

Your Enteric Nervous System

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Introduction

It seems that the majority of those that call themselves as a "medical scientist" do not actually know about what is the Enteric Nervous System (ENS). This fact completely baffles my beingness as the ENS is, after the Central Nervous System, one of the most important aspects of the nervous elements within your entire physical body. The following material is offered in the attempt to assist your efforts in recognizing this very important fact of life!

Your enteric nervous system elements

Apart from the obvious fact that your entire nervous system is made of individual nerve cell elements, these individual nerve cell elements are mostly grouped together in bundles of nerve cell groupings called ganglia. These ganglia are found all throughout the body, especially the body cavities next to the organs and specialized tissues present in all three of the body cavities: thorax, abdomen and sacrum. Individual nerve cells are located throughout the skin just below and within the hairy surface to interface with the external environment. This article is not about the various types of skin nerve cell types as such. It is also not about the nerve cell bodies that are located in another large scale location as the muscle tissue. Thus, we notice that there are 3 large area groupings of individual and ganglionic nerve cell bodies. These 3 groupings are characterized as follows: sensory, motor and autonomic. 1. If a sensory nerve is damaged, symptoms may include: Pain: burning, dull, sharp, jabbing or electric-like; numbness, tingling, "pins and needles" and itching; loss of feeling; the sensation that you're wearing an invisible glove or sock: extreme sensitivity to touch, even light touch. 2. If a motor nerve is damaged, symptoms may include: lack of coordination, falling over, lack of dexterity; partial

or complete loss of movement; muscle atrophy and bone degeneration; cramping and spasms, tremors; difficulty in swallowing or breathing. 3. If an autonomic nerve is damaged, symptoms may include: blurred vision, dizziness, fainting due to inability to control blood pressure; decreased ability to sweat and intolerance to heat; intolerance to cold; abdominal bloating, nausea and vomiting after meals, early satiety; diarrhea and/or constipation; unintentional weight loss (greater than 5%); urinary incontinence, feeling of incomplete bladder emptying, urinary hesitancy; impotence and infertility. 4. Other complications may include: ischemia (decreased oxygen/decreased blood flow); frostbite (prolonged exposure to cold); systemic or metabolic disorders, poor wound healing; infectious or inflammatory conditions; depression and insomnia.

- (<https://www.ncbi.nlm.nih.gov/books/NBK11097/> The ENS)
- (<https://exploringyourmind.com/enteric-nervous-system-second-brain/> The ENS)

The sensory nerves are obviously located in the skin throughout the entire body surface in two large groupings, left and right sides of the body and limbs. The motor nerves are located in the areas next to muscle groups to actually cause the muscle motor spindle fibers to contract. These peripheral nerve cell bodies are stimulated by nerves coming from the Central Nervous System (CNS). The autonomic nerves are of two groupings: those located scattered throughout the three body cavities and those located next to the spinal cord. The scattered ganglia group stimulate local organs and tissues. The ganglia next to the spinal cord, the dorsal and ventral ganglia, stimulate the various ganglia located next to the organs and tissues. It seems then that the dorsal and ventral ganglia next

to the dorsal and ventral roots of the CNS spinal ganglia coordinate the efforts of all of the organs and tissues of the “gut”, muscles and skin in a meaningful manner.

Coordination of gut and other phenomena

It must be obvious then that the ENS is in control of all of the unconscious aspects of what is going on within your limbs and body cavities proper. The CNS is only able to stimulate muscle tissue neurons. This is the sole body function of the CNS - to stimulate your muscles and to determine which, usually groups of muscles, muscles get stimulated! All else is controlled by the ENS, and this is mostly then an unconscious control system that is usually outside of any direct control by the CNS. It is not usually possible to voluntarily control any aspect of ENS behavior. Thus it is quite obviously an extremely important control system within the body, the ENS. The CNS may direct your conscious bodily behavior but the ENS is the system that keeps you alive while acting behind the scenes.

The point of all meditative practice is to learn how to gain some modicum of conscious control over any and perhaps all of the ENS functions. Remember that I said a modicum of control. Admittedly, some aspects are easier- like those of the first three chakras (Red, Orange and Yellow). Unfortunately, most workers dealing with the ENS try to treat the ENS the same as the CNS, which is a very naughty mistake. Naughty because the ENS has more neurons within the body than does the CNS! Also, a fact little known is that the Animal pole of a developing egg will eventually generate the CNS while the Vegetal pole will eventually generate the ENS. That is why the development of the Vegetal pole neurons proceeds at breakneck speed while the Animal pole seemingly lags behind in developmental events. The reason for this is obvious. It is like the conundrum of which came first, the chicken or the egg. Of course it is the Chicken! The CNS is useless without a fully capable and functioning ENS.

The ENS is absolutely in control of all digestive, assimilatory and elimination phenomena. The ENS is also very much involved in all Heart/Lung phenomena and especially involved in the role of the Heart/Lung in exercise physiology at the behest of the CNS. The ENS supports the many functions of the body that at first appears to be in the voluntary control by the CNS but in actual fact the ENS just sets the stage in the background for intense ENS muscle system stimulation by the CNS. The ENS works hand-in-hand with the CNS to provide the body with which the CNS then accomplishes its goals!

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