

Study finds taking probiotics has benefits for patients in hospitals

June 4 2013

Patients in hospital who are on antibiotics may benefit from taking probiotics, according to researchers at St. Michael's Hospital.

Dr. Reena Pattani led a literature review that looked at the effectiveness of probiotics, live bacteria that can take up residence in digestive tracts, in treating common side effects of antibiotics, such as antibiotic-associated diarrhea and life-threatening side effects such as *Clostridium difficile* infection.

"These two conditions are associated with high morbidity, mortality and [health care costs](#)," said Dr. Pattani, an internal medicine resident.

"Antibiotics are non-specific – they target both our good and bad bacteria. And some of the [good bacteria](#) being killed off protect us from pathogens like *C. difficile*, a [bacterium](#) that can cause symptoms ranging from diarrhea to life-threatening inflammation of the body."

Previous studies have shown 10 per cent of patients who receive antibiotics while in hospital will get antibiotic-associated diarrhea and of these patients, 15 per cent of them will have diarrhea because of *C. difficile*.

Dr. Pattani and colleagues scanned available literature for studies that compared patients who received probiotics and antibiotics at the same time in hospital, with patients who received antibiotics alone to see if rates of antibiotic-associated diarrhea and *C. difficile* infection were lower in those who also received probiotics.

They pooled the results of 16 studies, looking at data from 3,403 patients, and found a significant reduction in both antibiotic-associated [diarrhea](#) and *C. difficile* infection in patients who took probiotics with their antibiotics.

The results are likely due to the powerful effects of probiotics, including their ability to populate the [digestive tract](#) with healthy bacteria and strengthen the immune system, Dr. Pattani said.

"Hospitalization is a key risk factor for acquiring *C. difficile* infection," Dr. Pattani said. "Probiotics can help improve the health of individual patients by preventing *C. difficile* while also reducing the transmission of *C. difficile* to other, non-infected people in the high-risk inpatient environment. We hope these results will prompt physicians to consider its use."

Dr. Pattani said that while the results of her study are encouraging, a larger study including more patients, and one that looks at what kind of [probiotics](#) work best and at what doses needs to be done before hospital-wide policies can be made.

The paper appeared online in the journal *Open Medicine* today.

Dr. Pattani is a resident at the University of Toronto and St. Michael's incoming chief resident.

Provided by St. Michael's Hospital

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