Movement makes the difference

Movement is truly a critical aspect of life. Without movement, we could not feed ourselves and we would not survive. Life as we know it would not be possible without the ability to move. Our capacity to move is more than just a convenience enabling us to walk, play, or manipulate objects; it is a critical aspect of our evolutionary development, no less important to understand than is the evolution of our intellectual and emotional capacities. (Schmidt, 2005)

At Jan Kriel School we found Developmental Co-ordination Disorder (DSD) to be common amongst our learners.

The learner with DCD may present with a combination of the following: Low tone, poor balance, struggles with fine and gross motor co-ordination activities, problems with vision, motor perceptual problems, and difficulty with motor planning, tactile dysfunction, problems with body perception, speech, writing and reading problems, as well as emotional and behavioral problems.

> ***Low tone (Hypotonia)*** is known to be the marked by reduced levels of electrical activity in the muscle, thus the muscles appear floppy. This is known as a genetic muscle disorder or central nervous system disorder. Learners with low tone may struggle with gross motor activities and this causes them to have difficulty performing fine motor activities. These learners' muscles are not in a state of optimal readiness to contract in order to perform the task at hand. They also struggle to maintain their sitting posture and often use their arms to support their head, or try to lie on their arms during writing activities, especially as the day progresses. These learners experience difficulty when performing activities of daily living like dressing themselves, doing buttons and tying shoelaces.

> ***Gross motor skills*** involve the large muscles of the body to perform functional movements such as walking, kicking, sitting upright, lifting, balancing and throwing or kicking a ball. Gross motor skills depend on both muscle tone and strength. Learners with poor gross motor development may have difficulty with activities such as writing, sitting in an upright position, concentrating and doing their work in the class.

The physio- and occupational therapist assists the children by seating them in the correct sized chair with support under their feet to form 90º angle at the hips, knees and ankles. The correct/optimal sitting positions helps learners to focus better in class as it enables them to perform tasks with minimal energy expenditure, therefore reducing fatigue levels while enhancing endurance and participation in class. Sitting with a slumped posture also reduces the amount of oxygen that is inhaled and this can lead to a learner feeling tired; therefore the correct sitting position also impacts positively on the respiratory system and endurance.

The latest research shows that learners who are clumsy and experience motor co-ordination problems will have social, emotional and educational problems up to the age of sixteen years. On the playground these children are shy to participate in any social or active game. These learners often have a very low self-esteem; they will stand on their own, not socializing with any other children but they will rather try to have a conversation with the teachers.

Individual physiotherapy sessions for these learners mainly focused on developing the aspects of trunk control, shoulder stability, co-ordination and balance with which each specific learner struggles.

What can the parent do?

Parents are encouraged to take part in the development of their child's gross motor skills as soon as possible. This can be done by doing simple gross motor activities with their toddler e.g.

- Chase your child around as soon as he or she is able to walk;
- Climb over, under and through objects as well as jumping from low chairs or tables and landing on their feet;
- Do a variety of ball games, throwing, catching, kicking etc.
- Walk on a line or big stones to improve balance;
- Ride on a scooter or a tricycle.

To a great extent, achievement of large motor skills depends on children having the opportunity to try and practice the skills. These are some common guidelines to help your child reach these very important mile stones.

- Children who have never had a tricycle cannot be expected to be able to ride one.
- Watching television or playing computer games or TV games should be limited to thirty minutes per day.
- A child should play outside, run around, climb trees, swing or swim in a pool.
- At school we play all the old games like "bok in die hok", jumping with skipping ropes, rounders. Jumping games like hopscotch and "open the gate" are played during the physical activity part of the Life Orientation curriculum. These games contribute not only to the development of gross motor functions, co-ordination and endurance, but also the development of social skills and sportsmanship.

We would like to encourage you as the parents to start playing with your kids again and to be more active yourselves. A healthy body stores a healthy mind!

References

- Savelsbergh. G.J.P.2003.Development of movement co-ordination in children. London , New York , Routledge
- Schmidt. A.D.T. 2005. Motor control and learning: a behavioral emphasis. Human Kinetics. Schanpagn , IL
- Burger. M. 2003.Pediatriese Neurologie Handleiding Departement Fisioteraie, Fakulteit Gesondheidswetenskappe, Universiteit van Stellenbosch

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July 2012