CRANIAL NERVES:
The twelve pairs of cranial nerves primarily serve the head and neck and only one pair (the VAGUS) extends to the chest and abdominal areas.

These nerves control movements of the face, tongue, eyes, and throat (including skin, muscles and membranes) and receive sensory input from the special sense organs. The cranial nerves transmit information on sight, smell, hearing, balance and taste to the brain for processing.

The cranial nerves are numbered in order and in most cases their names reveal they most important structures they control.
DEVELOPMENT OF THE CRANIAL NERVES

By the forth week of development nuclei of all twelve cranial nerves are present in the pharyngeal arches. All except Olfactory I and Optic II nerves arise from the brainstem.

**VAGUS NERVE:**
The word VAGUS means “wanderer” (vagabond) and the VAGUS in its wanderings supplies the outer eardrum, the soft palate, a few taste buds, larynx, trachea, esophagus, heart, lungs, liver, gall bladder, pancreas, digestive tract, and the kidneys. Indeed it supplies all the organs, except the organs in the pelvic area.

VAGUS end in the walls of these structures and the cell bodies in the walls of the structures conduct the impulse to the smooth muscles and the glands of the body e.g. vagal effects on the heart is inhibitory.

The chemo receptors in these cells react on the O2 and CO2 changes in the bloodstream.

Vagus also has an influence on coughing, sneezing, swallowing, speaking, secretions of the glands and the sensation of hunger.

Submitted by elrie maree 2009-04-24
VAGUS STIMULATION:

Various techniques may be used to cause stimulation of the Vagus nerve to increase the flow of oxygen to the organs supported by the Vagus nerve. The increase of oxygen will “instruct” the smooth muscles to relax and support the functions of hearing, seeing, sucking, swallowing, speech, breathing, slow down the heart rate and improve digestion.

The follow techniques are used by medical and paramedical staff to save lives through stimulation of the Vagus Nerve.................

PHYSICAL 911

- Carotid Sinus Massage
- Valsalva Maneuver

Ice pack method

...but do you feel anxious?, ... do you panic..?... , ? increase in your heart rate,... fast shallow breathing....?, nausea?, diluted pupils?, hands in fists?, poor digestion? .....colic?.....

submitted by elrie maree 2009-04-24
In her book *Mind Moves*, dr. Melodie de Jager explains the following exercise to stimulate the Vagus nerve in every day activities at home and at school. It helps the body to relax so that better learning and communication can be encouraged.

**Massage the indentation just below the collar bone (in line with the eyes) on the left side of the body with the right hand.** This supplies oxygen-rich blood to the brain, relieves visual stress and re-establishes the electrical flow via the Vagus nerve to the stomach and speech organs to help one relax and talk.

*(De Jager 2009:62)*

An increase in pressure is interpreted by the carotic body as an increase in blood pressure. The autonomic nervous system is immediately activated and this reaction stimulates the Vagus nerve to send messages to the smooth muscles to relax. The heart rate slows down in an attempt to lower the blood pressure.
VAGUS AND EMOTIONS

Under stress, anxiety, intense excitement of joy a nerve running from the brain to the adrenal glands triggers a secretion of hormones which surge through the body priming it for an emergency. These hormones activate receptors in the Vagus nerve which carries messages from the brain to regulate the heart, but it also carries signals back into the brain to the amygdala. They activate neurons within the amygdala to signal other brain regions to strengthen memory for what is happening.

Emotions are essential building blocks to build memories for later learning, emotional development and social interaction.

Parent’s modify their children’s vagal tone by coaching them emotionally e.g. by talking to them about their feelings, not being critical or judgmental and problem-solving about emotional issues. These children were better able to suppress the vagal activity that keeps the amygdala priming the body with fight-flight hormones and so were better behaved. (Coleman 1995: 20,21,227).

Positive feedback and encouragement build stronger connections between the heart and the brain.

"When sensory stimulation is soothing, your baby releases health-promoting chemicals “(Chopra 2005: 47).

"Both stress and survival set up incoherent patterns in the brain/heart complex, allowing for quick reaction to danger and decreasing the system’s ability to learn, remember or create. Open up to every moment with full vulnerability and wonder with all the innocence of the child mind " (Hannaford 2002: 13,14).

‘WE ALL LEARN THROUGH MEMORABLE PERSONAL EXPERIENCE”
(Biel 2005: 235)
THE 911 TO STIMULATE THE FUNCTION OF VAGUS

The A, B, C of emotional development:
Affection.........Bonding........Communication.........Developmental opportunity........Environmental interaction

(Goddard 2006:239)

♥ make eye contact
♥ smile, laugh and talk to your partner/child
♥ express warmth and touch
♥ be sensitive and responsive
♥ sing and dance together
♥ read together
♥ spend time together
♥ lots of bear-hugs
♥ firm massage

“SLOW DOWN, SIMPLIFY AND BE KIND”

NAOMI JUDD
BIBLIOGRAPHY


Moodie, R. 2009. e-mail. Use of Vagal Maneuvers by Paramedics in symptomatic Paroxysmal Tachycardia
