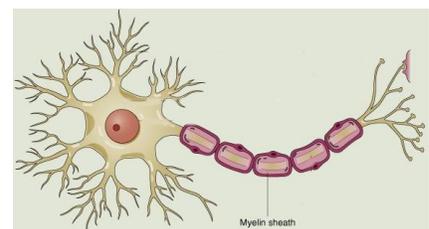
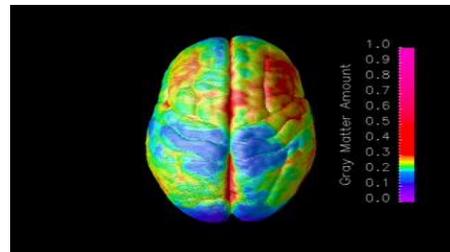


THE POWER OF THE ADOLESCENT BRAIN: TECHNICAL TERMS

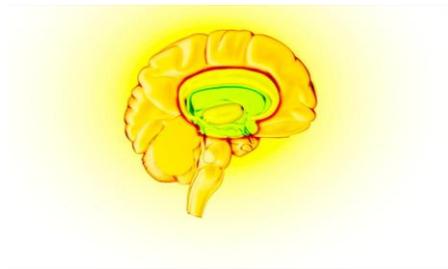
with Frances Jensen, MD, FACP

Definitions

- Bipolar disorder
 - ▶ Bipolar disorder is characterized by uncommon shifts in mood, energy, activity levels, and the ability to carry out day-to-day tasks.ⁱ
- Cortical development
 - ▶ The development of the cerebral cortex.ⁱⁱ The cerebral cortex is a vital layer of tissue that coats the surface of the brain. Most of the actual information processing in the brain takes place in the cerebral cortex.ⁱⁱⁱ
- Depression
 - ▶ Major depressive disorder or clinical depression is a mood disorder with severe symptoms that affect how a person feels, thinks, and goes about daily activities. The symptoms of depression must be present for at least two weeks to diagnose.^{iv}
- Dopamine
 - ▶ A neurotransmitter (or brain chemical that communicates information throughout our brain and body) present in regions of the brain that regulate movement, emotion, motivation, and feelings of pleasure. At normal levels, this system rewards our natural behaviors. Overstimulating the system with drugs produces euphoric effects that strongly reinforce drug use and “teach” the user to repeat it.^v
- Frontal Lobe
 - ▶ One of the four divisions of each cerebral hemisphere. The frontal lobe is important for controlling movement, thinking, and judgment.^{vi}
- Melatonin
 - ▶ A hormone produced by our bodies that stimulates sleep.^{vii}
- Myelin
 - ▶ A protein that wraps the nerve cells and increases the speed that impulses are transmitted from cell to cell.^{viii}
- Nerve impulses
 - ▶ An electrical signal that is carried along a nerve fiber.^{ix}
- Neurons
 - ▶ A unique type of cell found in the brain and body that is designed to process and transmit information.^x



THE POWER OF THE ADOLESCENT BRAIN



- Prefrontal cortex
 - ▶ An area of the brain that help us control impulses, makes decisions, consider the consequences of our behavior, and plan ahead. This is the last area of the brain to develop.^{xi}
- Schizophrenia^{xii}
 - ▶ A chronic and severe disorder that affects how a person thinks, feels, and acts.
- Stimuli
 - ▶ A thing or event that creates a specific functional reaction in an organ or tissue.^{xiii}
- Synapses
 - ▶ The space between neurons where neurotransmitters (the brain chemical that communicates information throughout our brain and body) are released to create nerve impulses.^{xiv}
- Tracts
 - ▶ Bundles of nerve fibers.^{xv}

ⁱ National Institute of Mental Health. Bipolar Disorder. Available at <https://www.nimh.nih.gov/health/topics/bipolar-disorder/index.shtml>

ⁱⁱ Leventer, R. J., Guerrini, R., & Dobyns, W. B. (2008). Malformations of cortical development and epilepsy. *Dialogues in clinical neuroscience*, 10(1), 47.

ⁱⁱⁱ National Institute of Neurological Disorders and Stroke. Brain Basics: Know your Brain. Available at http://www.ninds.nih.gov/disorders/brain_basics/know_your_brain.htm#cortex

^{iv} NIMH » Depression. Available at http://www.nimh.nih.gov/health/topics/depression/index.shtml#part_145398

^v National Institute on Drug Abuse. Drugs, Brains, and Behavior: The Science of Addiction. Available at <https://www.drugabuse.gov/publications/drugs-brains-behavior-science-addiction/drugs-brain>

^{vi} The Brain—Glossary, Page 1. Available at <https://science.education.nih.gov/supplements/nih2/addiction/other/glossary/glossary.html#ae>

^{vii} Melatonin: In Depth | NCCIH. Available at <https://nccih.nih.gov/health/melatonin#hed2>

^{viii} Lodish, H., Berk, A., Zipursky, S. L., Matsudaira, P., Baltimore, D., & Darnell, J. *Molecular Cell Biology*. Available at <http://www.ncbi.nlm.nih.gov/books/NBK21607/>

^{ix} Lodish, H., Berk, A., Zipursky, S. L., Matsudaira, P., Baltimore, D., & Darnell, J. *Molecular Cell Biology*. Available at <http://www.ncbi.nlm.nih.gov/books/NBK21607/>

^x Lodish, H., Berk, A., Zipursky, S. L., Matsudaira, P., Baltimore, D., & Darnell, J. *Molecular Cell Biology*. Available at <http://www.ncbi.nlm.nih.gov/books/NBK21607/>

^{xi} Funahashi, S., & Andreau, J. M. (2013). Prefrontal cortex and neural mechanisms of executive function. *Journal of Physiology-Paris*, 107(6), 471-482.

^{xii} National Institute of Mental Health. Schizophrenia. Available at <http://www.nimh.nih.gov/health/publications/schizophrenia-booklet-12-2015/index.shtml>

^{xiii} Stimulus - definition of stimulus in English | Oxford Dictionaries. Available at <https://en.oxforddictionaries.com/definition/us/stimulus>

^{xiv} Lodish, H., Berk, A., Zipursky, S. L., Matsudaira, P., Baltimore, D., & Darnell, J. *Molecular Cell Biology*. Available at <http://www.ncbi.nlm.nih.gov/books/NBK21607/>

^{xv} Nervous system - The vertebrate system. Available at <https://www.britannica.com/science/nervous-system/The-vertebrate-system#ref606548>