



## Effective Health Care

### Food Allergies Caused by Short-term PPI Use Nomination Summary Document

#### Results of Topic Selection Process & Next Steps

- The topic, *Food Allergies Caused by Short-term Proton Pump Inhibitor (PPI) Use*, is not feasible for a full systematic review due to the limited data available for a review at this time.
- The topic could potentially be considered for new research in comparative effectiveness.

#### Topic Description

**Nominator(s):** Individual

**Nomination Summary:** Researchers have speculated that proton pump inhibitors (PPIs) and other gastric acid suppressors may cause allergies. PPIs decrease the acidity and effectiveness of the digestive enzymes in the stomach, resulting in intact proteins or other intact molecules to reach the small intestine, and thus possibly causing sensitization to these proteins or molecules.

**Staff-Generated PICO**

**Population(s):** Adults and children with indications for PPIs

**Intervention(s):** Use of PPI

**Comparator(s):** Other medications used for the same indications, placebo, no treatment, or PPI compared to each other

**Outcome(s):** Food allergy/hypersensitivity

**Key Questions from Nominator:** **Original Key Question:**  
Does short term PPI use cause food/drug allergies or intolerance?

We excluded drug allergies from the scope of the brief because of the absence of biologic plausability.

**Revised Key Question:**  
Does short term PPI use cause food allergies or intolerance?

#### Considerations

- By altering the pH of the upper gastrointestinal system, PPIs could potentially lead to food allergy, since food proteins are less likely to be digested in the stomach and therefore more likely to reach intact the small intestine, which is rich in immune cells.
- A scan of the available literature identified five relevant studies related to the use of acid-suppressing medications and the development of food allergies. However, these studies did not limit medications of

interest to PPIs alone and were conducted in varying patient populations including adults, children, the elderly, and pregnant women and their children. Therefore, development of a systematic review on the topic may not be feasible at this time.

- Although PPIs are effective in treating conditions such as gastroesophageal reflux disease (GERD), more research on the adverse events of PPIs may help inform the choice between PPIs and other types of medications used for the same conditions, such as H2-receptor antagonists (H2-blockers) or antacids.