Crossing the midline

Definition

We all have an imaginary midline running down the centre of our bodies. In order for us to effectively coordinate the two sides of our bodies together, we need to be able to cross that imaginary midline.

When a baby begins to reach with one hand across to the other side of the body, it is the beginning of being able to use both sides of the body together.

Each side of our brain is responsible for the opposite side of our body, so that the right side of our brain affects the left side of our body and the other way around. Both sides of our brain need to work together, as do both sides of our bodies, in order to carry out bilateral activities (using two sides together) and to develop coordination. Learning to cross the midline of our body is therefore important in the development of bilateral coordination.

Midline activities are important to help coordinate the two sides of the body together and encourage communication between the right and left sides of the brain. When there is a lack of easy two-sided movement, each hand tends to operate on its own side of the body.

Children who avoid crossing the midline work the right side of the body with the right hand and the left side of the body with the left hand or they turn their body to avoid crossing the midline. This interferes with the normal development of a dominant hand and makes bilateral motor tasks very difficult.

If you have used this fact sheet and not seen improvement after 4 months, please contact the Integrated Therapy Service.

What you may see

The child may demonstrate difficulties with:

- Tying shoelaces
- Coordinating a knife and fork
- Reading and writing
• Ball games
• Drawing and cutting skills
• PE and with general gross and fine motor coordination skills

Strategies and Advice

The following activities will help facilitate crossing the midline to become an automatic response rather than one that has to be thought about. The brain will be ready for left to right eye movements and binocular vision (both eyes together) which are necessary for spelling, reading and writing. Left/right coordination, stamina and spatial awareness will be enhanced. Concentration and listening skills will become easier.

Gross Motor Activities

Cross Crawls

While marching on the spot, tap your left knee with your right hand and then your right knee with your left hand. This is repeated four times.

When you can manage this, touch your left knee with your right elbow and then your right knee with your left elbow. This is repeated four times.

Now bring your left foot in front touching your heel with your right hand and then bring your right foot in front touching your heel with your left hand. This is repeated four times.

And finally, bring your left foot up behind you touching your foot with your right hand and then bring your right foot up behind you touching your foot with your left hand. This is repeated four times.

When you have mastered this, try the above with eyes closed.
‘Simon Says’

- Play a game telling your child to touch somewhere on their body, such as ‘Simon Says touch your left shoulder with your right hand’. They should only do it when the sentence starts with ‘Simon Says’.
- Criss-cross walking along a line, either standing and crossing the line with each step or crawling along a long bench and crossing the hands.
- With the child sitting on the floor with legs outstretched, place a pile of beanbags between the knees. Ask the child to place beanbags on their left leg with their right hand and other beanbags on their right leg with their left hand.
- Ask the child to stand or kneel with a streamer/ribbon in one hand and draw a sideways figure of 8 in the air (∞). Make sure the arms are stretching to the other side of the body.
- Moving objects from a box on one side of the body to a box on the other side, while using one hand only. You can turn this into a sorting game or a building game etc.
- Balloon tennis using one hand only and ensuring there are a lot of movements that encourage crossing the midline.
- Throwing a beanbag with one hand to a container placed on the other side of the body.
- You can do the same with kicking into a goal or a bucket.
- While they are kneeling down, ask the child to draw a large rainbow on paper on the floor, ensuring the rainbow covers the whole page and the child uses the same hand.
- While they are kneeling, encourage the child to draw an arc around themselves. You can turn this into a rainbow and colour it in.

Fine Motor

On a chalkboard, whiteboard or paper fixed to a wall, the child can

- Trace designs
- Complete dot to dot pictures
- Draw lazy 8s (see below)
On a tabletop or on the floor, the child can do

- Pegboard designs
- Board games
- Collages
- Sorting tasks with containers and small objects e.g. buttons, pegs, counters, dried beans or peas. Place the container the opposite side of the body to the hand that is picking up the objects.
- Mazes
- Block designs
- Lazy 8s (see below)
- Puzzles – spreading the pieces around the body
- Drawing lines across a page using a ruler when the writing hand is crossing over the hand supporting the ruler.

Lazy 8s

- Begin at the centre dot. Draw a sideways figure of eight first using the left hand, then the right, then both together going in the same direction and keeping the hands together. Always go up and to the left first.
- Practise on a black or white board or paper taped to the wall and make the shape as big as your child can reach.
- Progress to paper on a tabletop but always make sure the centre dot is in line with the centre of their body.