

DECREASE OF ENTEROTOXIN-INDUCED JEJUNAL FLUID ACCUMULATION  
BY ACIDS IN DOGS

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The effects of acidity on the response to cholera and E. coli (LT) enterotoxins in dog jejunum were tested. Fluid accumulation induced by the enterotoxins was reduced by 60% after exposure of jejunum to 0.1N or 0.3N HCl. Infusion of 2.1 ml. of 0.1N HCl per centimeter of jejunum over one hour was effective when carried out so as to maintain loop pH near 1.0 during that period. When 0.3N HCl was used the required acid volume per centimeter jejunum diminished to 0.7 ml/cm and the duration of loop exposure to acid could be decreased to 30 minutes. Equimolar  $ZrOCl_2$  was as effective as HCl and equinormal  $H_2SO_4$  and  $HNO_3$  were also effective. Microscopic changes confined to the tips of the villi were noted but biopsies taken in convalescence were normal. These observations may be useful in the treatment of human cholera and related diarrheal diseases.

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