

Probiotics have slight preventive effect on colds

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Taking probiotics seems to provide both children and adults with a mild degree of protection against many upper respiratory tract infections including the common cold, according to a new systematic review. People who consume probiotics are also less likely to end up taking antibiotics for an upper respiratory infection, the review found.

Probiotics are found in fermented foods like yogurt, soy yogurt and [kefir](#) . People also often take probiotics as supplements. The reviewers

compared how often colds and other respiratory infections occurred in people who consumed probiotics to people who took placebos and found a statistically significant difference.

“Probiotics intervention was better than placebo in reducing the number of participants experiencing episodes of acute upper [respiratory tract infections](#),” said review co-author Qiuikui Hao in an email “Limited information from three of the 14 studies we included in our analysis also showed that probiotics can reduce the prescription of [antibiotics](#).”

Hao is a medical student at Sichuan University in China, where he works with lead review author Bi Rong Dong, M.D.

Colds and other upper respiratory infections are the most common reason that people in the United States seek medical care, the reviewers say. The average American has two to six colds each year, usually mild viral infections that resolve themselves after a few days.

Upper respiratory infections also include tonsillitis, laryngitis and pharyngitis, an inflammation of the pharynx and the most common cause of a sore throat. Other frequently occurring upper respiratory infections are acute sinusitis, acute middle ear infection and croup. Symptoms including nasal congestion, sore throats, hoarseness and coughing.

The researchers based their conclusions on 14 randomized controlled trials that included 3,451 participants. More than two-thirds of participants were children. The average age of adults was 40. Studies were conducted in Australia, Chile, Croatia, Finland, Japan, Spain, Sweden and the United States.

Probiotics include a wide variety of live active microorganisms such as lactic acid bacteria, also called lactobacillus, and bifidobacteria. The review considered any probiotic, whether it was a single strain or

multiple strains, at any dosage level for more than seven days.

There was no difference in how long a [respiratory infection](#) lasted in the probiotics group compared to the group consuming placebos.

Participants taking probiotics experienced only a few minor side effects. These were mostly gastrointestinal symptoms such as vomiting, flatulence and discomfort or pain in the lower intestinal region. The researchers found when studying all the pooled data that there were no significant differences in the occurrence of such side effects among people taking probiotics and those taking placebo.

The review appears in the current issue of *The Cochrane Library*, a publication of The Cochrane Collaboration, an international organization that evaluates medical research. Systematic reviews draw evidence-based conclusions about medical practice after considering both the content and quality of existing medical trials on a topic.

In Greek, the word “probiotics” means “for life.” Quikui Hao said that more than a century ago, Elie Metchnikoff a Nobel Prize-winning researcher in immunology, ran a series of studies that showed that the ingestion of microbes produced by lactic acid, that is probiotics, could help relieve both respiratory tract and digestive disorders.

However, more recent studies focusing on the impact of probiotics upon URTIs have been inconclusive, Hao said. “With the increasing consumption of probiotics in fermented foods or as dietary [supplements](#), we feel that it is very important to understand the effects of probiotics on acute URTIs and their potential adverse effects in humans.”

Mohamed Mubasher, Ph.D., a former associate professor of Biostatistics at the University of Texas, said, “What's exciting about this research is the fact that probiotics, a drug-free natural product, can potentially boost and enhance the human immune system and also regulate the production

of beneficial bacteria within the human system.”

Mubasher said that he considered the authors of this review to have competently evaluated the results of the 14 studies they reviewed. However, he added that with regard to reducing the duration of URTIs, he suspected that many of the studies covered by this analysis were of insufficient sample size to really support such claims.

He also noted a drawback which the authors had themselves acknowledged: Elderly adults were not included among the study participants. As people age, their immune systems weaken. Older adults might stand to benefit significantly from immune system enhancements, even mild ones such as those that probiotics seem to offer to younger people.

More information: Hao Q, et al. Probiotics for preventing acute upper respiratory tract infections. *Cochrane Database of Systematic Reviews* 2011, Issue 9.

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