The biology of behavior

Neural and hormonal systems

Neuron - basic building block of the brain (billions)

Travels up to 180 mph

Messanger

Neural impulse

Either you meet it or you don’t

All or none response

Travels through synapse which is the gap between two neurons

Nerurotransmitter are chemicals used to send a signal across the synaptic gap

Based on electricaal impulses

Reuptake is when the neurons aren’t used so are taken back up

Serotonin and dopamine pathways

Nervous system

Central which is brain and spinal cord

Peripheral is everything else which is:

Gathers info from the body and sends CNS decisions out to the body

Autonomic - sympathetic (flight) and parasympathetic (calms us)

Neurons that fire together wire together

The endocrine system

- a set of glands that produce chemical messengers called hormones

Putuitary gland sends signals to hormonal gland

Spinal cord and brain stem low functioning, breathing

Brainstem is made of medulla and pons

Our sensory info crosses over

The Thalamus

Sensory switch board

Reticular - nerve network in the brainstem - alertness

Cerebellum "little brain" - voluntary movement - non verbal learning and memory - muscle memory

Limbic "border" emotions and basic drives - episodic memories - story - the story or situation.

Hypothalamus - form story and process them there and forms emotionly charged memory with the amygdala

Body temperature, strong emotion in the amygdala - arousal, flight or fight

Cerebral cortex, higher brain functioning

Brainplasicity

300 billion synaptic connections

Frontal lobeso - speaking muscle movements and in making plans and judgements

Parietal lobes - sensory cortex

Occipital lobes - receive info from opposite eyes

Temporal lobes - auditory process

Morter cortex - Sensory strip deals with info from touch stimuli

Occipital love - deals with visual info

Auditoury info is sent to the temporal lobe

The more complex animals have more cortical space decorated to integrating

Neurogenesis - is the production of new brain cells, helps rebuild

Split brain study - Seperating the hemispheres

Behavior genetics - Understanding genes - Twin and adoption stufies - Gene/tenvironment interactions

Evolutionary psychology - Genes are parts of dna molecules which are found in chromosomes in the cuvlei of cells

Genome: is an organism’s entire collection of genes

Fraternal and identical twins

Biological vs. Adoptive relatives

religious beliefs

Values

Manners

Attitudes

Politics

Habits

Genotype genetic make up

Phenotype - what is presented

Evolutionary psychology - study of how evolutionary principles help explain the origin and function of the human mind

Chapter 2

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