

# Long-Term Proton Pump Inhibitor (PPI) Use: Less Can Be More When Treating Heartburn

## Best Evidence for Prescribing PPIs for GERD/Heartburn

Do they work? Yes, PPIs can be effective for heartburn symptoms.

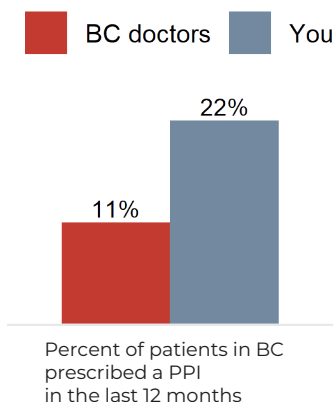
- Specifically: PPIs can improve non-erosive heartburn more than H2RAs (e.g. cimetidine) RR 0.78 and more than placebo RR 0.71.<sup>1</sup>

How long should a prescription be? Just 4-8 weeks. Most clinical trials for relief of heartburn symptoms with PPIs were this long.<sup>1</sup>

## Harms of Long-Term PPI Prescribing

PPIs are associated with serious harm that increases with duration of exposure, age, and comorbidity. These harms include increased risk for: chronic kidney disease,<sup>2</sup> gastric cancer,<sup>3</sup> cardiovascular disease, *C. difficile* and fractures.<sup>6</sup> Increase in mortality is controversial and studies are ongoing.<sup>6</sup>

When PPIs are indicated, they should be prescribed at the lowest dose and shortest time period.<sup>4</sup>

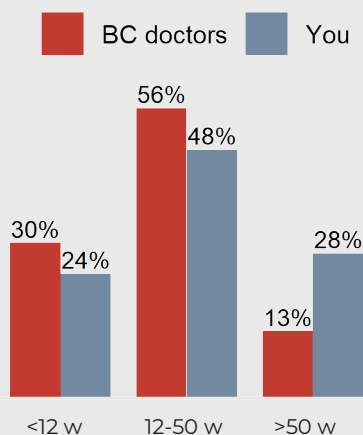


## When Long-Term PPIs May Be Appropriate

Long-term use of PPIs may be indicated for some serious conditions such as: moderate-to-severe esophagitis, Barrett's esophagus, Zollinger-Ellison syndrome, *H. pylori*, chronic NSAID or anticoagulant use, or peptic ulcer disease.<sup>4</sup>

### Length of PPI Prescriptions

(cumulative renewal of PPI prescription, per patient, in a year)



## Possible Actions for New Prescriptions <12 Weeks:

For new presentations of GERD/heartburn, you could:

- Consider use of prescription H2RA's, such as cimetidine, or over-the-counter antacids. Include **patient instructions to review dietary triggers**.<sup>8</sup>
- Write a 4-week PPI prescription only.**
  - Document indication and expected length of treatment for new prescriptions. Add this info to each prescription, so your community pharmacy colleague is aware.

## Possible Actions for Renewed Prescriptions >12 Weeks:

Instead of renewing, you could:

- Deprescribe the PPI** by tapering and/or discontinuing the PPI. Deprescribing has been found to be safe. A Canadian PPI deprescribing guideline was published in 2017.<sup>5</sup>
  - Set a reminder to review patient experience and symptoms of deprescribing decisions in 4 to 12 weeks.
- Change medication use instruction to PRN only.

Data definitions and references on reverse.

## Data and Definitions Used for This Portrait

**Study period:** We counted prescriptions for the 12-month period of April 2019 to March 2020.

**BC doctors:** All family doctors registered with CPSBC with BC mailing address who have prescribed  $\geq 25$  times in 2019.

**Patients:** Community dwelling adults to whom you prescribed a PPI  $\geq$  once during the study period.

**Patients excluded:** Anyone on Plan P (palliative) or Plan B (long-term care).

**Prescribed:** A prescription written using your prescribing number, recorded on PharmaNet.

**PPIs:** Pantoprazole, Rabeprazole, Esomeprazole, Lansoprazole, Omeprazole, Dexlansoprazole.

**Length of PPI prescriptions:** The cumulative weeks of prescribing of a PPI, by your prescribing number, for each patient. e.g. if a 12w prescription is dispensed 3 times ( $=36w$ ), that patient counts in the 12-50w category.

## References, Additional Reading and Patient Resources

### References

1. Sigterman KE, van Pinxteren B, Bonis PA, Lau J, Numans ME. Short-term treatment with proton pump inhibitors, H<sub>2</sub>-receptor antagonists and prokinetics for gastro-oesophageal reflux disease-like symptoms and endoscopy negative reflux disease. *Cochrane Database Syst Rev*. 2013 May 31;(5):CD002095. <https://doi.org/10.1002/14651858.CD002095.pub5>
2. Hussain S, Singh A, Habib A, Najmi AK. Proton pump inhibitors use and risk of chronic kidney disease: Evidence-based meta-analysis of observational studies. *Clinical Epidemiology and Global Health*. 2019 March;7(1):46-52. <https://doi.org/10.1016/j.cegh.2017.12.008>
3. Wan QY, Wu XT, Li N, Du L, Zhou Y. Long-term proton pump inhibitors use and risk of gastric cancer: a meta-analysis of 926 386 participants. *Gut*. 2019 April;68(4):762-764. <https://doi.org/10.1136/gutjnl-2018-316416>
4. Boghossian TA, Rashid FJ, Thompson W, Welch V, Moayyedi P, Rojas-Fernandez C, et al. Deprescribing versus continuation of chronic proton pump inhibitor use in adults. *Cochrane Database Syst Rev*. 2017 March 16;(3):CD011969. <https://doi.org/10.1002/14651858.CD011969.pub2>
5. **\*\*PPI Deprescribing Guideline\*\*** Farrell B, Pottie K, Thompson W, Boghossian T, Pizzola L, Rashid FJ, et al. Deprescribing proton pump inhibitors. *Can Fam Physician*. 2017 May;63(5):354-64. <http://www.cfp.ca/content/63/5/354> and 2 page summary flowsheet [https://deprescribing.org/wp-content/uploads/2018/08/ppi-deprescribing-algorithm\\_2018\\_En.pdf](https://deprescribing.org/wp-content/uploads/2018/08/ppi-deprescribing-algorithm_2018_En.pdf)
6. Therapeutics Initiative. Serious harms with long-term proton pump inhibitor use in older adults. *Therapeutics Letter* 126. Available online Apr-May 2020 at <https://ti.ubc.ca>
7. Therapeutics Initiative. Trends in utilization of proton pump inhibitors in British Columbia. *Therapeutics Letter* 118. 2002 (Jun-Sep);45:1-2. <https://ti.ubc.ca/letter118>

### Patient Resources

8. **2-page patient info sheet**, "Is a Proton Pump Inhibitor still needed?" including lifestyle/diet changes and over the counter remedies: [https://deprescribing.org/wp-content/uploads/2018/08/Deprescribing-Pamphlet\\_PPI\\_ENG\\_CFP.pdf](https://deprescribing.org/wp-content/uploads/2018/08/Deprescribing-Pamphlet_PPI_ENG_CFP.pdf) by Deprescribing.org
9. **12-page, easy-to-read patient workbook** – "Do I still Need this Medication? Proton Pump Inhibitor (PPI)" <http://www.criugm.qc.ca/fichier/pdf/PPI-EN-Men.pdf> at <https://www.deprescribingnetwork.ca/deprescribing> by Canadian Deprescribing Network (available in multiple languages).