

# PEARLS

## Practical Evidence About Real Life Situations



Nous le savons déjà, mais un rappel chiffré peut s'avérer utile: en cas de sinusite aiguë sans complications, les antibiotiques ont peu d'intérêt. Les prescrire avec réserve permet d'éviter des inconvénients pour les patients individuels et pour toute la population.

Bernhard Rindlisbacher

### Antibiotics have a small treatment effect in acute sinusitis

PEARLS No. 108, October 2008, written by Brian R McAvoy

**Clinical question:** How effective are antibiotics in treating acute sinusitis?

**Bottom line:** In a primary care setting, antibiotics have a small treatment effect in patients with uncomplicated acute sinusitis with symptoms for more than 7 days (average improvement rate of 90% in antibiotic groups and 80% in the control groups; NNT\* 10). The review contains trials of treatment for clinically diagnosed acute sinusitis, whether or not confirmed by radiography or bacterial culture. Drug therapies reviewed were antibiotic versus control or comparisons between different antibiotic classes. None of the antibiotic preparations (amoxicillin, amoxicillin-clavulanate, azithromycin, cephalosporins, faropenem, fluoroquinolones, macrolides, oxymetazoline, streptogramin and tetracyclines) was superior to each other.

\*NNT = number needed to treat to benefit one individual.

**Caveat:** Eighty per cent of participants treated without antibiotics improved within 2 weeks. Clinicians need to weigh the small benefits of antibiotic treatment against the potential for adverse effects at both the individual level (diarrhoea, abdominal pain, vomiting and skin rashes) and general population level (antibiotic resistance).

**Context:** Sinusitis accounts for 15–21% of all antibiotic prescriptions for adults in outpatient care. Treatment options include antibiotics, decongestants, steroid drops or sprays, mucolytics, antihistamines, or sinus puncture and lavage.

**Cochrane Systematic Review:** Ahovuo-Saloranta A et al. Antibiotics for acute maxillary sinusitis. Cochrane Reviews 2008, Issue 2. Article No. CD000243. DOI: 10.1002/14651858.CD000243.pub2.

*This review contains 57 trials involving 18,962 participants.*

En tant que compléments alimentaires, les antioxydants ne réduisent pas la mortalité, au contraire. Cependant, la presse courante continue à les propager sans gêne, sans doute dans un but lucratif. Sous le thème «Les antioxydants renforcent le corps de l'intérieur...»

Bernhard Rindlisbacher

### Antioxidant supplements do not reduce mortality

PEARLS No. 78, July 2008, written by Brian R McAvoy

**Clinical question:** Are antioxidant supplements effective in reducing mortality?

**Bottom line:** Compared to placebo or no intervention, antioxidant supplements (beta-carotene, vitamin A, vitamin C, vitamin E and selenium) did not reduce mortality in trials involving healthy participants (primary prevention) or participants with various diseases (including gastrointestinal, cardiovascular, neurological, ocular, dermatological, rheumatoid, renal, endocrinological or unspecified disease). Indeed, vitamin A, beta-carotene, and vitamin E given singly or combined with other antioxidant supplements were associated with a significant increase in mortality.

**Caveat:** The review did not assess antioxidant supplements for treatment of specific diseases (tertiary prevention), antioxidant supplements for patients with demonstrated needs for antioxidants, or the effects of antioxidants contained in fruit and vegetables. These findings suggest antioxidant supplements need to be considered medicinal products and should undergo sufficient evaluation before marketing.

**Context:** Oxidative stress may play a role in the pathogenesis of cancer and cardiovascular disease, the leading causes of death in middle and high-income countries<sup>1</sup>. Several observational studies have shown a significant positive association between higher intake of fruits and vegetables and reduced risk of chronic disease.<sup>2</sup> Many people take antioxidant supplements in the belief they will improve their health.<sup>3</sup>

**Cochrane Systematic Review:** Bjelakovic G et al. Antioxidant supplements for prevention of mortality in healthy participants and patients with various diseases. Cochrane Reviews 2008, Issue 2. Article No. CD007176. DOI: 10.1002/14651858.CD007176.

*This review contains 67 trials involving 232,550 participants.*

<sup>1</sup> Halliwell B. Lancet 2000;344:721–724.

<sup>2</sup> Willcox JK et al. Critical Reviews in Food Science and Nutrition 2004;44:275295.

<sup>3</sup> Nichter M et al. Culture, Medicine and Psychiatry 2006;30:175–222.



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### PEARLS

PEARLS are succinct summaries of Cochrane Systematic Reviews for primary care practitioners. They are developed by the Cochrane Primary Care Field and funded by the New Zealand Guidelines Group.

PEARLS provide guidance on whether a treatment is effective or ineffective. PEARLS are prepared as an educational resource and do not replace clinician judgement in the management of individual cases.

View PEARLS online at: [www.cochraneprietarycare.org](http://www.cochraneprietarycare.org).