

# Artificial sweeteners produce no glucagon response

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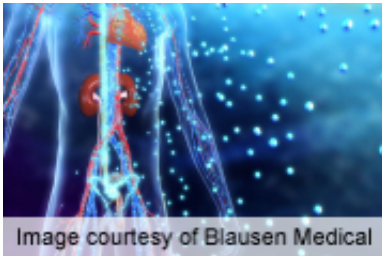


Image courtesy of Blausen Medical

"In conclusion, sucralose and AceK, either alone or in combination, have no acute effect on gastric emptying, GLP-1, or glycemic responses after oral glucose in healthy humans," the authors write.

**More information:** [Abstract](#)  
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(HealthDay)—Artificial sweeteners do not produce any changes in glucose metabolism compared to a glass of water, according to a letter published in the December issue of *Diabetes Care*.

Tongzhi Wu, M.B.B.S., from the University of Adelaide in Australia, and colleagues evaluated whether oral administration of sucralose and acesulfame potassium (AceK) would augment the glucagon-like peptide-1 (GLP-1) response to oral [glucose](#) and modulate gastric emptying or glycemia in 10 healthy men (mean age, 33.6 years). Participants were studied on four occasions separated by at least three days, in which they, following an overnight fast, consumed either 240 mL water alone or equivalently sweetened with 52 mg sucralose; 200 mg AceK; or 46 mg sucralose plus 26 mg AceK. Ten minutes later, each drank 75 g of glucose, made up to 300 mL with water and containing 150 mg <sup>13</sup>C-acetate. Over 240 minutes, blood glucose, plasma insulin, total GLP-1, and gastric emptying were measured.

The researchers found that [blood glucose](#), plasma insulin, and total GLP-1 concentrations did not change after either water or sweetened drinks, prior to glucose ingestion; however, following oral glucose, each significantly increased ( $P^{13}\text{CO}_2$ :<sup>12</sup>  $\text{CO}_2$  ratio or the half-emptying time.

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