

general psychology



Motivation

Hunger, Thirst, and Eating Disorders



Firouz meroei milan

Hunger, Thirst, and Eating Disorders:

Thirty million people a year
DIE of HUNGER

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- By the end of this lesson, I will be able to:
- 1. Discuss the biological factors in the regulation of hunger and thirst.
- 2. Describe the environmental factors in the regulation of hunger.
- 3. Identify the difference between anorexia and bulimia.

Motivation-Hunger



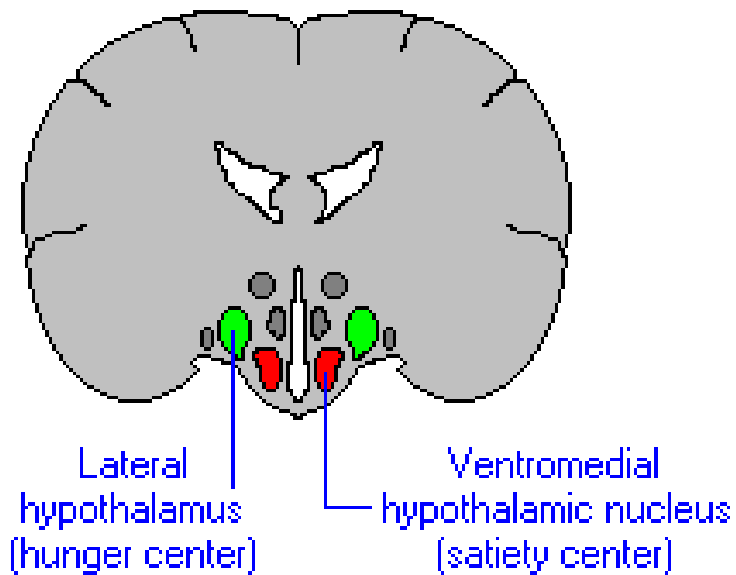
- Why do I feel hungry?
- Glucose
 - the form of sugar that circulates in the blood
 - provides the major source of energy for body tissues
 - Glucose Low = hunger
 - Glucose High = feel full

Brain Regulation:



- The hypothalamus regulates several biological needs (including hunger and thirst)
- “Investigators found that when they surgically destroyed animals’ lateral hypothalamus, the animals showed little or no interest in eating.” (Anand & Brobeck, 1951)

Check This Out! – Cont.



- “When researchers destroyed animals’ ventromedial nucleus of the hypothalamus, the animals ate excessively and gained weight rapidly.” (Brobeck, Teperman, & Long, 1943)

Hypothalamus Theory:



- This theory had always been widely accepted.
- Now some debate ensues
- Several researchers are focusing more on neural circuitry than just the hypothalamus.

Hunger - Environmental Factors



- There are several environmental factors that affect our hunger
- 1. Availability of food
- 2. Learned preference and habits
- 3. Stress

Hunger – Cont.



- Eating for survival vs. eating for pleasure.
- Tasty food is more likely to be eaten even when full (**palatability**)
- Environmental cues matter
 - 1. Commercials
 - 2. Odors
 - 3. Talking about it

Learned Preference and Habits



- Food preferences -
acquired through learning
- Sugary and fatty foods are important for survival (that's why they're popular)

Stress and Eating



- Enjoyable foods = feeling better
- Stress = overeating
- This is a vicious cycle because the food doesn't really make you "feel" better.
- We are born with a predetermined number of fat cells
- **When we gain weight** – fat cells increase in size / set point goes up
- **When we lose weight** – fat cells decrease in size / set point goes down

Click the pic!

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Motivation-Hunger



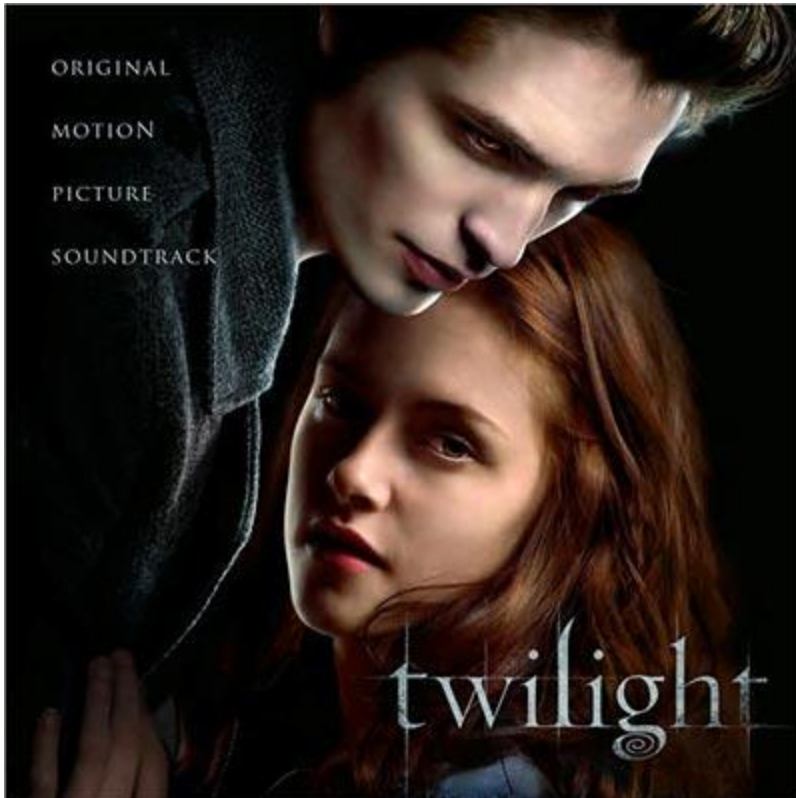
- Set Point
 - the point at which an individual's "weight thermostat" is supposedly set
 - when the body falls below this weight, an increase in hunger and a lowered metabolic rate may act to restore the lost weight
- Basal Metabolic Rate
 - body's base rate of energy expenditure

Eating Disorders:



- **Anorexia Nervosa** – starvation, low body weight, frequent exercise, usually women
- **Bulimia Nervosa** – eating binges, followed by vomiting or laxatives
- Some theories state social influences (media, peers, sexual abuse, etc.)
- Some theories state low levels of serotonin = depression

Thirst:



- Regulation of thirst is similar to regulation of hunger.
- Mouth dryness plays a role
- Most important is the fluid content of cells and the volume of blood
- When we vomit, have diarrhea, or donate blood, the volume of our blood decreases.
- Our hypothalamus encourages us to drink to bring this system back to homeostasis.