

Do proton pump inhibitors prevent dyspepsia and ulcers in chronic users of non-steroidal anti-inflammatory drugs?

Clinical Question	What are the benefits and harms of using proton pump inhibitors (PPI's) to prevent dyspepsia and ulcers in people who chronically use non-steroidal anti-inflammatory drugs (NSAIDs)?
Bottom Line	<p>The findings of this review suggest Compared to placebo, PPI's may slightly reduce global dyspepsia symptoms when measured continuously, though evidence is uncertain when measured dichotomously. PPIs probably lower the risk of ulcers and may slightly improve quality of life, with few adverse events reported, though evidence is limited.</p> <p>Compared to histamine 2-receptor antagonists, PPIs may increase ulcer incidence, but data on other outcomes is lacking.</p> <p>When compared to misoprostol, PPIs may also increase ulcers but reduce adverse events.</p>
Caveat	Most of the available evidence compares proton pump inhibitors (PPIs) with placebo, while only one study each compares PPIs with misoprostol or histamine 2-receptor antagonists. This highlights a significant gap in comparative research, limiting conclusions about the relative effectiveness of PPIs versus these alternatives.
Context	NSAIDs are widely used for pain and inflammation but pose risks with chronic use. Chronic NSAID use, especially in older adults or those with risk factors like peptic ulcers or Helicobacter pylori infection, increases the likelihood of GI toxicity, including dyspepsia and ulcers. NSAIDs inhibit COX enzymes, disrupting protective gastric prostaglandins. Proton pump inhibitors (PPIs), such as omeprazole and pantoprazole, reduce gastric acid secretion and help prevent NSAID-induced GI damage. Though PPIs are generally effective, they may carry risks like kidney disease and nutrient malabsorption, though these associations remain debated
Cochrane Systematic Review	Garegnani L, Oltra G, Burgos MA, Ivaldi D, Varela LB, Díaz Menai S, Puga-Tejada M, Escobar Liquitay CM, Franco JVA. Proton pump inhibitors for the prevention of non-steroidal anti-inflammatory drug-induced ulcers and dyspepsia. Cochrane Database of Systematic Reviews 2025, Issue 5. Art. No.: CD014585. DOI: 10.1002/14651858.CD014585.pub2. This review contains 12 trials which included 8,760 participants.

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Systematic review link:

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD014585.pub2/full>