Did your little one crawl? This question, routinely asked by doctors, teachers and therapists, tends to raise a few other questions in parents’ minds. What is crawling – and what is creeping? Are they important? And if they are important, why are they important?

Depending on where in the world you live, the definitions of creeping and crawling may differ. We will use the South African terms: creeping is when a baby moves along on its stomach, and crawling is moving forward on all fours (hands and knees) with the body raised off the ground.
IS CRAWLING IMPORTANT?
Movement is so much part of everyday life that we tend to take it for granted, and it’s equally easy to overlook the part movement plays in learning. All movement activities (from breathing, suckling and swallowing to hopping, skipping and jumping) are important in enabling the baby and later the child to discover his body and what he can do with it.

WHY IS CRAWLING IMPORTANT?
Crawling is quite far down the line of developmental milestones, and draws together the nerve networks that all the previous milestones have so painstakingly built up. Now that these networks have joined forces, crawling further develops:

- postural control
- balance
- locomotion
- manipulation.

Postural control
Postural control means keeping all the body parts aligned when moving or when still. It requires tremendous muscle strength in the upper and lower body, developed when a baby uses the symmetrical tonic labyrinthine reflex (STNR). The STNR develops muscle strength and muscle tone when lowering the head to flex the arms and straighten the legs and when raising the head to straighten the arms and flex the legs. The upper body is strengthened by raising the head to straighten the arms, and the bottom part is exercised by pushing the bum up.

All this continues until the head starts moving independently from arm and leg movement and the muscles are strong enough to push the body off the ground into an all-fours position and hold it there — postural control! Time to celebrate — baby is close to crawling!

Balance
Balance and postural control work as a team to hold the body upright when still or moving. Before a baby starts crawling he stands on all fours and then starts rocking forwards and backwards. The rocking action synchronises posture, balance and muscle strength, while the baby’s eyes are adjusting to a new position quite a few centimetres higher than he’s been used to. If a baby skips the crawling phase the different systems in the body don’t get the same opportunity to learn to work together, which may lead to low muscle tone, poor posture, messy eating, and reading and writing difficulties later on.

Locomotion
Crawling is a baby’s first experience of moving forward. In doing so he becomes aware of the left and right sides of the body and of crossing the midline between the left and right side of the body and the brain. Children who can’t cross the body’s vertical midline tend to focus on the vertical midline, sometimes writing or drawing down the midline, changing the pencil to the other hand at the midpoint of the paper, or stopping reading at the middle of the page.

‘Creeping and crawling not only help children cross the midline, but also activate both hemispheres of the brain in a balanced manner.’1 Crossing the midline involves both eyes, both ears, both hands and both feet as well as the core muscles on both sides of the body, effectively stimulating both hemispheres and all four lobes of the brain.

According to Goddard,2 babies don’t only learn to look ahead when crawling — their eyes also follow their hand movements. Crawling therefore teaches the eyes to cross the midline.

The rocking action synchronises posture, balance and muscle strength
Crawling is one of the most important of the series of developmental milestones a baby needs to reach to indicate that all is well. If a child does not crawl it does not mean he will have problems later, but because each motor milestone is also a brain developmental milestone it is advisable to pack away supporting chairs, walking rings and other such equipment in favour of natural development on the tummy and on the back!

Tummy time or rug time is the ideal opportunity to encourage crawling.


and promotes **eye-hand co-ordination**. Later on this ability will be essential for being able to read without losing the words at the middle of the line and to visually follow the moving hand when writing.2

Crawling over a variety of surfaces also gives the baby a lot of tactile (touch) stimulation, which helps to map body awareness of where body parts are without looking at them. The ability to move without having to look at the part that you are moving is important for all co-ordination later on.

The tactile sense also has a huge influence on **vision**.3 While crawling and looking forward, to the left and right hand, up and down, baby is giving his eyes a wonderful workout while at the same time maintaining his posture, balance, movement, tactile sense and muscle tone and crossing his midline, all in preparation for fine motor manipulation and later reading and spelling.

Goddard2 confirms the importance of crawling in the development of vision by referring to the **focusing distance** between eye and hand. Practising this distance when crawling is preparation for sitting at a desk one day, because the distance between the eye and crawling hands is the same as the distance the child will later use for reading and writing.

Crawling also expands a baby's **personal space** as he moves beyond the restricted zones of carrycot, high chair and rug on the carpet, looking and reaching for things and people. In expanding his personal space baby learns about social interaction and social rules. Eye contact is an important social skill that improves while baby crawls about.

Children who have trouble with personal space might line up too close to others and usually write letters in a similar way.4

**Manipulation**

Manipulation conjures up images of blocks, puzzles, eating with a spoon and using other objects that develop fine motor skills. In later years the young child will need his manipulation skills to hold a crayon, cut with scissors and grasp a pencil in a three-point position.

Crawling contributes to later pencil grasp by developing:

- joint control in the shoulder, elbow and lower arm and within the hand
- the arches of the hand
- motonic separation of the hand (support on the little-finger side and skills on the thumb side)
- strength and tone of the hand.5

**WHAT CAN I DO?**

Provide baby with loads of opportunities to lie flat and unhampered on a rug! When she is ready to become mobile she will start moaning, pushing and shoving until she has developed the necessary muscle strength, co-ordination and muscle control to push up into an all-fours position.

Don’t come to baby’s rescue during this period to save her (or yourself) from the moaning and struggling! It may rob her of the opportunity to synchronise the workings of her muscles and senses. Allowing a baby to do ‘baby work’ (growing, developing and reaching milestones) is one of the greatest gifts a parent can give – the two-in-one gift of confidence and independence.

- Place toys or a treat just out of reach, to stimulate the desire to be mobile.
- If your baby shows no sign of starting or wanting to crawl, fold a tea towel or cloth nappy into a rectangle. Put it on the floor and place baby on it, on her tummy, its ends sticking out on both sides. Pull the ends upwards, and baby’s body will automatically rise into an all-fours position. Gently rock baby forwards and backwards. Do this every day until she starts getting into a crawling position of her own accord.

**WHAT MAY HAPPEN IF MY BABY DOESN’T CRAWL?**

Not crawling does not necessarily mean your child will have problems later. But failure to crawl on all fours – not bunny-hopping or bum-sliding – may impact on the following skills:

- motor development
- postural control
- general muscle tone
- balance
- integration of the eyes, ears, balance and muscles
- eye-hand co-ordination
- development and integration of the left and right brain
- tactile (touch) stimulation
- vision
- focusing distance
- personal space

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**Children’s Corner**

**Developmental Milestones**

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**Big Nutrition for Little People**

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eye contact
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WHAT CAN I DO WHEN MY CHILD DISPLAYS ANY THREE OR MORE OF THESE INDICATORS?

It’s never too late to address these challenges and mend the mind. The following simple but practical Mind Moves exercises have been found helpful in building up the skills crawling would have developed in a baby:

**Homolateral walk.** Move the left arm and leg together, then the right arm and leg. Follow with a bilateral walk, touching the left hand to the right knee, alternating with the right hand and left knee. First do this lying down, then progress to standing up.

**Gravity crawl.** Crawl on a carpet or grass, keeping the tummy flat on the floor while the arms and legs bend to propel the body forward. Leopard-crawl on a flat surface as well as up and down a slope. This movement aids core muscle development, muscle tone and vestibular stimulation.

**Palm stretch.** Extend the fingers as wide as possible for a count of eight, then relax the entire hand. Make a tight fist, hold for a count of eight, relax the hand.

**Mouse pad.** The eyes are to the brain what the mouse is to the computer. The eyes access different parts of the brain when turning up, down, horizontal, left and right. Focus on the thumb held at elbow distance from the eyes. Move the thumb upwards, first around the left eye and then around the right eye. Repeat five times. Swap hands and repeat the process, always first drawing a circle around the left eye and then around the right eye.

**References**
5. Visser M. The impact of crawling on pencil grasp and control, as well as visual perceptual skills in 5 and 6 year old children. Master’s study, Department of Occupational Therapy, University of the Witwatersrand.

**Bibliography**