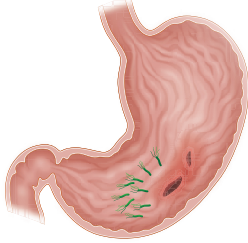







ACG GUIDELINE *Highlights*



Treatment of *Helicobacter pylori* Infection

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Epidemiology	<ul style="list-style-type: none"> <i>H. pylori</i> prevalence in North America is 30%-40% Typically acquired in childhood More prevalent among non-White races or ethnicities, those living in crowded or poor sanitary conditions, and early generation immigrants from endemic regions. 																																
When to Test for <i>H. pylori</i>	Benign Conditions <ul style="list-style-type: none"> Dyspepsia if <60 years without alarm features (GI bleeding, vomiting, unexplained weight loss, iron deficiency) Dyspepsia if <50 years with high risk for gastric cancer Endoscopy with biopsies if dyspepsia and alarm features, NSAID use, family history of gastric cancer, immigration from high incidence region 	Premalignant and Malignant Conditions <ul style="list-style-type: none"> Adult household members of <i>H. pylori</i> positive individuals ITP Unexplained IDA Current or prior history of PUD Chronically taking NSAID or starting daily aspirin therapies 	<ul style="list-style-type: none"> High risk gastric premalignant condition <ul style="list-style-type: none"> - Atrophy, intestinal metaplasia, dysplasia - Autoimmune gastritis - Family history of gastric cancer - Foreign born with immigration from high incidence region - High risk race or ethnicity MALT lymphoma Gastric epithelial polyps <p>WHO recognizes <i>H. pylori</i> as a group I (definite) carcinogen</p>																														
Treatment for <i>H. pylori</i>	<table border="1"> <thead> <tr> <th colspan="2">Regimens for <i>H. pylori</i> Treatment</th> <th>Rx Naïve</th> <th colspan="2">Rx Experienced (Salvage)</th> </tr> </thead> <tbody> <tr> <td>Optimized bismuth quadruple</td> <td> <ul style="list-style-type: none"> PPI b.i.d. Bismuth subcitrate (120-300 mg) or subsalicylate (300 -524 mg) q.i.d. Tetracycline 500 mg q.i.d. Metronidazole 500 mg t.i.d. or q.i.d. <p><i>Doxycycline is not a recommended substitute for tetracycline</i></p> </td> <td>Empiric ✔</td> <td>Empiric ✔</td> <td>Proven Rx Sensitivity ✔</td> </tr> <tr> <td>Rifabutin Triple</td> <td> <ul style="list-style-type: none"> Rifabutin 50 mg t.i.d. (if dose unavailable, substitute rifabutin 150 mg b.i.d.) Amoxicillin 1000 mg t.i.d. Omeprazole 40 mg t.i.d. </td> <td>✔</td> <td>✔</td> <td>✔</td> </tr> <tr> <td>PCAB Dual</td> <td> <ul style="list-style-type: none"> Vonoprazan 20 mg b.i.d. Amoxicillin 1000 mg t.i.d. </td> <td>✔</td> <td>! (Not recommended)</td> <td>! (Not recommended)</td> </tr> <tr> <td>PCAB Triple</td> <td> <ul style="list-style-type: none"> Vonoprazan 20 mg b.i.d. Clarithromycin 500 mg b.i.d. Amoxicillin 1000 mg b.i.d. </td> <td></td> <td></td> <td>✔</td> </tr> <tr> <td>Levofloxacin Triple</td> <td> <ul style="list-style-type: none"> PPI b.i.d. Amoxicillin 1000 mg b.i.d. Levofloxacin 500 mg q.d. </td> <td></td> <td></td> <td>✔</td> </tr> </tbody> </table> <p> ✔ Recommended ✔ Suggested ! May be considered when no other options </p>			Regimens for <i>H. pylori</i> Treatment		Rx Naïve	Rx Experienced (Salvage)		Optimized bismuth quadruple	<ul style="list-style-type: none"> PPI b.i.d. Bismuth subcitrate (120-300 mg) or subsalicylate (300 -524 mg) q.i.d. Tetracycline 500 mg q.i.d. Metronidazole 500 mg t.i.d. or q.i.d. <p><i>Doxycycline is not a recommended substitute for tetracycline</i></p>	Empiric ✔	Empiric ✔	Proven Rx Sensitivity ✔	Rifabutin Triple	<ul style="list-style-type: none"> Rifabutin 50 mg t.i.d. (if dose unavailable, substitute rifabutin 150 mg b.i.d.) Amoxicillin 1000 mg t.i.d. Omeprazole 40 mg t.i.d. 	✔	✔	✔	PCAB Dual	<ul style="list-style-type: none"> Vonoprazan 20 mg b.i.d. Amoxicillin 1000 mg t.i.d. 	✔	! (Not recommended)	! (Not recommended)	PCAB Triple	<ul style="list-style-type: none"> Vonoprazan 20 mg b.i.d. Clarithromycin 500 mg b.i.d. Amoxicillin 1000 mg b.i.d. 			✔	Levofloxacin Triple	<ul style="list-style-type: none"> PPI b.i.d. Amoxicillin 1000 mg b.i.d. Levofloxacin 500 mg q.d. 			✔
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Treatment Pearls <ul style="list-style-type: none"> All patients found to be infected with <i>H. pylori</i> should be treated Complete test of cure at least four weeks after therapy with either: <ul style="list-style-type: none"> Urea breath test Fecal antigen test Biopsy-based test To avoid false negatives in test of cure – hold PPI x 2 weeks; bismuth and antibiotics x 4 weeks Avoid clarithromycin and levofloxacin-containing Rx unless demonstrated susceptibility PCN allergy – consider referral for formal PCN allergy testing and/or desensitization 																																	

Abx = antibiotic
b.i.d. = twice a day
GIM = gastric intestinal metaplasia
H. pylori = *Helicobacter pylori*

ITP = immune thrombocytopenic purpura
IDA = iron deficiency anemia
mg = milligrams
NSAID = non-steroidal anti-inflammatory drug

PCN = penicillin
PCAB = potassium-competitive acid blocker
PPI = proton pump inhibitor
PUD = peptic ulcer disease

q.d. = once a day
q.i.d. = four times a day
Rx = treatment
t.i.d. = three times a day