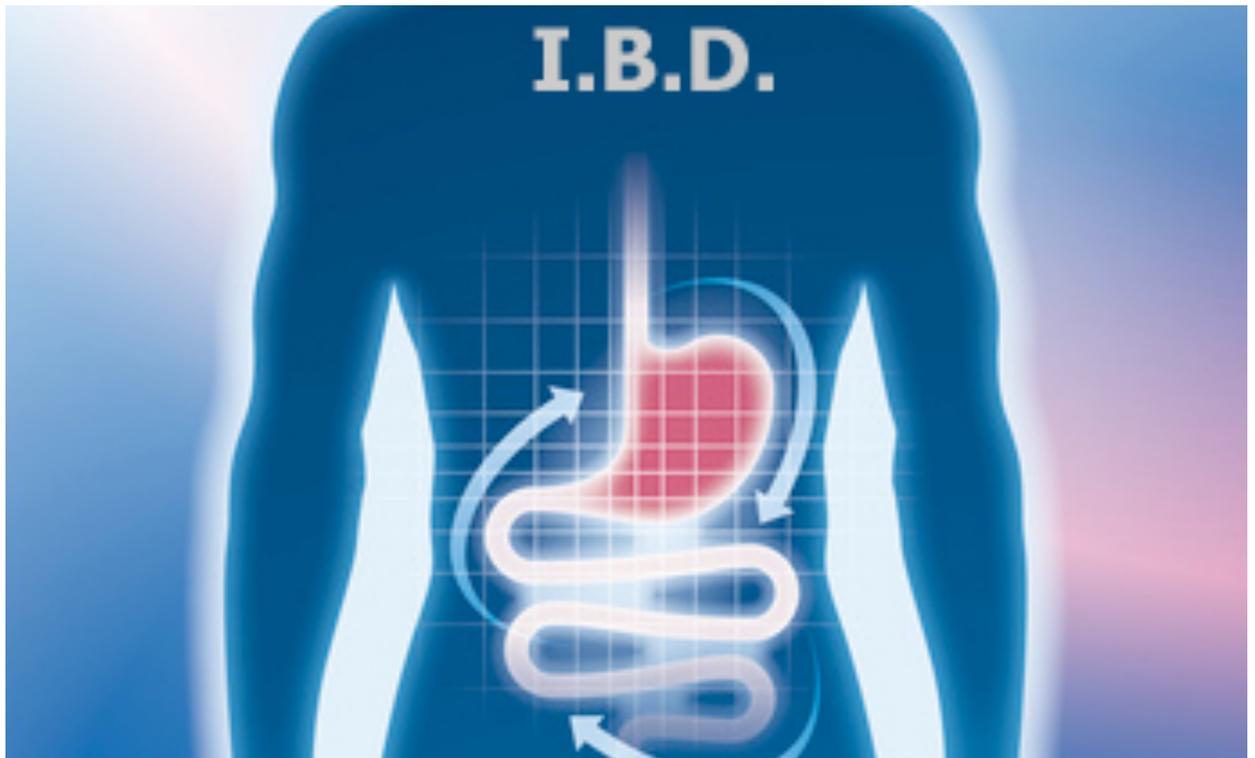


# ALBERTA IBD CONSORTIUM DIGEST

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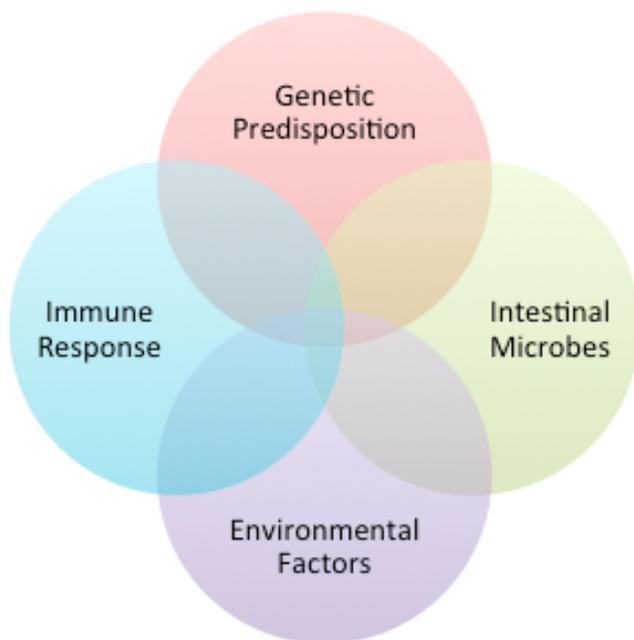
## Research News

### Dietary Therapy and Inflammatory Bowel Disease

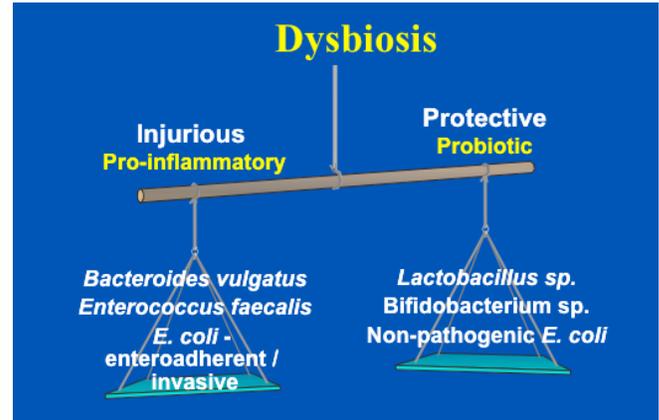
Dr. Leo Dieleman, Dr. Karen Madsen, Dr. Richard Fedorak, Daniel Grigat

Inflammatory bowel diseases (IBD) are chronic intestinal inflammations characterized by frequent flares of abdominal cramps and chronic diarrhea. Current treatment of these conditions requires anti-inflammatory and immunosuppressive medications that can cause unwanted side effects, and often surgery.

It is known that the development and disease course of IBD is influenced by an interaction of factors that includes genetic predisposition, our immune response, environment (tobacco, diet, pollution), and the balance of microorganisms living in our intestinal tract.



The 400-500 species of bacteria living in our colon can be placed into two general categories. One category is **Pro-inflammatory** bacteria that are injurious to our gastrointestinal tract. The other category is **Protective bacteria** that play a beneficial role in our gut. **Dysbiosis** is an unbalance between the two and is associated with IBD disease activity.



A recent study by Dr. Leo Dieleman, Dr. Richard Fedorak and Dr. Karen Madsen at the University of Alberta has shown that some dietary interventions can normalize this imbalance and have a positive effect on disease activity. The dietary intervention consisted of large doses of protective or probiotic bacteria, whereas another study by Dr. Dieleman used prebiotics (fermentable fibers that promote the growth of protective bacteria).

The therapeutic benefit of this intervention was most evident in patients with mild to moderate ulcerative colitis. The benefits observed in this preliminary study included an improvement of bloody diarrhea and abdominal pain. Why was probiotic/prebiotic dietary therapy more effective in ulcerative colitis than Crohn's disease? "The answer to that", ponders Dr. Dieleman, "will probably lie in understanding the fundamental differences in the causes between Crohn's disease and Ulcerative Colitis". Dr. Dieleman also hypothesized that dietary therapy, when given early after bowel surgery for Crohn's disease, may prove beneficial in reducing disease recurrence in patients with Crohn's disease.

The bottom line, says Dr. Dieleman, is that probiotic/prebiotic therapies have shown to be beneficial for mild to moderate ulcerative colitis **when used in combination with standard pharmaceutical therapies under medical supervision.**

## Research News

### Dietary Therapy and Inflammatory Bowel Disease

In order to further this exciting research, Dr. Dieleman, together with Drs. Madsen and Fedorak and in collaboration with Dr. Rhonda Bell (Nutrition), Dr. David Wishart (metabolomics) and Dr. Michael Gaenzle (food science), has secured a \$350,000 research grant from Alberta Innovates - Bio Solutions to study “Personalized Dietary Therapies for Treating Inflammatory Bowel Disease”. This study will utilize a personalized diet, unique to each patient, supplementing specific metabolic deficiencies found in blood and urine, using Alberta-grown food sources that are rich in key nutrients that are believed to decrease flare-ups of IBD. These nutrients include:

- Omega-3 Fatty Acids (e.g. salmon, lamb, enriched eggs, canola and flaxseed oil)
- Polyphenolic compounds (e.g. strawberries, saskatoons)
- Glutamine (e.g. barley, wheat, rye)
- Short-Chain Glycerides and Branch-Chained Amino Acids (e.g. butter, cheese)
- Lactobacilli or Bifidibacteria (e.g. yoghurt)
- Soluble Fermentable Fiber (e.g. pulses, oats, barley)



It is believed that this study will increase our knowledge of the effective use of specific dietary therapy for treating or even preventing Inflammatory Bowel Disease. The eventual goal is to reduce drug dependency, empower IBD patients and improve their quality of life, and to improve health outcomes.

#### **Disclaimer**

This article does not constitute medical advice. The research results discussed are preliminary and require further validation. Inflammatory bowel diseases are complex medical conditions that require regular professional medical care. Discuss your options with your doctor prior to starting any diet.