## First-line therapies for H. pylori infection

Regimen	Drugs (doses)	Dosing frequency	Duration (days)	FDA approval
Clarithromycin triple‡	PPI (standard* or double the standard dose)	Twice daily	14	Yes¶
	Clarithromycin (500 mg)	Twice daily		
	Amoxicillin (1 gram)  or  Metronidazole (500 mg)	Twice daily (amoxicillin) Three times daily (metronidazole)		
Bismuth quadruple	PPI (standard dose*)	Twice daily	10 to 14 <sup>∆</sup>	No <sup>♦</sup>
	Bismuth subcitrate (120 to 300 mg [not available in US] or 420 mg [available in North America and elsewhere as part of Pylera combination pill]) <sup>[1]</sup> or  Bismuth subsalicylate (300 or 524 mg) <sup>[1]</sup>	Four times daily		
	Tetracycline (500 mg)	Four times daily		
	Metronidazole (250 to 500 mg)	Four times daily (250 mg)		
		Three to four times daily (500 mg)		
Clarithromycin-based concomitant‡	PPI (standard dose*)	Twice daily	10 to 14	No
	Clarithromycin (500 mg)	Twice daily		
	Amoxicillin (1 gram)	Twice daily		
	Metronidazole or tinidazole (500 mg)	Twice daily		
Clarithromycin-based sequential§‡	PPI (standard dose*) plus amoxicillin (1 gram) for 5 days followed by:	Twice daily	10 (total)	No
	PPI, clarithromycin (500 mg) plus either metronidazole or tinidazole (500 mg) for an additional 5 days	Twice daily		
Clarithromycin-based hybrid¥‡	PPI (standard dose*) plus amoxicillin (1 gram) for 7 days followed by:	Twice daily	14 (total)	No
	PPI, amoxicillin, clarithromycin (500 mg), plus either metronidazole or tinidazole (500 mg) for an additional 7 days	Twice daily		

FDA: United States Food and Drug Administration; PPI: proton pump inhibitor.

- ¶ Several PPI, clarithromycin, and amoxicillin combinations have achieved FDA approval. PPI, clarithromycin, and metronidazole is not an FDA-approved treatment regimen.
- Δ 14 days is recommended. Refer to UpToDate topic on treatment for *H. pylori* infection.
- PPI, bismuth, tetracycline, and metronidazole prescribed separately is not an FDA-approved treatment regimen. However, Pylera, a combination product containing bismuth subcitrate, tetracycline, and metronidazole combined with a PPI for 10 days is an FDA-approved treatment regimen.
- § Some North American guidelines do not support the use of sequential therapy.

<sup>\*</sup> Standard doses of orally administered proton pump inhibitors include: Lansoprazole 30 mg daily, omeprazole 20 mg daily, pantoprazole 40 mg daily, rabeprazole 20 mg daily, or esomeprazole 20 mg daily.