Unlocking the mysteries of bowel disorders

Part 1: inflammatory bowel disease

Many of us have experienced abdominal discomfort, usually from overindulging. People with inflammatory bowel disease (IBD), however, have recurring and severe bouts of intestinal pain, bleeding, and diarrhea. This month, in the first of a two-part series on bowel disorders, alive looks at research that may provide relief for people with IBD.

People with IBD, specifically Crohn's disease and ulcerative colitis, need powerful medications to control symptoms and relieve pain. While these drugs can help, they have troubling side effects and many IBD patients hope for more natural options.

Current research is focused on three areas—uncovering the genetic origins of IBD, controlling disease symptoms, and preventing the disease. Gastroenterologists are encouraged by recent discoveries, but while exciting and full of promise, these results are quite preliminary.

IBD AND GENETICS
A consortium of Canadian and American researchers is only one among several study groups to have identified genes associated with IBD onset and symptomatology. Especially interesting work is underway to understand how different genes influence IBD onset and disease manifestation among racial groups. Researchers have only just discovered that African Americans with IBD have different genetic patterns than do their Caucasian or Asian counterparts. The hope is that these African American genetic variations will further the general knowledge about IBD and particularly about its heritability.

TREATING IBD
IBD treatment leans heavily toward symptom control. Though certain foods are known to trigger attacks, recent work has shown that diet can also diminish symptoms. Among the most promising are several studies on probiotic bacteria such as those found in yogourt. These bacteria can decrease inflammation and the gas, pain, and bloating associated with the disease.

A recurring research question is whether micronutrients and vitamin supplementation are useful for IBD. One small laboratory study reported that high doses of selenium offered some cellular protection and prevented inflammation.

Conversely, a US Public Health Service bulletin reported in
2004 that omega-3 fatty acids seemed to provide neither protection from relapse nor any reduction in inflammation. Scientists studying cancer and IBD are interested in vitamin D as both diseases occur more frequently in northern climates. Other studies are investigating zinc, iron, aloe vera, and vitamin E supplementation as well as the anti-inflammatory properties of green tea polyphenols.

PREVENTION
A strong link between IBD in children and diet seems likely, based on a study comparing 130 young IBD patients with 202 healthy controls. The results indicate that a diet high in fruits, vegetables, fish, and dietary fibre seems to protect children from early-onset Crohn’s disease. Other work correlates these findings, demonstrating that obesity in children appears to increase the risk for ulcerative colitis and that obesity can worsen the disease in adults.

FUTURE CHALLENGES
Research has furthered our understanding of IBD but basic questions remain unanswered: What causes the disease? What is the inflammatory mechanism? What role does diet play? For patients and their physicians, the challenge is to provide optimum health by balancing diet and medication while waiting for science to unlock IBD’s long-held secrets.

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Race seems to matter
The causes of IBD are unknown. The disease affects women and men equally and can begin in childhood. Race seems to matter—fewer cases occur in Asian populations than among Caucasians and African Americans, while Ashkenazi Jewish populations report significantly higher incidence rates. Climate, too, seems important, with higher incidences in temperate areas than in the tropics. IBD rates in the northern US exceed those in the south. Canada has one of the highest incidence rates of Crohn’s disease in the world (16.3 cases per 100,000).

More on IBD
Watch for Part 2 of this series in next month’s issue.