Echinacea May Protect Against the Common Cold

BY JEFF EVANS
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Users of echinacea supplements in clinical trials reduced their odds of developing the common cold by more than half, according to findings from a meta-analysis of 14 published, randomized, placebo-controlled trials.

When patients in the trials caught a cold, those who used echinacea supplements also cut a mean of 1.4 days from the duration of their illness, compared with patients who received a placebo.

The trials involved preparations of the three most common *Echinacea* species (*E. purpurea*, *E. augustifolia*, and *E. pallida*) either alone or in combination with other supplements.

Although agencies such as the World Health Organization, the Canadian Natural Health Products Directorate, and the German Federal Institute for Drugs and Medical Devices Commission E have supported the use of echinacea for the common cold, "there is controversy about the efficacy of echinacea for the prevention or treatment of the common cold with some studies showing benefit and others showing a null effect," wrote lead investigator Sachin A. Shah, Pharm.D., of the University of Connecticut School of Pharmacy, Storrs, and associates (Lancet Infect. Dis. 2007;7:473-80).

The meta-analysis, which encompassed 1,356 patients in tests of echinacea's effect on the incidence of the common cold and 1,630 patients in determining its effect on the duration of colds, showed that echinacea users had significantly lower odds of contracting a cold (58% lower) than did placebo-treated patients.

Nine trials evaluated the effect of echinacea on the incidence of colds, while seven tested its effect on reducing the duration of colds (two trials examined both end points).

Prophylactic use of echinacea reduced the incidence of naturally occurring colds by 65%, compared with placebo.

Echinacea dropped the incidence of colds by only 35% when investigators directly inoculated participants with rhinovirus, which suggests that echinacea has a modest effect on rhinovirus but marked effects against some of the 200 other viruses that are capable of causing the common cold, the researchers wrote.

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Echinacea's effects on the incidence and duration of colds were maintained regardless of whether patients contracted colds naturally or were inoculated with viruses. All of the trials pointed toward a positive effect of echinacea in reducing the odds of developing a cold, but the magnitude of this effect varied.

The investigators could not rule out the presence of publication bias, but a statistical analysis suggested that any such potential bias was not significant.

In four trials in which participants were allowed to use echinacea with other supplements, such as vitamin C, the combination significantly shortened the duration of colds.

But findings from three other trials that evaluated the effect of echinacea alone did not show any significant influence on the duration of colds.

Dr. Shah and colleagues suggested that this outcome does not mean that echinacea alone has no effect on the duration of colds because this subgroup analysis may have been "underpowered," and comparisons to the results obtained in the overall analysis indicate that "the benefit is caused by echinacea rather than the other supplements."

More than 800 products containing echinacea are available in a variety of forms; these may contain different parts of the plant and may contain differing levels of the molecules that are thought to underlie the proposed immunostimulatory effects of the plant, such as polysaccharides, alkamides, and chicoric acid.

The meta-analysis did not focus on the safety of echinacea, which is an inhibitor of the human cytochrome P450 3A4 enzyme; the enzyme processes many drugs and metabolites.

The researchers reported no conflicts of interest with any echinacea products. ■

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