



## Helping Your Baby Learn Through Movement

Concerned and conscientious parents naturally want the best for their children and certainly a great education is high on the list of importance. What few parents realize, however, is that some of the most critical learning occurs at home long before a child ever steps into a preschool. The foundations for academic learning occur in the first few years of life with movement being at the core of the learning process. You can ease your child's academic journey tremendously and significantly influence your child's academic success through awareness of the early stages of movement development.

In a process commonly termed "sensory-motor integration," parents can begin to easily and naturally facilitate their tiny child's development. What follows are but a few sensory-motor concepts and some things you can do to encourage your child.

What you can do...

Early random movement - with practice and over time - organizes itself into coordinated sequential movement.

- **PLACE YOUR BABY ON HER TUMMY**

When your baby is awake, she should spend ever increasing periods of time on her tummy (this is called the prone position) on the floor. The floor surface should be smooth, warm, and clean. Hardwood or linoleum floors are ideal. If the baby has yet to gain head control, you may want to use a very firm exercise mat with a smooth plastic surface. The reason for this kind of surface is to reduce friction. Carpets and blankets create too much friction to allow a tiny baby to easily move. Try it yourself. You will be quickly exhausted if you try to move fully clothed across a carpeted surface.

The baby should wear as few clothes as possible – preferably covering only the torso with arms, hands, legs and feet bare. Thousands of sensory messages are able to reach the brain through the sense of touch. Random movement starts to become more intentional and organized as the baby realizes she can move herself. These movement patterns are built into the brain. The push-off reflexes are still active in babies up until about six months of age.

While on her tummy, your baby is gaining strength in her arms, hands, shoulders, neck and back. She is developing the muscular and skeletal support for good posture, body control and balance. (Please do not prop a baby up to sit as this can place a great strain on the undeveloped back.) Sitting up should happen when the baby can do it herself or when you are supporting her weight with your hands.

Also, if you wait too long to place your baby on her tummy, her muscular strength won't be able to keep up with the weight gain. Essentially, your baby will be like a "beached whale" helpless to move about.

If your baby doesn't seem to like the prone position, get down on the floor with her and give her short



periods of time to get used to this position. Place things out in front like an unbreakable mirror or favorite musical toy that will make this a more pleasant experience.

Soon you will find your baby creeping on her belly. At first the pattern of movement is random, then it progresses to pulling like an inchworm with both arms together and both legs together (homologous pattern.)

Eventually a homolateral pattern will emerge where the arm and leg on the same side push. Finally, a cross-pattern develops where opposing arms and legs are working together.

Your baby is learning she has two sides to her body. She is beginning to train the two hemispheres of the brain to work together. She is learning body awareness - "I have a hand out there." And awareness of time and space - "How far is that teddybear?" and "How can I get to it?"

Reaching out for toys and other interesting objects teaches eye-hand skills, and control of the arms, hands and fingers.

- REALLY GETTING AROUND

If your baby has not already done so, she probably will begin to push up into a crawling position (on hands and knees.) At first, your baby will probably rock back and forth on all fours. The homologous pattern again emerges as evidenced by reaching forward with both arms and followed by pulling her legs forward. This pattern looks like a modified leapfrog.

Quickly, a cross pattern should emerge with opposing arms and legs moving forward simultaneously. Nothing is safe in your house now! Your baby will be everywhere and into everything! Give your child lots of room to move about freely - and safely!

You will find that a carpeted surface works just fine now as there is little body surface on the ground so there is less friction. You may also want to dress your child in long, lightweight pants or leggings as their little knees can get quite irritated. Please avoid dressing girls in dresses, as they tend to get caught under the knees and prevent unrestricted movement.

When your baby is crawling on hands and knees, she is getting hundreds of hours of hand muscle development. This is so important for later control of a crayon, pencil and pen. She is also training her eyes to focus both near and far. The distance from the eyes to the hand is the distance that will later be used to read. The hands are training the eyes to focus and follow along!

Keep your baby out of walkers, play pens, baby bouncers, and other devices that restrict or limit free movement, exploration and sensory integration!

You can create a mini obstacle course in your house with cushions, boxes (cover any sharp edges and remove any staples), chairs, slides, ladders to climb over, through, under, down, and over. This is such



a fun way to teach body and space awareness. Your child will be internally assessing “How big am I?” and “Will I fit through this space?” Your child will learn by trying out these skills over and over again.

Baby and toddler gym classes are both fun and beneficial ways to supplement your at-home activities, for variety, and for social stimulation.

Coordinated body movement leads to sequential thinking skills (such as math, spelling and reading) and awareness of time and space. The child who does not get sufficient opportunity to move may be slow to learn numbers and letters, may reverse letters, may have difficulty with reading, spelling, and math, and may be physically clumsy.

- If you have a baby who is happy to sit and watch the world go by, you may have to stimulate movement a bit. Get down on the floor with your baby whenever you can. Hold a favorite toy out for the baby to reach. Don't bring everything to your baby; let her go get it. Roll a favorite ball across the floor or send her chasing after a wind up train or animal. Pretty soon she'll be an expert cross pattern crawler.

- **CRUISING**

Your baby has probably begun pulling up to a stand by holding onto furniture. As long as she has developed a good, synchronous cross pattern of crawling it is fine to create a cruising environment in your house. You'll want to line up tables, chairs and boxes so your baby can practice walking while holding onto something at arm level. As there will be plenty of tumbles in the process of gaining control of this movement, make sure furniture is arranged so your baby doesn't hit her head when she loses her balance.

You'll notice that when your baby wants to get somewhere quickly, she'll get down on her hands and knees and crawl. This is a solid and secure mode of locomotion.

Don't be in a hurry for your baby to walk! These months of early movement are priceless! Your baby is establishing the foundations for coordinated physical movement as well as a multitude of later academic skills.

- What is written here is only an introduction! For more information and details about early and later sensory motor integration, I highly recommend that you order the book, *If Only We Had Known...* by Margaret Sasse' or the video series, *The Ladder of Learning*. These are invaluable resources. The Optometric Extension Program carries both items. Their 800 number is listed under "[Resources for Parents](#)". I am also happy to recommend the PlayWisely TM parent and baby classes that have been developed by Patty Hannan. Patty was our first da Vinci School teacher. As a world class gymnast, she has a unique understanding of movement and has spent the last 25 years studying the development of early cognitive and motor development. Check her website for additional information:[www.playwisely.com](http://www.playwisely.com).