

MODULE 38 HUNGER MOTIVATION**THE PHYSIOLOGY OF HUNGER**

- A.L. Washburn swallowed a balloon to keep up with stomach pangs when hungry. Before, hunger was perceived due to these stomach pangs but when the stomachs were removed from rats, it was shown that hunger was still triggered. The main source of energy in your body is the blood sugar GLUCOSE. When low, your stomach, intestines, and liver will signal your brain to motivate eating.
- In the brain, the hypothalamus controls hunger. Blood vessels supply the hypothalamus, enabling to respond to our current blood chemistry as well as to incoming neural information about the body's state. Appetite hormones include ghrelin, insulin, leptin, orexin, and PYY.
- A SET POINT is the point at which an individual's "weight thermostat" is supposedly set. When the body falls below this weight, an increase in hunger and a lowered metabolic rate may act to restore the lost weight. Influenced by heredity.
- We humans vary in our BASAL METABOLIC RATE, a measure of how much energy we use to maintain basic body functions when our body is at rest.

THE PSYCHOLOGY OF HUNGER

- One part of our decision to eat is our memory of the time of our last meal. As time passes, we think about eating again, and those thoughts trigger feelings of hunger.
- Our taste preferences are influenced on body chemistry and environmental factors. When feeling tense or depressed, carbs are our go to in order to boost levels of the neurotransmitter serotonin, which has calming effects.

OBESITY AND WEIGHT CONTROL

- The physiology of obesity. Fat is an ideal form of stored energy.
- Studies do reveal a genetic influence on body weight.
- Environmental factors are mighty important too when dealing with obesity sleep deprivation, social influence, food consumption, and activity levels. We are eating more (due to the supply and accessibility) but moving less.

BE ABLE TO ANSWER: You've skipped lunch to meet with your guidance counselor so you haven't eaten anything in 8 hours. As your favorite dish is placed in front of you, your mouth waters. Even imaging this may set your mouth to watering. What triggers this anticipatory salivation?

PRACTICE FRQ: Explain the activity of the appetite hormones insulin and leptin.