

Antibiotic treatment recommendations for purulent acute exacerbations of chronic obstructive pulmonary disease (COPD)

Group	Basic clinical state	Symptoms and risk factors	Probable pathogens	First choice
Simple exacerbation	COPD without risk factors	Increased sputum purulence and dyspnea	<i>Haemophilus influenzae</i> , <i>Haemophilus</i> species, <i>Moraxella catarrhalis</i> , <i>Streptococcus pneumoniae</i>	Amoxicillin, second- or third-generation cephalosporins, doxycycline, extended-spectrum macrolides, trimethoprim/sulfamethoxazole <i>(in alphabetical order)</i>
Complicated exacerbation	COPD with risk factors	As in simple plus at least one of: <ul style="list-style-type: none">• FEV₁ < 50% predicted• ≥ 4 exacerbations per year• Ischemic heart disease• Use of home oxygen• Chronic oral steroid use	As in simple plus: <i>Klebsiella</i> species and other Gram-negatives Increased probability of beta-lactam resistance <i>Pseudomonas</i> species	Fluoroquinolone, beta-lactam/beta-lactamase inhibitor <i>(in order of preference)</i>

Repeat prescriptions of the same antibiotic class should be avoided within a three-month interval. FEV₁ Forced expiratory volume in 1 s