

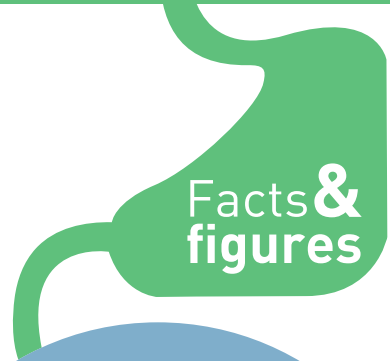


### Caffeine, coffee and GI function

The gastrointestinal (GI) tract is involved in the digestion and absorption of all food, fluid and nutrients. A normally functioning digestive tract is essential to wellbeing, ensuring adequate amounts of fluid and nutrients are absorbed to keep the body healthy.

Scientific research suggests coffee has no significant adverse effects on the GI tract in healthy individuals<sup>1,2</sup>.

Read some of the scientific research in each area:



Facts & figures

#### Dyspepsia

No association between coffee drinking and dyspepsia has been found, however research in the Netherlands suggests that 38% of the general population believe it is a cause<sup>7</sup>. Work has investigated a role for the bacterium, *H. pylori*, in dyspepsia<sup>8-14</sup>.

#### Reflux and stomach pains

Common causes of acid reflux are over-eating, or eating highly spiced food. There is no clear research that coffee drinking worsens symptoms, or that abstinence reduces the symptoms<sup>1,2,6-9</sup>. Individuals with gastritis (stomach irritation) often self-regulate their diet and may limit coffee consumption according to their own sensitivities<sup>1</sup>.

#### Oesophagus

In 2016, the International Agency for Research on Cancer (IARC) classified beverages consumed at very high temperatures (defined as over 65°C) as "probably carcinogenic to the human oesophagus"<sup>3</sup>. It is the temperature, rather than the drinks themselves, that appears to be responsible. 65°C is significantly hotter than the temperature at which most people can comfortably drink coffee without scalding their mouth and tongue; coffee is typically drunk at temperatures below 60°C<sup>4,5,2-6</sup>. When IARC assessed evidence for a link between oesophageal cancer and coffee specifically, it found insufficient evidence of an association.

#### Stomach and intestinal ulcers

Research suggests a role of the bacterium *Helicobacter pylori* (*H. pylori*) in their development<sup>2,14-16</sup>. Coffee consumption is not associated with an increased occurrence of gastric or duodenal ulcers.

#### Gallstones

Research suggests that drinking coffee may help to reduce the risk of developing gallbladder disease (or symptomatic gallstones) by up to 45% in men and up to 28% in women<sup>17,18</sup>. Caffeine in coffee can cause contraction of the gallbladder and whilst it may prevent small stones forming in the gallbladder, those with pre-existing gallstones may experience pain caused by such contractions<sup>17,18</sup>.

#### Cancers of the stomach, colon, liver, pancreas and bowel

In 2016, IARC reviewed all available research on coffee and cancer and found no clear association between coffee intake and cancers of the digestive system. IARC classified coffee in Group 3, for agents "not classifiable as to carcinogenicity to humans"<sup>3,19-21</sup>.

#### Dehydration

Caffeine itself can have a small diuretic effect, however the fluid intake consumed in a cup of coffee outweighs this effect. Advice to avoid coffee because it causes dehydration is not supported by scientific research<sup>25,26</sup>.

#### Diarrhoea

Most food and drink stimulates movement in the large intestine, as part of the routine digestive process. One study investigated the effect of regular and decaffeinated coffee on intestinal motility, and found that the effect of caffeinated coffee on intestinal motility was similar to a full meal, 60% stronger than water and 23% stronger than decaffeinated coffee<sup>24</sup>.

#### IBS, gastritis, Crohn's Disease, colitis and ulcers

There is no indication that coffee aggravates disorders such as IBS, gastritis, Crohn's Disease, colitis and ulcers<sup>2,10-12,22,23</sup>. However, sufferers of these conditions may choose to self-regulate their diets according to their own perceived triggers, possibly including coffee<sup>10,11,22</sup>.





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