

# Gastrointestinal Response and Plasma and Urine Determinations in Human Subjects Given Erythritol

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## **Abstract:**

This study was undertaken to examine the influence of erythritol on certain plasma and urinary parameters and to assess the gastrointestinal response of humans given erythritol at single oral doses of 0.4 or 0.8 g/kg body wt/day. Three groups of six healthy volunteers each received a midmorning snack containing the equivalent of 0.4 or 0.8 g erythritol/kg body wt or 0.8 g sucrose/kg body wt. A fourth group received no snack and served as a negative control group. Consumption of erythritol did not affect plasma osmolarity, water consumption, or diuresis, and no significant variations in plasma or urine electrolyte balance were observed. Plasma glucose and insulin concentrations also were not affected by erythritol. Gastrointestinal responses to erythritol were comparable to those of sucrose. Plasma and urine erythritol concentrations increased within 2 hr of ingestion in proportion to the amount ingested. Approximately 60% of the erythritol dose was eliminated in the urine within 22 hr. The results of this study demonstrate that ingestion of erythritol at doses of up to 0.8 g/kg body wt does not alter plasma or urine osmolarity or electrolyte balance and is well tolerated by the digestive tract.

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