Term:Medulla Oblongata

Introduction

The assignment is to define a term using multiple formats such as sentence, parenthetical and expanded definitions. The definition must be written so that non-technical readers, in this case, my writing group, can understand the term Medulla Oblongata, a small region of the brainstem.

Parenthetical Definition:

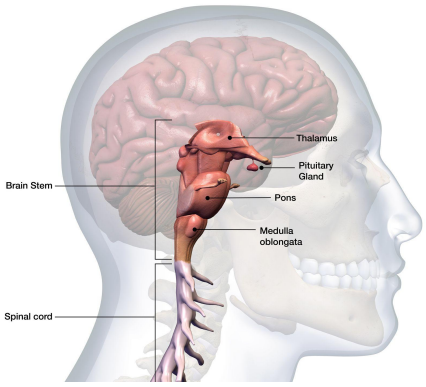
The Medulla Oblongata is a brain region responsible for controlling one's automatic processes(a brain region that controls your vitals and manages many of the most important functions of your body).

Sentence definition:

often known as just the Medulla is the lowest portion of the brainstem where it is between the brain and the spinal cord and below the pons; the Medulla plays a significant role in controlling one's heartbeat, breathing, automatic processes, and blood pressure.

Expanded definition:

Figure 1



What is the Medulla

The Medulla Oblongata resides inside the midbrain, immediately above the spinal cord and is connected to the pons and through the foramen magnum, an opening at the bottom of your skull by a nerve called the cranial nerves(britannica.com, n.d.; Cleveland Clinic, n.d.). The Medulla is involved in controlling vital functions that keep an organism alive (Britannica, n.d.). For instance, it helps regulate metabolism; regulates the rate and force of the heartbeat and the sizing of blood vessels; it adjusts the basic rhythm of breathing through inhalation and expiratory areas (Cleveland Clinic, n.d.). Messages are transmitted through the reticular formation which are clusters of interconnected neurons(nerve cells) that help neurons transmit motor and sensory impulses down and up the spinal cord (Britannica, n.d.). This is why we quickly pull our hands

away when we touch something hot. The reticular formation is made out of both myelinated(White Matter) and unmyelinated (Grey Matter)nerve fibres. White matter is axons which are wrapped around by a fatty tissue known as the (Myelin sheath). The grey Matter is called the Somas(cell bodies where the organelles reside). The Medulla is divided into two main compartments: the ventral medulla (the frontal portion) and the dorsal medulla (the rear portion; also known as the tegmentum).

Etymology:

The word Medulla comes from the Greek word **myelos** which means marrow," and Medulla Oblongata comes from the Greek word **enkephalos** which means Brain.

History

First discovered by Julien Jean-Cesar Levallois in 1806, the Medulla is a structure closely related to the brain. He claimed that the Medulla was an anatomically important region of the brain (Bolano, 2020). The brain region was discovered during his procedure of removing both cortex and cerebellum from rabbits. Levallois found that even though the regions were removed, the rabbits continue to breathe (Bolano, 2020). However, once he removed a specific section of the medulla, the rabbits' respiration stopped immediately, so he claimed that the Medulla oblongata is the region that controls repository functioning and for necessary survival.

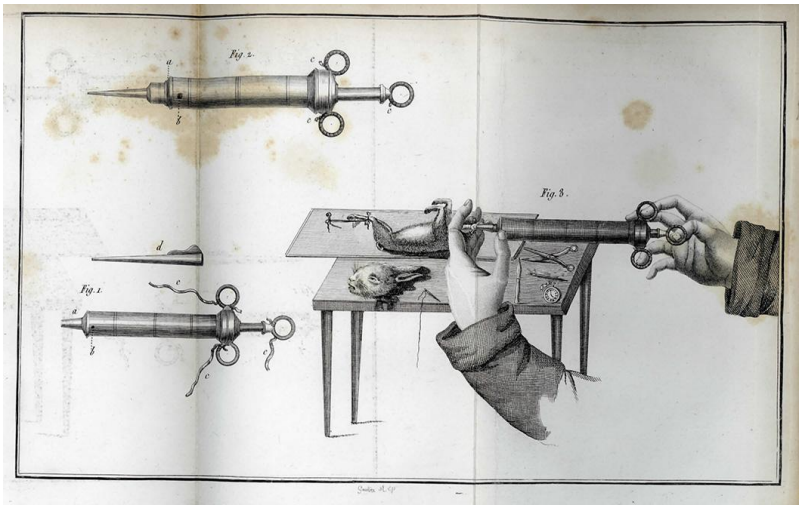


Figure 2

Example:

George, a fifteen-year-old student, visits the hospital complaining of headaches and unprovoked seizures. The doctor then takes him to the radiology room for a CT Scan to see what is going on and finds out that there's a small tumour in his Medulla and tells his parents that "George has a malignant tumour called Medulloblastoma in the lower part of his brain known as the Medulla. Its primary function is for controlling his breathing and all his body functioning. He will need

surgery since we found it early, he will need intensive chemotherapy and radiation for treating his cancer".

References

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