

THE PSYCHOLOGY OF HUNGER



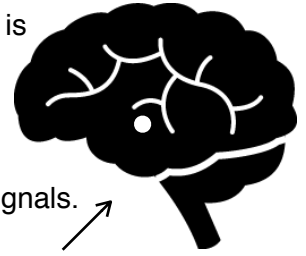
HUNGER

Burt Block says . . .

We often eat when we are not even hungry. We eat when we are bored, or out of habit at a certain time. We eat because we love the taste of a particular food that we know it will make us feel better (Hmmm. . . donuts. . .). But what about when we are *really* hungry, when our body needs food for energy?



A small pea size structure in the brain is responsible for regulating hunger. It is called the **hypothalamus**. If a portion of the hypothalamus called the **lateral hypothalamus (LH)** is stimulated with electrodes, a rat will begin eating, even if it has just finished a large meal. However if the LH is removed surgically, a rat will stop eating and will die of starvation. Thus the lateral hypothalamus (LH) is a part of the hypothalamus that produces hunger signals.



1. What is that little white circle in the picture of the brain above?

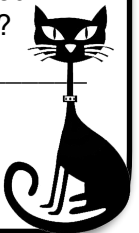
2. What does the lateral hypothalamus(LH) do? _____

If a different portion of the hypothalamus called the **ventromedial hypothalamus (VMH)** is stimulated, a rat will slow down or even stop eating, even if kept from food for a long time. If the VMH is removed, the animal will eat everything possible until it becomes so obese it can hardly move. Thus the ventromedial hypothalamus (VMH) is a part of the the hypothalamus that can cause one to stop eating.

3. What does the ventromedial hypothalamus(VMH) do? _____

4. Due to a freak baseball game accident, Burt's friend Pete had his **ventromedial hypothalamus** destroyed. While in recovery at the hospital, Pete was given some delicious hospital food. How much did Pete eat?

5. Betty's cat Beau is constantly trying to eat Betty's hamster. Burt crudely suggested destroying Beau's _____ in order to reduce Beau's desire to eat. Betty was stunned.



Other factors also influence your hunger. A major resource of energy in your body is the blood sugar **glucose**. Glucose is a form of sugar that circulates in the blood and is the body's major source of energy. If your blood glucose level drops, your LH fires to stimulate you to eat and thus triggers hunger.

6. Two biological factors that influence hunger are the hypothalamus and _____

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Yet another factor affecting your hunger is **set-point**, the weight range in which your body is programmed to function normally. Although your daily calorie(energy) intake fluctuates, your body maintains a stable weight over the long run by increasing and decreasing metabolism(energy expenditure).

7. What are three biological factors that influence hunger? _____

PSYCHOSOCIAL FACTORS OF HUNGER

Besides biological or internal factors that influence hunger, there are also external or psychosocial factors that influence hunger and eating. The following are social factors that influence eating behavior.

- Presence of others - When other people are eating, we tend to eat more. The presence of others tends to amplify our natural behavior tendencies.
- Unit bias - The larger the portion size, the more we will eat.
- Food Variety - The more variety of food choices we have access to, the more we eat

8. What are three psychosocial factors that influence hunger? _____



OBESITY

Obesity is on the rise around the world. Obesity has been associated with heart disease, diabetes, stroke, arthritis, certain types of cancers, and lower psychological well being.

Genetic Factors

In studies, despite shared family meals, adoptive siblings' body weights are uncorrelated with one another or with those of their adoptive parents. People's weights are similar to their biological parents.

Food and Activity Factors

- Overeating - U.S. portion sizes have increased over the 40 years, leading to more caloric intake and encouraging people to eat more
- Inactivity - According to U.S. Dept. of Health and Human services, more than 80% of American adults do not meet the guidelines for both aerobic and muscle-strengthening activities. Physical activity among Americans have gone down.
- Studies have shown that people who suffer from sleep loss are more vulnerable to obesity
- *Social influence* - people are more likely to become obese when a friend becomes obese (Christakis & Fowler, 2007)

9. What physical problems are associated with obesity? _____

10. What are two ways portion size influences our weight? _____