

Cochrane Database of Systematic Reviews - - Cochrane Review

# Antibiotic treatment for *Stenotrophomonas maltophilia* in people with cystic fibrosis

**Code:** CD009249

**Year:** 2020 **Date:** 2012 - updated: 03 MAR 2020

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## Study design (if review, criteria of inclusion for studies)

Any randomized controlled trial of *Stenotrophomonas maltophilia* mono-infection or *Stenotrophomonas maltophilia* co-infection with *Pseudomonas aeruginosa* in either the setting of an acute pulmonary exacerbation or a chronic infection treated with suppressive antibiotic therapy

## Participants

Adults and children (with all levels of disease severity) with a clinical diagnosis of CF, confirmed with sweat test or genetic testing or both, who have *S. maltophilia* isolated from respiratory specimens. If a clinical diagnosis of CF is not met, these patients will be excluded

## Interventions

Antibiotic therapy used to treat *S. maltophilia* cultured in a respiratory tract specimen from people with CF. Antibiotic therapy will include oral, intravenous or inhaled antibiotics. Antibiotics to treat *S. maltophilia* vs no antibiotics to treat *S. maltophilia* or one antibiotic regimen vs another antibiotic regimen to treat *S. maltophilia*. *S. maltophilia* mono-infection and *S. maltophilia* co-infection with *P. aeruginosa*. The first setting will be antibiotics used to treat acute pulmonary exacerbations. The second setting will be the use of long-term antibiotics to treat *S. maltophilia* in CF as a suppressive treatment

## Outcome measures

Primary outcomes 1. Lung function i) FEV1 ii) FVC iii) FEF25~75 2. Pulmonary exacerbations i) number of days until next exacerbation ii) length of hospital stay 3. Adverse events i) emergence of resistant organisms ii) other adverse events such as rashes, Stevens-Johnson type reactions, photosensitivity, tooth discolouration etc

## Main results

We identified only one trial of antibiotic treatment of pulmonary exacerbations that included people with cystic fibrosis with *Stenotrophomonas maltophilia*. However, this trial had to be excluded because data was not available per pathogen.

## Authors' conclusions

This review did not identify any evidence regarding the effectiveness of antibiotic treatment for *Stenotrophomonas maltophilia* in people with cystic fibrosis. Until such evidence becomes available, clinicians need to use their clinical judgement as to whether or not to treat *Stenotrophomonas maltophilia* infection in people with cystic fibrosis. Randomized clinical trials are needed to address these unanswered clinical questions.

<https://doi.org/10.1002/14651858.CD009249.pub5>

## See also

Amin R, Jahnke N, Waters V. Antibiotic treatment for *Stenotrophomonas maltophilia* in people with cystic fibrosis. Cochrane Database of Systematic Reviews 2020, Issue 3. Art. No.: CD009249. DOI: 10.1002/14651858.CD009249.pub5.

## Keywords

Anti-Bacterial Agents; Bacterial Infections; Colonization; Exacerbation; Infection; pharmacological\_intervention; Respiratory Tract Diseases; Respiratory Tract Infections; *Stenotrophomonas Maltophilia*;