The Importance of Movement for Learning

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“Movement awakens and activates many of our mental capacities. Movement integrates and anchors new information and experiences into our neural networks. And movement is vital to all the actions by which we embody and express our learning, our understanding and ourselves.”

(Hannaford, 2005:107)

During one of my recent BabyGym® classes a mommy of a prematurely-born infant asked me “What is the big deal about movement?” And so I hope this article can shed some light on her question.

Figure 1 illustrates the first five years of a child’s life to be of particular importance when it comes to synaptic formation in the developing brain. So the question arises: What needs to happen during the first few years after birth to assist the optimal growth of the developing brain?

![Synapse Formation in the Developing Brain]

Figure 1: Synapse formation in the Developing Brain During Sensitive Periods of Development

(National Scientific Council on the Developing Child, 2007:3)
Prechtl, Einspieler, Cioni, Bos, Ferrari and Sontheimer (1997) studied the fidgety movements of 130 normal awake infants and compared their findings with assessments of neurological development repeated at intervals until the age of two years. The aim of the study was to test the predictive value of absent or abnormal spontaneous movements in young infants for the later development of neurological deficits. The study found that 96% of infants who had normal fidgety movements had a normal neurological outcome, whereas abnormal quality or total absence of fidgety movements was followed by neurological abnormalities in 95% of infants studied. A similar study was conducted in South Africa with a sample of 115 very low and extremely low birth weight infants at the Tygerberg Children’s Hospital in Cape Town. The objective of the study was to determine whether the qualitative assessment of fidgety movements at three months corrected age predicts the neurological motor outcome at 12 months corrected age. A significant relationship was found, with the absence of fidgety movements predicting the development of cerebral palsy with 71% of the participants (Burger, Frieg & Louw, 2011).

We may conclude therefore that infants and young children not only need sensory stimulation during sensitive periods of neurological development, but also, require stimulation that facilitates movement and processing thereof, and probably then especially during the first 5 years of life.

Dr Melodie De Jager, the founder of the BabyGym® and Mind Moves® Institutes in Johannesburg (South Africa) explains that every instant in a baby’s life involves movement. Cells that are dividing after conception, the heartbeat, the withdrawal and moro reflexes, sucking a thumb, the first kick in utero, breathing, suckling and rolling, are all movement activities that indicate that the brain and the body are developing (De Jager, 2011:139). De Jager (2011:140) adds that every movement of the young infant creates new wiring in the brain. The brain’s wiring is structured through repeating the same movements and is pruned when movements are not repeated and the wiring is dissolved. It seems that every healthy child is born with the necessary material needed for the natural ability to cope with school-related tasks, but that these only become effective when children move and act, explore and control, see and describe, hear and attend, as well as feel and respond.
De Jager (2011:140) draws attention to the link between the way in which babies reach their motor milestones and their ability to learn. She elaborates that when a baby skips a milestone or reaches a milestone out of sequence, such as walking before crawling, it can create a weakness in the wiring, which may influence future learning. Later movement activities such as the ability to balance on one leg, sit still, concentrate, hold a pencil, read and write also indicate whether all is well or not (De Jager, 2011:139).

Movement therefore does not only structure the brain, but is also an expression of the level of structure. Movement actions are thus the foundations and building blocks for learning; and this relationship between movement and learning continues throughout life.

Bibliography


