Evidence Suggests Low Calorie Sweeteners Don’t Trigger Hormones Involved in Appetite Control – They Just Taste Sweet

- The gut-brain axis is a continuous cycle that helps regulate our desires for food.
  - **BRAIN**: Controls appetite, hunger cues, desire to eat.
  - **GUT**: Releases hormonal triggers that help to regulate nutrient metabolism and signaling to the brain for appetite response.
- Research supports low calorie sweeteners have no effect on gut function or hormones to affect the gut-brain axis in controlling food intake.

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**SIMPLE SUGARS**

- Sweetened with sugar
  - BRAIN: Detects signals of sweet taste and incoming energy and circulating glucose levels. Drives signals to help regulate appetite.
  - GUT: Uptake of energy (primarily glucose), hunger and fullness hormones released.

**LOW CALORIE SWEETENERS**

- Sweetened with low calorie sweetener
  - BRAIN: Detects signals of sweet taste; no signals of incoming energy or detectable changes in circulating glucose levels.
  - GUT: No evidence of effect on hunger or fullness hormones. Sucralose, aspartame and ace-K have effects similar to water.

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1 The authors note that the data in humans is from mostly short-term studies, which may limit the findings, but conclude that “evidence remains lacking for effects [of LCS] on human gut function,” specifically noting a lack of evidence of effects on “gastric motility, gut hormones or appetitive responses.”

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