

Inside Tract®

Canada's Gastrointestinal Disease & Disorder Newsletter

Issue 182 | 2012



IBD AND THE BALANCED DINNER PLATE

Plus information on ulcer disease, pancreatitis, taste, and more.

The **Gastrointestinal Society**

Volunteers

GIS Board of Directors

Gail Attara	Co-founder & President
Gilles Larose	Chair
Dr. Frank H. Anderson	Co-founder & Honorary Chair
Dr. James R. Gray	Co-founder & Honorary Vice-Chair
Kathleen Matthews	Secretary
Paul Beaumont	Treasurer
Bruce Good	
Farzin Khosrow-Khavar	
Jennifer Lowther	
Sean Webster	

CSIR Board of Directors

Gail Attara	President
Dr. James R. Gray	Vice President
Dr. Frank H. Anderson	Co-founder & Honorary Chair
Gwen Ellert	
Farzin Khosrow-Khavar	
Diane Robinson	

Board Advisors

Doug Ford	Jo Hoeflok	Dr. Alan Low
-----------	------------	--------------

Medical Advisory Council

Dr. J. R. Gray Chair	Dr. G. I. McGregor	Dr. M. E. Prest
Dr. F. H. Anderson	Dr. D. C. Pearson	Dr. U. P. Steinbrecher
Dr. D. M. Israel	Dr. D. M. Petrunia	Dr. E. Tam
Dr. W. C. Kwan	Dr. T. D. Picton	Dr. J. S. Whittaker

Office & Special Events

Grace Chen	Kevin Lalli	Tony You
Doug Ford	Nasrin Tabrizi	

National & Head Office Staff

Head Office

Gail Attara	Chief Executive Officer
Kwynn Vodnak	Associate Director
Kimberly Skulsky	Outreach Coordinator
Susan Mersereau	Communications Coordinator
TBA	Office Assistant

Phone	604-875-4875
Toll-Free	866-600-4875
Fax	604-875-4429
Toll-Free Fax	855-875-4429
Email	info@badgut.org
Website	www.badgut.org

Mailing Address Gastrointestinal Society
855 West 12th Avenue
Vancouver, BC V5Z 1M9

Office Location 700 West 10th Avenue, 212
Vancouver, BC V5Z 1L5

Ontario Division

TBA	Executive Director
Toll-Free	855-848-4875

Quebec & Atlantic Division

Gary G. Fabian	Executive Director
Toll-Free	855-600-4875

Registered Charity Number 817065352RR0001

Follow the Gastrointestinal Society on



About Us

As the Canadian leader in providing trusted, evidence-based information on all areas of the gastrointestinal tract, the GI Society is committed to improving the lives of people with GI and liver conditions, supporting research, advocating for appropriate patient access to healthcare, and promoting gastrointestinal and liver health.

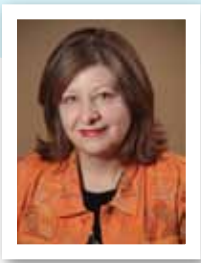
Our core education programming includes a comprehensive series of patient education pamphlets called BadGut® Basics, the BadGut® Lecture Series, online resources at badgut.org, and *The Inside Tract*® newsletter.

The GI Society was built in 2008 on the foundation of its partner organization, the Canadian Society of Intestinal Research (CSIR), a registered charity since 1976, and now leads the activities of the CSIR, as well as numerous new initiatives. The GI Society (Société GI) is also carrying on the legacy of L'Association des maladies gastro-intestinales fonctionnelles (AMGIF) and

providing programs and services in the French language for all diseases and disorders of the GI tract.

We have printed resources available on these topics, and even more information online:

Celiac Disease	Intestinal Gas
Colorectal Cancer	Irritable Bowel Syndrome
Constipation	Non-Alcoholic Fatty Liver Disease
Crohn's Disease	Ostomies
Diverticular Disease	Pancreatitis
Functional Dyspepsia	Stress Management
GERD (Reflux Disease)	Ulcer Disease
Hemorrhoids	Ulcerative Colitis
Hepatitis B	Ulcerative Proctitis
Hepatitis C	
Hiatus Hernia	
Inflammatory Bowel Disease	



President & CEO Report

Gail Attara

As Chair of the Best Medicines Coalition, I'm honoured to have been invited to attend the Canadian Medical Association's 145th Annual Meeting this summer in Yellowknife. Known as "the parliament of Canadian medicine", I will be observing the General Council debates among physician-delegates as they discuss the most pressing current issues in Canadian healthcare and healthcare policy. This year's theme is Best Care. Best Health. Best Value: From Consensus to Action.

On July 5, 2012, I had the pleasure of being part of a news story on Global TV in Vancouver regarding Dificid® (fidaxomicin), a remarkable new medication approved in Canada to treat *Clostridium difficile* infections. Watch for our review of this unique new class of antibiotic in the next newsletter.

We're continuing to hold BadGut® Lectures throughout the country this fall on GERD, IBD, IBS, and The Aging Digestive Tract, a useful resource for baby boomers and their parents. Keep an eye on our website for lectures near you.

Have you signed up yet to golf with us on Monday, September 24, 2012 in Surrey, BC? Forty golfers aim to raise \$100,000 in one day through pledges and epic rounds on the course. We have some spots left, so please tell golf fanatics you know about this event and they will thank you forever. See our website for more details.

Dine and network with us in Toronto on Monday, October 22, 2012 for the GI Society's inaugural Ontario fundraising event, The Inside Affair. CTV's Leslie Beck hosts this dynamic evening at Toronto's popular Boiler House in the charming Distillery District. See more information on page 9.

Wherever in the country you find yourself this fall, you can still be involved with the GI Society's activities. Do you have a fun idea for a fundraising event in your area? Contact our office. Would you like to facilitate a support group in your community? Please talk to us.



A Word from the Chairperson

Gilles Larose

The GI Society is heading up more exciting initiatives than ever. Our inaugural Quebec newspaper insert in June was an even more overwhelming success than we had anticipated. Our offices continue to receive a plethora of subscriptions, donations, and patient information requests from individuals in Quebec who might never have found us without the help of this outreach project. This professional publication, packed with useful, evidence-based information on gastrointestinal and liver conditions, was a useful tool for thousands of Quebecers concerned about their GI health, and it gave the GI Society the opportunity to prove our dedication to serving this region.

We also conducted a number of BadGut® Lectures this spring, including one in May in St-Léonard on IBS and Constipation. This lecture, presented by Dr. Céline Beaulieu to a full house, was hosted by incoming Executive Director of the Quebec region, Gary Fabian. There will be three French lectures in Quebec this fall, on GERD, Chronic Constipation, and Ulcerative Colitis. Look to our website in the coming months for more details.

As you know, the GI Society is a national organization, and I'm thrilled to be supporting the 2012 Golf Marathon by flying all the way to Vancouver to participate on September 24th in Surrey. You, too, can be a part of this year's success by pledging a participating golfer, or by pooling your coworkers and friends for a group donation in support of the GI Society's mandate to improve the lives of all Canadians affected by GI and liver conditions.

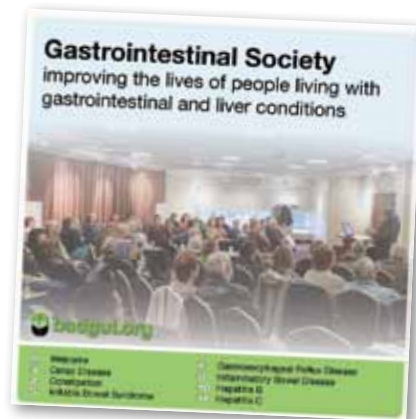


Photo: © diego cenov/Fotolia.com



September 24
2012



The **Inside Tract**®

This quarterly newsletter is a primary tool of the Gastrointestinal Society (GI Society) for delivering up-to-date medical information, in lay terms, to the Canadian public. Readership includes a mix of patients and their family, friends, and caregivers; healthcare professionals; and business professionals who are interested in the wellness of their employees. To subscribe for a low annual fee of \$20 (\$30 outside Canada), please visit our website, or complete and submit the form on page 23.

The GI Society does not endorse the products or services contained in this newsletter. Opinions expressed by the authors are their own and not necessarily those of the GI Society. Members of our medical advisory council or other professionals write or review all articles contained herein. In the interest of space, we usually do not publish references but will provide them upon request. We do not intend that this newsletter replace the knowledge or diagnosis of your physician or healthcare team and we advise seeking advice from a medical professional whenever a health problem arises.

Preparation and printing of *The Inside Tract*® newsletter is possible due to financial contributions from individuals, the Province of British Columbia, Abbott Laboratories Ltd., Aptalis Pharma, Bristol-Myers Squibb Canada, Ferring Pharmaceuticals, GlaxoSmithKline Inc., Hoffmann-La Roche Ltd., Janssen Inc., Medical Futures Inc., Merck Frosst Canada Inc., Takeda Canada Inc., and Warner Chilcott Canada Co.

Contributors

Gail Attara
Kwynn Vodnak
Morgan Amber
Gilles Larose
Melissa Carr
Ashley Charlebois
Susan Mersereau
Kimberly Skulsky

Editor Design

© Copyright 2012. All rights reserved. ISSN 1206-6028.

Reproduction of the contents in whole or in part without express written permission of the GI Society is prohibited.

The Inside Tract® is distributed by mail agreement 42037523.

Return undeliverable Canadian-addressed mail to:

Gastrointestinal Society
855 West 12th Avenue
Vancouver, BC V5Z 1M9

Guts

- 3 President & CEO Report
- 3 A Word from the Chairperson
- 5 Welcome New Board Members
- 6 Following Doctor's Orders
- 8 Gluten-Free on the Go in Toronto
- 9 The Inside Affair – A Fundraiser
- 10 Our Other Taste Buds
- 11 New Crohn's Medication
- 12 IBD and the Balanced Dinner Plate
- 14 IBD and Travelling
- 16 Diet for Ulcer Disease
- 17 Health Canada Report Highlights
- 18 Alcohol and Acute Pancreatitis
- 19 TCM Look at Summer Foods
- 20 The Scoop on Poop
- 22 Germs in the Loo
- 23 Subscription/Donation Form



Welcome New Board Members



Gastrointestinal Society New Treasurer

Paul Beaumont, BA, CMA

Paul Beaumont holds a BA in Economics from the University of Manitoba and professional designation as Certified Management Accountant. He has worked in high technology hardware and software development with Kodak (and Creo prior to acquisition), holding leadership roles in HR, marketing, engineering and product development, operations management, and finance. He is currently Program Manager



and Vice President of Kodak Graphic Communications Canada.

With a keen eye to dollars and sense, Paul is eager to contribute to the GI Society's success and looks forward to supporting the financial foundations required to meet its goals.

He enjoys an active lifestyle with a love for running, cycling and overseas travelling, taking nothing for granted, having been personally touched by maladies within the GI Society's mandate.



Canadian Society of Intestinal Research New Board Members

Gwen Ellert, BScN, MEd, RN

The president and CEO of Trelle Enterprises, Gwen Ellert, has been an educator in the healthcare industry for more than 15 years. A registered nurse, she also holds a Master of Education degree and a BSc in Nursing, both from the University of British Columbia. Gwen shares her knowledge and experience within numerous profit and non-profit settings, and is a regular lecturer for the CSIR and GI Society's joint BadGut® Lecture Series focusing on The Aging Digestive Tract.

She has contributed to published medical research and innovation, is a founding member of the BC Men's Health Foundation, and is co-author of *The Osteoporosis Book: Bone Health* as well as other books and educational materials endorsed by Canadian and American experts in Arthritis and Osteoporosis.

Gwen has a long history of volunteering with numerous charities and non-profit groups, including the Arthritis Society, Osteoporosis Canada, and the BC Women's Hospital & Health Center Society. She looks forward to serving in this new role within the CSIR Board of Directors.



Diane Robinson, BA

After starting out in the tourism industry with a number of sales and marketing management positions, Diane has worked at senior management levels in the areas of fundraising, marketing, and communications for non-profit organizations, including the Canadian Diabetes Association, the Variety Club, the Canadian Council for Business and the Arts, the Vancouver Symphony, and the Vancouver Art Gallery. Diane joined Parkinson Society British Columbia in 2005 as CEO.

Originally from Montreal and fully bilingual in English and French, she holds a BA from the University of Montreal. In 1976, she founded the Vancouver AM Tourist Association, which still thrives today. Diane looks forward to contributing her expertise in the non-profit and healthcare fields to the continuing work of CSIR in British Columbia.



Following Doctor's Orders



With an increase in lifespan and the prevalence of chronic disease, the number of new medications also continues to rise. However, recent advancements in alternative treatments and a better understanding of how lifestyle factors such as diet and exercise affect our health may cause many individuals to feel a general reluctance toward taking prescription drugs, especially on a long-term basis. Typically, effective treatment for chronic GI illnesses includes a combination of medication, a special diet or exercise routine, and ongoing monitoring. It's important to understand that even though prescription medicines usually come with certain risks, a physician only prescribes them after weighing those risks against the potential benefits to the patient. If 'an apple a day' alone could keep your condition at bay, then that is what your physician would gladly recommend.

Whatever treatment plan your healthcare team establishes for you, it can only be effective if you follow it. Research shows that 30-50% of patients do not comply with prescribed medication instructions, resulting in increased rates of disease-related sickness and death, as well as an increased financial burden on the healthcare system.¹ "Adherence is the fundamental link," experts say, "between intent and outcome of medical care." In addition to taking prescribed medications consistently, at the correct time and dosage, adherence can also include attendance to follow-up appointments, submitting to certain procedures, and adopting recommended diet and lifestyle changes.

Patient Involvement & Personal Beliefs Play an Important Role

A new study, published in *Patient Preference and Adherence*¹, analyzed eleven recent studies that focussed on the effectiveness of a number of medication reminder mechanisms, such as phone calls, emails, text messages, and others. The results of this study, as well as another very recent study² that looked just at electronic reminder mechanisms, showed that reminders do improve patients' adherence to medical therapy and that there is little difference in level of effectiveness among the various types of reminders.

Perhaps more importantly, however, this study's authors say that an individual's adherence to a treatment regimen is strongly linked to his or her personal beliefs and specific circumstances, rather than simply remembering or forgetting to take a medication. Individuals fail to follow medication regimens for a number of intentional and unintentional reasons, such as concerns about the efficacy of the prescribed treatment, fear of negative side effects, inconvenient treatment methods, poor communication and trust between physician and patient, lack of social support,

poor motivation, and misinformation about how to use the medication.

Researchers recommend that medical professionals communicate in a way that acknowledges their patients' roles in the treatment decision-making process, making themselves aware of patients' personal beliefs and paying attention to any particular circumstances that could lead them not to follow medication instructions. Strategies might include patient education, simplified medication regimens, and ensuring convenient access to prescriptions and other medical care. Patients can be part of this process by maintaining a trusting, mutually respectful relationship with medical professionals and caregivers.

Express clearly with your physician any concerns you have that might affect your decision to stick to a medication regimen. For example, if you are worried about a certain side-effect of a new medication, possibly based on something you read on an internet site or other source, then describe this to your physician so that she or he can discuss exactly why this particular treatment is right for you. It is also a good idea to explain your treatment plan with your family or other members of your support circle.

The Case of Steve Jobs

Steve Jobs, the famous co-founder and CEO of Apple Inc., died in 2011 from cancer. Though the media often simply referred to it as pancreatic cancer, an uncommon and normally fatal form of cancer, Jobs actually had neuroendocrine cancer, a very rare form of cancer that can occur in various areas of the body (for more information on neuroendocrine tumours, see *The Inside Tract Issue # 178*). If physicians discover neuroendocrine tumours before the cancer has spread (metastasized) to other areas of the body more difficult to treat, surgery can often provide a cure. Physicians first diagnosed Jobs with the disease in 2003, when a routine abdominal scan revealed a tumour in his pancreas.³ Relieved that he had a potentially curable form of cancer, his medical team recommended immediate surgery to remove the tumour, but Jobs refused this treatment for a full nine months, preferring instead to try diet modifications not based on medical evidence. It is impossible to know what difference that nine-month delay might have made, but Jobs' cancer did, at some point, spread to other areas, including his liver, and he died of complications directly related to the cancer.⁴

Economic Barriers to Adherence

A large Canadian survey that included 10,898 respondents from all ten provinces indicates that 9.6% of

Canadians are not complying with their prescribed medicine regimens due to financial barriers. Non-adherence factors in the survey included not filling a prescribed medication, not refilling a prescribed medication, or trying to stretch out a prescribed medication by taking lower or less frequent doses than what was laid out by the prescribing physician.

The highest cost-related noncompliance was among those who reported lower household income, poor health, chronic illness, and lack of prescription drug coverage. Respondents who did not have insurance coverage for prescription drugs were four times more likely to report cost-related noncompliance than those who did have coverage. Those who had two or more chronic conditions were 1.61 times more likely to report cost-related noncompliance than those who had no chronic conditions.

The researchers were surprised to find the highest rate of not adhering to prescribed medicine regimens due to cost was in British Columbia (the lowest was in Quebec). They suggest that BC's higher deductible rates for the public drug plan and higher levels of debt among BC residents may be important factors. The authors suggest that policy changes around public insurance coverage may be the key to lessening the burden of out-of-pocket expenses for prescription drugs in Canada, which would increase patient adherence, improve Canadians' health, and decrease hospital admissions for acute health problems.

New Tools

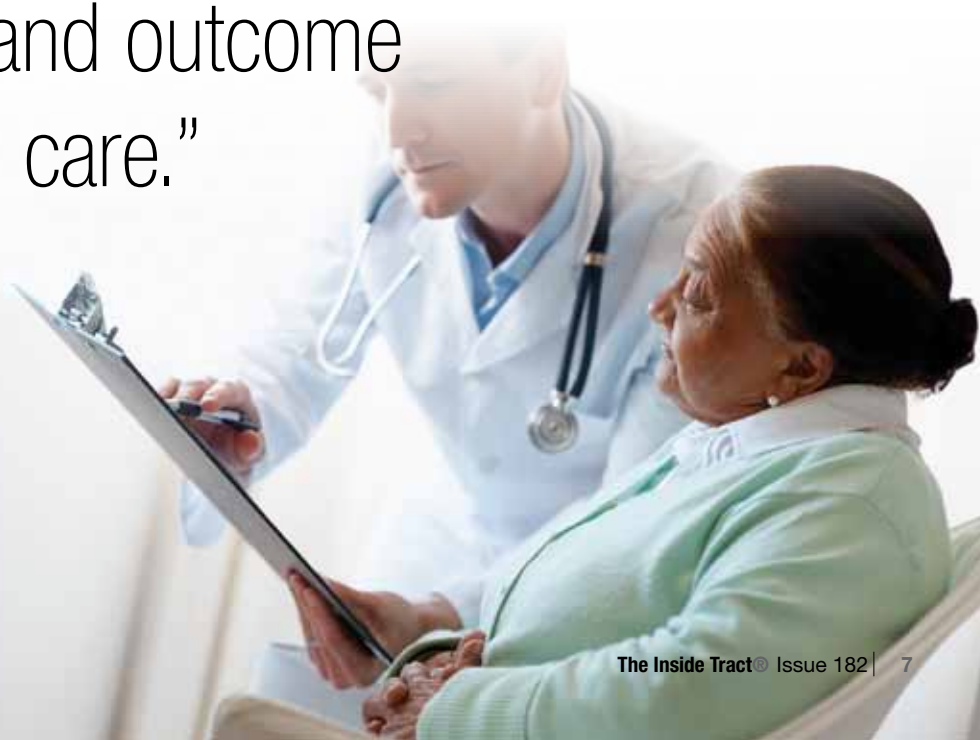
Knowledge is the Best Medicine (KiBM) is a program funded by Canada's Research-Based Pharmaceutical Companies that offers free tools to help patients keep track of their medical history and follow the treatment regimen their physicians have prescribed. KiBM is intended to help patients work better with their entire healthcare team, including physicians, pharmacists, and other medical professionals involved in their care, by using a KiBM tool to keep an up-to-date medication list with them at all times.

The most recent tool KiBM is rolling out is a new iPhone app – MyMedRec – that allows patients to easily track and schedule their medicine intake and other treatments. Patients can share the records accumulated using MyMedRec with family, physicians, and other members of their healthcare team, when appropriate. The tool also can send reminders to patients when it's time to take a dose of medicine and refill prescriptions.

For more information about the MyMedRec app, helpful tips on keeping on top of your treatment regimen, and personalized forms and booklets you can download and print, visit www.knowledgeisthebestmedicine.org.



“Adherence is the fundamental link,” experts say, “between intent and outcome of medical care.”



gluten-free *on the go*



Two innovative entrepreneurs are taking the Toronto food truck scene to a new level by serving up affordable gourmet dishes that include a range of healthy alternatives, which are free of gluten, dairy, soy, or spelt. Shontelle Pinch and Bianka Matchett say their motivations to launch the Gourmet Bitches food truck were their love of food and entertaining, a personal experience with gluten-related health problems, and a need for better food variations for Torontonians with specific dietary needs.

Gluten is a protein found in wheat, barley, and rye. Gluten also shows up in many whole grain foods related to wheat, including bulgur, farro, kamut, spelt, and triticale (a hybrid of wheat and rye). Some celiac disease experts warn patients to steer clear of oats, as well, since they could be contaminated by being in close proximity to other grains while being processed.

Food manufacturers often use gluten in food processing because it binds, stabilizes, and prevents crumbling. It is most common in products like bread, cereal, and pasta, but manufacturers also use gluten to thicken various packaged or processed foods, such as soups, ice creams, and sauces.

Many individuals have tried eliminating gluten from their diets and found that they feel better. This might mean that gluten is the culprit but there might be a different reason. If you pay close attention to your diet, no matter what steps you take, it usually makes you feel better because you're likely making better food choices overall. Several conditions respond well to eliminating gluten from the diet, including celiac disease, wheat allergy, and gluten-intolerance or sensitivity. However, celiac disease is an autoimmune condition, in which the body's immune system starts attacking intestinal tissue in response to eating gluten. If

you have celiac disease, you cannot afford to cheat, as even a small amount of gluten can cause great digestive harm, so this food truck is perfect for you!

"Everyone deserves a great lunch, and we're thrilled to offer dishes we've created to appeal to those with specific dietary restrictions, including people with celiac disease, who need a completely gluten-free diet," Shontelle told us. Their mouth-watering, gluten-free menu includes such items as tempura pineapple and Balinese chicken on corn tostadas.

Finally, with options like the Gourmet Bitches truck, if you must avoid gluten, you can now enjoy hot, prepared gluten-free food while you're on the go – without compromising your health. The distinctive matte black Gourmet Bitches truck, which alternates to serve a number of locations in Toronto, also caters special events. For more information, visit www.gourmetbitches.com (yes, that's a number 1 instead of an i in their URL). To find out when the Gourmet Bitches truck might be pulling up near your Toronto workplace, visit torontofoodtrucks.ca, or search for them on Facebook.



Is Gluten-Free Right for Me?

Going gluten-free when you don't have to means saying no to many common and nutritious foods. Don't believe everything you hear and see in the media about gluten. It has mistakenly become a dietary villain when it is only harmful to a few medically-predisposed individuals. Some unfounded stories include claims

that eliminating gluten from the diet might help a person to lose weight, or that gluten is harmful to all humans. There is simply no science to support these claims. For most individuals, gluten does not cause health problems and is actually a notable source of healthy protein.



Leslie Beck

MONDAY, OCTOBER 22, 2012 @ 6PM

THE INSIDE AFFAIR

A GI SOCIETY FUNDRAISER



Gail Attara

Join us for the fundraiser of the season at Toronto's popular **Boiler House** in the charming Distillery District (55 Mill St).

CTV's nutrition expert and author of eleven books, **Leslie Beck**, will emcee this dynamic networking evening you're sure to remember – featuring exquisite food, special guests, live auction items, and dazzling performances. Proceeds will go toward the GI Society's vital charitable work for Canadians affected by gastrointestinal and liver conditions.



Dr. Anna Reid

WHAT YOU CAN EXPECT

- » A few words from **Gail Attara**, our President & CEO
- » A chance to listen to and mingle with some of Canada's top health industry leaders, including **Dr. Anna Reid**, Incoming President of the CMA, and **Russell Williams**, President of Rx&D
- » Acrobats, magicians, and other performers to delight throughout the evening
- » Gourmet food stations with an array of beverage options to create perfect pairings, plus irresistible desserts, created by our host chef, **Jason Rosso**
- » Surprise lively auctions and draws throughout the evening



Russell Williams

SECURE YOUR RESERVATION TODAY!

Tickets for this not-to-be-missed event are \$200. Purchase tickets through our secure site at www.badgut.org, or contact us at ontario@badgut.org or 1-866-600-4875.



Jason Rosso

Company sponsorships are also available.

Photo: (top-left) © Ryan Visina, Image © Aleksey Klementev/Bigstock.com

Our *Other* Taste Buds

You've heard about gut instinct and gut feelings, but have you heard about gut tasting? We explore taste beyond the tongue.

When we like the taste of a food, we're more willing to eat it, and when we don't like the taste, we avoid eating it. This seems obvious, but it's an important detail, as our taste reactions might protect us from eating something that's bad for us. Although we associate taste with something that happens only along our tongues, there are actually taste receptors located throughout the intestinal tract.

Just after the turn of the last century, scientists discovered the genome for taste receptors, making it easier to locate them in various areas of the body.¹ Similar to those on our tongues, taste receptors in the gut have an adverse reaction in response to food they don't like, which can lead to nausea and other gastrointestinal (GI) symptoms.

Researchers are optimistic that new discoveries about these mysterious taste receptor cells will lead to better treatments for a number of conditions, such as type II diabetes, obesity, irritable bowel syndrome, inflammatory bowel disease (Crohn's disease and ulcerative colitis), and some functional GI conditions affecting children.

The Gatekeeper

Within the GI tract, taste receptors play an important role in nutrient absorption, gut motility, and the secretory activity of GI glands during digestion. They work by detecting the chemical compounds contained in foods we consume and react by triggering a sequence of events that might lead either to digestion of nutrients or protective behaviour (e.g., nausea and/or vomiting) against potentially dangerous chemicals.

Green Eggs and Ham

You may have heard children complain about particular foods, not because they don't like the taste necessarily, but because they say the food upsets their stomachs. Sometimes a particular food, though it is not harmful, will cause a child to vomit or experience other tummy upsets. When physicians investigate such complaints, they often find no organic cause and primarily treat these young patients with dietary modifications. After several decades of research, scientists have classified these GI symptoms as functional, acknowledging that they are real, but admitting that they don't yet have a physical explanation for them.

We know that taste sensitivities are different for children, and that our taste receptors change and develop as we grow. Researchers believe there is a complex system of factors that likely contribute to functional GI complaints in children and have suggested that taste receptors may have an important role to play in improving treatment.

The Future

Other researchers are examining how different taste sensitivities among patients with irritable bowel syndrome might be affecting that disorder, and why an elemental diet can often induce remission in patients newly diagnosed with Crohn's disease. If taste receptors in the gut are an important trigger for the digestive process, as the latest research suggests, then over- or under-sensitive receptors could have a direct effect on several medical conditions. Eventually, drug developers may be able to target these receptors to treat issues related to activity that happens later during the digestive process or affects different organs, but which is first set in motion by the gut's taste receptors.

5 tastes

What We Know Today: Taste is one of the five basic senses. Aristotle postulated in 350 BCE that the two most basic tastes were sweet and bitter and, for centuries, there were four basic recognized tastes: sweet, sour, bitter, and salty. In 1985, 77 years after its proposal as a distinct savory taste, the term umami received official recognition as the scientific term to describe the taste of glutamates and nucleotides.



umami



salty



bitter



sour



sweet

NEW MEDICATION on the Horizon for Crohn's Disease

In the fall, researchers will begin recruitment for a phase I/II clinical trial for patients with moderate to severe, active Crohn's disease.

Qu Biologics, a Vancouver-based biotechnology company, has developed a new class of immunotherapies, Site-Specific Immunotherapies (SSIs), which stimulate the body's innate immune response. Derived from the cell wall of bacterial species, SSIs stimulate the innate immune system in an organ-specific manner. Animal studies and initial clinical use in humans suggests that SSIs reverse chronic inflammation underlying many conditions, including cancer, arthritis, and inflammatory bowel disease.

Eight patients with Crohn's disease have been treated to date. All have had a therapeutic response and seven are off all other Crohn's disease medications. Five are in clinical remission. Four are in sustained clinical remission (longest is 2 years) after completing a four-month course of treatment.



The objective of this upcoming study is to investigate the safety profile and therapeutic efficacy of this treatment on clinical improvement. It will be conducted in Vancouver, and volunteer participation will be over 24 weeks. While recruitment has not yet begun, you can watch for news of the study on their website, www.qubiologics.com.

About Clinical Trials

Medications go through many stages of research before they are ready for the market. The clinical side of research is dependent on volunteers who have the condition that the new medication, device, or procedure is aimed to help. These studies often also require some healthy volunteers who do not have the condition.

In phase one trials, researchers are typically trying to determine if a treatment is safe, and these trials often include healthy participants. Phase two studies are conducted to discover if the treatment actually works and to determine correct dosages. Phase three studies monitor patients long-term to screen for side effects.

Participating in a clinical trial should not be taken lightly. Potential volunteers should examine the study guidelines and always consult with their physicians before entering into a trial. During a clinical trial you may have to take medication, change your diet and exercise habits, submit to laboratory and diagnostic tests, or visit a specific healthcare provider.



IBD AND THE BALANCED DINNER PLATE

Inflammatory bowel disease (IBD) is a collective term for a number of intestinal conditions, primarily Crohn's disease and ulcerative colitis. In the search for a fuller understanding of IBD, numerous recent studies have looked at the effects of specific foods on the development of the disease and management of its associated flares.¹ Along the way, researchers have found that while some foods do appear to be associated with an increased risk of IBD and flares, others may actually have a protective effect.

Photos: © Roman Sigaev/Bigstock.com, © Elena Schmitzler/Bigstock.com

What we Know

There has been a recent, dramatic increase in the incidence of IBD in certain countries, particularly those that have implemented a Western diet. Canada has the highest reported incidence of IBD in the world, so this trend is of particular concern right here at home.² When families move to different geographical regions, the children take on the same degree of risk for IBD as is present in the new place of residence, whereas their parents maintain the same risk as is present in their previous location.¹ As well, in pediatric Crohn's disease patients, the introduction of exclusive enteral nutrition therapy (administering specially formulated nutrition to the GI tract via a feeding tube) has a high rate of controlling the disease, suggesting that diet does have an effect on gut inflammation. For these and other reasons, we know that environmental factors play a role in IBD, in addition to genetic predisposition. Research continues to point to the Western diet – typically rich in meat, fat, sugar, synthetic additives, and processed foods – as an important risk factor for IBD. There are two ways that certain foods might play a role in IBD: they could have a direct effect on the gut or they could disrupt the microbial balance, which in turn disrupts the gut mucosa, leading to inflammation.

All together, a familiar message is beginning to come through: a balanced diet that is rich in fruits, nuts, and vegetables, and not heavily based on certain types of meat (such as red, processed, or fried) might decrease an individual's risk for developing IBD and might also help those who already have it to limit the occurrence of disease flares.

IBD patients, who are already vulnerable to nutritional deficiencies because their digestive tracts are compromised by disease, sometimes avoid certain types of food that they associate with disease activity, even

if they are not certain that those foods actually elicit their symptoms. It can be very difficult to achieve a balanced diet when an individual lives in constant fear that particular foods will cause pain or trigger an IBD flare, but current research gives these individuals even more reason to try to include a variety of healthy foods in their diets whenever possible, as it might help decrease their risk of disease relapse. Here we present some highlights from the latest studies.

Meat

Studies examining the association between meat consumption and IBD have been conflicting, with some research showing a significant link but others showing none. A large study in France involving 67,581 middle-aged women showed an association between total meat and fish consumption (though not eggs or dairy) and an increased risk for developing IBD.³ Similarly, a recent survey of the Japanese population found that the high number of new Crohn's patients had a strong correlation with increased protein consumption in the Japanese diet.¹

In a small study that looked at 149 children newly diagnosed with Crohn's and 251 control participants, researchers found that a high dietary intake of meat, fatty foods, and desserts correlated with a high risk of developing Crohn's in girls, and a high intake of vegetables showed a low risk in girls.¹ The researchers did not find these correlations in boys within this study.

One large study that included 20,686 men and women found no association between protein or any macronutrient and ulcerative colitis, but that study used very broad categorizations. For example, the researchers studied protein as a percentage of the total energy consumed, rather than considering the specific sources of protein, such as

meat, fish, nuts, dairy, legumes, and so on.

In a study of 191 ulcerative colitis patients in remission, meat consumption, especially red and processed, as well as other forms of protein and alcohol, were associated with disease relapse.¹

This doesn't mean you should eliminate meat from your diet, but keep the portion of meat on your dinner plate in moderation and avoid fried and processed versions whenever possible.

Fish and Nuts

In a 2011 study,⁴ researchers analysed the potential protective effect of fish and nuts – both of which have known anti-inflammatory properties – on deaths related to several inflammatory diseases, including IBD. The study included 2,514 participants older than 49, who completed a detailed questionnaire on diet habits. The researchers followed up with the participants after 15 years and found that even moderate consumption of nuts had a significant protective effect against death from inflammatory disease-related conditions, particularly in women. Nuts have a number of properties the researchers say may play a role in the protective effect, including polyunsaturated fats, magnesium, and antioxidants.

The researchers were surprised to find no association between fish consumption and IBD-related deaths in either women or men, because numerous other studies have shown that eating fish has a protective effect. They note that they were studying mortality but not the incidence of these diseases or flare-ups, which means that fish could have a beneficial effect that simply wasn't analysed in this study. They also hypothesize that if fish is fried, the harmful effects of frying may cancel out any protective effect.

Fibre

Two types of fibre come from plant materials, which the human body cannot digest without bacterial help. Soluble fibre can absorb water and transform into a gel-like consistency in the gut, whereas insoluble fibre does not absorb water and works as a bulking agent to aid digestion. Most fibre-containing foods include varying amounts of both types. Although our gastrointestinal secretions and enzymes cannot break down fibre, given the right colonic microflora (bacteria and yeasts), our body can still derive a nutritive benefit from it. Some bacteria, for example, are able to break down soluble fibres to produce short chain fatty acids, including one called butyrate, which reduces mucosal inflammation.^{1,5}

Studies have shown that a combination of probiotics and a high-fibre diet, which includes prebiotics, can improve the balance of beneficial over detrimental microbial species in the gut, preventing inflammation that can result from imbalances in the gut microbiota. Prebiotics are specific carbohydrates that nourish the probiotics.

Fibre-rich foods also contain many beneficial substances, including flavonoids that assist in intestinal barrier function and antioxidants that may protect against some types of inflammation. Although these reasons lead scientists to suspect that foods high in dietary fibre would have a protective effect against IBD, further research is required to confirm this. Some studies have found that a diet

high in fibre-rich vegetables and fruits has a protective effect against IBD.¹ Surprisingly, however, the same large study with 260,686 participants that found no correlation between protein and risk for ulcerative colitis, also found no protective effect between fibre and ulcerative colitis.⁶

Until more research is available, it would be wise to keep those whole grains, fruits, and vegetables on the menu. Studies are consistently finding a link between a high intake of dietary fibre and protection from other GI-related conditions, such as diverticular disease, constipation, and even colorectal cancer. Health Canada considers a food product to be a 'high source of fibre' if it contains 4-6g of fibre per serving, and a 'very high source of fibre' if it contains more than

IBD *and* Travelling

Although travelling is an exciting activity, it can be a very stressful ordeal for those with gastrointestinal conditions such as inflammatory bowel disease (IBD). Someone with IBD has to ensure adequate access to washrooms and guard against possible negative reactions to new and different foods. Confounding this problem, many IBD sufferers wonder if the disease puts them at an increased risk of contracting other illnesses while travelling abroad. However, new evidence shows that this might not be the case.¹

A recent study shows that while individuals with IBD experience more illness than the rest of the population while on vacation in an industrialized destination, they have equal levels of illness while travelling in developing and tropical regions. The researchers explain that those with IBD get sick more in industrialized locations because they are experiencing regular IBD flare-ups, which other individuals are not. However, they are no more likely to get a different type of sickness while travelling in developing countries than are those without IBD.

The study surveyed 222 patients with IBD and 224 control subjects who went on a combined total of 1,099 trips. Researchers found that IBD patients became ill during 15.1% of their trips, whereas the controls

experienced an illness during only 10.9% of their trips. However, when they looked at the statistics during trips to just the tropical and developing areas, they found that the controls actually came down with an illness more often (21% of trips to these locations compared with 17% of trips to these locations by the IBD patients).

Perhaps this shows that IBD patients are already vigilant about monitoring their food consumption and overall health, and this helps them avoid catching communicable diseases while travelling. *Bon voyage!*



Photo: © U.Ding/Bigstock.com

6g of fibre per serving. It is important to consume plenty of liquid with high-fibre foods, to ensure well-formed stool.

Leafy Greens

A recent study showed that nutrients from leafy greens, which include numerous vegetables such as broccoli, kale, bok choy – and yes, Brussels sprouts too – help to strengthen the immune system and provide a positive influence on bacterial composition and healthy quantity in the gut.⁷

How does it work? Intraepithelial lymphocytes (IELs) are cells located just under the inner lining of the intestine. IELs help to regulate the bacteria and yeasts within the intestine and stimulate the growth of the protective epithelial lining. Loss of IELs leads to an imbalance of the microbiota (an increase in pathogenic organisms and loss of beneficial organisms), hindering the immune system, and making the intestinal lining more vulnerable to inflammation. There is evidence that alterations in the intestinal microbial composition have a causal role in the mucosal inflammatory response experienced by individuals with IBD.

Researchers have discovered that the consumption of foods such as leafy greens, which are high in AhR (a protein carbon that forms part of IELs), increased the number of IELs in the gut. Conversely, when they fed study mice a diet lacking in leafy greens, they found that the mice experienced a dramatic loss of IELs. The study shows that leafy greens are not only an important source of AhR, but that AhR deficiency caused by a diet low in leafy greens results in damage to colonic epithelial cells. The researchers recommend further studies into the role of AhR and the onset or relapse of IBD.

Even if you don't especially love them on their own, there are plenty

of leafy greens to choose from and lots of ways to incorporate them into your meals. Leafy vegetables are tasty when blended with fruit into a refreshing smoothie, and in this form are easily included in the diet.

Sugar

There is limited evidence that a diet high in sugar, such as the refined sugar or glucose-fructose (derived from corn-syrup) that is found in most desserts, soft drinks and other sweet and processed foods, may increase an individual's risk of developing Crohn's disease,⁸ but a large cohort study found no risk association between sugar and ulcerative colitis.⁶ Future research may shed more light on any connection between sugar and IBD. See *The Inside Tract*®, issue #180, for an article on one researcher's theory that artificial sweeteners may be a risk factor, even if sugar itself is not. Diets that are high in sweets are more likely to have increased amounts of artificial sweetener consumption as well as real sugar.⁹ As with other potentially risky food, enjoy sweet foods in moderation.

Conclusion

In their review of studies on IBD and diet, researchers in Denmark found many important methodological problems in most studies, particularly in retrospective studies, in which participants' accuracy in recalling and recording dietary consumption, sometimes long after the fact, might not be reliable.¹ They conclude that ongoing and future studies should provide data that is more definitive. In the meantime, the research seems to corroborate what our physicians and dietitians have been telling us for decades – it is a good idea to implement a balanced diet, such as that recommended in *Canada's Food Guide*. This is often a challenge for patients with IBD, especially during episodes of intense disease activity, but since there is evidence that diet also affects the risk of relapse, these individuals – and family members who may be at an increased risk for the disease – should include a diversity of healthy foods on their dinner plates whenever possible.



Diet for Ulcer Disease

Ashley Charlebois, MSc, RD



Ulcer disease is a condition in which open sores develop in the lining of the gastrointestinal tract. They can occur in the upper portion of the small intestine (duodenal ulcer), stomach (gastric ulcer), and esophagus (esophageal ulcer). Contrary to long-standing common belief, stress does not cause ulcers. Instead, the leading cause of ulcer disease is a bacterium called *Helicobacter pylori* (*H. pylori*). These bacteria damage the protective mucosal barrier of certain areas within the gastrointestinal tract, making it easier for acidic digestive fluids to injure and inflame the gut's lining. Other causes include smoking and chronic use of non-steroidal anti-inflammatory drugs (NSAIDs), such as aspirin and ibuprofen.¹

The cause of your ulcer will determine the type of medical treatment that your physician recommends. If caused by NSAID use, then your doctor may discontinue prescribing NSAID medication, suggest a different pain medication, or continue NSAID use and add another

medication to protect your stomach and duodenum, such as a proton pump inhibitor (PPI), which reduces production of stomach acid.

If *H. pylori* infection is the cause of your ulcer, then your doctor may prescribe a treatment plan to kill the infection while reducing the acid in your stomach.

Physicians often recommend lifestyle and dietary changes for persons with ulcers in addition to medications until complete healing occurs. Although in the past patients were encouraged to follow a bland diet, current research does not support this dietary modification to be beneficial. Although spicy foods are an irritant for some people with ulcers, medical professionals now place more emphasis on a high fibre diet rich in vegetables and fruits.

Dietary Fibre & Vitamin A

Research shows that a high fibre diet decreases the risk of developing ulcer disease. Although both insoluble and soluble fibres demonstrate this association, there is a stronger association between diets high in soluble fibre and a decreased risk for developing ulcers.

Foods that are high in soluble fibre include oats, psyllium husk, legumes, flax seeds, barley, nuts, and certain vegetables and fruits, such as oranges, apples, and carrots.

Findings from a prospective cohort study that included 47,806 men, showed that a diet rich in vitamin A from all sources might reduce the development of duodenal ulcer, as might diets high in fruits and vegetables, possibly due to their fibre content.² A prospective cohort study follows, over time, a group of similar individuals (cohort) who differ with respect to certain factors under study, to determine how these factors affect rates of a certain outcome; however, more research is necessary to verify results because there are so many other factors involved with this type of study that could confound the data.

Animal studies demonstrate that vitamin A increases the production of mucus in the gastrointestinal tract. Impaired mucosal defense can allow ulcers to develop. Therefore, vitamin A may have a protective effect against the development of ulcer disease.³

Good sources of vitamin A include liver, carrots, broccoli, sweet potatoes, kale, spinach, and collard greens.

Green Tea and Flavonoid-Rich Foods

Emerging research from China shows the potential protective effects of green tea and other foods that are rich in

Cranberry Juice Cocktail

Drinking just two 250mL cups of cranberry juice cocktail per day might reduce the risk of *H. pylori* overgrowth in the stomach.⁷ Concerns about antibiotic resistance make this finding especially significant because cranberry tannins appear to block the bacteria without destroying them. When antibiotics are used to eradicate infection, the bacteria may mutate and become resistant to treatment. Cranberry helps by either not allowing the bacteria to attach itself or by disengaging it from the body once it is attached, and prevent inflammation. So drink up, cranberry juice cocktail is good for you!

flavonoids against chronic gastritis, *H. pylori* infection, and stomach cancer. Specifically, these foods seem to inhibit the growth of *H. pylori*.

In addition, one recent laboratory study of green, white, oolong, and black teas indicated that these teas inhibit the growth of *H. pylori* but cause no harm to beneficial types of bacteria normally found in the stomach, including *L. acidophilus*, *L. plantarum*, and *B. lungum*. However, this was an *in vitro* study, which means testing occurred directly between teas and bacteria in the laboratory, and we cannot draw direct conclusions as to what would happen inside the human body between these two substances. Beneficial effects in the laboratory were best when tea steeped for a full five minutes.

Flavonoid-rich foods include garlic, onions, and colourful fruits and vegetables such as cranberries, strawberries, blueberries, broccoli, carrots, and snap peas.^{4,5}

Coffee and Alcohol

Both caffeinated and decaffeinated coffee can increase acid production and exacerbate symptoms in individuals with ulcer disease.⁶ Alcoholic beverages can erode the protective mucosal lining along the gastrointestinal tract and lead to further inflammation and bleeding. To minimize symptoms, individuals with ulcer disease should avoid or limit both coffee and alcohol.

Assess Your Individual Tolerance

No evidence suggests that spicy or citrus foods affect ulcer disease, although some individuals do report worsening of symptoms after eating these types of foods. It is important to find out what works for you. If you notice that your symptoms get worse after eating certain foods, then limit or avoid them so you can feel your best, making sure that you don't eliminate an entire food group.

Conclusion

In summary, if you suffer from peptic ulcer disease, then aim to have a diet high in fibre and rich in vegetables, fruits, and whole grains. Try for a minimum of seven servings of vegetables and fruits each day, and a minimum of five servings of whole grains. Choose foods that are a good source of soluble fibre, vitamin A, and flavonoids. Consider adding tea to your daily list of beverages. If you drink alcohol, do so in moderation, with no more than two drinks per day, and no more than nine drinks per week for women (fourteen for men).

Ashley Charlebois, Dietary Consulting, Vancouver, BC - www.ashleyrd.com

4 Health Canada Report Highlights

Health Canada released the fifth in a series of reports on the health status of Canadians and the performance of our healthcare system. Using data from Statistics Canada, the Public Health Agency of Canada, and the Aboriginal Peoples Survey, the report identifies 52 health indicators of importance to Canadians. Here are 4 highlights from *Healthy Canadians 2010* that might be of particular interest to those who live with gastrointestinal or liver conditions:

1. Life Expectancy

Life expectancy for Canadian men was 78.3 years during 2005-2007, up from 76.6 during 1999-2001; for women it was 83.0, an increase from 81.9 during 1999-2001.

2. Access to Healthcare

In 2009, 17.9% of Canadians reported difficulty obtaining routine or ongoing health services, 15.8% reported difficulty obtaining health information or advice, and 24.4% reported difficulty obtaining immediate care.

3. Medication Spending

In 2008, more than 20% of Canadian households were spending greater than 1% of their after-tax income on prescription drugs, and the percentage of those reporting out-of-pocket expenditures of more than 2% and 3% of their after-tax income increased since 2000.

4. Colorectal Cancer

Incidence of colorectal cancer, which is more common in men than in women, is on a slight decline (49.6 new cases per 100,000 persons in 2007; 52.5 in 2000). However, since 2004, Canada has had the second highest colon cancer mortality rate among G7 countries (after Germany) with 18 deaths per 100,000 (males: 22.1, females: 14.6, except 22.6 in First Nations women).

The full report is available on Health Canada's website.



ALCOHOL and acute pancreatitis

What and How You Drink Can Affect Your Risk

The pancreas is a flat gland organ – located behind the stomach – that produces digestive enzymes and secretes hormones to regulate blood sugar levels. Pancreatitis is inflammation of the pancreas. There are two forms of this disease – acute and chronic.

Acute pancreatitis involves an abrupt onset of symptoms that can vary in severity from mild to life threatening. Symptoms often include nausea, accompanied by pain in the upper abdomen or back. Severe cases may lead to major complications, such as infection, hemorrhage, failure of other organ systems, such as the lungs or kidneys, or fluid collection in the abdomen.

Gallstones are the most common cause of acute pancreatitis, followed closely by alcohol use, and then by several less common causes. Unlike pancreatitis caused by gallstones, pancreatitis caused by alcohol use is the most dangerous, as it can lead to chronic pancreatitis.

Numerous studies have shown a correlation between alcohol consumption and risk of acute pancreatitis, but researchers have wondered why only 1-3% of heavy alcohol drinkers (defined as consuming 4-5 drinks of alcohol per day) will develop acute pancreatitis over a span of 10-20 years. Previous research has shown an association between sales of spirits and incidence of acute pancreatitis. In Sweden, for example, there was a decline in the incidence of acute pancreatitis during the 1970s and 1980s, when sales of hard liquor had declined and sales of wine and beer had increased.

In contrast, chronic pancreatitis is a smouldering, long-standing disease that continues even after resolution of the original trigger. It's characterized by scarring and irreversible destruction of pancreatic tissue. Alcohol abuse is the typical cause of chronic pancreatitis.

New Research

The first large study to look at the amount and type of alcohol consumed during one sitting and over certain durations, recently published in the *British Journal of Surgery*,¹ has come up with some interesting results that are important for anyone who drinks alcohol, whether regularly or infrequently. Results showed that drinking large amounts

of hard liquor at one sitting significantly increases a person's risk for developing acute pancreatitis.

The researchers followed 84,601 individuals who were aged 46-84 for about a decade, and 513 of them developed acute pancreatitis. The participants were representative of the Swedish population and the majority of them usually consumed no more than 1-2 alcoholic beverages per day. They all filled out questionnaires on their alcohol consumption, diet, smoking, and other lifestyle factors, and provided their medical history. The researchers linked that information to hospital admissions records for acute pancreatitis from the Swedish Patient Register.

The study showed that for every increment of five drinks of hard liquor (one drink is 40mL) consumed in one sitting, the risk of developing acute pancreatitis increased by 52%. However, there was no such increased risk associated with beer or wine consumed in one sitting. Individuals who drank any amount of beer or wine over a short or long period were no more likely to develop acute pancreatitis than individuals who didn't drink. The researchers also found that the overall amount of hard liquor consumed over the course of a month had no effect on the development of pancreatitis.

“Drinking large amounts of hard liquor at one sitting significantly increases a person's risk for developing acute pancreatitis.”

Antioxidant Effect

The study's authors believe these results could reflect the antioxidant capacity of wine and beer. One of the ways alcohol damages the pancreas is by inducing oxidative stress. Unlike spirits, wine and beer both contain polyphenols, which are antioxidants that neutralize harmful oxidation.

Moderation is always a good idea. It is clear from this study that you should especially avoid drinking large quantities of hard liquor at one time, as it is harmful to your pancreas and could lead to pancreatitis or other problems. If you are concerned about your health and alcohol consumption, please discuss this with your physician.



Traditional Chinese Medicine **Summer Foods**

Have you ever thought about looking at foods from a different perspective? Traditional Chinese Medicine (TCM) was founded on centuries of observing nature and the human body's reactions to trying different things, which is the very essence of science. TCM emphasizes the consumption of local, seasonally available foods for better health.

Grocery stores abound with foods from every corner of the world – goji berries from the Himalayas, papayas from Belize, coconuts from the Philippines, avocados from Mexico, and so forth. These foods are all healthy produce that I often recommend to my patients for various reasons but, from a TCM perspective, imports should not comprise the bulk of your diet. One reason is that farmers have to harvest them before they are ripe, to allow time for packaging, shipping, and shelving. If you have ever travelled to a country where you can try a tree-ripened, fresh, local banana, then you know that there is a world of difference in taste when compared to one bought from your local grocer.

TCM also believes that Mother Nature has provided the right kind of food for the right kind of environment. If the weather is cold, then warming and nutrient-dense root vegetables are best. Hot weather that makes you sweat calls for cooling and water-filled cantaloupe, watermelon, and cucumber. If you live in an area that is too cold for the year-round growth of vegetables, you're not off the hook; you will need to eat some imports.

Abundance of fruits and vegetables is not usually an issue in the summer in most places. Perhaps that is one reason why summertime is such a popular season. You get to eat more berries and cherries, beans and broccoli, peaches and peppers, tomatoes and potatoes, and the most summery food of all – watermelon.

Summer in Canada also brings warmer – sometimes sweltering hot – weather that makes many of us crave icy cold food and drinks. I'm sorry to say it, but TCM is particularly opposed to ice cream. Knowing that favourite foods are hard to give up, TCM offers some healthier

substitutions for ice cream, such as frozen slices of peaches, frozen grapes, and healthy homemade fruit shakes. As always, it is important to pay attention to how you feel when you eat certain foods. Maybe a small amount of coconut ice cream makes you feel happy and your body can handle the occasional treat, so enjoy.

On the other hand, maybe eating too many raw and cold foods causes you to feel cold, sluggish, and bloated. If this is the case, you may need to continue to ingest a balance of warm foods even when the outside temperature climbs. For example, try adding sliced ginger or some warming cinnamon to your cold fruit shake. Keep steaming your vegetables and continue to have soup. Miso soup is easy to

make and is a nice balance of cooling foods (miso, tofu, seaweeds) with a warm temperature.

If you are unsure which foods are warming and which are cooling, think of how you feel when you eat them. Peppermint is cooling; cayenne is heating. Think as well of the colour of the food. Green and blue foods tend to be more cooling, while orange, red, and yellow foods are generally more warming. Foods that grow below the ground are inclined toward warming the body, while those growing above tend to cool us off; however, these are guidelines, not hard rules.

If you are not sure what foods are seasonally available where you live, try visiting a local farmer's market or check out www.eatwellguide.org. You can also ask your local Traditional Chinese Medicine doctor for some advice on foods that best fit your personal profile. To cool down this season, the TCM summer food diet might be just what you need!

Dr. Melissa Carr is a registered Doctor of Traditional Chinese Medicine (TCM) with a Bachelor's degree in Human Kinetics from Guelph University. While TCM is thousands of years old, she believes that TCM is truly a modern medicine that continues to evolve to treat today's modern illnesses, imbalances, and diseases. She loves food and is passionate about healthy and enjoyable eating. www.activetcm.com.



Photos: (centre) © Ivan Mikhaylov/Bigstock.com, (bottom) © Madlen/Bigstock.com

The Scoop on Poop: Answers to 7 FAQs

From diet to disease, many things affect your poop. If you have any concerns that your stool is abnormal, then visit your physician.

What is poop made of?

In a typical bowel movement, about 75% of the stool volume is water. The other 25% is a mixture of things, primarily dead and living bacteria, food waste, as well as undigested parts of foods, typically fibrous foods such as seeds, nuts, corn, and beans, and substances contributed by the intestines and liver, such as mucus and bile (a dark green to yellowish-brown fluid). Many things can affect the balance of stool content, including diet, medications, supplements, and the presence of a GI disease, disorder, or infection.

What is a healthy bowel movement?

An ideal stool is medium-brown, long, smooth, and soft, which passes easily from the body with little straining or effort. Healthy individuals typically have bowel movements anywhere between three per day and three per week. More than three per day is often associated with diarrhea, and fewer than three per week typically suggests constipation, although there must be other symptoms present before the stool strictly qualifies as either diarrhea or constipation. Ideal stool requires little effort and no straining for elimination.

What does the colour of my poop mean?

BROWN Healthy bowel movements tend to be brown, due to the presences of bile and bilirubin, which is a product resulting from dead red blood cells being broken down in the intestine.

BLACK If your stool is black, it is important to see your doctor, as it could be a sign of internal bleeding from higher in the digestive tract, especially if it smells foul and is tarry. However, there are many

benign causes of black stool, including ingesting something with bismuth subsalicylate such as Pepto-Bismol® (which can also turn your tongue black), iron supplements, black licorice, blueberries, or other darkly coloured foods.

RED OR MAROON: If you are bleeding in the lower portion of the digestive tract, then this could cause bright red stool. Bleeding could be a result of inflammatory bowel disease, diverticulitis, hemorrhoids, fissures, polyps, or colorectal cancer. However, a red stool might be unrelated to bleeding, since consuming large amounts of foods with red colouring, such as cakes or colourful packaged breakfast cereals, tomato-based sauce and soup, and beets can also colour your stool red.

ORANGE: If you consume excess beta-carotene from supplements or produce, such as carrots, sweet potato, squash, some leafy greens, and some herbs, then your stool can appear orange.

YELLOW/PALE BROWN/GREY: Bright yellow diarrhea can signify a condition known as *Giardiasis* (see sidebar). Stool that is yellow or pale can also result from reduced production of bile salts, since a normal, brown-coloured stool acquires its hue from breaking down bile. Pale stool (yellow or grey) can signify a problem with the liver or gallbladder, so if you have persistently light-coloured stool, then you should see your physician.

GREEN: Most often, green stool is the result of ingesting large quantities of green foods, such as leafy greens or foods with green colouring added. Iron supplements may also cause the stool to become green. However, green stool could also signify a colonic transit time that is too fast. Bile usually becomes darker as it passes through the large intestine but stays green if it moves

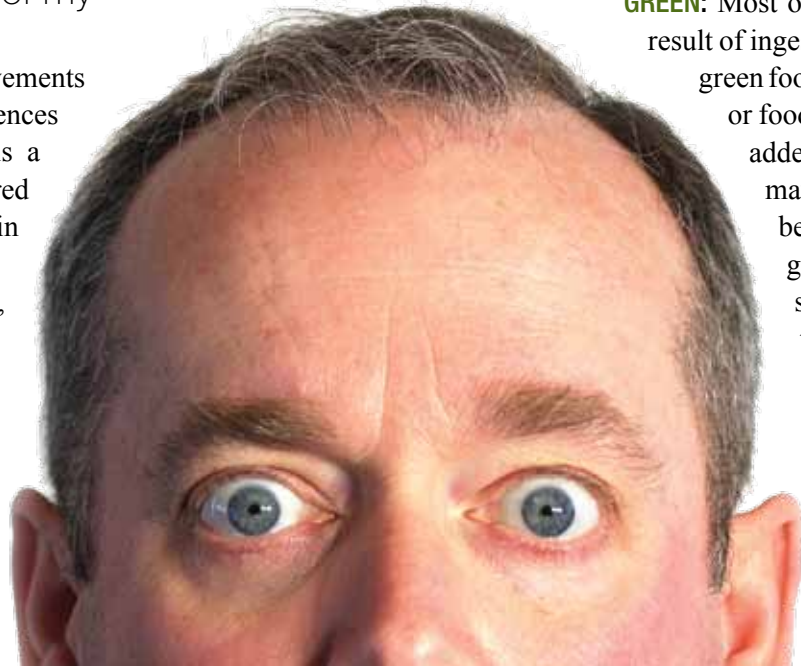


Photo: © Denis Papin/Getty.com

through too quickly.

BLUE: Eating lots of blue foods (e.g., blueberries) or beverages with blue food colouring (e.g., grape pop) can turn your stool this colour.

Is the texture of my poop normal?

The Bristol Stool Chart (you can search for it online or refer to *The Inside Tract*®, issue 174) is the most useful tool developed for assessing the texture and shape of your stool. On a scale of 1-7, you rate your stool on how solid or liquid it is. For instance, small, hard lumps that are difficult to pass would be a 1, and entirely liquid would be a 7. On this scale, 1-2 could signify constipation, 3-5 are healthy stools, and 6-7 point to diarrhea.

Why does it hurt when I have a bowel movement?

There are many reasons why defecation might cause pain. Depending on the type and severity of the pain, it could be anything from what you ate to an irritated hemorrhoid. In rare cases, a tumour in the intestine could make bowel movements painful. If you have any concerns about persistent pain, see your physician. Here are some common causes:

- Constipation is the most common cause of pain; if your stools are hard and difficult to pass, this could be the culprit
- Diarrhea can also cause cramping, leading up to elimination
- If you eat too much spicy food, the oils can stay in your stool and cause burning upon defecation, in the same way that they can make your mouth burn when you eat them
- Hemorrhoids, anal fissures (tears in the anus), and abscesses can cause pain and bleeding
- Bowel conditions, such as irritable bowel syndrome, celiac disease, inflammatory bowel disease (Crohn's disease and ulcerative colitis), and colorectal cancer can also cause pain
- Severe pain while experiencing bowel movements could signify a tumour obstructing the rectum or anus

Why do some stools float and others sink?

Most stool sinks because the contents of feces tend to be denser than water. However, some stool just floats and,

generally, this is nothing of concern, as it is usually the result of gas within the fecal matter, or a high fibre intake. Excess fat in the stool (steatorrhea) can also cause feces to float. This is especially common in individuals who have GI conditions that affect fat absorption, such as celiac disease or Crohn's disease, but can also happen in healthy individuals who consume large quantities of fat, which is likely the cause if the stool is also oily and foul smelling.

Why does my poop smell so bad?

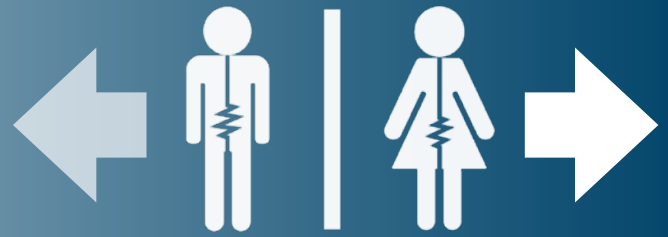
The first thing to remember is that what goes in also comes out, so if you had a spicy meal, chances are you'll smell it strongly when it exits. Meat produces more smell than vegetables and intestinal bacteria produce several sulphur-containing compounds that are the primary smelly culprits along with fatty acids and skatole, a product resulting from the naturally-occurring process of amino acids being broken down in the intestine. The human nose can detect hydrogen sulphide in concentrations as low as one-half part per billion, making it easy for us to smell stool! Malabsorption, particularly of fats (see FAQ 5), can cause a stronger odour, so talk to your doctor if this persists.

Giardiasis

Giardiasis is an infection caused by the most commonly reported (5-10% of Canadians and their pets) intestinal parasite in North America and the world, *Giardia lamblia*. Individuals most often contract it through consumption of contaminated water or exposure to an infected person. Its symptoms include abdominal pain, diarrhea, nausea or vomiting, loss of appetite, swollen abdomen, gas, headache, and fever. If you experience some of these symptoms, visit your doctor, as effective treatment is readily available.



Germs in the Loo



Put Down that Lid

A new UK study, published in the *Journal of Hospital Infection*,¹ reveals that an open toilet lid during flushing increases the risk of contamination of other areas of the bathroom. The study specifically looked at *Clostridium difficile* (*C. difficile*), a potentially life-threatening bacterial infection often spread in hospitals. The researchers simulated bacteria-infected feces to measure how far it spread into the air (the aerosolization) after flushing. Using two different types of toilets commonly used in hospitals, the researchers found *C. difficile* in the air 25cm above the toilet seat and determined that surface contamination with this bacteria occurred within 90 minutes after flushing, meaning that droplets are suspended in the air for some time before settling on a



surface. The recent study is particularly concerning because the *C. difficile* bacterium has a high survival rate and it is not uncommon for sufferers to experience explosive diarrhea, making possible bathroom contamination more likely.

Previous research has demonstrated how flushing domestic and hospital toilets without a lid can also contaminate the surrounding surfaces with other types of bacteria, such as *E. coli*. The researchers of the current study recommend thorough hand-washing after toilet use, frequent bathroom cleaning, and the implementation of newer toilets that do not have an aerosol effect when flushed, especially in healthcare facilities.

Paper Towel or Air Dry?

Canadian researchers recently evaluated the bacterial content found on unused paper towels. In their pilot study, published in the *American Journal of Infection Control*,² the research team tested six brands of commercially available paper towel products in Canada. Similar to previous studies, paper towels made from recycled materials contained significantly more bacteria than that made from new pulp. The concentration of bacteria in recycled paper was 100-1,000 times greater than that of virgin wood pulp brands. The researchers are especially concerned about the presence of the toxic *Bacillus* bacteria, which is associated with food borne and other illnesses. The *Bacillus* genus of bacteria has both good and bad strains and can sometimes survive even bleach disinfection processes, which are common in paper mills.



Although the bacterial content transmitted to the study participants' hands during drying with paper towel was very low for all of the tested brands, those who air-dried their hands had almost no bacteria on them after washing. The researchers say that this study does not suggest that paper towels are necessarily unsafe, but that immunocompromised and other vulnerable individuals may wish to take particular caution.

It's important to understand that germs (microorganisms) are everywhere. Our bellybuttons alone are host to an entire community of bacteria, and this in itself is not a bad thing. What we should focus on is preventing the spread of illness-causing bacteria, viruses, and fungi. Health Canada recommends frequent, proper hand washing, using regular soap and water and, sometimes, the use of an alcohol-based hand sanitizer.³ They do not recommend anti-bacterial soaps because these products destroy good bacteria as well as bad and can add to the current problem of antibiotic-resistant bacteria. You should wash your hands for a full 15 seconds, ensuring that you reach all parts of your hands, as friction is an important part of removing contaminants. Rinse well under warm running water, using a rubbing motion.

Although the study above on paper towels may discourage you from using them, keep in mind that other surfaces, such as sink taps, soap dispensers, and door handles, are likely to harbour far more bacteria than a new piece of paper towel. At home, wash kitchen and bathroom surfaces regularly and, when using public restrooms, minimize hand contact with surfaces and consider air-drying your hand when you have the option available.

Photo: (centre) © Ricardo Miguel/Bigstock.com, (bottom) © Kim Reinick/Bigstock.com

Please **GIVE**

We need your ongoing support to continue to help the millions of Canadians who live with gastrointestinal diseases and disorders, and for those who want to maintain a healthy digestive tract.

The GI Society guards donor dollars rigorously, ensuring maximum yield. We are frugal and efficient, spending far less than the national charitable average on governance and administration.

Your donations help to support:

- High-quality, up-to-date printed information and educational materials for patients and their families, and for healthcare professionals
- BadGut® Lectures throughout Canada
- Medical research
- Advocacy – to encourage governments to put digestive health on the political agenda and implement policies that will improve lives

Donating Now

Visit our secure website and complete your payment online or send a gift by filling in the form at the end of this newsletter and sending it to our office.

Giving Monthly

Contact us to set up an automatic monthly donation plan.

Giving In Honour or In Memory

For gifts in honour of a special occasion or in memory of a person, provide us with your name and address, as well as that of the honouree or bereaved and decedent, so we can send a card advising of your gift on his or her behalf. We don't share the amount of a gift unless requested to do so.

Bequests

Naming the GI (Gastrointestinal) Society as a beneficiary in your will ensures your funds continue to support this important work.

Sponsorship

Your business can collaborate with the GI Society on special projects or ongoing activities and receive recognition through a variety of avenues. Contact our CEO at the head office for details.

Workplace Giving

Does your place of work pool donations for charitable giving? Why not select the GI Society as the beneficiary? Sometimes all it takes is someone to suggest us. We'd be happy to send you some promotional literature to assist you in this task and, in many cases, can offer speakers.

Donations made to the GI Society are eligible for a tax receipt and will automatically be issued for amounts of \$20 and greater.

GI Society Registered Charity 817065352RR0001



Subscription/Donation Form

Subscribe now! Your annual subscription fee of only \$20 supports the GI Society's activities and includes quarterly issues of *The Inside Tract*® newsletter that we mail to you. Please sign up online at www.badgut.org or fill in and submit this form by mail to the address below.

Purchase Information

- I enclose a donation of \$_____ (Eligible for a tax receipt).
 I enclose a \$20 annual subscription fee (\$30 outside Canada)
Total \$_____

Personal Information

Name (Mr./Mrs./Ms./Dr.)

Company Name (Optional)

Street Address

City, Province, Postal Code

Phone Number(s)

Email(s)

- Patient Friend/Family Member Professional

Diagnosis/Area of Interest: *(This optional information helps us to determine which topics might be of interest to you and is kept confidential.)*

Would you like more information? Please list your topics:

- Check this box if you would like to volunteer

Payment Method

- Cheque (Payable to GI Society)
- Credit Card and bank debit purchase is available via PayPal on our secure website www.badgut.org.

The GI (Gastrointestinal) Society respects your privacy. We never sell, trade, or loan your information to any other organization. We will use your information only for follow-up contact, statistical purposes, evaluation of our services, and to process and recognize your contributions. We disclose your information only to our own employees and agents and only to accomplish these purposes. If at any time you no longer wish to be contacted by the GI Society, please call 604-875-4875 (Toll Free 1-866-600-4875) or email info@badgut.org and we will promptly remove you from our list.

Gastrointestinal Society
855 West 12th Avenue
Vancouver, BC V5Z 1M9
Fax 604-875-4429



badgut.org
Gastrointestinal Society
Société gastro-intestinale



FSC