

LEVEL: LOWER MEDULLA

This section is representative of the medullary levels below the fourth ventricle with the ventricular system represented by a small canal. The most conspicuous feature is the massive medullary pyramids (corticospinal tracts). The axons in this heavily myelinated bundle synapse on motor neurons in the spinal cord; these motor neurons innervate the upper and lower limbs and trunk.

Cranial Nerves

Motor. The most inferior portion of nerves X (dorsal motor) and XII are found in relation to the spinal canal. The cell bodies of the ambiguous nucleus at this level represent the medullary portion of nerve XI

innervating the trapezius and sternocleidomastoid muscles.

Sensory. The descending nucleus and tract of nerve V are conspicuous throughout the medulla and upper pons.

Tracts. The nuclei gracilis and cuneatus are conspicuous, and secondary axons can be seen leaving their anterior surfaces, swinging around the ventricle, crossing the midline, and taking up a position posterior to the pyramids. These fibers, the sensory decussation, are forming the medial lemniscus, a specific discrete projection system to the thalamus. The central core of the brain stem consists of the reticular formation which is a nonspecific diffuse multisynaptic system important in maintaining our "posture" as regards the external and internal milieu.

