

Chapter 2 Reading Guide

1. What is “psychosocial health?”
2. Discuss the many components of psychosocial health.
3. Does a person have to be religious to experience spiritual health? Explain.
4. Describe a “plan” for developing psychosocial health/happiness in a person.
5. Describe learned helplessness and learned optimism.
6. Discuss how sleep and laughter play a role in a person’s health.
7. What are some common causes for sleep problems in men vs women, and in both genders?
8. Describe the different types of depression, causes for depression (including factors that affect different populations) and treatments.
9. If you found yourself in a situation in which life factors could lead to depression, what are some warning signs you might look for that you could be heading toward depression (even if you have never experienced it before)? What are some steps you could take to try to prevent yourself from getting there? If you find yourself being depressed, or suspect it, what are some steps you can take to start to recover? Are “self treatments” recommended for depression? Why or why not? Be sure to also use table 2.5 as you answer this.
10. What are some factors that are at least partly predictive of the development of depression? □
11. Discuss antidepressant drugs and how they work. (be sure to also use my supplemental lectures and required links)
12. What is anxiety? Discuss different types of anxiety disorders. What are some factors that affect your likelihood of developing one?
13. Describe SAD and schizophrenia. Why do you think SAD is pretty common up here in Western Washington?
14. Go back to chapter 1, table 1.4. Among age groups 5-14, 15-24, and 25-44, where does suicide rank in the top 5 reasons for death?
15. What are some warning signs of suicide?
16. What are some measures you can take to help a person whom you suspect might feel suicidal?
17. If you were a person feeling suicidal, what are some actions you can take to protect yourself?
18. Describe different types of mental health professionals, and what treatments often consist of.
19. What are some examples of how mental health can affect physical health?

-the following refer directly to my supplemental lectures (below) and to the required links listed for chapter 2 in the Reading Guides page; they are not from the text-

20. Define axon, dendrite, neurotransmitter, synapse and receptor. Now explain how they are related.
21. What does the term "reuptake" mean as it relates to communication between neurons? □
22. What are the "positive" symptoms of schizophrenia? "negative"? □

23. In what part of the brain do schizophrenics have fewer of certain dopamine receptors than non-schizophrenics? □
24. In what part of the brain do schizophrenics produce more dopamine than non-schizophrenics? □

Supplemental Lecture

I. The brain, neurons, neurotransmitters, receptors and reuptake:

When you look at a picture of a whole brain, like the picture from HowStuffWorks, you are looking at a structure that is composed of millions of individual neurons, other types of cells (for example, glial cells that take care of neurons), and connective material that holds all these cells together. Neurons in specific parts of the brain deal with specific types of information; for example, neurons in the occipital lobe receive information coming in from your eyes, and help translate that information into what you perceive as a vision. Neurons in the cerebellum help to coordinate complex movements without your conscious awareness.

Neurons talk to other neurons using chemicals: neurotransmitters. The end of one neuron (the axon) will spit neurotransmitters onto the dendrites of another neuron. This transmission of chemical sends a message from one neuron to the next. For example, neurons in your eyeball receive light information. They have axons that extend into the part of the brain called the thalamus. There, the neurons from your eyeball spit neurotransmitters onto neurons in the thalamus. Now, the neurons from the thalamus have axons that extend into the occipital lobe of your brain. Here, the thalamic neurons spit neurotransmitters onto neurons in the occipital lobe. Once this occurs, your perception of the vision can begin.

There are lots of interconnections throughout the brain; information tends to be shared with lots of different areas of the brain. So, for example, when your eyeball neurons "see" something, that information will go to the occipital lobe as you know, but it will also go to neurons in other areas. It will go to areas that process light information and regulate your sleep-wake cycles. It will go to areas that process emotional responses and (hopefully) elicit an appropriate response.

So, neurons talk to each other with chemicals, and different neurons in different parts of the brain process different types of information (or different aspects of the same types of information, like the example of vision vs. light vs. emotion above). But, the only way for neurons to communicate effectively with chemicals is if the "listening" neuron has receptors for a neurotransmitter, and if those receptors work well. When the "talking" neuron spits out a neurotransmitter, the neurotransmitter must bind to a receptor on the surface of the "listening" neuron. Only then can the listening neuron respond. And, neurotransmitters don't stay bound for long. The "talking" neuron immediately sucks back its neurotransmitter. It's like when you talk to somebody: in order for them to hear it, they must have ears. And, once you say something, the sound doesn't stay stuck in their ears.

Some examples of neurotransmitters you've probably heard of are: serotonin and dopamine.

Okay, the reason I'm going on about this is to try to really point out how important these minute aspects of brain function are to PROPER brain function. Many disorders are linked to problems with neurotransmitters (too much is made, not enough is made) and receptors (not enough, not shaped right). For example, Parkinson's disease is caused by not enough dopamine being made by neurons; schizophrenia is associated with too much dopamine. Some types of depression are associated with not enough serotonin. Some of these anomalies have a genetic basis, some can be affected by life experiences, both emotional and physical.

And many drugs take advantage of the way neurons communicate. For example, many antidepressants are serotonin reuptake inhibitors (SSRI). What that means is, when serotonin is spit out by a talking neuron, the antidepressant makes it less able to suck serotonin back in. The longer serotonin stays bound to the listening neuron, the better you feel! (Yes, this is oversimplified!). □

II. Technical, nitpickity note: this is a correction of the text, it is grammatical, nothing you'll be tested on but something you should know-

The box "Health in a Diverse World" focuses on "how data is collected and used." Really, the word "data" is plural. The word "data" refers to many single units of information, each unit is a "datum." So, the title of that box should say "how data ARE collected and used." Whenever you use the word data, you are referring to many datum (pieces of information), and should use the word as a plural.