

Probiotic bacteria could help treat Crohn's disease

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New research suggests that infection with a probiotic strain of *E. coli* bacteria could help treat and reduce the negative effects of another *E. coli* infection that may be associated with Crohn's disease. Researchers from the University of Auckland, New Zealand publish their results in the April 2011 issue of the journal *Applied and Environmental Microbiology*.

Crohn's disease is a common chronic disorder that affects the [gastrointestinal tract](#) and is believed to develop as a result of an aberrant [immune response](#) to intestinal microbes in a genetically susceptible host. Over the last decade, high levels of adherent invasive *E. coli* (AIEC) have been reported. One study isolated the bacteria in 36% of Crohn's sufferers compared to just 6% of controls.

Since Crohn's disease is a clinical subtype of [inflammatory bowel disease](#) (IBD) and others have reported successful treatment of IBC with the probiotic *E. coli* Nissle 1917 (EcN), the researchers investigated the impact EcN might have on an already established infection with AIEC in [cell cultures](#) mimicking those found in the lining of the intestines.

They found that treatment with EcN not only helped prevent the AIEC reference strain LF82 from invading the cells and establishing infection, it also appears to modulate production of immune proteins that cause inflammation.

"This study is the first to our knowledge to show that EcN can reduce some of the negative effects associated with the strain LF82 in an

already established AIEC infection and emphasizes the potential of EcN in IBD treatment. In particular the use of this probiotic could be of interest in CD patients harboring pathogenic AIEC," write the researchers.

Provided by American Society for Microbiology

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