

Different effects of cholestyramine on postprandial secretions of cholecystokinin and peptide YY in women with bulimia nervosa.

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Objective: Patients with bulimia nervosa (BN) are reported to have decreased postprandial levels of cholecystokinin (CCK) and peptide YY (PYY). Fatty nutrients are the most powerful stimulus for releasing these peptides. Cholestyramine is an anion exchanger which adsorbs bile salts and reduces the digestion of lipids, affecting the secretion of both CCK and PYY. To further characterise the physiology of these peptides in BN, we aimed to investigate the effects of cholestyramine (12 g, per os) or placebo administered with a high-fat meal on CCK and PYY secretions in bulimic versus healthy women.

Results: Postprandial CCK levels significantly increased in both healthy and bulimic women after placebo + the high-fat meal, without any significant difference between the two groups. Cholestyramine administration significantly increased postprandial CCK responses in both healthy and bulimic women; however, significantly lower CCK levels were observed in BN. Postprandial PYY levels significantly increased after placebo administration in healthy women after the high-fat meal, whereas no significant changes were found in bulimic women. Cholestyramine, administered with the high-fat meal, significantly reduced postprandial PYY response in healthy women, but not in bulimic women. Finally, there was a negative correlation of the area under the curve with respect to the increase of PYY (after placebo administration) with binge frequency in the bulimic women.

Conclusion: In BN an altered postprandial secretion of CCK may be evidenced when cholestyramine is combined with a high-fat meal. Instead, the postprandial secretion of PYY is significantly blunted and not affected by cholestyramine administration.

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