

Pharmacotherapy of *Helicobacter pylori*

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Helicobacter pylori eradication protocols

The aim of the pharmacotherapy of *Helicobacter pylori* is to eradicate it and thus improve the healing of the mucosa.

First-line therapy

For this purpose, a "**triple combination**" of drugs is used as a first-line choice. This therapy consists of a proton pump inhibitor (most commonly **omeprazole** at a dose of 2 × 20 mg/day, but others can be used too at appropriate dosing: **lansoprazole**, **pantoprazole**, **esomeprazole**, **rabeprazole**) and two antibiotics: **clarithromycin** (2 × 500 mg/day), and **amoxicillin** (2 × 1000 mg/day). If the patient is allergic to amoxicillin and/or other penicillin-derived drugs (beta-lactams), they can be replaced with **metronidazole** or **tinidazole** (2 × 400-500 mg/day). This treatment should be taken daily for 14 days and leads to eradication in *ca.* 70% of cases.

Second-line therapy

If the patient is allergic to clarithromycin, or the first-line treatment has failed (possibly due to clarithromycin resistance, *ca.* 20% of cases), an alternative "**quadruple therapy**" treatment should be used instead (not common in the Czech Republic). This therapy consists of **omeprazole** (2 × 20 mg/day, or any other proton pump inhibitor), **colloidal bismuth** (4 × 120 mg/day), **tetracycline** (4 × 500 mg/day) or **amoxicillin** (2 × 1000 mg/day), and **metronidazole** (2-3 × 500 mg/day). This therapy should be administered daily for 14 days and leads to eradication in more than 90% of patients.^{[1][2]}

Sequential therapy

Sequential therapy can be used when patients have recurrent *H. Pylori* infections. It is a ten-day long therapy involving the administration of a proton pump inhibitor (**omeprazole** at 2 × 20 mg/day) and **levofloxacin** (2 × 500 mg/day) or **amoxicillin** (2 × 1000 mg/day) for the first five days followed by the administration of **omeprazole** (2 × 20 mg/day), **clarithromycin** (2 × 500 mg/day), and **metronidazole** (2 × 500 mg/day) for the next five days.

References

Literature

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Infekce *Helicobacter pylori* - doporučený postup (<https://www.cgs-cls.cz/detail-clanku/infekce-helicobacter-pylori-doporuceny-postup/>) (in Czech)

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