

Stress-induced GI motility disorders (supported by NIH RO1)

Stress is one of the most important contributing factors in the pathogenesis of functional GI disorders. Patients with serious stress frequently complain of GI symptoms and these symptoms are, at least in part, due to GI motility disorders. Restraint stress delays solid gastric emptying in rats. The inhibitory effect of restraint stress on gastric emptying is mediated via central corticotropin releasing factor (CRF), CRF₂ receptors and peripheral sympathetic neurons^{46,47}. Restraint stress augments postprandial gastric motility and impairs the coordination between the antrum and pylorus in rats⁴⁸⁻⁵⁰.

In contrast to gastric emptying, restraint stress accelerates colonic transit in rats⁵¹⁻⁵³. The stimulatory effect of restraint stress on colonic transit is mediated via central CRF₁ receptors, peripheral parasympathetic neurons and 5-HT₃ receptors^{51,54-57}.

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