

Name: _____

Date: _____

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Weekly Reading HW

HW Wk _____

Directions: Read and annotate the passage below. Then answer the questions.

Is your Nose Making you Overeat?

Some people are drawn to the thick smell of bacon, sizzling in the skillet. For others, it's the aroma of freshly baked cookies or McDonald's fries. At this time of year, I find the scent of freshly baked pumpkin muffins irresistible. Of course, I'd like to think I'm not a slave to my nose, at least not when I'm full from dinner. It would be a different story if I were a fruit fly. Already-fed fruit fly larvae (immature fruit flies) exposed to certain food-related smells ate more food than larvae that didn't experience the smells, according to a new study.

According to the study, the scents, such as the sweet odor of bananas, served as "cues" or triggers for the flies. The triggers motivated the fly larvae to eat, even when they'd already eaten. "They're not hungry, but they will get an extra kick in their appetite, so they will eat 30 percent more," said Dr. Shen, lead author on the study. For the fly to feel this urge to eat, the smell has to be transported from receptors in the nose to the part of the brain that regulates appetite through a series of neurons (brain cells). Part of this signal transfer involves a brain chemical associated with behavior motivated by a hint of something to come, like food smells.

So can the scent of freshly baked cookies paired with my brain's neurons drive me to eat despite my stomach being full? Studies show food aromas activate specific areas of the brain that are associated with motivation to get a reward. Food aromas can actually cause humans to overeat, although whether they will depends on a variety of other factors, such as current weight. Other studies have considered the way the brain responds to pictures of food. "The areas in the brain that regulate reward and motivation are activated just by the sight of food," said Dr. Page, another scientist. "Not only are those regions activated when you see pictures of palatable junk food like chocolate cake, people also have higher ratings of hunger and a desire to eat."

In a country with restaurants lining the roads, churning out appetizing smells, and food ads on every billboard and commercial break, our brains can make eating healthy amounts challenging. Constant food stimulation in our environment can promote overeating and obesity. However, data shows urges caused by a food smell tend not to last.

1. (RST.9-10.2) The main idea of the passage is that:
 - a. The brain's neurons are wired in such a way that make it impossible not to want to eat food if you smell food.
 - b. The brain thinks that eating junk food is like a reward so it is difficult to avoid junk food.
 - c. Fruit fly larvae think they are full when they are not, so they eat when they smell food.
 - d. Food smells can impact the amount of food a person eats despite their hunger level.

2. (RST.9-10.4) As it is used in the passage, the term *palatable* means:
 - a. Detestable
 - b. Nutritious
 - c. Crunchy
 - d. Tasty

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3. (RST.9-10.1) The author mentions all of the following as things that cause us to overeat EXCEPT:
- a. Seeing a billboard for some restaurant
 - b. Preparing and cooking food to eat
 - c. Passing a restaurant and smelling the food
 - d. Watching a television advertisement for a restaurant

4. (RST.9-10.1) The reader can conclude from the passage that the author is someone who:
- a. Does not like fast food but likes homemade desserts.
 - b. Likes to eat junk food like muffins or cookies.
 - c. Is on a diet and is trying not to eat junk food.
 - d. Does not like the taste of sweets like chocolate cake.

5. (RST.9-10.1) What happens in the brain that makes food smells so irresistible to flies and humans?

6. (RST.9-10.1) According to the last paragraph, what is worrying about today's constant food stimulation?

Adapted from the article, "Is your nose making you overeat?" by Julianne Wyrick for Scientific American, on September 30, 2013.