

# Preventive Probiotics Cut Cold Symptoms in Kids

— LITTLE FALLS, N.J. -- When given preventively over the winter months, probiotics reduce fever, cough, and runny noses in children, researchers said.

by [Kristina Fiore](#)  
Staff Writer, *MedPage Today*

LITTLE FALLS, N.J., July 27 -- When given preventively over the winter months, probiotics reduce fever, cough, and runny noses in children, researchers said.

Prophylactic *Lactobacillus acidophilus* alone or in combination with other microorganisms reduced the incidence and duration of all three symptoms, Gregory J. Leyer, PhD, of Danisco USA in Madison, Wis., and colleagues reported online in *Pediatrics*.

Danisco produces probiotics and other health foods.

"Daily probiotic dietary supplementation during the winter months was a safe, effective way to reduce episodes of fever, rhinorrhea, and cough, the cumulative duration of those symptoms, the incidence of antibiotic

prescriptions, and the number of missed school days attributable to illness," the researchers said.

Some strains of probiotics have shown health benefits for adults in a variety of diseases. However, there isn't a vast literature about the prophylactic benefits of probiotics in a healthy population. Also, studies have often been conducted with a single strain but few have studied strain combinations.

Nor are probiotics routinely recommended in children for prevention of respiratory infection or its symptoms.

So the researchers assessed 326 healthy children ages 3 to 5 in a group childcare center in Jinhua City, China. They were randomly assigned to twice-daily doses of *L. acidophilus* or *L. acidophilus* in combination with *Bifidobacterium animalis* for six months from November 2005 to May 2006.

A third group was assigned to placebo, and a total of 248 youngsters completed the trial.

The researchers found that while both single- and combination-strain products reduced the incidence of fever, cough, and rhinorrhea, the effect was more profound with the combination product.

The single-strain dose significantly reduced the incidence of cough by 41% and fever by 53% ( $P=0.027$  and  $P=0.0085$ , respectively), but the reduction in rhinorrhea was not significant.

On the other hand, the combination product significantly reduced the incidence of all three symptoms: cough by 62.1%, fever by 72.7%, and rhinorrhea by 58.8% ( $P=0.005$ ,  $P=0.0009$ , and  $P=0.03$ , respectively).

The more profound effect with the combination product may have resulted from the fact that bifidobacteria in the mouth decrease adherence of certain respiratory viruses to the epithelium.

Both products significantly reduced the duration of fever, cough, and rhinorrhea compared with placebo, by 32% for the single strain ( $P=0.0023$ ) and by 48% for the combination product ( $P<0.001$ ).

Duration was about 6.5 days for the placebo group compared with about 4.5 days for acidophilus alone and 3.4 days for the combination product.

Antibiotic use was also reduced compared with placebo, by 68.4% for the single-strain dose ( $P=0.0002$ ) and by 84.2% for the combination product ( $P<0.0001$ ).

"Reducing the need for antibiotic use early in life may have important benefits (e.g., reduced adverse reactions, costs, and risk for antimicrobial resistance development)," the researchers said.

There were also significant reductions in days absent from childcare, the researchers said.

They added that the incidence of vomiting and diarrhea were low during the study period.

Probiotics may reduce respiratory symptoms and antibiotic use via an immune-enhancing effect, the researchers said, since previous studies have shown an ability of the bacteria to modulate immune responses through interactions with toll-like receptors.

The study was sponsored by Danisco USA.

Dr. Leyer and co-author Arthur C. Ouwehand, PhD, are employees of Danisco.

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#### **Primary Source**

*Pediatrics*

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