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Coffee and Gastrointestinal Function: Facts and Fiction. A Review

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Abstract

Background: Effects of coffee on the gastrointestinal system have been suggested by patients and the lay press, while doctors tend to discourage its consumption in some diseases.

Methods: The literature on the effects of coffee and caffeine on the gastrointestinal system is reviewed with emphasis on gastrointestinal function.

Results: Although often mentioned as a cause of dyspeptic symptoms, no association between coffee and dyspepsia is found. Heartburn is the most frequently reported symptom after coffee drinking. It is demonstrated that coffee promotes gastro-oesophageal reflux. Coffee stimulates gastrin release and gastric acid secretion, but studies on the effect on lower oesophageal sphincter pressure yield conflicting results. Coffee also prolongs the adaptive relaxation of the proximal stomach, suggesting that it might slow gastric emptying. However, other studies indicate that coffee does not affect gastric emptying or small bowel transit. Coffee induces cholecystokinin release and gallbladder contraction, which may explain why patients with symptomatic gallstones often avoid drinking coffee. Coffee increases rectosigmoid motor activity within 4 min after ingestion in some people. Its effects on the colon are found to be comparable to those of a 1000 kCal meal. Since coffee contains no calories, and its effects on the gastrointestinal tract cannot be ascribed to its volume load, acidity or osmolality, it must have pharmacological effects. Caffeine cannot solely account for these gastrointestinal effects.

Conclusions: Coffee promotes gastro-oesophageal reflux, but is not associated with dyspepsia. Coffee stimulates gallbladder contraction and colonic motor activity.

