

# Could Preventing Crohn's be This Easy?

written by Eugene L. Heyden, RN. | December 28, 2016



Last update: 08-20-22

***By Eugene L. Heyden, RN***

This is the story of a boy and his dog, and the Crohn's he will never get . . . maybe. This is also the story of a dog and his boy, and the Crohn's he will never get . . . perhaps. (Yes, dogs get Crohn's, too.)

In the image above, you see a boy and a dog sharing a bed. How sweet! I see this, too. But I also see something else. I see a boy and a dog sharing germs. How wonderful! Both are already super organisms—each composed of themselves plus more germs than you can count in a lifetime. But now, together in close proximity, they will share their germs and increase the bacterial diversity in each other's GI tract. Believe it or not, the greater the diversity in an individual's gut, the better he or she is able to fend off disease, Crohn's included. This is the power of what is called **The Hygiene Hypothesis**.

*"The "IBD hygiene hypothesis" states that raising children in extremely hygienic environments negatively affects immune development, which predisposes them to immunological diseases like IBD later in life." (Weinstock and Elliott, 2009)*

The Hygiene Hypothesis basically states: The more bacterial species you are exposed to as an infant or as a child, the more resistant to disease you will become.

Hard to believe, I know. Our society is all about cleanliness and the killing of germs. But exposure to a wide variety of bacteria (doggy bacteria included), and the bacterial diversity that follows, trains the immune system to be more on its toes and better able to protect from disease. Surprisingly, bacterial diversity becomes a layer of protection. Apparently, a lot of good bacteria have the power to crowd out a lot of bad bacteria. Uh oh! Our society has it in for bacterial diversity. Not intentionally, but quite effectively.

If we wait long enough, little Jimmy up there, sleeping with little Barron, will probably come down with an ear infection. And likely, he will get a round of antibiotics to solve the problem. Of course, this is probably a good idea. However, the antibiotics taken will reduce the bacterial diversity in little Jimmy's gut, killing off billions of good bacteria as an unintended consequence. Look out, little Jimmy!

You are now at more risk for developing Crohn's. After a course of antibiotics, in children it can take only a few months for Crohn's to show up, seemingly from out of nowhere (Hviid et al., 2011). And why, you ask:

*"Antibiotics are common early life exposures which can disturb the intestinal microflora. They can alter the composition of the intestinal microflora by reducing colonization resistance against opportunistic microorganisms." (Hviid et al., 2011)*

Poor little Jimmy. Perhaps we should get him another dog to sleep with. And let's make it a dirty little dog, one harboring a ton of germs. Maybe, just maybe, by this means we can most expeditiously repopulate his gut with hordes of bacteria and recreate the bacterial diversity he once enjoyed. Then he will be better protected against contracting Crohn's and meeting a nice new doctor. This is the promise of the Hygiene Hypothesis.

As long as we are considering getting another dog for Jimmy, perhaps we should find him a dog with intestinal worms. Intestinal worms, as it turns out, are protective against Crohn's. Given the right dog and the right worm, it won't take long for little Jimmy to become host to a new type of organism, one that has an uncanny ability to prevent disease. Now, I'm not suggesting that giving a child a case of worms is a good idea. It may be a lousy idea. I'm just saying that worms appear to have the power to protect their host from a handful of very serious diseases. And wouldn't you know, some people owe their Crohn's remission to intentionally infecting themselves with intestinal worms. Whatever it takes, say I! But there may be better ways to achieve remission in Crohn's than being infected with worms. That being said, desperate times do require desperate measures.

I guess The Hygiene Hypothesis gives us all kinds of unusual ideas to play around with. It is a *powerful* theory. It may even lead you to do the unthinkable.

In order to create, actually recreate, a high degree of bacterial diversity, a diversity that has the power to stop a hideous disease in its tracks, one might consider what I call "the nuclear option"—doing something so extreme that you don't want to do it, but you will if you have to. I'm talkin' fecal transplantation (FMT) here! FMT takes the Hygiene Hypothesis to a whole other level.

With FMT, you take poop from a healthy individual (one we will presume is host to a wide variety of bacterial species) and transplant it into the gut of a diseased individual. FMT is the gift of bacterial diversity, and in an instant! And it's no joke. FMT has the power to cure Crohn's (and particularly ulcerative colitis).

In my book entitled ***More to Consider in the Battle against Crohn's***, I include a chapter entitled ***Yes, we have a worm for that!*** And you guessed it! This chapter is all about The Hygiene Hypothesis. In it, I share the stories of two gentlemen

whose Crohn's disease was cured by FMT. It is not difficult to believe, and I mean firmly believe, in the Hygiene Hypothesis when you do the dirtiest thing you can think of, and your Crohn's goes into remission. Here is an excerpt from my book:

A case report—heralded as the first case of severe Crohn's disease to be successfully treated by fecal transplantation—comes to us from China, the birthplace of FMT some 2,000 years ago. The patient, a 32-year-old male, presented to clinic with “progressive abdominal pain, bloody diarrhea and high fever.” Two and a half years earlier, he had been formally diagnosed as having Crohn's. He undoubtedly had Crohn's for quite some time, as he had experienced gastrointestinal symptoms including pain for five years prior to diagnosis. To make a long story short, this gentleman received one fecal transplant donated from his healthy 10-year-old daughter, instilled in the duodenum via an endoscope. Only one! After one week (only one!), “his symptoms, such as fever, bloody purulent stool and abdominal pain, were dramatically alleviated.” At one month (only one!), he met the criteria for clinical remission. He continued in remission for 9 months and counting. (see Zhang et al., 2013) If it can happen in China, I guess it could happen elsewhere. Perhaps in North America.

In August, 2011, a 26-year-old gentleman presented to the emergency room (exact location not disclosed—Canada, I think) with a perianal fistula. Surprisingly, he had no gastrointestinal symptoms at the time that would suggest he had Crohn's and was treated with antibiotics and surgery and attained what appeared to be a full recovery. Seven months later another perianal fistula appeared from out of nowhere, so it was off to the emergency room again! This second fistula was also successfully treated with antibiotics and surgery, and life was good once again, but not for long. Five months after his second surgery he returned to the emergency room with all the classic symptoms of Crohn's—abdominal pain, diarrhea, and weight loss. It was time to get to the bottom of things, so to speak, and soon the diagnosis of Crohn's was made. The patient was subsequently started on the typical first-line anti-inflammatory agents, and remission was achieved but did not last. The evil reappeared. What to do next?

Typically, next is the biologics. Heard of Remicade? Unfortunately (or not), this individuals' insurance would not cover the cost for this form of therapy is very, very

expensive. (You won't believe how expensive, so I won't tell you.) Since going in this direction was not an option for this patient at the time, his gastroenterologist had to come up with something. And in this instance, up with something . . . really meant . . . up with something. After discussing the FMT option with the patient who was all ears and most agreeable—and having donor stool readily available in the local stool bank—a fecal transplant was performed, placed with a colonoscope as high up as reasonably possible. Within days the patient felt better (and had quite a story to tell) and . . . well, let's just see what happened next:

“Two days after FMT, the patient reported 2 to 3 formed BMs per day, associated with decreasing abdominal pain. He continued to improve and reported 1 formed BM per day, 1 week after FMT and remained in remission for 4 weeks after FMT. By this time, his insurer had agreed to cover a biological agent, but the patient wanted to pursue further FMT instead. At the time of his second FMT, there was complete mucosal healing of his colon, and colonic biopsies showed no active inflammation.”  
(Kao et al., 2014)

(End of excerpt)

I think I started this post with an image of a little boy sleeping with his little dog. How sweet! Now look what the post has deteriorated into—*poop therapy*! Oh, well! It is what it is.

In closing: Crohn's is a most unusual disease. The Hygiene Hypothesis makes everything a lot more interesting. There are lessons to be learned. There are principles to be put into practice. There are puppy dogs to snuggle up to. There are donors to find. My goal in writing these little Crohn's posts and sharing them with you is to bring things to your attention that, if acted upon, may give you an edge in the struggle you face. We are ignoring so much in the battle against Crohn's. Your battle against this disease may not be won with the use of drugs, drugs galore, and drugs alone. I thought you should know.

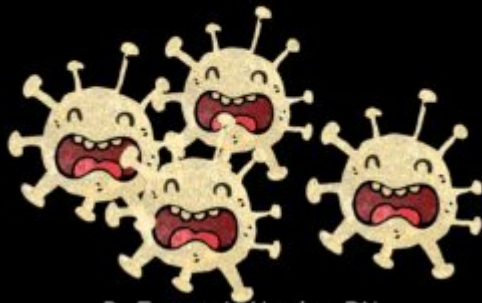
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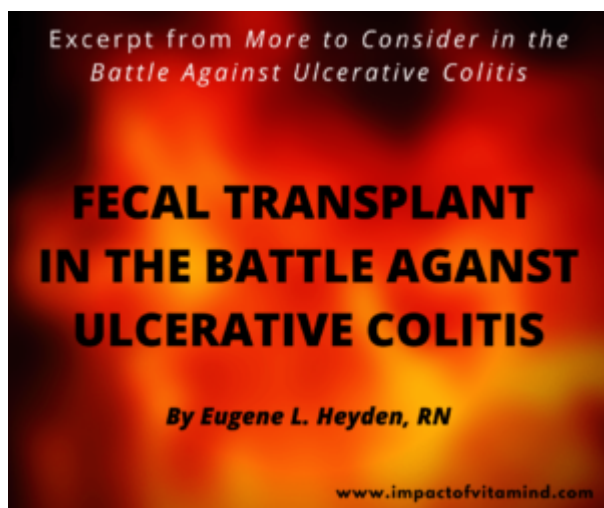
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**WAR STORIES: JERRY**

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