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	Fine muscle movement, integration of emotions and thoughts, 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	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 disease Dementia Parkinsons Huntington's Chorea

Structures of the Brain

Brain Structure	Function
The limbic System	"Emotional brain" 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 blood pressure, temperature, perspiration, libido, hunger, thirst, and circadian rhythms, such as sleep and wakefulness.
Frontal Lobe	Formulates or select goals initiate, plan, terminate actions Decision making insight, motivation, social judgement, voluntary motor ability starts in frontal lobe
Parietal Lobe	Receives and identifies sensory information, concept information and abstraction Proprioception and body awareness, reading, mathematics, right and left orientation

Temporal Lobe	Language comprehension, stores sounds into memory (language, speech) Connects with limbic system “the emotional brain” to allow expression of emotions (sexual, aggressive, and fear)
Occipital Lobe	Interprets visual images, visual association, visual memories, involved with language formation.