence when faced with tasks such as brushing their hair.
- Some children will lean way over to one side when drawing or even writing to avoid crossing over the midline. Alternatively, they may shift their project over to the side to reach it more easily. Children who consistently switch hands during an activity, such as cutting, have found a way to avoid crossing the midline.
- Most children will discover that they prefer kicking a ball with their dominant foot, but children who cannot cross the midline may switch feet easily.



Screening for midline-crossing problems through observation

So, what are the things that can indicate a delay in children when it comes to crossing their midline? Casually observing children on the playground or in the classroom is the best way to see if a midline problem exists. If the skill does not naturally occur when doing everyday activities, then one should suspect a midline problem.



Another sign to look out for is children who can perform activities and writing tasks with both hands equally well. This is also called being ambidextrous. They seem to be stuck at the midline level. The building block of laterality and lateral preference (dominancy) is usually delayed, and the two sides of their bodies have no relationship to one another.

How to improve a child's midline crossing?

While you are reading this newsletter, you may suddenly realise that your own child or a few children in your class are struggling with one of the above mentioned items and may possibly have a delay in crossing their midline. What now? What can you do to encourage the development of this skill? Firstly, do not panic! Remember that gross motor and sensory development, through moving and exploring from a young age, is directly linked to midline crossing.

Creating an environment for movement and freedom will lay a solid foundation. There are many fun activities one can do to encourage younger and older children to cross their midline.

Below are a few practical and easy ideas for the young and older children alike:

Activities for younger children:

- Babies should be given plenty of tummy time and freedom to move around and play. Place toys in front of baby and encourage him or her to reach for the toy.
- When the baby starts to crawl, encourage the baby to crawl for as long as possible. Crawling is very important for effective midline crossing and the longer the baby performs the skill, the better.
- Using stickers is a simple way to enhance midline crossing. Place stickers on one arm and encourage the child to remove them with the opposite hand. You can also place the stickers on the child's feet.
- Place a ball on a string and hang it in front of the child. Move it from the midline and encourage the child to reach for it with both hands.

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Activities for older children:

- Develop independence by motivating a child to do age-appropriate self-care tasks on their own. Brushing teeth, washing in the bath, and picking up a bag and putting it on their back are all tasks that require one to cross the midline.
- Gross motor activities such as throwing, kicking and animal walks should be done regularly. This is such a fun and playful way to develop midline crossing.
- Drawing a large figure 8 in the sandpit, on paper, in the air, or on the blackboard is a great way to cross the midline. You can also do the activity with your foot. There will likely be many laughs as a result!
- Everyone knows the game Twister. By placing your hand or foot on the correct colour, you need to cross the midline. This is fun and the children do not even realise that they are practicing the skill.

In the book, *Perceptual-Motor Activities For Children: An Evidence-Based Guide to Building Physical and Cognitive Skills* you will find more creative ways to enhance midline crossing.

By creating the perfect environment for moving, learning and exploring, most children will cross their midline normally as part of their development. For some children, it might not come so easily, and they may need to do a few extra activities. After a while, the skill of crossing the midline will start to appear. In few cases, some children may need a bit more help developing the skill. A consultation with a Kinderkineticist or Occupational Therapist can determine what the underlying cause may be, and a plan of action put in place to enhance the skill and resolve the midline problem.



We have come to the end of our discussion about midline crossing. I am sure that after reading all the information about crossing the midline, you agree that we are wonderfully made by our Creator. Every small detail in a child's development is planned to perfection. I just stand in AWE!

About the author:

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