Neurosciences & Brain Imaging

Open Access Perspective

Effect of Coronavirus on Neurological Appearances: An Outline of Stroke Show in Pandemic

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INTRODUCTION

Neurons are the fundamental units of the nervous system, responsible for transmitting electrical signals and enabling communication within the body. These specialized cells play a critical role in our ability to think, feel, move, and perceive the world around us. This essay explores the structure and function of neurons, highlighting their remarkable capabilities and essential contributions to the functioning of the nervous system [1].

Neurons consist of three main components: The cell body (soma), dendrites, and the axon. The cell body contains the nucleus and other organelles necessary for the cell's metabolic processes. Dendrites are branching extensions that receive incoming signals from other neurons or sensory receptors, while the axon is a long, slender projection that carries electrical signals, called action potentials, away from the cell body.

Neurons function as information processors, receiving, integrating, and transmitting electrical signals. When a neuron receives signals from its dendrites, the information is processed in the cell body [2]. If the sum of these signals reaches a certain threshold, an action potential is generated and travels down the axon. This electrical impulse is then transmitted to other neurons or target cells through specialized connections called synapses.

DESCRIPTION

Sensory neurons transmit sensory information from the body's sensory receptors to the Central Nervous System (CNS). These neurons allow us to perceive and interpret various sensory stimuli, such as light, sound, touch, taste, and smell. Interneurons, also known as association neurons, are located within the CNS. They receive information from sensory neurons and transmit it to motor neurons or other interneurons. Interneurons play a crucial role in integrating and processing information, allowing for complex cognitive processes and coordinated movements [3]. Motor neurons transmit signals from the CNS to muscles or glands, enabling us to initiate voluntary movements and control bodily functions. Motor neurons form connections at specialized junctions called neuromuscular junctions, where the signal is transmitted from the neuron to the muscle fibers. Neurons communicate through synapses, which are specialized junctions where the axon terminal of one neuron connects to the dendrites or cell body of another neuron. At the synapse, electrical signals are converted into chemical signals called neurotransmitters. When an action potential reaches the axon terminal, neurotransmitters are released into the synaptic cleft, diffusing across the gap and binding to specific receptors on the postsynaptic neuron. This process allows the signal to be transmitted from one neuron to another, facilitating the flow of information throughout the nervous system [4].

One of the remarkable features of neurons is their ability to adapt and rewire their connections in response to experience and environmental changes. This property, known as neuronal plasticity, underlies learning, memory formation, and recovery from brain injuries. Through processes such as synaptic strengthening or pruning, neurons can modify their connections and optimize their functionality, enabling us to learn new skills, acquire knowledge, and adapt to our surroundings.

Received:	05-June-2023	**Manuscript No:**	IPNBI-23-16655
Editor assigned:	08-June-2023	**PreQC No:**	IPNBI-23-16655 (PQ)
Reviewed:	22-June-2023	**QC No:**	IPNBI-23-16655
Revised:	04-August-2023	**Manuscript No:**	IPNBI-23-16655 (R)
Published:	11-August-2023	**DOI**	10.36648/ipnbi.7.4.34

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Citation: Dalaie S (2023) Effect of Coronavirus on Neurological Appearances: An Outline of Stroke Show in Pandemic. J Neurosci Brain Imag. 7:34.

CONCLUSION

Neurons are the fundamental building blocks of the nervous system, enabling communication and information processing throughout our bodies. Their intricate structure and remarkable capabilities facilitate our ability to think, move, perceive, and experience the world around us. Understanding the structure and function of neurons is essential for unraveling the mysteries of the brain, advancing our knowledge of neurological disorders, and developing effective treatments and interventions.

ACKNOWLEDGEMENT

None.

CONFLICT OF INTEREST

The author has no potential conflicts of interest.

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