

H. pylori Eradication Therapy

How do I take the therapy?

Follow your physician's instructions carefully. Amoxicillin, Clarithromycin, Metronidazole, and Tetracycline can be taken with or without food. Tablets may be crushed and capsules may be opened and the contents sprinkled on soft food to make it easier to swallow. If using the liquid be sure to shake well before each dose. Amoxicillin and Tetracycline liquid, but not clarithromycin, should be kept in the refrigerator. Discard any unused liquid after 14 days. Keep in a tightly sealed container away from light. Keep all medications away from children. Never share your medications with anyone else.

What do I do for a missed dose?

Antibiotics work best when there is a steady blood level. Therefore, it is necessary to take the drug at evenly spaced intervals and to avoid missing doses. If you should miss a dose, take it as soon as you remember. If it is almost time for the next dose and you take 2 doses a day, take the one you missed and the next dose 5 to 6 hours later. If you take 3 or more doses a day, take the one you missed and the next dose 2 to 4 hours later. Then return to your regular schedule. Do not take 2 doses at once.

Are there interactions with food or beverages?

There are no known food or beverage interactions with Amoxicillin, Clarithromycin, or Pepto-bismol. For Metronidazole, alcohol should be avoided during and for 3 days after taking it. The combination of Metronidazole with alcohol can cause severe abdominal cramps, nausea, vomiting and headaches. For Tetracycline, avoid cheese, yogurt, milk, ice cream, iron-fortified cereals and supplements, and meats for 2 hours before or after taking it.

Are there interactions with other drugs?

An interaction generally means that one drug may increase or decrease the effect of another drug. Also, the more medications a person takes, the more likely there will be a drug interaction. Almost all antibiotics may interact with antacids and birth control pills.

Interactions with Amoxicillin may occur with the following:

- allopurinol (Zyloprim)
- atenolol (Tenormin)
- probenecid

Interactions with Clarithromycin may occur with the following:

- astemizole (Hismanal)
- blood thinners (Coumadin)
- carbamazepine (Tegretol)
- cyclosporine (Sandimmune, Neoral)
- digoxin (Lanoxin)
- disopyramide (Norpace)
- ergotamine (Cafergot)
- fluconazole (Diflucan)

- lovastatin (Mevacor)
- phenytoin (Dilantin)
- theophylline (Theo-Dur)
- triazolam (Halcion)
- valproate (Depakene)
- zidovudine (Retrovir)
- ranitidine-bismuth citrate (Tritec) --- only in patient's with Porphyria

Interactions with Metronidazole may occur with the following:

- blood thinners (Coumadin)
- cholestyramine (Questran)
- disulfiram (Antabuse)
- cimetidine (Tagamet)
- phenytoin (Dilantin)
- phenobarbital
- lithium (Eskalith)

Interactions with Tetracycline may occur with the following:

- insulin
- blood thinners (Coumadin)
- digoxin (Lanoxin)
- lithium (Eskalith)
- furosemide (Lasix)
- theophylline (Theo-Dur)
- cholestyramine (Questran)
- sucralfate (Carafate)
- cimetidine (Tagamet)
- penicillins
- calcium or iron supplements

Interactions with Pepto-bismol may occur with blood thinners (Coumadin)

Is there a problem if I have another disorder or disease?

At times, a drug may have a different or enhanced effect when other diseases are present. At other times, the drug may worsen or affect another disease. There are generally no problems when using Amoxicillin with other medical conditions. Since Metronidazole is metabolized by the liver, Tetracycline is metabolized by the kidney, and Clarithromycin is excreted by the kidney and liver, patients with severe chronic kidney or liver disease should discuss it with their physician. Pepto-bismol should be used with caution if you have renal disease, diabetes, or gout.

What about allergies?

People who have known allergies or asthma may be at an increased risk for a reaction from any new medication. Signs of an allergic reaction are skin rash, hives, itching, severe diarrhea, shortness of breath or wheezing. Of course, a person should not take an antibiotic of a particular class if there has been a previous reaction to this or a similar drug. For example, allergy to penicillin or cephalosporin (Ceftin, Keflex) should avoid Amoxicillin; allergy to erythromycin or Zithromax should avoid Clarithromycin; allergy to aspirin or salicylate should avoid Pepto-bismol; allergy to doxycycline or minocycline should avoid Tetracycline.

What if I'm pregnant, considering pregnancy or breast-feeding?

Any drug taken during pregnancy is potentially dangerous to a fetus. The FDA has a grading system for each drug which reflects what is known medically. Amoxicillin and Metronidazole are ranked B. This means these drugs are not expected to be harmful to an unborn baby. Clarithromycin and Pepto-bismol are ranked C. This means it is not known whether these drugs will harm the unborn baby and they probably should not be used. Tetracycline is ranked D meaning it will harm an unborn baby and should not be taken during pregnancy. Amoxicillin and Metronidazole pass into breast milk but are not thought to be harmful. Rarely, Amoxicillin may cause a yeast infection, diarrhea, or allergic reaction in a nursing infant, although no serious harm is expected. Tetracycline passes into breast milk; It is unknown if Clarithromycin or Pepto-Bismol pass into breast milk. Because these drugs have potential for serious harm to nursing infants, discontinuation of nursing or the drug must occur. Always consult the physician before taking any drug during or when planning pregnancy or during breast feeding.

What are the effects on sexual function?

Amoxicillin and Tetracycline may decrease the effects of oral contraceptives in some women so an additional form of birth control may be necessary. Metronidazole can cause a decreased sexual drive and decreased vaginal secretions that can result in painful or difficult intercourse.

Are there other precautions?

Mild diarrhea is a fairly common side effect of antibiotics. It may stop after your body gets used to these drugs. However, if you get prolonged or severe diarrhea lasting over 24 hours, stop taking the drug and contact your physician. Prolonged or repeated use of antibiotics may result in bacterial or fungal overgrowth and superinfection. These are usually due to yeast organisms and occur in the mouth, intestinal tract or vagina. Metronidazole may cause drowsiness or lightheadedness. Restrict driving and other activities as necessary. Metronidazole may cause dark discoloration of urine which has no significance. Pepto-bismol may cause a temporary and harmless darkening of the tongue and stool. Tetracycline may cause photosensitivity, making you more prone to sunburn.

How about side effects?

Adverse reactions can occur with any drug, even over-the-counter medications. Some of these are mild such as a stomach upset, which may be avoided by taking the medication with food. Minor reactions may go away on their own but if they persist, contact the physician. For major reactions, the patient should contact the physician immediately.

For Amoxicillin, the following are the observed side effects:

Minor:

Diarrhea, nausea, vomiting, rash, hives, itching

Major:

Difficult breathing, wheezing, severe diarrhea, weakness, fever, severe sore throat, abnormal bleeding or bruising

For Clarithromycin, the following are the observed side effects:

Minor:

Diarrhea, nausea, abnormal taste, abdominal discomfort, indigestion, headache

Major:

Severe diarrhea or abdominal cramps, rapid heart rate

For Metronidazole, the following are the observed side effects:

Minor:

Unpleasant metallic taste, headache, dizziness, fatigue, dry mouth, stomach cramps, nausea, vomiting, diarrhea, dark urine (no significance), rash, hives, itching

Major:

Changes in mood or mental function, unsteadiness, numbness, pain or weakness in hands or feet, seizures, fever, sore throat

For Pepto-bismol, the following are the observed side effects:

Minor:

temporary gray-black darkening of stool

Major:

stool impaction or blockage in infants or elderly patients

For Tetracycline, the following are the observed side effects:

Minor:

Discoloration and soreness of tongue, nausea, stomach irritation, vomiting, diarrhea, itching of genital or rectal area, rash

Major:

Yellow color to skin or eyes, swollen joints or lymph glands, severe diarrhea