

# NUTRITION, *a passion!*

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Dear Health Care Professional,

Danone Inc. is proud to announce the launch of our new electronic newsletter specifically for health care professionals, *Nutrition, a passion!* The aim of this resource is to help health care professionals stay abreast of some of the latest science on probiotics, functional foods, nutrition and health.

The *Nutrition, a passion!* newsletter will be distributed quarterly, with the input of leading Canadian experts. We trust you will find this new resource of value to your practice.

Our inaugural issue of the *Nutrition, a passion!* newsletter highlights the theme for this year's World Digestive Health Day that will take place on May 29th. According to Dr. Richard Fedorak, president of the Canadian Digestive Health Foundation, "at least 60% of Canadians – that's 20 million people – suffer from at least one digestive disease each year." In this issue, we take look at one of the most common digestive diseases, irritable bowel syndrome (IBS), which is the focus of World Digestive Health Day activities this year. In particular, we examine the role of probiotics in the management of IBS symptoms, based on a review by Dr. Fedorak and his colleague Dr. Anna Borowiec, as well as other current research.

While the complex pathogenesis of IBS remains poorly understood, it is increasingly clear that the bacterial gut flora plays an important role. Recent research indicates that certain probiotic strains may help relieve symptoms and improve quality of life. Studies unravelling their many mechanisms of action offer hope for safe options for the management of IBS symptoms.

While more research is needed, some studies indicate that certain probiotic strains and products may provide a safe IBS management strategy to patients looking for relief from symptoms.

To better health and well-being!  
Danone's Team of Registered Dietitians



**World Digestive  
Health Day**  
May 29th 2008  
World Gastroenterology  
Organization

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**Author:**

Valerie Johnson, MHS, RD  
Nutrition Wise Communications

**Reviewers:**

Richard Fedorak, MD  
President, Canadian Digestive Health  
Foundation

Leo Dieleman, MD, PhD  
Associate Professor, Division of  
Gastroenterology, Alberta University

Kendall Taft, RD  
Clinical Dietitian – Gastroenterology,  
University of Alberta Hospital

## Probiotics – potential new options for IBS symptom management



IBS symptoms typically include, abdominal pain or discomfort, chronic diarrhea or constipation (or a mixture of both), bloating and flatulence. Health-related quality of life usually suffers also. Since there currently is no cure for IBS, treatment focuses on symptom relief. This usually includes the use of bulking agents (to relieve constipation), anti-diarrheal and anti-spasmodic agents, tricyclic antidepressants (for pain) and behavioural therapy. Recent trials have investigated the use of probiotics as novel options for the management of IBS symptoms.

### Mechanisms of action

The etiology of IBS involves changes in bacterial flora, such as small bowel overgrowth. In addition, there is good evidence that the intestinal microflora of patients with IBS differs significantly from healthy controls. The immune system is also involved, with pro-inflammatory and anti-inflammatory cytokines. There is evidence that probiotics have the potential to exert a number of different beneficial effects. Depending on the specific species and strain, probiotics may help alleviate IBS symptoms by:

- Altering the adherence of pathogenic bacteria to the bowel wall
- Secreting antimicrobial peptides that inhibit pathogenic bacteria
- Modulating the immune system, normalizing cytokine production

### Randomized controlled trials

The results from well-designed randomized controlled trials (RCTs) are helping to identify probiotics that may be effective in patients with IBS. A number of double-blind RCTs have demonstrated some beneficial effects within relatively short time frames (often as little as 4 to 8 weeks). It is important to note however, that not all studies have demonstrated significant effects. The specific probiotic, dose, length of administration and individual patient symptoms are all important considerations. Study results suggest that different probiotics may provide relief for different symptoms associated with IBS.

### Benefits of specific probiotics

Research on the benefits of specific probiotics for patients with IBS began over a quarter century ago. During that time, a number of double-blind RCTs have documented significant beneficial effects of specific probiotics. While some studies have been criticized for relatively small sample sizes and short duration, the combined results do offer hope that probiotics are a promising option for the management of IBS symptoms. The following table highlights some documented clinical benefits of probiotic use in patients with IBS:



Danone has joined the World Gastroenterology Organisation in a three-year partnership to raise awareness about the importance of nutrition for maintaining digestive health.

Probiotic	Clinical benefits (significant improvements in)
Bifidobacterium animalis (lactis) DN-173 010	Health-related quality of life discomfort score, bloated feeling, stool frequency
Bifidobacterium infantis	Abdominal pain, global symptoms and anti-inflammatory cytokine profile
Lactobacillus acidophilus	Abdominal pain, flatulence, number of stools, consistency of stools, mucus, general physical state
Lactobacillus plantarum 299v Pro-Viva	Abdominal pain, flatulence, overall GI function, global symptoms
Saccharomyces boulardii	Stool frequency and consistency

Source: Borowiec AM and Fedorak RN. *Current Gastroenterology Reports*, 2007; 9:393-400; and Guyonnet D et al. *Alimentary Pharmacology & Therapeutics*, 2007; 26:475-85.

## References

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Some probiotic combinations have also been shown to have specific benefits. For example, a study of VSL #3, a combination of eight different probiotics, found a significant reduction in flatulence after 4 and 8 weeks.

One of the larger clinical trials to-date demonstrated that two daily servings of Activia (a fermented milk with *Bifidobacterium animalis (lactis)* DN-173 010) significantly improved a number of IBS symptoms within weeks. This multicentre, double-blind, placebo-controlled study included 267 adults diagnosed with constipation-predominant IBS. Participants were randomized to consume 2 servings of Activia or 2 servings of a heat-treated yogurt per day for 6 weeks.

The study demonstrated the beneficial effect of Activia on digestive discomfort and bloating, as well as on bowel movement frequency in persons with the type of IBS that is mainly associated with constipation. In subjects with a bowel movement frequency of less than 3 stools per week, Activia significantly increased stool frequency and improved digestive comfort over a six-week period. Regular daily consumption of Activia is required to maintain its effect.

Several earlier studies not related to IBS have demonstrated the effectiveness of *Bifidobacterium animalis (lactis)* DN-173 010 and Activia for improving slow transit time in healthy adults, women and the elderly.

Probiotics clearly offer hope as a safe option, for symptom management in patients suffering from IBS. Further research is needed to better understand how specific probiotics may help and to support the use of specific probiotic foods to alleviate IBS symptoms. Last year, the World Gastroenterology Organisation (WGO) published [10 Global Nutrition Recommendations to Improve Digestive Health](#). These include consuming fermented dairy products, especially probiotics with proven benefits on digestive health. The WGO plans to publish an IBS guideline this May 29th, 2009. To learn more visit [www.worldgastroenterology.org](http://www.worldgastroenterology.org).