

EFFECTS OF INTRACOLONIC FRUCTANS, FRUCTOSE, AND MANNITOL INFUSION ON COLONIC MOTILITY WITH HIGH-RESOLUTION COLONIC MANOMETRY IN HEALTHY SUBJECTS

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Poster

Colorectal

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In healthy volunteers, intracolonic infusion of different FODMAPs (fructans, fructose, mannitol) produces distinct colonic motility patterns measured by high-resolution manometry, with fructans inducing more anterograde and synchronous motor activity including interrupted pressurizations linked to gas transit.

KEY POINTS

- Fructans infusion resulted in significantly more postprandial long anterograde patterns (median 40) and long synchronous patterns (median 6) compared to fructose and mannitol ($p=0.0008$ and $p=0.001$ respectively).
- Pan-colonic interrupted pressurizations, previously associated with gas transit, were significantly more frequent after fructans (median 12 postprandially) than after fructose (median 6) or mannitol (median 5), $p=0.004$.
- Mannitol tended to induce long retrograde patterns postprandially ($p=0.07$) and accounted for 50% of high-amplitude retrograde-propagating contractions observed.
- No significant differences in gastrointestinal symptoms were detected between the three FODMAPs, though flatulence and abdominal cramps were slightly increased after fructans.
- This double-blind crossover study in 15 healthy volunteers used a 36-sensor high-resolution colonic manometry catheter to measure motility for 4.5 hours following intracolonic infusion of 200 mL of each FODMAP solution.

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