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WHY DO WE FEEL

HUNGRY



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PHYSIOLOGICAL COMPONENTS OF HUNGER

Hunger is a complex process influenced by physiological, hormonal, and neurological factors. It's not just about an empty stomach; it involves signals from the body and brain. This intricate system ensures that the body maintains energy balance and supports survival.



STOMACH AND HUNGER SIGNALS

The stomach helps signal hunger, with early theories linking stomach contractions (hunger pangs) to hunger. While these contractions happen, they aren't the only factor. Sensory receptors in the stomach detect stretching when food is eaten and send signals to the brain to signal fullness. However, people without stomachs still feel hunger, showing that other mechanisms play a role.



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HORMONAL INFLUENCES ON HUNGER

Hormones are key in regulating hunger and energy:

Insulin: Secreted by the pancreas, it lowers blood glucose levels. After eating, insulin levels rise, which can cause blood sugar to drop and trigger hunger.

Glucagon: Increases blood glucose levels, balancing the effects of insulin.

Leptin: This hormone, released by fat cells, signals the brain (via the hypothalamus) to reduce appetite, helping regulate body weight and prevent overeating.



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ROLE OF THE HYPOTHALAMUS

The hypothalamus, a small brain region, plays a central role in regulating hunger:

- *Ventromedial Hypothalamus (VMH):* Signals the brain to stop eating when glucose levels are high. Damage here can cause overeating.
- *Lateral Hypothalamus (LH):* Stimulates hunger when insulin levels rise. Damage can suppress appetite, potentially leading to starvation.

These regions work together to maintain energy balance in the body.



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WEIGHT SET POINT AND BASAL METABOLIC RATE (BMR)

- *Weight Set Point:* The body naturally maintains a specific weight range, with the hypothalamus adjusting hunger and metabolism to keep it steady.
- *Basal Metabolic Rate (BMR):* The rate at which the body burns energy at rest. A high BMR allows for higher calorie consumption without weight gain, while a low BMR makes weight loss harder. Regular exercise helps keep metabolism healthy and prevents excessive weight gain.



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SOCIAL AND CULTURAL COMPONENTS OF HUNGER

- Hunger is influenced by social cues and habits, such as eating at specific times or during social events. Classical conditioning plays a role—hunger can be triggered by external stimuli like the sight or smell of food.
- Cultural factors also shape eating behaviors, with emotional eating more common in some cultures and genders. For example, women in some regions may eat due to stress, while others eat due to hunger or social expectations.



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