

# ABSOLUTE SCOOP

## DID YOU KNOW?

Overuse of PPIs contributes to polypharmacy, increased healthcare costs, and reduced patient quality of life. Long-term PPI use is also associated with some negative side effects.

## DEPRESCRIBING PROTON PUMP INHIBITORS

*Written by Eric McCaw, RPh, BCGP, Consultant Pharmacist*

### What is a PPI?

Proton Pump Inhibitors (PPIs) are a class of medications designed to reduce stomach acid by inhibiting the hydrogen-potassium ATPase enzyme system. This action effectively treats conditions such as gastroesophageal reflux disease (GERD) and peptic ulcer disease (PUD). Common examples of PPIs include omeprazole, pantoprazole, lansoprazole, and esomeprazole.

### Prevalence and Cost of PPIs

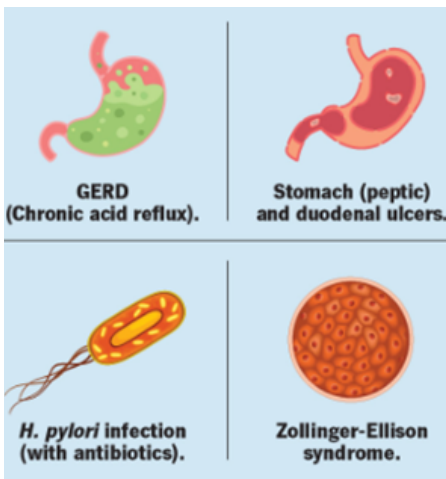
PPIs are among the most commonly prescribed medication classes, particularly in long-term care. Approximately 52 million prescriptions are issued annually for PPIs, costing patients around \$20 billion. PPI use is particularly high among long-term care residents, with up to 50% receiving these medications. Unfortunately, many of these prescriptions are not regularly reassessed, leading to potentially unnecessary, prolonged therapy. Protonix (pantoprazole) is the second most dispensed medication by Absolute Pharmacy this year.

### Indications for PPI Use

Many very common conditions can be treated with PPIs within only 12 weeks of therapy. So a number of the ongoing PPI orders in long term care are unnecessary. Common indications for short-term use include mild to moderate esophagitis or GERD, peptic ulcer disease, and stress ulcer prophylaxis. Some patients do have conditions warranting longer-term use such as Barrett's esophagus, Zollinger-Ellison syndrome, severe ongoing esophagitis, a history of bleeding ulcers, or chronic NSAID use with a high risk of bleeding. Residents in long-term care facilities are often started on PPIs during hospital stays for stress ulcer prevention (SUP). Studies indicate these prescriptions are commonly continued indefinitely after hospital discharge without reassessment. Current guidelines recommend limiting SUP therapy only to ICU stays, with discontinuation upon discharge.

### Why Deprescribe PPIs?

PPI orders should be routinely reassessed to avoid unnecessary therapy. Unless the patient is being treated for a known, ongoing condition as listed above, these PPI orders are "low-hanging fruit" for reducing medication burden. Overuse of PPIs contributes to polypharmacy, increased healthcare costs, and reduced patient quality of life. Long-term PPI use is also associated with some negative side effects. Decreased gastric pH can contribute to mineral deficiencies and resulting fracture risks. PPIs are also associated with an increased risk of Clostridium difficile infections, and pneumonia.



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**How to Deprescribe PPIs**

The first step in deprescribing PPIs is to establish the indication for use. In cases where a patient has taken the PPI for more than 12 weeks, and the original diagnosis is unknown, or where GERD or PUD symptoms are well-controlled, consider gradually reducing the dose. Monitor for a return of GI symptoms during dose reductions. To help prevent symptom recurrence, consider non-pharmacologic strategies such as:

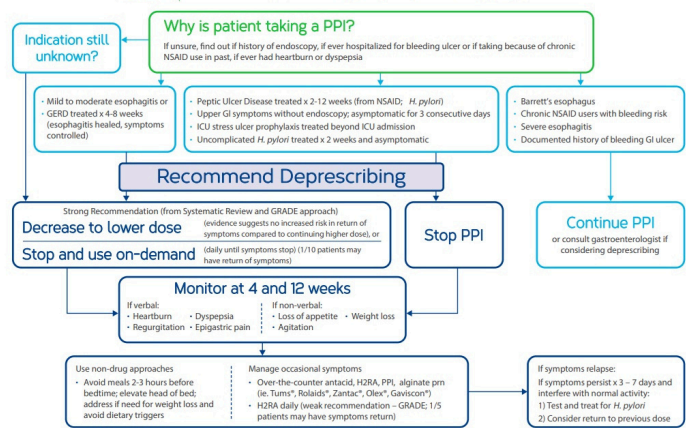
- Avoiding meals 2-3 hours before bed
- Elevating the head of the bed
- Avoiding dietary triggers

During the taper and after discontinuing a PPI, watch heartburn, GI pain, and regurgitation. Nonverbal patients can be assessed by considering changes of appetite, weight loss, or increased agitation. If occasional symptoms persist, they can often be managed with antacids or as needed H2 antagonists, such as famotidine or ranitidine.

**Conclusion**

PPIs play an essential role in managing GI conditions, but long-term care residents often continue these medications longer than necessary. By routinely assessing and deprescribing PPIs, the healthcare team can reduce the risk of adverse effects and lower treatment costs. Streamlining medication regimens in this way not only improves patient safety but also enhances quality of life for residents. Effective deprescribing is a key step toward more responsible, patient-centered care in this vulnerable population.

Figure 1 | Proton Pump Inhibitor (PPI) Deprescribing Algorithm



**Please contact your Consultant Pharmacist with any questions.**

**About the Author**



*Outside of work, Eric loves to spend time outdoors including hiking, running, backpacking, gardening, and photography. He enjoys traveling with his wife and 2 children.*

Eric McCaw, RPh, BCGP is a Consultant Pharmacist. Eric graduated from The Ohio State University. He began working at Absolute Pharmacy as an in-house Operations Pharmacist in 2006. In 2010, he transitioned to consulting and has enjoyed working with many facility staff members throughout Ohio while striving to improve the lives of residents.

Which side of the turkey has the most feathers?

The outside.



If pilgrims were still alive today, what would they be famous for?

Their age.