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**Prevalence of irritable bowel syndrome and functional dyspepsia after acute gastroenteritis: systematic review and meta-analysis**

Porcari S, Ingrosso M, Maida M, et al. [Prevalence of irritable bowel syndrome and functional dyspepsia after acute gastroenteritis: systematic review and meta-analysis](https://gut.bmj.com/content/73/9/1431). Gut 2024; 73: 1431-1440. doi: 10.1136/gutjnl-2023-331835.

Acute infectious gastroenteritis is a recognised risk factor for disorders of gut-brain interaction (DGBI). Subtypes of DGBI, such as irritable bowel syndrome (IBS) and functional dyspepsia (FD) have a clear post infectious (PI) origin. The introduction of the Rome IV criteria has altered the DGBI criteria and resulted in a subsequent decrease in IBS prevalence whilst comprehensive data on the prevalence of PI-FD is limited. Porcari et al., sought to evaluate the prevalence of PI-IBS and PI-FD.

In total 47 studies including 28170 subjects were included in the final analysis. Prevalence of PI-IBS and PI-FD were 14.3% and 12.7% respectively. Individuals with acute gastroenteritis had significantly higher odds of IBS (OR 4.3) and FD (OR 3.0) compared to non-exposed controls. In 2 studies PI-IBS was most associated with parasites (30.1%) followed by bacteria (18.3%) and viruses (10.7%). Campylobacter was associated with the highest PI-IBS prevalence (20.7%). Proteobacteria and SAR-CoV-2 yielded highest odds for PI-IBS (OR 5.4 for both). PI-FD prevalence was 10.0% for SARS-CoV2 and 13.6% for bacteria.

There were considerable persistence rates of PI-IBS (52.3% of subjects at 1-4 years follow up and 39.8% at greater than 5 years follow up).

Whilst this is the largest meta-analysis to evaluate the prevalence of PI-IBS and PI-FD after acute gastroenteritis the study has some limitations. Most of the analyses contained moderate to high heterogeneity and most studies came from Western populations. Areas with a high prevalence of acute gastroenteritis, such as the Asia-Pacific region and Africa had little data. Finally, several studies lacked microbiological evidence of gastroenteritis limiting the assessment of the microbial strains involved in PI-IBS and PI-FD.

Porcari et al., conclude that individuals experiencing acute gastroenteritis had a greater than fourfold increase odds for IBS and threefold increase for FD. Proinflammatory microbes may be associated with development of PI-IBS and PI-FD including proteobacteria and SARS-CoV-2.