Summary Message

Trials assessing echinacea for prevention and treatment of URTIs report conflicting results and at present there is insufficient evidence to recommend a particular preparation or dosage regimen. The limited data available indicate that echinacea preparations are generally well-tolerated, although allergic reactions may occur. As with other herbal medicines, echinacea products differ in their pharmaceutical quality, and the implications of this for efficacy and safety should be considered.

Results have been contradictory and the evidence is difficult to interpret as different studies have assessed different species and plant parts of echinacea, as well as different preparations and dosage regimens. A Cochrane systematic review found some evidence that preparations of the aerial parts of *E. purpurea* may be useful in early treatment of the common cold in adults, but that evidence for other echinacea preparations and for echinacea as prophylaxis against colds was not available from rigorous randomised controlled trials (RCTs). Several newer trials of different echinacea preparations for treatment of colds have also reported conflicting results.

ADVERSE EFFECTS: Animal studies of echinacea preparations generally show low toxicity; adverse effects/events reported in RCTs are infrequent, minor and similar to those noted for placebo. The main safety issues at present are the possibility of allergic reactions: echinacea species

Echinenace

Three species are used medicinally:
*E. angustifolia, E. pallida, E. purpurea*

Also known as Black Sampson, Coneflower

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**PREPARATIONS:** Dried root or rhizome of all three species may be prepared as an infusion or decoction and/or as an alcohol extract or tincture. The aerial parts of the *E. purpurea* may also be used as an expressed juice. Fresh or dried plant material is also formulated into solid dosage forms (e.g. tablets).

**ACTIVE CONSTITUENTS:** Several groups of constituents—the alkamides, caffeic acid derivatives, polysaccharides and alkenes—appear to contribute to activity. However, one study found that caffeic acid derivatives are not bioavailable following oral delivery and, therefore, cannot contribute to activity. The three species of echinacea are chemically dissimilar: *E. purpurea* and *E. angustifolia* contain alkamides, whereas *E. pallida* has only very low alkamide concentrations, if any. As with other herbal medicines, the profile of constituents in echinacea raw material and preparations will vary qualitatively and quantitatively depending on environmental factors, species, plant part used, methods of preparation and other factors.

**MAIN USES:** Long history of medicinal use for a variety of conditions, mainly infections. Current interest is focussed on its immunostimulant (increasingly described as immunomodulatory) effects, particularly in the treatment and prevention of the common cold, influenza and other upper respiratory tract infections (URTIs).

**EVIDENCE FOR EFFICACY:** Clinical trials have focussed on testing effects in preventing and treating the common cold and other URTIs.

**HERBAL** medicines are a popular health care choice, but few have been tested to contemporary standards. **CHARMS & HARMS** summarises the evidence for the potential benefits and possible harms of well-known herbal medicines.
**Grommets effective for recurrent acute otitis media**

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**THE PROBLEM:** Acute suppurative otitis media is one of the most common infectious diseases in childhood. Recurrent acute otitis media is defined for the purposes of this review as either three or more acute infections of the middle ear cleft in a six-month period, or at least four episodes in a year. Strategies for managing the condition include the assessment and modification of risk factors where possible, repeated courses of antibiotics for each new infection, antibiotic prophylaxis and the insertion of ventilation tubes (grommets).

**CLINICAL BOTTOM LINE:** Grommets have a significant role in maintaining a ‘disease-free’ state in the first six months after insertion, in children aged three years or younger. In one study, grommets reduced the number of episodes of acute otitis media by an average of 1.5 episodes per child (a reduction of approximately 70%), and significantly increased the proportion of children with no episodes of AOM. The other study reviewed also found a higher proportion of patients in the grommet group had no episodes of AOM in the six months after intervention, but the difference was not statistically significant. The effect size was small in terms of total number of episodes of recurrent AOM but in both studies more than 50% of children were AOM free, while only a handful were rendered AOM free in the antibiotic arm. This review involved only two small studies. Further research is required to investigate the effect of grommets beyond six months. Clinicians should take into account an individual patient’s circumstances, the possible adverse effects of grommet insertion and the potential complications of AOM before surgery is undertaken.

**Table 1. Grommets effective for recurrent acute otitis media**

<table>
<thead>
<tr>
<th>Grommets to prevent recurrent otitis media</th>
<th>Success</th>
<th>Evidence</th>
<th>Harms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction on Acute otitis media up to six months</td>
<td>Cochrane review</td>
<td>Complications of surgery</td>
<td></td>
</tr>
</tbody>
</table>

**Key references**


**References**


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