

Cochrane: Probiotics may reduce the risk of antibiotic-associated diarrhea

By Stephen DANIELLS, 31-May-2013

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Consuming supplements and food containing probiotics may reduce the risk of antibiotic-associated diarrhea, according to a systematic review from the prestigious Cochrane Collaboration.

Analysis of 23 clinical trials revealed that probiotics taken in conjunction with antibiotics reduced the number of people who suffered diarrhea by 64%.

"In the short-term, taking probiotics in conjunction with antibiotics appears to be a safe and effective way of preventing diarrhoea associated with Clostridium difficile infection," said lead researcher Bradley Johnston of The Hospital for Sick Children Research Institute in Toronto, Canada.

"The introduction of some probiotic regimens as adjuncts to antibiotics could have an immediate impact on patient outcomes, especially in outbreak settings. However, we still need to establish the probiotic strains and doses that provide the best results, and determine the safety of probiotics in immunocompromised patients."

The issue

Antibiotics treatment is known to disturb the beneficial bacteria that live in the gut, and it may allow other harmful bacteria like *C. difficile* to take hold. Although some people infected with *C. difficile* show no symptoms, others suffer diarrhea or colitis.

Numerous studies have reported that probiotic foods and supplements may offer a safe, low-cost way to help prevent *C. difficile*-associated diarrhea (CDAD), said Dr Johnston and his co-workers. This finding is important, they added, because CDAD is expensive to treat.

Probiotics are defined by FAO/WHO as 'Live microorganisms which when administered in adequate amounts confer a health benefit on the host'.

Dr Johnston and his co-workers identified 23 trials involving 4,213 adults and children with reported CDAD cases. Probiotics taken in conjunction with antibiotics reduced the number of people who suffered diarrhoea by 64%. Only 2% of participants who took probiotics had CDAD compared to nearly 6% of those who took placebo.

In addition, there were fewer adverse events in the group taking probiotics, they said.

While taking antibiotics in combination with probiotics helped to prevent CDAD, it did not reduce the number of people who were infected with *C. difficile*.

"We think it's possible that probiotics act to prevent the symptoms of C. difficile infection rather than to prevent the infection itself," said Johnston. *"This possibility needs to be investigated further in future trials, which should help us to understand more about how probiotics work."*

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"Probiotics for the prevention of Clostridium difficile-associated diarrhea in adults and children"

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