

Zombified Brains

Introduction: The zombie apocalypse is upon us, and – uh-oh – you've all been infected! Your hunger for brains is insatiable. Luckily for you, you were all able to get your hands on just the brain you needed. Being anatomy students, naturally you chose to eat the brain lobe by lobe, piece by piece. However, you noticed some side effects as you ate – and not just your arms falling off . . . The side effects seem to match the function of the brain part you are consuming.

Consult your online textbook, class lectures, and guided notes to help you identify which section of the brain is being eaten based on the side effects zombie-you is experiencing and answer the subsequent questions.

1. PART 1: You begin eating the superior portion of the brain, the cerebral hemispheres or cerebrum. *As you eat, you notice that you start to lose control over your body. When you eat from the right portion of the brain, your left side spasms; when you eat from the left side, the right side of your body loses all voluntary control of skeletal muscles. Further, you have lost your ability to concentrate, solve complex problems, and judge the consequences of an action, and so you decide to keep eating from this section of the brain. As you eat from the left hemisphere of this lobe, you also stop being able to speak.*
 - a. Which **LOBE** of the brain are you eating?
 - b. What were the key functions that led you to that conclusion?
 - c. Specifically, what part of this lobe controls our voluntary movement?
 - d. Why does the left side of the brain control movement on the right side of the body and vice-versa?
 - e. Specifically, what area in this lobe would affect your ability to concentrate, solve complex problems, and judge the consequences of an action?
 - f. What did you most likely eat that caused you to stop being able to talk?
 - g. Did it matter that your answer in “f” was specific to the left hemisphere when you stopped being able to talk?

2. PART 2: *You move on to your next section of the cerebrum. As you eat from this section, you stop being able to hear very well—or at least being able to make sense of what people are saying to you. You start to lose some of your memory and begin to experience a severe sense of déjà-vu.*
 - a. Which **LOBE** of the brain are you eating?

 - b. Which area in this lobe would be responsible for you being unable to make sense of what people are saying to you?

3. PART 3: *You continue eating the cerebrum. As you eat this section, you lose sensation in your skin and are no longer able to feel the brain in your cold, rotting hands. You try to yell to a friend in frustration but realize that you can no longer use words. You look back at the brain in your hands and realize you've already consumed the left hemisphere, so you might as well continue on and finish off the right.*
 - a. Which **LOBE** of the brain are you eating?

 - b. What were the key functions given that led you to that conclusion?

4. PART 4: *You have one piece of the cerebrum left. As you eat, everything you see around you stops making sense. Are you going blind? Your eyes still work, don't they? But you don't recognize anything you're seeing anymore—not even the friend you tried to call out to before.*
 - a. Which **LOBE** of the brain are you eating?

 - b. What were the key functions given that led you to that conclusion?

 - c. Where in the cerebrum is this lobe located? (Use directional terminology to explain!).

5. PART 5: *Finished with the cerebrum, you are not satisfied—you decide to keep eating. In one large bite, you eat three structures all at once. Your body temperature goes haywire, your heart rate increases, blood pressure spikes, you're suddenly wide awake, and your emotions are in uproar. To top it all off, your smell begins to fade.*
- Which major division of the brain did you just eat?
 - List the three structures you ate that comprises this major division from part a.
 - Which of the three structures is most likely responsible for the differences in body temperature, heart rate, and blood pressure?
 - What center is housed in this part of the brain and would cause your emotions to be in an uproar?
6. PART 6: *In another large bite, you consume 2 structures of the brain stem at once, leaving the bottom structure of the brain stem—however, due to your decay and the side effects from the other portions of the brain, the only change you notice is that your breathing has lost all rhythm.*
- Which part of the brain did you just eat based on the function given? (**only one answer**)
 - Due to its location, which other part of the brain stem did you probably eat on the way to the structure from part a?
 - What is the function of the structure given in part b?
7. PART 7: *You pluck off a mass attached to what you've been eating from and pop it in your mouth. Once it slides down your throat, you feel yourself lose a sense of balance and posture—you hunch into the zombie you were afraid of becoming. You develop tremors and twitches, and when you walk, you reel.*
- Which part of the brain did you just eat?
 - What were the key functions that led you to that conclusion?

8. PART 8: *Nearly full and very distraught, you are ready to eat your last section of the brain stem before it connects to the spinal cord. Once you do, your heart rate changes yet again, your blood pressure fluctuates drastically, and your breathing becomes deep then shallow with no rhythm. Random reflexes shoot off and you cough then swallow then sneeze.*

a. Which part of the brain did you just eat?

b. What were the key functions given that led you to that conclusion?

Suddenly, everything in your body stops. You go slack jawed, and your mind goes blank. You gaze in front of you at the faint outline of, what, another zombie? No, a human. You glide your decaying leg along the ground and reach out after them, groaning, "BRAAAAAAAAAAIIIIINNSSSSSS....."

Credit: Modified version of "Zombified Brains" by Ms. Ridgley | William M Raines Senior HS