INTRODUCTION
The Vagus nerve supplies all organs except those in the pelvic area. It conducts impulses from these organs to the smooth muscles and glands in the body, the functioning of which ensure survival. (Maree, 2009). It is deemed important because its function directly impacts upon the Learning Process that supports physical, emotional and cognitive development, as explained below.

STRESS – Physical impact
In stressful situations, the body produces adrenaline and noradrenaline, which increase heart rate, cause vaso-constriction, increase respiration rate (i.e. they have a direct effect on the smooth muscles), increase muscle contraction and increase the level of arousal/alertness/attention in the brain in preparation for fight or flight (Anon, n.d). Sensory input and processing is thus directly affected and restricted. Production of adrenaline and noradrenaline also results in the symptoms of anxiety such as:

- increased peripheral hearing and vision;
- a raised heart rate;
- changes in skin tone;
- dryness in the mouth and;
- ‘butterflies’ in the stomach that we experience when stressed (De Jager, 2010).

Furthermore, prolonged periods in such a condition can negatively affect the immune system (De Jager, 2009a).

These physiological effects of adrenaline and noradrenaline are therefore clearly not conducive to facilitating learning and development.

The physiological effects of adrenaline and noradrenaline can, however, be reversed through direct stimulation of the Vagus nerve (Yoshio et al, 1999) or an increase in blood oxygen levels (cell bodies in the structures supported by the Vagus nerve are sensitive to oxygen concentration in the body). As a result of stimulation or increased oxygen levels, the Vagus nerve instructs the relaxation of the smooth muscles. The functions of seeing, hearing, sucking, swallowing and speech thus improve as heart rate reduces and breathing slows and cerebral blood flow increases (Yoshio et al, 1999) and the body therefore returns to a more optimal state for learning and development.
STRESS – Emotional impact
In addition, the Vagus nerve also fulfils other functions. During emotionally intense experiences the Vagus nerve is responsible for conduction of the messages that ultimately signal the limbic system to strengthen memory for what is occurring (Maree, 2009). Creation of memory and validation of perception against memory before action is essential in the Learning Process.

IMMUNITY
It has also been found that the Vagus nerve speaks directly to the immune system through a neurochemical called acetylcholine. Stimulating the Vagus nerve sends commands to the immune system to stop pumping out toxic inflammatory markers. Through this “inflammatory reflex”, the Vagus nerve therefore controls inflammation (Anon, 2007) and thus assists the body to maintain a state of physical ability to support development.

Physical development provides the essential foundation for emotional, social and cognitive development, As the Vagus Nerve exerts a wide range of influence over the structures and neuro-chemical processes that impact directly on physical development and learning through the Learning Process, it is crucial that its role in reversing the effects of adrenaline and noradrenaline is acknowledged. In the context of Mind Moves® the direct effects and importance of using the Power ON exercise (De Jager, 2009b) should not therefore be down-played.

Power ON
Rub the indentation just below the collar bone in line with the left eye to re-establish the electrical flow via the Vagus nerve to the speech organs and stomach to help relax butterflies and self sooth.
REFERENCES


