Nerve Tissue that is Not Counted as a CNS

Nemer Ali*

Department of Neurology, Jordan

*Corresponding Author: Nemer Ali, Department of Neurology, Jordan.

Received: April 09, 2020; Published: May 11, 2020

Effector and receptor organ of the CNS (i.e. leads afferent, sensitive information FROM periphery and efferent, motor impulses TO periphery).

Somatomotor: Skeletal muscles, arbitrary.

General somatosensitive: Exteroception (external perception from the skin/mucous membrane) and proprioception (self-perception via muscle spindles/Golgi tendon organs).

Specifically somatosensitive: retina and inner ear.

General visceromotor = Para- and sympathetic: smooth vascular and visceral musculature, heart and glands (as the only fibers of the PNS connected again synaptically outside the CNS!).

Especially visceromotor: Gill arch muscles, corresponding to somatomotor. Quality, only with cranial nerves, arbitrary

Generally viscerosensitive: Viscera and blood vessels.

Specially viscerosensitive: Olfactory mucosa and taste buds.

Sensory = Especially somatosensitive and especially viscerosensitive = seeing, hearing, balance, smelling, tasting (with IMPP often just "sensitive").

Spinal nerve

8 cervical, 12 thoracic, 5 lumbar, 5 sacrale and 1-2 coccygeale.

C1 above the vertebral body C1, C8 below the vertebral body C7, all others below the corresponding vertebral body.

RM ends at the vertebral body level of approx. L1, then cauda equina.

The RM has one radix post. and ant. per segment, the radix post. does NOT form a synapse.

Part of the fibers in the intervertebral foramen = spinal nerve.
Nerve Tissue that is Not Counted as a CNS

Anterior ramus: Motor innervation of the entire somatic muscles (except autochthonous) and sensitive supply of the lateral and ventral trunk wall and the extremities.

Thoracic area: Segmentally separated in the periphery, i.e. innervation areas correspond to the RM segments (in the area of the skin: dermatomes, without sharp boundaries!).

Cervical/lumbar/sacral area: plexus formation, i.e. peripheral innervation areas of peripheral nerves are not segmented, BUT individual fibers of these nerves end segmentally, i.e. a distinction is made between peripheral (through nerves) and segmental (from individual nerve fibers, corresponding to dermatomes) innervation.

Posterior ram: motor innervation of the autochthonous back muscles and sensitive care of the medial skin of the back of the head, neck, back and buttocks.

Ramus meninges: Sensitive care of the spinal membranes, ligamentous system of the spine and joint capsules of the small vertebral joints.

From Ncl. intermediolateralis (side horn) pull fibers through the front horn.

Ramus communicans albus: Preganglionic fibers from the spinal nerve to the truncus sympatheticus (only thoracic!)-marrow-containing.

Ramus communicans griseus: Postganglionic fibers from the truncus sympatheticus to the spinal nerve (only thoracic!)-unmarked.

Switching to ganglia is mediated via Ach.

Note: Who knows goes to the trunk (albus to the trunk), comes back gray to the nerves! (griseus to spinal nerves).

Dermatomes

Dermatomes: Segmental innervation areas on the skin, overlapping edges.

Hypasthesia: The corresponding dermatome is therefore only slightly sensitive in the case of injury to a posterior root.

Head zones: Hypersensitive areas of skin in the event of disease of internal organs, in the dermatome, which is supplied by the same nerve that also supplies the diseased organ with sensory activity (convergent connection in the RM).

Myotomes: All muscles that are supplied by an RM segment.

Sclerotomes: all bones with tension. Periostea, which are supplied by an RM segment.


Identification muscles for spinal cord segments and reflexes.

C4: Diaphragm, C5: M. deltoideus, C6: M. biceps brachii, C7: M. triceps brachii, C8: small finger ball muscles and Mm. interossei, L3/L4: M. quadriceps femoris (patellar tendon reflex), L4: M. tibialis anterior, L5: M. extensor hallucis longus and M. tibialis posterior; S1/S2: M. triceps surae (Achilles tendon reflex), Cervical plexus C1-C4.

Formation after delivery of motor branches to deep neck muscles.
Nerve Tissue that is Not Counted as a CNS

Motor: Infrahyoid muscles and diaphragm (via phrenic nerve, this runs between pleura and pericardium).

Sensitive: skin on neck, shoulder and Z.T. lateral head over minor occipital nerve, auricularis magnus nerve, transversus coli nerve and Nn. supraclaviculares appear at the punctum nervosum.

Volume 15 Issue 6 June 2020
© All rights reserved by Nemer Ali.

Citation: Nemer Ali. "Nerve Tissue that is Not Counted as a CNS”. *EC Nutrition* 15.6 (2020): 11-13.