

Probiotics prevent diarrhoea related to antibiotic use

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Probiotic supplements have the potential to prevent diarrhoea caused by antibiotics, according to a new Cochrane systematic review. The authors studied *Clostridium difficile* (*C. difficile*) infections in patients taking antibiotics and found symptoms of diarrhoea were substantially reduced when patients were also treated with probiotics.

Antibiotics disturb the [beneficial bacteria](#) that live in the gut and allow other [harmful bacteria](#) like *C. difficile* to take hold. Although some people infected with *C. difficile* show no symptoms, others suffer [diarrhoea](#) or colitis. The so-called "[good bacteria](#)" or yeast in probiotic foods and supplements may offer a safe, low-cost way to help prevent *C. difficile*-associated diarrhoea (CDAD). This finding is important because CDAD is expensive to treat.

CDAD cases were reported in 23 trials involving 4,213 adults and children. 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 26 trials reporting on adverse events, there were fewer adverse events in the group taking probiotics.

"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](#)."

Although taking probiotics in combination with antibiotics 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."

More information: Goldenberg JZ, Ma SSY, Saxton JD, Martzen MR, Vandvik PO, Thorlund K, Guyatt GH, Johnston BC. Probiotics for the prevention of Clostridium difficile-associated diarrhea in adults and children. *Cochrane Database of Systematic Reviews* 2013, Issue 5. Art. No.: CD006095. [DOI: 10.1002/14651858.CD006095.pub3](https://doi.org/10.1002/14651858.CD006095.pub3)

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