

the most reliable procedure to detect PUD in children. A biopsy can determine the presence of *H. pylori*. A blood test can also identify the presence of the antigen to this organism. The C¹³ urea breath test measures bacterial colonization in the gastric mucosa and is often performed to determine the presence of antibodies to *H. pylori*. Polyclonal and monoclonal stool antigen tests are an accurate, noninvasive method both for the initial diagnosis of *H. pylori* and for the confirmation of its eradication after treatment ([Ertem, 2012](#)).

Therapeutic Management

The major goals of therapy for children with PUD are to relieve discomfort, promote healing, prevent complications, and prevent recurrence. Management is primarily medical and consists of administration of medications to treat the infection and to reduce or neutralize gastric acid secretion. Antacids are beneficial medications to neutralize gastric acid. Histamine (H₂) receptor antagonists (antisecretory drugs) act to suppress gastric acid production. Cimetidine (Tagamet), ranitidine (Zantac), and famotidine (Pepcid) are examples of these medications. These medications have few side effects.

PPIs (such as omeprazole, lansoprazole, pantoprazole, and esomeprazole) act to inhibit the hydrogen ion pump in the parietal cells, thus blocking the production of acid. These agents have been shown to be effective in children and adolescents but not in infants ([van der Pol, Smits, van Wijk, et al, 2011](#)).

Mucosal protective agents, such as sucralfate and bismuth-containing preparations, may be prescribed for PUD. Sucralfate is an aluminum-containing agent that forms a protective barrier over ulcerated mucosa to protect against acid and pepsin. Bismuth compounds are sometimes prescribed for the relief of ulcers, but they are used less frequently than PPIs. Although these compounds inhibit the growth of microorganisms, the mechanism of their activity is poorly understood. In combination with antibiotics, bismuth is effective against *H. pylori*. Although concern has been expressed about the use of bismuth salts in children because of potential side effects, none of these side effects has been reported when these compounds have been used in the treatment of *H. pylori* infection. These agents are available in both pill and liquid forms.