

Nerve Cell.

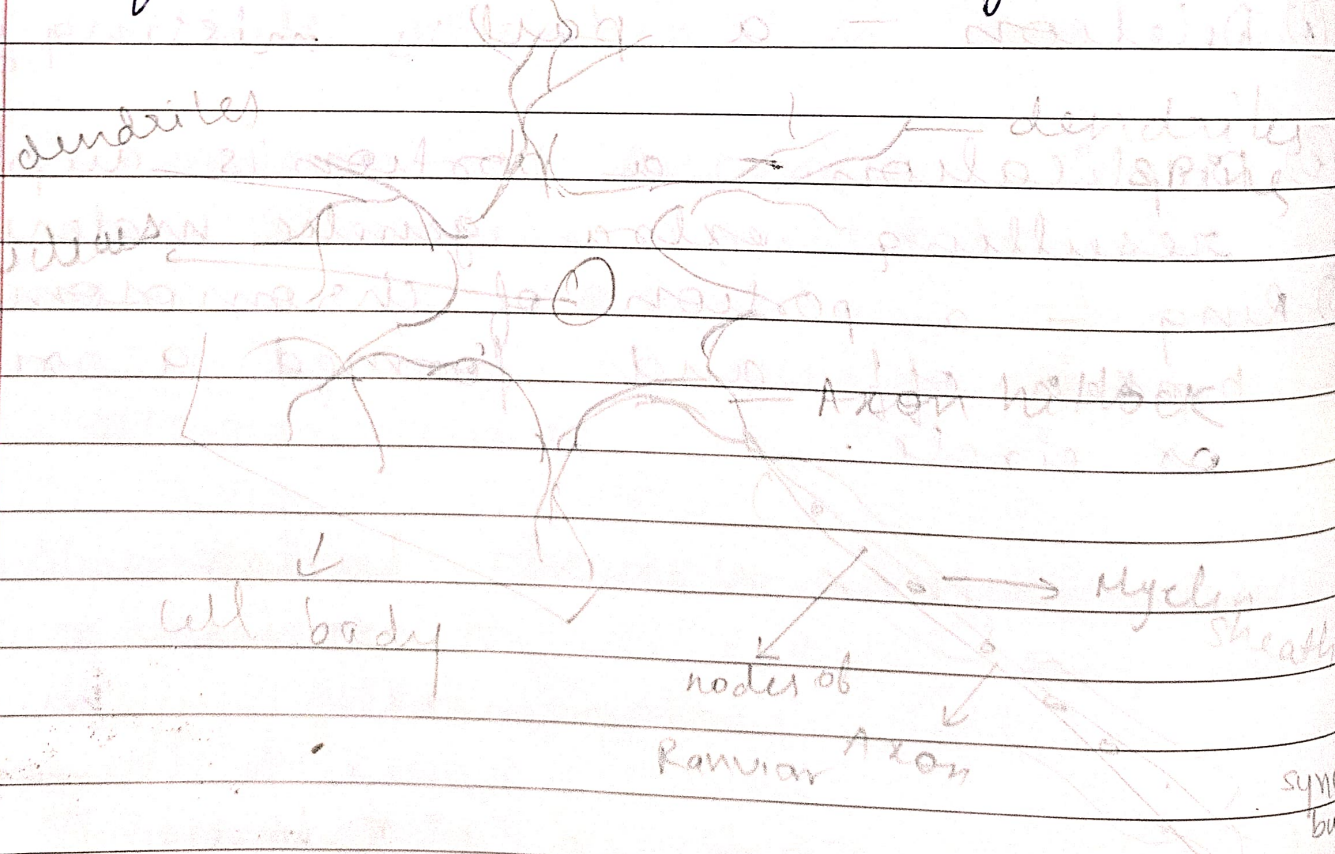
The nervous system consist of 2 kinds of cells.

- Neurons - receives information and transmit it to other cells.

- Glia

Neurons differs from other cells as it is specialised in information processing. Neurons are anatomically independent as they do not touch each other. The whole human life depends upon the coordination of the neurons.

Neurons are cells that are specialised for the reception, conduction and transmission of electrochemical signals.



mitochondria
ribosomes
nucleus etc

The major components of neuron are

Dendrites - short processes emanating from cell body receiving most of the synaptic contacts

Soma (cell body) - metabolic centre of cell

Synaptic Terminals -

An Axon - the long and narrow process that projects from cell body

Axon Hillock - the cone shaped region at the junction betw cell body & axon

Myelin Sheath - the fatty insulation around many axons

Synaptic bulb - which releases chemicals into Synapses

Nodes of Ranvier - gaps between myelin sheath

Cell membrane - semi permeable membrane that encloses the neuron

Types -

1) Sensory Neurons - activated by sensory input from the environment.

For eg. touch a hot surface with your fingers tips, firing and sending ^{to} the rest of the nervous system about the info information received

They are pseudounipolar means one axon which split into 2 branches



2) Motor Neurons - of the spinal cord part of CNS and connect to glands, muscles and organs through out the body. These neurons transmit impulses from the spinal cord to skeleton and smooth muscles and so directly controls all our muscle movements. 2 types upper & lower

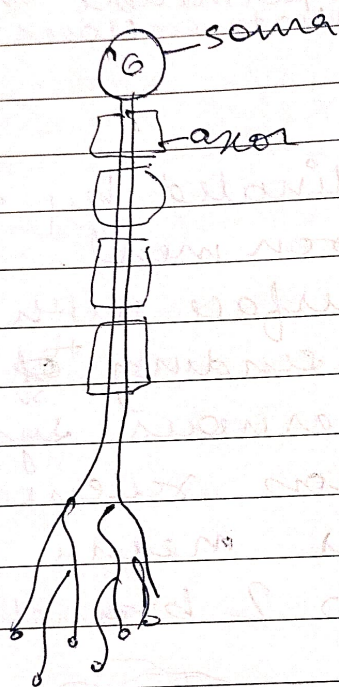
* Upper that travels from brain to spinal cord

* Lower that travels from spinal cord to muscles

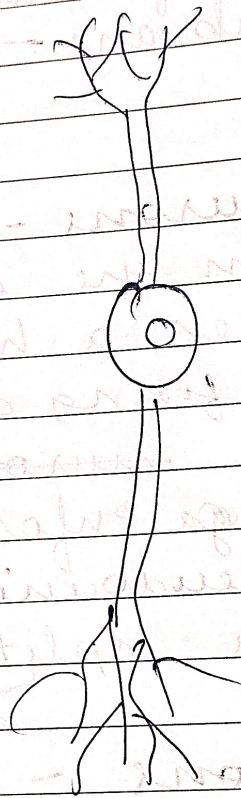
- Multipolar (common) one axon and several dendrites

Interneurons -

They connect sensory and motor neurons transferring signals between sensory and motor neurons with each other forming circuits of various complexity (also multipolar)



unipolar



Bipolar

Functions -

- Reception from one neuron
- Integration b/w excitatory and inhibitory responses in order to determine whether or not an information should be transmitted
- Nerve impulse.
- Transmission -

Neuropsychology

The term was used in the subtitle in Donalds Hebb's influential book "The organisation of behaviour: A neuropsychological theory" published in 1949.

broadly defined as the study of brain-behaviour relationship. this definition does not capture the ~~core~~ multiplicity that have been used to explore how the CNS ~~has~~ represents organises and generates the infinite range of human capabilities and actions.

Modern neuropsychology includes the study of the classic concepts - attention, learning perception cognition personality and psychopathology. along with techniques and methods such as test construction and psychometrics.

The scientists includes technology with high resolution functional and structural neuroimaging and other biological technologies.

Neuropsychology as a field has grown in the past 40 years and seeks to understand the relationship between brain and behaviour. i.e. attempts to explain the way in which the activity of the brain is expressed in observable behaviour.

There are many ways the investigation is done to see this.

Scope of neuropsychology
Neuropsychological assessment
measures and clinical neuropsychology

Neurodiagnostic assessment
Medical health care patients
Minority groups measures.

Neuropsychiatry

Neuropsychiatry is a field of medicine in which neurology and by extension neuroscience, is a necessary or at least helpful in the understanding and management of mental illness.

It is best viewed as integrative psychiatry, neurology and neuropsychology.

It is a branch of science that deals with the study of the behavioural disorders associated with neural disorders.

Neuropsychiatric doctors or neuropsychiatrists uses various tools to diagnose the symptoms of neuropsychiatric disorders along with neuropsychopharmacology, electroencephalography and neural imaging etc.

It is used for neuropsychiatric disorders like

Anxiety, hyperactivity disorder, dementia, Delirium, chronic fatigue syndrome, cognitive impairment, schizophrenia, OCD etc.