

THE EFFECT OF CORTICOTROPIN-RELEASING HORMONE ON DUODENAL PERMEABILITY AND IMMUNE ACTIVATION IN HEALTHY VOLUNTEERS

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Poster

Oesophagus

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A randomized crossover study in 20 healthy volunteers found that acute intravenous CRH administration decreased duodenal permeability and tryptase release in biopsy supernatant, contrary to the hypothesis that CRH would increase permeability and immune activation.

KEY POINTS

- Participants received 100 µg intravenous CRH or placebo in a double-blind crossover design, with duodenal biopsies taken two hours post-injection for permeability and immune marker assessment.
- CRH administration significantly decreased FITC-D4 flux (41.4 pmol placebo vs 33.0 pmol CRH, $p < 0.0001$) and showed a trend toward increased TEER ($p = 0.056$), indicating decreased duodenal permeability.
- Tryptase release in biopsy supernatant was significantly lower after CRH exposure (6.06 ng/mL placebo vs 4.03 ng/mL CRH, $p = 0.031$), with a trend toward decreased eosinophil-derived neurotoxin ($p = 0.061$).
- No significant correlation was found between changes in permeability measures and changes in tryptase, chymase, or eosinophil-derived neurotoxin secretion.
- This study may interest researchers investigating gut-brain axis mechanisms, particularly the unexpected protective effects of acute CRH on intestinal barrier function in healthy individuals.

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