

# Cochrane for Clinicians

*Putting Evidence into Practice*

These are summaries of reviews from the Cochrane Library.

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## Prophylactic Antibiotics for the Prevention of COPD Exacerbation

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### Clinical Question

Can prophylactic antibiotics decrease chronic obstructive pulmonary disease (COPD) exacerbations in a 67-year-old man with a history of frequent exacerbations?

### Evidence-Based Answer

Continuous prophylactic antibiotic therapy significantly decreases COPD exacerbations for up to three years. However, it does not decrease mortality, and it puts the patient at risk of antibiotic-resistant colonization and infection. (Strength of Recommendation: B, based on inconsistent or limited-quality patient-oriented evidence.)

### Practice Pointers

COPD occurs in approximately 40% of smokers, affects more men than women, and is more common among those living in urban areas.<sup>1</sup> The economic burden in the United States is as much as \$49.5 billion annually, with most of this cost devoted to treating exacerbations.<sup>1</sup> Current guidelines recommend preventive measures to limit exacerbations, including smoking cessation, immunization against pneumococcus and the influenza virus, maintenance therapy (e.g., use of inhaled steroids), and treatment of comorbid conditions.<sup>1</sup>

This systematic review analyzed seven randomized controlled trials involving 3,170 patients with a mean age of 66 years and at least moderate COPD. Patients were followed for three to 36 months. In five studies, patients were given continuous antibiotic therapy; in the other two, they received intermittent antibiotic therapy. All of the patients treated continuously were given macrolide antibiotics—azithromycin (Zithromax), clarithromycin (Biaxin), or erythromycin. Moxifloxacin (Avelox) was the

only nonmacrolide antibiotic studied and was used only intermittently.

The number of patients with exacerbations was significantly reduced in those treated continuously (54% vs. 69% in the placebo group; number needed to treat = 8). Intermittent antibiotic use also reduced the number of exacerbations, but this result was not significant. Although continuous and intermittent regimens yielded a statistically significant improvement in quality of life, neither reduced important secondary outcomes such as frequency of hospital admission or all-cause mortality.

Adverse effects such as hearing loss were noted in patients taking azithromycin, and there was a statistically significant increase in the number of gastrointestinal symptoms among those taking moxifloxacin. Notably, patients treated with moxifloxacin experienced rapid development of antibiotic-resistant *Pseudomonas* infections.

The authors of this Cochrane review are hesitant to recommend continuous antibiotic therapy for all patients with COPD, given the cost, risks to each individual patient, and potential for increasing antibiotic resistance. In January 2014, the Global Initiative for Chronic Obstructive Lung Disease released updated guidelines on the management and prevention of COPD. These guidelines do not advocate use of prophylactic antibiotics.<sup>1</sup> Although the use of prophylactic antibiotic regimens to prevent exacerbations shows promise, for now they should be used only for carefully selected patients (e.g., those with frequent exacerbations), if at all.

SOURCE: Herath SC, Poole P. Prophylactic antibiotic therapy for chronic obstructive pulmonary disease (COPD). *Cochrane Database Syst Rev.* 2013;(11):CD009764.

The practice recommendations in this activity are available at <http://summaries.cochrane.org/CD009764>.

### REFERENCE

1. Global Initiative for Chronic Obstructive Lung Disease (GOLD). *Global Strategy for the Diagnosis, Management, and Prevention of COPD.* 2014. <http://www.goldcopd.org/>. Accessed April 15, 2014.

## Psychosocial and Psychological Interventions for Preventing Postpartum Depression

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### Clinical Question

Can psychosocial or psychological interventions prevent postpartum depression?

### Evidence-Based Answer

A range of prevention strategies can reduce the risk of postpartum depression, but more study is needed to determine which interventions are most effective. (Strength of Recommendation: B, based on inconsistent or limited-quality patient-oriented evidence.)

### Practice Pointers

Among women of childbearing age in the United States, depression is the leading cause of nonobstetric hospitalization.<sup>1</sup> Postpartum depression is associated with morbidity for mother and infant, because affected women are less able to effectively parent and bond with their infants.<sup>2</sup> The *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed., defines depression with peripartum onset as that which occurs during pregnancy or within four weeks of delivery.<sup>3</sup> However, depressive symptoms most often start within the first 12 weeks postpartum, and many studies define postpartum depression as that which occurs within the first year after delivery. A systematic review found a period prevalence of 19.2% for all depression in the first 12 weeks postpartum and 7.1% for major depression.<sup>4</sup>

Although postpartum depression can be treated effectively, preventive strategies are needed. The authors of this Cochrane review evaluated whether psychological or psychosocial interventions could reduce the risk of developing postpartum depression in the general population and among women at increased risk. They identified 28 randomized controlled trials conducted in seven countries that enrolled almost 17,000 pregnant women and new mothers within six weeks of delivery. Included trials compared a nonpharmacologic intervention (such as psychological therapy, counseling, or debriefing; or supportive psychosocial interactions such as pre- or postpartum home or clinic visits or telephone calls) with usual care. The interventions were provided to groups or individuals by health care professionals or laypersons.

The primary outcome was the risk of developing postpartum depression. Most of the studies used the Edinburgh Postnatal Depression Scale to measure postpartum symptoms. Overall, women who received a psychological or psychosocial intervention were significantly less likely to develop symptoms of postpartum depression than women receiving usual care (relative risk = 0.78; 95% confidence interval, 0.66 to 0.93). When interventions were broken down by type, the most promising were interpersonal psychotherapy, postpartum home visits by nurses or midwives, postpartum peer-based telephone support, and flexible postpartum care by midwives. No strong evidence supported antenatal or postnatal classes that provided education about depression, postpartum home visits by peers or laypersons, early postpartum follow-up, continuity-of-care models, in-hospital psychological debriefing, or cognitive behavior therapy.

The American College of Obstetricians and Gynecologists states the importance of screening for postpartum depression, but cites insufficient evidence to recommend universal screening of all women who are pregnant or in the postpartum period.<sup>5</sup> Although the authors caution that the diversity of the study interventions and end points contributed to significant statistical heterogeneity that could limit the reliability of their findings, this review can help guide future research.

SOURCE: Dennis CL, Dowswell T. Psychosocial and psychological interventions for preventing postpartum depression. *Cochrane Database Syst Rev*. 2013;(2):CD001134.

The practice recommendations in this activity are available at <http://summaries.cochrane.org/CD001134>.

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