

Class Preparation: Mental Health #1

Directions: Fill in the charts below. Identify what mental health disorders can occur when each neurotransmitter is increased or decreased.

| | Functions | Increase | Decrease |
|-----------------------|--|-----------------------------------|---|
| Dopamine | Integration of emotions and thoughts, fine muscle movement, decision making, stimulates hypothalamus to release hormones | Schizophrenia Mania | Parkinson's - Disease Depression |
| Norepinephrine | Mood, attention and arousal, fight or flight in response to stress | Anxiety Mania Schizophrenia | Depression |
| Serotonin | Mood, sleep regulation, hunger, pain perception, aggression and libido | Anxiety | Depression |
| GABA | Reduces anxiety, aggression, pain perception, anticonvulsant and muscle-relaxing properties | Reduction of anxiety | Anxiety disorders, schizophrenia, mania |
| Acetylcholine | Plays a role in learning and memory, regulates mood, mania, sexual aggression, stimulates the parasympathetic nervous system | Depression | Alzheimer's, Dementia, Parkinson disease, Huntington's Chorea |

Structures of the Brain

| Brain Structure | Function |
|------------------------|--|
| The limbic System | Hippocampus: interacts with the PFC in making new memories Amygdala: Plays a major role in processing fear and anxiety Thalamus: Filters sensory information before it reaches the cerebral cortex Hypothalamus: Maintains homeostasis by regulating temperature, BP, perspiration, libido, hunger & thirst, Circadian rhythm |
| Frontal Lobe | Formulates or selects goals, initiates plan, terminates action, decision making, insight, motivation, social judgement, voluntary motor ability starts in frontal lobe |
| Parietal Lobe | Receive and identify sensory information, concept formation and abstraction, proprioception and body awareness, reading, mathematics, right and left orientation |
| Temporal Lobe | Language and comprehension, stores sounds into memory, connects limbic system to allow expression of emotions |
| Occipital Lobe | Interprets visual images, visual association, visual memories, involved with language formation |

