# Short Summaries

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**These short summaries are of Cochrane reviews**
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## Vitamin C for preventing and treating the common cold

**Douglas RM, Hemilä H, Chalker E, Treacy B.**
*Vitamin C for preventing and treating the common cold. Cochrane Database Syst Rev 2007; issue 3*

Many people will be aware of the suggestion that vitamin C (ascorbic acid) can aid both prevention and treatment of the common cold. The idea became particularly widespread in the 1970s when (Nobel Prize winner) Linus Pauling drew conclusions from earlier placebo-controlled trials of high-dose vitamin C on the incidence of colds. This latest update of the Cochrane review of placebo-controlled trials looked at whether oral doses of 0.2 g or more daily of vitamin C reduces the incidence, duration or severity of the common cold.

Thirty trial comparisons involving 11 350 study participants contributed to a meta-analysis on the relative risk (RR) of developing a cold while taking prophylactic vitamin C. The pooled RR was 0.96 [95% confidence intervals (CI), 0.92–1.00]. A subgroup of six trials involving a total of 642 marathon runners, skiers, and soldiers on subarctic exercises reported a pooled RR of 0.50 (95% CI, 0.38–0.66). For these people, thirty comparisons involving 9676 respiratory episodes contributed to a meta-analysis on common cold duration during prophylaxis. A consistent benefit was observed, representing a reduction in cold duration of 8% (95% CI, 3–13%) for adults and 13.6% (95% CI, 5–22%) for children.

Seven trial comparisons involving 3294 respiratory episodes contributed to the meta-analysis of cold duration during therapy with vitamin C initiated after the onset of symptoms. No significant differences from placebo were seen. Four trial comparisons involving 2753 respiratory episodes contributed to the meta-analysis of cold severity during therapy and no significant differences from placebo were seen.

The failure of vitamin C supplementation to reduce the incidence of colds in the normal population indicates that routine mega-dose prophylaxis is not rationally justified for community use. Evidence does suggest that it could be justified in people exposed to brief periods of severe physical exercise or cold environments.

## Parasympathomimetic drugs for the treatment of salivary gland dysfunction caused by radiotherapy

**Davies AN, Shorthose K.**
*Parasympathomimetic drugs for the treatment of salivary gland dysfunction due to radiotherapy. Cochrane Database Sys Rev 2007; issue 3*

For patients undergoing radiotherapy to the head and neck region, salivary gland dysfunction is a frequent and important side-effect. In many countries pilocarpine hydrochloride (a choline ester) is licensed for the treatment of radiation-induced salivary gland dysfunction, and other parasympathomimetics have also been used 'off licence' in the treatment of this condition.

This Cochrane review looked at the efficacy and tolerability of parasympathomimetic drugs in the treatment of radiation-induced salivary gland dysfunction. They identified three studies, involving a total of 298 patients that met the criteria; all three studies involved the use of pilocarpine hydrochloride.

The data suggest that pilocarpine hydrochloride was more effective than placebo, and at least as effective as artificial saliva in those participants who responded to treatment. Treatment response rate was 42–51% with the time to respond being up to 12 weeks. The side-effect rate was high, with side-effects being the main reason for withdrawal. The side effects were usually the result of generalised parasympathomimetic stimulation (eg, sweating, headaches, urinary frequency, vasodilatation). Response rates were not dose-dependent, but side-effect rates were dose-dependent.

The authors concluded that there was limited evidence to support the use of pilocarpine hydrochloride in the treatment of radiation-induced salivary gland dysfunction. Currently, there is little evidence to support the use of other parasympathomimetic drugs in the treatment of this condition. The available studies suggest that approximately half of patients will respond, but side-effects to responders can be problematic. Because the adverse effects are dose-dependent it is important to keep doses low at 5 mg tds.