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THE INSIDE TRACT®

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Acid Reflux, GERD, and Therapeutic Substitution

**ACID
REFLUX
& GERD:**

*The Unsettling
Reality in Canada*

**LE
REFLUX
ACIDE et
LE RGO**

PATHOLOGIQUE:
*Une réalité
troublante
au Canada*

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Plus Information on Celiac Disease, UCan Speak From the Gut , and More.

CANADA'S GASTROINTESTINAL DISEASE & DISORDER NEWSLETTER

About CSIR

In 1976, the Canadian Society of Intestinal Research (CSIR) arose as the first registered charity in Canada to enhance public awareness by providing patient and professional information and funding medical research on a wide array of gastrointestinal (GI) diseases and disorders.

With quality and integrity, we continue to be the leading provider of evidence-based free patient information in the GI health field. We work to dispel myths about GI conditions. Although gastrointestinal diseases and disorders are rarely a subject of public discussion, they are highly prevalent in Canadian population and are the most frequent reason for employee absenteeism after the common cold.

CSIR Registered Charity #: 108090374RR0001

THE INSIDE TRACT® Newsletter

This newsletter is one of the primary delivery tools for the most up-to-date medical information, in lay terms, for the Canadian Society of Intestinal Research's members and other interested individuals. Receiving this newsletter is a benefit of membership with CSIR. Membership is \$20 a year within Canada. Join online or submit the form on page 23.

CSIR does not endorse the products or services contained in the newsletter. Opinions expressed by the authors are their own and not necessarily those of CSIR. All articles are written or reviewed by members of our medical advisory council or other professionals. In the interest of space, references are usually omitted but are available on request. This newsletter is not intended to replace the knowledge or diagnosis of your doctor. We advise seeking a physician or other medical professional whenever a health problem arises.

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Executive Director's Report *by Gail Attara*

What has the Canadian Society of Intestinal Research been up to lately?

We're so very happy to welcome CSIR long-time member, Susan Knott, to the Board. See more information about her below.

This issue brings you lots of information about **reflux disease**, which results from years of actively collecting and developing all relevant medical and scientific information for a thorough look at this condition.

We're delighted to feature a gluten-free segment for those with **celiac disease**, by dietitian and author, Shelley Case.

For patients with **Crohn's** disease, e-Style Research is conducting a study in the form of a *Reflective Journal Exercise*, which requires spending a bit of time each day answering questions and providing your feedback, which could potentially influence future treatments and care approaches for Crohn's patients. At the end of the study, you ship the materials back to e-Style Research and they send you an honorarium of \$100-\$300, depending on the scope of the particular study. If interested, call Sam Dhalla toll-free at 1-877-685-2239 x223, or email samir@estyle.biz.

Of interest to **IBS** patients is our April initiative featuring irritable bowel syndrome information nation-wide at all Wal-Mart pharmacies.

We hope you enjoy this issue. Please take some time to visit www.badgut.org to view the new portal to **Sit or Squat**, a global restroom locator, which we're certain will be valuable to most.

Welcome New Board Member, **Susan Knott**

A native Vancouverite, Susan's extensive career spans a range of roles in the public, private, and non-profit sectors. A large portion of her experience lies in the realm of corrections, where she served on British Columbian and National Parole Boards, determining inmate eligibility for parole.

Since 1995, she has worked as an organizational consultant specializing in event management and production, and motivating and directing volunteers. Over the years, Susan developed an extensive network and in-depth knowledge of the local business community and provincial government, and is actively involved in the charitable sector.

Diagnosed with Crohn's disease in 1979, Susan has experienced the full spectrum of this sometimes-debilitating illness – as a patient and then as a grateful consumer of CSIR resources and patient education materials. She credits Dr. Frank Anderson and the Canadian Society of Intestinal Research with helping her achieve more than two healthy decades since she joined the Society as a lifetime member during those 'early days.' We're excited to have Susan on our team.

THE GUTS

Acid Reflux & GERD: The Unsettling Reality in Canada 4

Sit or Squat 7

Truth in Numbers: The Cost of Therapeutic Substitution 8

Celiac Disease: Still Vastly Under-Diagnosed 10

Trans Fat Restricted in BC 13

UCan Speak from the Gut: Sarah Lang Embarks on a New Adventure 14

BadGut® Basics: Gallbladder and Gallstones 16

Product Detective: Tecta™ 18

Could Headaches and a "Bad Gut" Have Something in Common 19

Night-time GERD 19

April is IBS Awareness Month 20

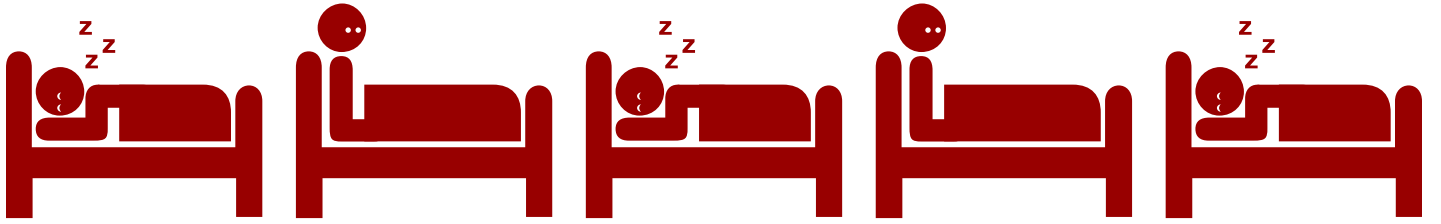
CSIR Partners with Wal-Mart's Canadian Pharmacies..... 20

Ask an Expert: Bowel Preparations 21

Be Kind to Yourself 22

Support Groups..... 23

Membership/Donation Form 23



Report Card

Acid Reflux & GERD: *The Unsettling Reality in Canada*

The Canadian Society of Intestinal Research and our new national sister charity, the Gastrointestinal Society, have collaborated with Association des Maladies Gastro-intestinales Fonctionnelles and the Canadian Digestive Health Foundation to produce a health report card called, *Acid Reflux & GERD: The Unsettling Reality in Canada*. Here we're offering some highlights of this new, compelling document.



ARD & GERD are debilitating conditions that affect millions of Canadians

Imagine a burning pain behind the breastbone, which creeps upward toward the throat, coupled with regurgitation and an acidic taste in the mouth. These are symptoms of acid-related diseases (ARDs), including gastroesophageal reflux disease (GERD), and they worsen

after common, everyday happenings, such as eating, bending over, lying down, or certain physical activities. It's due to a reverse flow of stomach contents up into the esophagus.

GERD is a condition involving acid regurgitation/reflux, and it's one type of ARD in which heartburn, ranging from mild to severe, is the most common symptom. Acid reflux may also trigger persistent hoarseness, difficult or painful swallowing, asthma, unexplained chest pain, bad breath, and the feeling of a lump in the throat. Furthermore, reflux can affect the throat with symptoms such as voice

**Almost 1/4 of
Canadians
experience
heartburn daily
or more often²**



loss and sore throat, as well as the airways with chronic coughing, wheezing, or episodic, choking attacks.

Individuals with GERD incur significant personal expenses to manage their illness.

Two in five patients with GERD have difficulty sleeping, and 43% feel tired and/or worn out¹

Population-based studies reveal that GERD is a common condition with a prevalence of 10-20% in North America.⁴ In Canada, GERD is the most prevalent acid-related disorder.⁵ Approximately 13% of Canadians suffer from GERD symptoms weekly.⁵ Almost one quarter of the population (24%) experiences heartburn daily or more frequently.²

GERD decreases quality of life

GERD is often a misunderstood condition, and its potential severity is not fully recognized by the general public, patients, the healthcare system and, in some cases, healthcare providers. It markedly affects patients' health-related quality of life and daily activities.⁶

For example, a study of more than 6,000 GERD patients demonstrated that the quality of life of individuals with reflux disease was significantly lower than that of the general population.³ In fact, the quality of life of GERD patients is similar to that of patients who have suffered from acute coronary events.³

Unmanaged severe GERD can damage the lining of the esophagus, which may be further complicated by bleeding or ulceration. Resultant chronic scarring may lead to narrowing of the esophagus, making swallowing difficult. Some patients may develop Barrett's esophagus, a condition in which cells in the esophageal lining take on an abnormal appearance. Although rare, Barrett's esophagus may increase the chance of developing esophageal cancer, which can be fatal.⁷

ARD/GERD patients self-medicate and wait too long before seeking medical attention

The vast majority (75%) of sufferers self-medicate and never see a physician.⁸ Because patients with ARD often misattribute the blame for their condition to their lifestyle choices, they delay seeking medical attention and getting appropriate medication. For example, patients will alter their diet, social life, work and daily activities to

try to compensate for the symptoms they're experiencing.

- Almost one-third of patients don't consult a physician because they believe the symptoms are due to food choices.¹
- Another one-quarter feel that their symptoms are due to their physical condition.¹ Increasing frequency of symptoms is the primary driver cited as to why a person finally consults a physician.
- Many who have an acid-related disease, such as GERD, wait an average of over two years before talking with their physician about their problem.¹

Quality of life of GERD patients is similar to that of patients who have suffered from acute coronary events³

The clinical evidence reveals that lifestyle changes usually have only limited effect, and lifestyle modifications are not recommended as the sole management modality of GERD. Instead, pharmacological treatment is required to heal erosive esophagitis, and achieve and maintain effective symptom resolution.⁹

PASS Test

The PASS Test,^o a simple, validated, 5-point questionnaire, may be helpful in identifying patients with persistent symptoms who may respond to a change in PPI therapy.

- Are you still experiencing stomach symptoms?
- In addition to your main medication, are you taking any of the following medications to control your symptoms: antacids, H₂RAs, motility drugs, or others?
- Is your sleep affected by your stomach symptoms?
- Are your eating and drinking habits affected by your stomach symptoms?
- At any time, do your stomach symptoms interfere with your daily activities?¹¹

^o Proton pump inhibitor Acid Suppression Symptom (PASS)



This highlights the need to educate people about this chronic condition, to help ensure those who suffer have access to information and to encourage people to seek the appropriate treatment.

Before seeking medical attention and targeted prescription medication, people with ARD experience severe symptoms

Patients experience numerous troublesome symptoms (including heartburn, acidic taste, stomach pain, indigestion, and sleeping problems) prior to taking medication.¹ In fact, approximately 80% of people with an ARD experienced at least one somewhat severe or severe symptom prior to receiving a prescription medication.¹ Furthermore, two in five patients (41%) have difficulty sleeping, with 43% feeling tired and/or worn out.¹

Often unrecognized, sleeping problems have a significant impact on workplace productivity, as this means increased time off work (7% missed work) and decreased concentration at work (experienced by 18%) for those with ARD.¹ Ultimately, this issue can have serious cost implications, affecting the bottom line for Canadian employers, employees and government.

On average, ARD patients wait over 2 years before seeking care¹

Drug coverage limitations are a barrier to effective treatment

There is a lack of universal coverage for prescription medications in the treatment of ARD and ARD-like symptoms. Drug coverage limitation is a major barrier to the effective treatment of GERD. This issue must be addressed to help avoid escalation of disease symptoms.

The level of prescription drug coverage varies by province and in federally funded plans. Quebec is the only province with open access to all medications available for ARD; therefore, the people of Quebec are less likely to rely on over-the-counter medications (in addition to their prescription medication) for ARD management when compared to people in other provinces.¹ Additionally, those in Quebec also report that their ARD symptoms have less interference with their daily lives compared to persons with ARD living throughout the rest of Canada.¹ This suggests that proper management of the disease can improve quality of life.

Dialogue necessary to tailor appropriate therapy

In Canada, there are three primary methods generally employed for the treatment of GERD:

- **Lifestyle and Dietary Modifications**, these are appropriate steps, and must be made in consultation with a healthcare professional, however, these alone will not usually alleviate the symptoms of a chronic GERD sufferer;⁸
- **Over-the-Counter (OTC) Medications**, such as antacids and lower-dose histamine-2 receptor antagonists (H₂RAs), are non-prescription medications used to treat GERD symptoms, and
- **Prescription Medications**, two classes of prescription medications used to help suppress acid secretion are higher-dose H₂RAs and proton pump inhibitors (PPIs).

Available evidence indicates that therapy response rates in GERD are related to the degree of acid suppression achieved.¹ Having an appropriate discussion with a physician is the key to understanding the condition, available treatment options and the degree to which acid suppression can be achieved. For example, the PASS Test (see page 5) is a useful tool to build dialogue between physicians and their GERD patients on PPIs (one class of prescription medications used to treat these conditions).

No matter what therapy, both the patient and the physician should proactively engage and participate in a GERD management discussion with constant re-evaluation at all stages of treatment to ensure optimal disease management and assess the advantages and disadvantages of all options, including factors such as lifestyle, diet, family history, treatment choices and patient compliance.

Almost one-third of GERD patients don't consult a physician because they believe symptoms are due to food choices¹



Please contact our office if you would like a copy of the full report. We thank AstraZeneca Canada for providing resources and support toward this initiative.



Looking for a restroom that's better than an outhouse?

we may have just the tool you're looking for

We're the first in Canada to offer an amazing service via our website, thanks to *Sit or Squat*, a place to find and record bathrooms anywhere in the world. You'll find a portal to this social-networking-driven tool on our home page at www.badgut.org.

Charmin®, a product made by Procter and Gamble, is the primary sponsor of this site, which is particularly helpful to families travelling with children, those with gastrointestinal and bladder conditions, and persons with physical limitations, because it helps them find clean facilities, changing tables, and special access.

This is the world's first Wiki for recording and accessing bathroom information globally. The website has iPhone and Blackberry applications, designed to help people on-the-go find the cleanest public restrooms around the world. Application users are asked to add content to the service and provide feedback when they've used one of the featured toilets. The website depends on feedback from the public and, as at February 1, 2009, has logged more than 52,000 toilets in 10 countries, in just 120 days. The site owners hope to catalogue more than a million toilets by the end of 2010.

"Our goal is to connect Charmin with innovative conversations and solutions as a brand that understands the importance of bringing the best bathroom experience to consumers, even when they're away from home," explained Jacques Hagopian, brand manager for Charmin. "Helping people find a bathroom that is clean and comfortable is exactly what the *Sit or Squat* project is all about."

Danika Landers and Jonathan Glanz developed *Sit or Squat* in September of 2008, arising from a blog Landers began the year before.

Based on Google Maps, this innovative social site allows anyone to obtain and submit information about toilets anywhere in the world. As a member – it's free – you can personalize the site based on your needs and

preferences. A member is also able to create a list of their favourite toilets and can share this list with his or her friends. With time, and more input from its global users, the site will continue to enhance the accuracy of toilet ratings as well as offer more options on places to go and features available.

We all have a regular need to relieve ourselves, and the chances of this need occurring somewhere other than while we're at home are pretty high.

As a developing site, *Sit or Squat* will continue to offer innovation in access to these resources. If you want to let others know of a particularly good (or bad) restroom, then the site allows you to upload information, including pictures. Some current attributes you may select for toilets you submit are baby changing table, handicap access, high speed hand dryer, tampon vending machine, condom vending machine, seat covers, auto flush, attendant, single room, and pay-per-use toilet.

So, you'll find this site useful if you:

- are a traveller with a language barrier in the country you're visiting,
- lack local information on the rest stops in any area away from home,
- have a gastrointestinal disease or disorder and need immediate access to a toilet,
- experience bladder urgency or frequency,
- have physical limitations requiring special access,
- have infants or small children with you and need a changing table,
- need feminine hygiene supplies, and
- even if you fear being exposed to dangerous germs and absolutely need to find an extremely sanitary facility.

Let's to it, *Inside Tract*® readers, let's use our networks of friends, family, and colleagues to map Canada for *Sit or Squat*.

SITORSQUAT
A place to find and record bathrooms
anywhere in the world.

truth in numbers

The Cost of Therapeutic Substitution

It was May 1, 2003, when the government of British Columbia announced that it was “*providing a new PharmaCare coverage arrangement for patients with gastric ulcers and acid reflux disease that will ensure continued access to high-quality medication while protecting \$42 million in PharmaCare resources over three years. The new arrangement, which takes effect July 15, [2003] affects the use of proton pump inhibitors.*”¹

Sadly, the government predictions were far off the mark. In fact, after a thorough examination of the province’s own linked databases, we note that this ‘new arrangement’ actually cost our healthcare system and patients more than \$43.5 million. We’ve just had a study published in the peer-reviewed journal, *Alimentary Pharmacology & Therapeutics*, called Increased health costs from mandated Therapeutic Substitution of proton pump inhibitors in British Columbia, co-authored by Brett Skinner of the Fraser Institute, Dr. James Gray, gastroenterologist, chair of the Canadian Society of Intestinal Research (CSIR) Medical Advisory Council, and Vice-President of the CSIR Board of Directors, and Gail Attara, CSIR’s executive director.²

The ‘New Arrangement’ - 2003

We’ve reported on this ‘new arrangement’ before in the pages of *The Inside Tract®*; it’s called Therapeutic Substitution. It is a PharmaCare policy requiring British Columbians who were already approved for proton pump inhibitor (PPI) medication, to switch the cheapest brand name PPI medication or risk loss of public insurance coverage of their PPI medication. This policy was unprecedented in Canada at that time.

By the end of May 2003, more than three-quarters of the gastroenterologists in BC, met with the executive director of the Canadian Society of Intestinal Research, expressing potential health concerns that could arise from the enforcement of this policy. Following this meeting, CSIR’s executive director, a physician representing the BC Medical Association, and two gastroenterologists from the BC Society of Gastroenterology presented their concerns to BC’s Minister of Health Services, the Assistant Deputy Minister, and the executive director of PharmaCare, strongly recommending that the Ministry and PharmaCare halt this change in policy. The government decided to proceed as announced, ignoring our concerns.

When the policy came into effect in July 2003 all patients taking a PPI to treat acid related diseases, such as severe GERD, had to stop taking the medication that was working for them, and start taking the cheapest brand name drug. BC made this change to the reimbursement policy without any evidence to support the benefits of such a mass switching of patients from one drug to another, and without having conducted a pilot project to see if there might be a risk to patient health.

The BC PharmaCare program administrators assumed that all of the medications in the PPI class were interchangeable despite the fact that they are all brand name products with unique chemical profiles, not generic versions. BC did not substitute one product for its generic ‘equivalent,’ but it substituted one brand name product for another, totally different chemical.

A First Look at the Consequences – 2005³

During 2003–2004, many of the individuals affected by this policy contacted CSIR complaining of destabilization of their acid-related diseases resulting from forced medication switching. Some reported a return of symptoms, such as severe heartburn, and some reported side effects including diarrhea, vomiting, nausea, chest pain, fatigue and, less commonly, vomiting blood. A number of these complaints required increased access to healthcare, leading us to suspect a change in health-related expenditures because of this policy.

With increasing queries as to the impact of the Therapeutic Substitution of PPIs in BC, CSIR undertook an initial examination of the impact of the policy from the patients’ perspective. The findings suggested that Therapeutic Substitution of PPIs in BC has resulted in a significant impact among patients.

Physical - Most symptoms patients experienced after switching were associated with the gastrointestinal system, with the most common physical effect being a return of GERD symptoms. Physical symptoms ranged in intensity from mild to severe.

Emotional - In large part, patients characterized the emotional impact of the Therapeutic Substitution policy in terms of an overarching sense of concern and fear about their health, disappointment, and anger directed at the Government/PharmaCare or implementation of this policy, overall anger and resentment, and feelings of depression.

C\$9.11 million in total PPI drug expenditures
C\$24.65 million for physician services
C\$9.75 million for hospital services

Financial - Some patients experienced an increased financial impact when their medication was no longer covered by PharmaCare and secondary costs due to increased use of antacids and wasted/unused prescriptions.

Health Service Utilization - The impact of switching from the original PPI to the policy-substituted medication extended beyond the personal/patient realm to the healthcare system. Some patients were required to seek out healthcare services that they would not have otherwise required. These included increased general practitioner, specialist, and emergency room visits; as well as increased diagnostic testing, hospital stays, and pharmacist consultations.

CSIR thanks the more than 280 British Columbians who gave so generously of their time to share their experience and contribute to this work.

Published, Peer-Reviewed Study - 2009

CSIR and Dr. James Gray applied in 2005 to the BC Government for access to its linked databases of individual-level patient records for the entire population of the province in three separate databases: hospitals (Hospital Separations), physicians' services (Medical Services Plan) and prescription drugs (PharmaNet). The hospital and physicians' databases reflect patient utilization, which is almost entirely publicly funded. The PharmaNet database includes all prescription drug sales in the province, whether publicly or privately paid. Patient records link across these databases, because each patient is assigned an anonymous, unique numerical identifier that is the same for each database.

CSIR's specific request included individual level data on the utilization of hospitals, physician services, and PPI prescriptions, for all patients who filled a prescription for a PPI during the years studied. When we received the massive data files, in August 2007, we engaged the help of Brett Skinner, for which we are extremely grateful. We completed this study without pharmaceutical industry funding, as required under our contract with the provincial government. All authors volunteered their time to this study.

Study Conclusions (the following is an excerpt from *Alimentary Pharmacology and Therapeutics*²)

Our study finds that the 2003 implementation of Therapeutic Substitution policy for proton pump inhibitors in BC probably generated significant direct, avoidable, net healthcare costs over the period 2003 to 2005, potentially totalling up to \$43.51 million. After controlling for

individual case variation in age, gender, and a proxy for pre-existing health status, regression analysis revealed statistically significant greater overall use of PPIs, physician services, and hospital services independently associated with patients who complied with Therapeutic Substitution. Over the three-year period 2003–2005, this represented net healthcare expenditures totalling approximately C\$43.51 million (C\$9.11 million in total PPI drug expenditures, C\$24.65 million for physician services, and C\$9.75 million for hospital services).

Our empirical findings appear to undermine one of the basic rationales for Therapeutic Substitution, which is cost savings. In order for Therapeutic Substitution to be justified, any public savings from the policy must significantly outweigh the public and private additional costs of increased use of medical goods and services that could arise when physicians' prescribing advice is ignored and patients' choice is diminished.

It is not enough for the savings from substitution merely to offset increases in other healthcare costs. It is even worse if substitution policy results in additional net healthcare costs, as our study suggests actually occurred in BC among persons taking PPIs. The evidence presented in this study suggests (with cautions noted in the full study) that Therapeutic Substitution policy for proton pump inhibitors in BC was statistically associated with significantly greater individual use of healthcare by the patients affected by the policy, that the effect was likely independent of confounding variables, and that the effect was large enough to create net costs at the aggregate level.

This study also did not estimate broader socio-economic costs such as productivity or efficiency losses, or effects on other family members that could be associated with the additional healthcare utilization for our patient cohort. We did not examine distortions in the delivery of physician services, such as any potential extra staffing costs required to handle an increased number of Special Authority requests to BC PharmaCare, or PharmaCare's extra costs in processing these requests. We also did not examine crowding-out effects on other patients from the increased utilization of healthcare resources among PPI switchers.

Comment

If a patient, whose condition is stabilized on a prescribed medication regime, is forced to switch to a different medication, for no reason other than that their drug plan mandates the switch, then more frequent physician visits, diagnostic testing, hospital services, and drug costs result, increasing overall healthcare costs.

Now that this body of evidence is in the public domain, we have asked the BC government to halt all Therapeutic Substitution and are waiting for a reply.

Celiac Disease

Still Vastly Under-Diagnosed

Shelley Case, Registered Dietitian
Case Nutrition Consulting, Inc.



What is celiac disease?

Celiac disease is a common, inherited disorder estimated to affect as many as 1 in 100 persons in North America. In genetically susceptible individuals, the ingestion of gluten triggers this autoimmune disease. Continued exposure to specific proteins (gluten) contained in wheat, rye, and barley damages the tiny finger-like projections (villi), which line the small intestinal tract. These villi eventually become inflamed and flattened (villous atrophy). Malabsorption of nutrients such as iron, folate, calcium, fat-soluble vitamins A, D, E, and K, and protein can occur, leading to nutritional deficiencies (e.g. anemia and osteoporosis). The poorly-functioning villi may decrease their production of lactase, an enzyme necessary for digesting lactose, the sugar found in milk. This may result in temporary lactose intolerance. Additional complications of untreated celiac disease include infertility in women and men, miscarriage, lymphoma, and the possible development of other autoimmune diseases.

Presentations of celiac disease

Symptoms of celiac disease can appear at any age from infancy well into senior adulthood. The average age of diagnosis is between the 4th and 6th decades of life, with approximately 20% of cases diagnosed in those who are more than 60 years of age. In the *Canadian Celiac Health Survey*¹ of 2,681 adults with biopsy-proven celiac disease, the mean age at diagnosis was 46 years. A gastrointestinal or viral infection, surgery, pregnancy, or severe stress can sometimes trigger onset of the disease.

Medical scientists now recognize that while celiac disease clearly affects the gastrointestinal system, it also affects the musculoskeletal, hematological, endocrine, neurological, cutaneous, and reproductive systems. The symptoms of celiac disease are highly variable depending on age, the duration, and extent of the disease, and the presence of extra intestinal manifestations. Celiac disease may also be associated with other conditions including type 1 diabetes, autoimmune hepatitis, autoimmune thyroid disease, Down syndrome, and Turner syndrome.

Symptoms of Celiac Disease*

- Iron, folate, and/or vitamin B12 deficiency
- Other vitamin and mineral deficiencies (A, D, E, K)
- Chronic fatigue and weakness
- Abdominal pain, bloating, and gas
- Indigestion/reflux
- Nausea and vomiting
- Diarrhea, constipation or intermittent diarrhea and/or constipation
- Lactose intolerance
- Weight loss (note that celiac can also occur in obese individuals)
- Bone/joint pain
- Easy bruising of the skin
- Edema (swelling) of hands and feet
- Migraine headaches
- Depression
- Mouth ulcers (canker sores)
- Menstrual irregularities
- Infertility (in both women and men)
- Recurrent miscarriages
- Elevated liver enzymes
- Peripheral neuropathy, ataxia, epilepsy

Additional symptoms in children:

- Irritability and behavioural changes
- Concentration and learning difficulties
- Failure to thrive (delayed growth and short stature)
- Delayed puberty
- Dental enamel abnormalities

* These symptoms can occur singly or in combination.

Diagnosis

The varied presentations of celiac disease and similarities of its symptoms with other diseases often lead to misdiagnoses such as irritable bowel syndrome, diverticular disease, gastric ulcers, allergies, chronic fatigue syndrome, or fibromyalgia. Individuals frequently see numerous physicians before receiving a correct diagnosis. The *Canadian Celiac Health Survey*¹ revealed

that 37% of respondents had consulted two or more family physicians, 27% saw three or more physicians and 14% consulted two or more gastroenterologists before reaching a diagnosis of celiac disease. The mean delay in diagnosis was 11.7 years after onset of the symptoms.

Specific blood tests are now available to screen for celiac disease, including IgA tissue transglutaminase (TtG) and IgA endomysial (EMA) antibody tests. False negative results can occur with these tests. IgA TtG and EMA will be falsely negative in individuals with IgA deficiency, which occurs in 3-5% of persons with celiac disease. If these tests are negative and the patient has symptoms of celiac disease, then they should also be tested for IgA deficiency. IgA and IgG anti-gliadin antibody tests are no longer recommended screening tests for celiac disease, since they are not as sensitive or as specific as the TtG and EMA.

Health Canada has approved a home blood test screening kit that identifies IgA TtG, which is now available in Canadian pharmacies. Sold under the name Biocard™ Celiac Test, it costs \$50 and uses a fingertip blood drop, providing results within about ten minutes.

Regardless of whether accessing laboratory analysis or using a home test kit, **a small intestinal biopsy is required to confirm the diagnosis of celiac disease.** It is important to know that a **gluten-free diet should NOT be started before the blood test and biopsy have been**

completed as it can interfere with making an accurate diagnosis.

Treatment

The only treatment for celiac disease is a **strict gluten-free diet for life.** Upon diagnosis, it is essential the individual and family members/caregivers consult a registered dietitian with expertise in celiac disease. The dietitian will do a complete nutritional assessment and provide comprehensive diet education. This includes assisting with meal planning, label reading, shopping, finding specialty food products, locating recipes, eating out, travelling, finding credible resources, and using supplements. Joining a patient group like the Canadian Society of Intestinal Research (www.badgut.org) or the Canadian Celiac Association (www.celiac.ca) is also highly recommended to receive valuable information and ongoing support.

Gluten-Free 101

Celiac patients must avoid all forms of wheat, rye, and barley on a gluten-free diet (**See Table 1: NOT SAFE**). Historically, oats were also on the list of prohibited grains as it was thought that the oat protein (avenin) caused the same toxic reaction as in wheat, rye, and barley. However, new research reveals that moderate amounts of pure, uncontaminated oats are

Table 1: NOT SAFE⁴
Gluten-Containing Foods & Ingredients

Ale	Lager
Atta ⁱ	Malt
Barley (Flakes, Flour, Pearl)	Malt Extract, Malt Syrup, Malt Flavouring
Beer	Malt Vinegar
Brewer's Yeast	Malted Milk
Bulgur	Matzoh, Matzoh Meal
Couscous	Modified Wheat Starch
Dinkel (also known as spelt) ⁱⁱ	Rye
Durum ⁱⁱ	Seitan ^{iv}
Einkorn ⁱⁱ	Semolina
Emmer ⁱⁱ	Spelt (also known as farro or faro; dinkel)
Farina	Triticale
Farro or Faro (also known as spelt) ⁱⁱ	Wheat
Fu ⁱⁱⁱ	Wheat Bran
Graham Flour	Wheat Flour
Hydrolyzed Wheat Protein	Wheat Germ
Kamut ⁱⁱ	Wheat Starch

i A fine whole-meal flour made from low-gluten, soft-textured wheat used to make Indian flatbread (also known as chapatti flour).

ii Types of wheat.

iii A dried gluten product derived from wheat and sold as thin sheets or thick round cakes; used as a protein supplement in Asian dishes such as soups and vegetables.

iv A meat-like food derived from wheat gluten used in many vegetarian dishes, sometimes called 'wheat meat.'

safe for most individuals with celiac disease. Producers grow these specialty oats on dedicated fields and then harvest, transport, and process them on dedicated equipment to prevent cross-contamination with gluten-containing grains. Cream Hill Estates Ltd. (Lara brand)² in Montreal and FarmPure Foods Ltd. (Only Oats)³ in Regina are the only two Canadian companies currently producing pure oats. All other regular commercial oats might contain wheat, rye and/or barley and thus do not conform to the gluten-free diet. A very small number of individuals with celiac disease may not tolerate pure oats; however, the mechanism causing this intolerance remains undiscovered. Physicians recommend that a person be well established on a gluten-free diet before they introduce pure oats into their diet.

Most individuals find that changing lifelong eating habits and adapting to a gluten-free diet is a major challenge for a number of reasons, including that wheat, and to a lesser extent, rye and barley, are the staple cereals used in the North American diet. They serve as the basis for a wide variety of foods such as cereals, pasta, breads, and other baked products. Many soups, sauces, salad dressings, seasonings, prepared meats (e.g. deli meats, hot dogs, meat patties), snack foods, some flavoured coffees and teas, beer, candies, and chocolates contain gluten. Due to busy lifestyles, eating out, and use of packaged, convenience foods, it is increasingly common for gluten to find its way into our diet, even where we least expect it. Current Canadian food labelling regulations do not require manufacturers to declare all components of ingredients on the package label (e.g. modified food starch, seasonings, hydrolyzed vegetable protein) making it difficult to determine whether products containing these ingredients are gluten-free.

Fortunately, there are many varieties of foods that are naturally gluten-free, including plain meat, poultry, fish, eggs, nuts, seeds, legumes, milk, cheese, yogurt,

Celiac Resources

Please contact our office for more information about celiac disease and the gluten-free diet. The following resources may also be helpful:

- Health Canada's extensive technical review on the safety of oats: www.hc-sc.gc.ca/fn-an/securit/allerg/cel-coe/oats_cd-avoine-eng.php
- The Canadian Celiac Association (CCA), 1-800-363-7296 or www.celiac.ca
- *Acceptability of Foods and Food Ingredients for the Gluten-Free Diet Pocket Dictionary (CCA)*
- *Guidelines for Consumption of Pure and Uncontaminated Oats by Individuals with Celiac Disease*: www.celiac.ca/Articles/PABoatsguidelines2007June.html
- *Gluten-Free Diet: A Comprehensive Resource Guide* by Shelley Case, RD, Case Nutrition Consulting: www.glutenfreediet.ca
- Canada Revenue Agency celiac disease medical expense information: www.cra-arc.gc.ca/tx/ndvdl/tpcs/clc-eng.html

fruits, and vegetables. Additionally, there are many gluten-free flours, starches, and grains that can replace wheat, barley, and rye (**See Table 2: SAFE**). Distilled alcoholic beverages, wine, and liqueurs are safe, however beer derived from barley is not. All vinegars except malt vinegar are gluten-free.

There are also increasing varieties of gluten-free specialty products available, such as ready-to-eat baked products (e.g. breads, bagels, buns, muffins, cakes, cookies, pies, and pizza crusts), baking mixes and specialty flours, hot and cold cereals, snack foods, entrees, pasta, soups, sauces, communion wafers, snack bars and gluten-free beer. Products are available in health food and grocery stores, as well as from mail order companies.

The cost of gluten-free products is usually considerably higher than gluten-containing foods and

Table 2: SAFE⁴
Gluten-Free Flours, Cereals, and Starches

Amaranth	Potato Starch
Arrowroot	Quinoa
Buckwheat	Rice (black, brown, glutinous/sweet, white, wild)
Corn	Rice Bran
Flax	Rice Polish
Indian Ricegrass (Montina™)	Sago
Legumes Flours (bean, chickpea/garbanzo, lentil, pea)	Sorghum
Mesquite Flour	Soy
Millet	Sweet Potato Flour
Nut Flours (almond, hazelnut, pecan)	Tapioca (cassava/manioc)
Potato Flour	Teff

they are not as readily available as gluten-containing products. A small percentage of individuals with celiac disease may qualify for a tax rebate from the Canada Revenue Agency for the incremental cost of purchasing gluten-free foods. Additionally, many gluten free items are available in bulk form for cost savings. See sidebar for more resources.

Good compliance with the diet is essential to reduce the risk of complications and to improve the health and quality of life for those with celiac disease.

Shelley Case, a registered dietitian, is a leading international nutrition expert on celiac disease and the gluten-free diet. She is a member of the Medical Advisory Boards of the Celiac Disease Foundation and Gluten Intolerance Group in the United States and the Professional Advisory Board of the Canadian Celiac Association. Visit her website at www.glutenfreediet.ca.

In recognition of Shelley's major contributions to the celiac community and dedication to educating health professionals and individuals with celiac disease in Canada and the United States, she was awarded the Queen Elizabeth Golden Jubilee Medal. Shelley also recently received the Canadian Celiac Association's Honourary Life Member Award.

Here's what you'll find in the new *Gluten-Free Diet*

- Detailed food and ingredient information
- Latest breaking news on oats, including position statements from various organizations around the world, guidelines for use, and references
- New food and GF labeling regulations in the US, Canada, Europe and Australia/NZ, as well as the international Codex Alimentarius
- More than 3,100 gluten-free specialty products listed by company name, product name, and package size
- Directory of more than 270 American, Canadian, and international companies divided into 3 categories: manufacturers of GF products, GF bakeries, and GF stores & distributors
- Nutrition information and practical strategies for healthy gluten-free living
- Creative ideas for meals and snacks
- Gluten-free recipes with nutritional analysis
- Prevention of cross-contamination
- Resources such as books, cookbooks, magazines, celiac groups around the world
- Tips for eating out, and more!



Trans Fat Restricted in BC

British Columbia is the first province in Canada to restrict trans fat in all foods served and prepared in BC restaurants, Mary Polak, BC Minister of Healthy Living Sport, announced in March.

“We’re following through on our throne speech commitment to restrict trans fat by the year 2010 because we know trans fat is harmful and this is an effective way we can protect British Columbians’ health,” said Polak. “By the time we hold the Olympics in 2010, we want every British Columbian and every visitor to our province to know the food they order in restaurants or eat at schools is trans fat free.”

Trans fat comes in two forms:

- naturally occurring in small amounts in certain foods including milk products, and the fat of ruminant animals, such as beef and lamb, and
- created artificially in the refining process of some liquid vegetable oils or in the ‘partial hydrogenation’ process that transforms liquid oils into semi-hard form, such as shortening or margarine.

Historically, most Canadian consumption of dietary trans fat came primarily from margarine and commercially prepared foods and bakery goods like donuts, cookies, crackers, and deep-fried foods that were made with margarine or other partially hydrogenated oils and fat. Trans fat increases a person’s risk of coronary heart disease by raising levels of bad cholesterol and lowering levels of good cholesterol, leading to clogged arteries.

Introducing the regulation to restrict industrially-produced trans fat is part of BC’s new *Public Health Act*. This regulation follows the recommendations of Health Canada’s Trans Fat Task Force. As it is practically impossible to eliminate trans fat completely, the regulation restricts the amount of trans fat content of oils and spreadable margarines to 2% of total fat and restricts trans fat content of all other foods to 5% of total fat content of the food.

All food service establishments that require a permit to operate a food service in BC must comply with the new regulation by September 30, 2009. This includes restaurants, delis, cafeterias, schools and other educational facilities, healthcare institutions, bakeries, and applies to food sold at special events. Packaged foods sold directly to the consumer that have a federally-approved Nutrition Facts Table on the package are exempt from the regulation.

sarah lang embarks on a new adventure



Editor's Note When The Inside Tract® last checked in with world-class speed skater Sarah Lang at the beginning of our first UCan Speak From the Gut! Campaign, she was a student at the University of Calgary and an Olympic hopeful in training, learning to manage living with UC. Since then, Sarah's life has gone down a different path – but what hasn't changed is her perseverance in the face of new challenges, her sense of adventure, and her positive outlook on life. We caught up with Sarah recently, to see what she's been up to since last year's campaign.

Skating on to New Challenges

Since last year's UCan Speak From the Gut! campaign, a lot has changed in my life. First of all, I made the difficult decision to retire from my skating career and embark on a new adventure. My last season turned out to be one of the best of my career, and I wanted to leave on a high note. I also graduated from the University of Calgary with a Masters degree in economics and I wanted to travel before starting a new career.

I had always been interested in learning to speak Spanish and I'm an avid snowboarder, so I wanted to try my hand at surfing. When the opportunity to visit

Nicaragua came up in November 2008, I jumped on it. I spent an incredible month immersed in the culture, learning the language, surfing, and sightseeing.

For many individuals with ulcerative colitis (UC), an experience like this would seem almost unimaginable. It is frightening for a UC patient to be away from a doctor or pharmacist, especially in a country where English is not widely spoken. But I wasn't about to let UC stop me from living my life and having new experiences.

I talked to my doctor before I left for my trip and he gave me his e-mail address, in case of an emergency. Coincidentally, I also met an ER doctor while in Nicaragua who quickly became my 'surf buddy' and who could answer questions I had while experiencing symptoms. I also learned how to say "I'm sick in my intestine," in Spanish, just in case I needed to explain my condition to someone who didn't speak English. In the end, I was one of the only people in the group of travellers I met who didn't get sick. I was so used to taking precautions with what I eat and drink and I think that helped me stay healthy.

Shortly after I got back to Canada, I made the official transition from the world of speed skating to starting a career as a consultant at Deloitte, an international professional services firm. I'm also getting ready to travel to Vancouver, to work as the on-site live announcer for the World Long Track Speed Skating Championship and, if all goes well, I'll be doing the same thing at the 2010 Olympics!

With all the changes, my lifestyle is so different from what I'm used to. I'm still adjusting and, with stress being one of the biggest triggers for my flares, I have had some symptoms. I just keep reminding myself that I have dealt with high-pressure situations before, and I can get through them. I still apply some of the stress management techniques I learned in my speed skating training, which have really helped me stay well and keep a positive attitude.

Staying on Track

When I was first diagnosed and just learning how to manage my symptoms, finding the right treatment



UCan Inspire Others Living with UC!

The second year of the UCan Speak From the Gut! campaign is here – and we are looking for artists, photographers, writers, or anyone whose life has been affected by ulcerative colitis to take part!

This year, although we are still accepting your written stories, we are also now seeking artwork, photos, videos, stories, and poems. Express yourself anyway you choose. You might see your submission in a future issue of *The Inside Tract*®!

If you would like the chance to share what you've learned through your personal experience managing UC, or supporting a loved one with UC, then we'd like to hear from you! For more information on making your submission, please visit our website or call our office.



Attention IBD Patients

Dr. Michael Byrne, Dr. Bill Salh, and Dr. James Gray recently announced the creation of the Vancouver General Hospital Gastroenterology Luminal Clinical Trials Group. They will be seeking participants from the IBD patient population and from among those who have other luminal disease. Look for further details in our next newsletter.

UCan Speak from the Gut

regimen was a big win. UC is different for everyone, so I worked closely with my doctor to find what worked for me. I tried quite a few therapies, including suppositories, enemas, and oral medications, until I found that Asacol® 800 is the product that works best for me.

Now that I've been living with UC for a couple of years, sticking to my treatment plan has been just as important as ever. Whether I'm out on a fishing boat on the Nicaraguan coast, or working late at the office, Asacol® 800 is easy for me to take, and it provides fast relief of my symptoms when I need it to. I still have occasional symptoms, but by staying on track with my treatment plan, I know I can handle them.

Having the Guts to Face Adversity

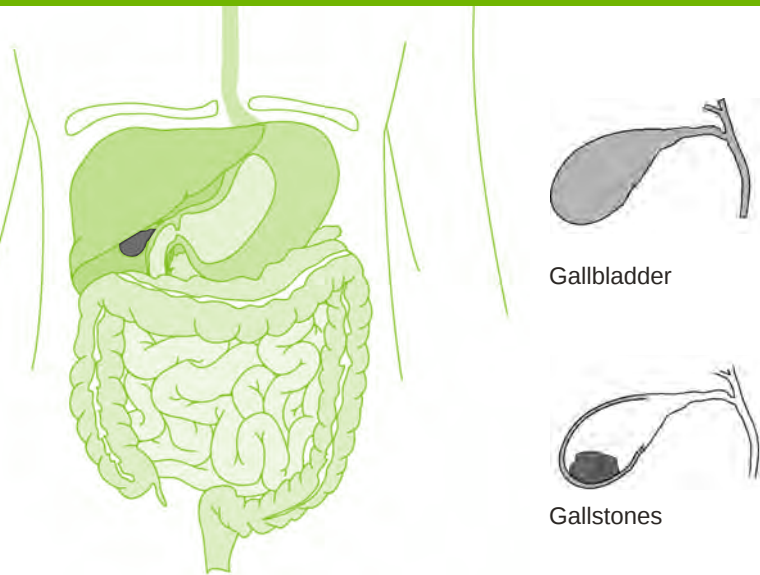
All of my life experiences, the good and the not so good, have given me more confidence as I move through this major transition in my life. Having UC has taught me a lot about myself – I'm stronger than I realized. A UC diagnosis was by far the biggest challenge I have ever faced but I got through it, so I know that I can get through these new challenges too.

Words of encouragement for UC patients

- **Don't lose hope** The first year or two after being diagnosed with UC are the most difficult, because you're still discovering how to manage your disease.
- **It's not all bad** The longer you have the disease, the better you become at managing it. Eventually, I learned to see each flare as an opportunity to learn how to manage the next one with a new angle or perspective, and improving as I go along.
- **Challenges will only make you stronger** For me, a UC diagnosis was one of the hardest times in my life, but it has made me stronger. If you can manage the tough times, you can manage anything else in life.
- **Stay positive** Remind yourself how strong you are to make it through the rough patches.

We thank Procter & Gamble Health Care Canada for a grant that makes this campaign possible.

Gallbladder & Gallstones



The gallbladder is a small sac-like organ located below the liver. Its primary function is to store and concentrate bile, an important digestive fluid made by the liver. When fat enters the upper portion of the small intestine (duodenum), bile flows from the liver through bile ducts to the duodenum. When the small intestine is empty, bile flows back into the gallbladder for storage. Bile consists of water, cholesterol, fats, bile salts (also called bile acids), and a yellow pigment product known as bilirubin.

Gallstones (cholelithiasis) are the most common gallbladder disorder, and affect about one-fifth of men and one-third of women at some point in their lives.¹ Stones form when cholesterol and other elements of the bile are abnormally concentrated or they are in disproportion. Three types of gallstones exist. Pigment stones, comprised primarily of bilirubin, are more common in some populations and parts of the world than in others and occur most frequently among persons who have types of anemia characterized by rapid destruction of red blood cells. Mixed stones, the most widespread type of stone, develop from crystalline particles of cholesterol mixed with other bile substances. Sometimes mixed stones are referred to as cholesterol stones, since they are comprised mostly of cholesterol. However, the third type of stones, comprised of pure cholesterol, is rare.

Symptoms & Diagnosis

About half of all patients with gallstones are asymptomatic, however, you may have heard of, or even had, what many refer to as a gallstone 'attack,' an episode of mild to intense pain in the lower or upper right abdomen, which can spread to your right upper back or shoulder

blade area. This is the most common presentation. Other symptoms include vomiting, tenderness in the area of the gallbladder, and a low-grade fever. If shaking and chills occur, this usually indicates a bacterial infection in the gallbladder. Sometimes symptoms can increase in severity when a stone blocks a portion of, or the entire, biliary tract. After symptom assessment occurs, abdominal ultrasound or x-ray generally confirms diagnosis.¹

Risk Factors

The following are some risk factors for gallstone formation:^{2,3}

- Female gender
- Age over 55 years
- Obesity
- Rapid weight loss
- Diabetes
- High calorie diet
- High cholesterol diet
- Pregnancy
- Gastric bypass surgery
- Maternal family history of gallstones
- Alcoholic cirrhosis
- The following medications: Post-menopausal estrogen, cholesterol-lowering medication

Other Risks

According to a number of scientific studies, patients with Crohn's disease are at significantly increased risk of developing gallstones. A recent study demonstrated a two-fold increase in risk, and researchers found that the disease site (namely ileocecal and ileocolonic involvement) was a specific risk factor, as was duration of disease.⁴ After 15 years of disease activity, Crohn's patients' risk of gallstone development rose to 4 times greater than the general population. Additionally, patients with more and longer hospital stays, a higher number of total parenteral nutrition treatments, and ileal resection had greater risk. However, patients with ulcerative colitis did not have an increased incidence of gallstones.

Treatment

Asymptomatic or uncomplicated gallstones usually do not require treatment. If you have a mild gallstone attack, your doctor may prescribe pain medication, however, after your first incidence, you have a much higher likelihood of repeat attacks. If subsequent episodes occur, then the most direct and effective course of treatment is surgical gallbladder removal (cholecystectomy). The

gallbladder is a non-essential organ, and this very safe procedure, usually performed laparoscopically, with minimal incisions, is the most commonly performed bowel surgery in medicine, with approximately 600,000 performed annually in Canada.^{3,5} Some surgeons are experimenting with gallbladder removal via the vagina in women.⁶ Without the presence of the gallbladder, bile flows directly from the liver into the small intestine, and this leads to diarrhea in about 1% of patients, although for most this is a temporary effect.⁷

In patients for whom surgery carries an abnormally high risk, such as the elderly or those with otherwise compromised health, sound waves can be used to breakup the gallstones non-invasively, during a procedure called lithotripsy. Physicians may also prescribe medication to dissolve the stones. These options are less effective treatments than surgery and carry a considerably greater risk of stone recurrence.²

Prevention

Gallstone prevention focuses on specific lifestyle changes that echo common advice for general health and well-being and for reduction of many other disease risk factors.²

- Keep a healthy weight and avoid weight fluctuations. If trying to achieve weight loss, do so slowly, aiming for about a 0.5 kg loss per week.
- Discuss taking post-menopausal hormones with your doctor and consider the pros and cons, as some medications may increase your risk of gallbladder disease.
- Get enough exercise. A number of studies show that regular physical activity correlates with a decrease in risk of gallstone disease in men and women.⁸
- Eat regular meals containing some fat and plenty of whole grains and fibre and avoid saturated fat and cholesterol. Make sure you get adequate dietary calcium.

Some more specific research looks at the following prevention measures:

Eat more vegetables As part of the large prospective Nurses' Health Study, researchers discovered a strong link between increased consumption of vegetable protein and a decreased risk of cholecystectomy.⁹ This research followed animal studies that reported significantly inhibited gallstone formation with higher vegetable protein intake. After controlling for various risk factors including age, body mass index, recent weight change, physical activity, diet and more, this study found that

increased vegetable protein intake had a protective effect on gallstone formation independently of total protein intake or intake of animal protein. The authors suggests that “substituting vegetable protein for part of the animal protein supply or other macronutrients in the Western diets could be effective in primary or secondary prevention of gallstones at the earliest stage of crystal formation in humans”. Good vegetable sources of protein are peas, beans, and lentils, soy-based foods such as tofu and soymilk, and nuts and seeds.¹⁰ (To read more about how dietary fibre can reduce your risk for gallbladder surgery see *The Inside Tract®* newsletter, issue 145).

If you're a man, try magnesium Supported by numerous previous findings, this editorial in the *American Journal of Gastroenterology*, indicates that men who consume the most magnesium in their diets have a considerably lower risk of developing symptomatic gallstone disease, compared to men who consume the least amount of magnesium.¹¹ This association was evident for dietary magnesium consumption, but not for those taking supplements, most likely because only very small percentage of study subjects used magnesium supplements. Furthermore, the presence of asymptomatic gallstones, which form the majority of all gallstones, was not taken into account. Green vegetables, beans and peas, nuts and whole grains are all good sources of dietary magnesium. (note: since the study only looked at male participants, researchers related their conclusions to men only.)

Outlook

Fortunately, most patients function very well without their gallbladder, and thus adequate management of gallstones through surgical removal of the gallbladder is an excellent treatment with very few complications and mild or no side effects in most patients.

A note on gallbladder cancer: Although extremely rare, comprising less than 0.5% of all cancers, gallbladder cancer presents with symptoms similar to gallstone disease: nausea, vomiting, pain, as well as anorexia. Gallstones are evident in 75% of patients with gallbladder cancer (although the incidence of gallbladder cancer among patients with gallstones is still extremely low at 0.2%). The highest risk is for patients with symptomatic gallbladder disease. Surgery is the only curative treatment for this type of cancer.¹²



Tecta™

A remodeled PPI with a longer half-life

Dr. George Sachs was the first to describe the molecular structure and mechanism of action of the acid-producing pumps found in the stomach lining, in the *Journal of Biological Chemistry*, in 1976. This discovery led to his later innovation of the first medication in the class of drugs known as the proton pump inhibitor (PPI).

The proton pump mechanism in the parietal cells, within the stomach lining, takes a non-acidic potassium ion out of the stomach and replaces it with an acidic hydrogen ion. The accumulation of hydrogen ions increases stomach acidity.

PPIs work by blocking the hydrogen/potassium adenosine triphosphatase (H^+/K^+ ATPase) enzyme system of the gastric parietal cell. Parietal cells have receptors for three stimulators of acid secretion, acetylcholine, gastrin, and histamine-2. While the effect of the PPI is irreversible on each individual parietal cell, permanently stopping it from pumping acid into the stomach, when these cells

reach the end of their short natural life (2-5 days), the body generates new parietal cells, which are able to produce acid. This is why ongoing dosing is essential.

The PPI class of medication directly affects the proton pump, rather than using an indirect approach, such as that of the

histamine-2 receptor antagonists, which were the most widely accepted acid-reducing products prior to PPI discovery. Antacids also target stomach acids but they don't stop its production. They work by neutralizing acid in the stomach (sodium bicarbonate derivatives) and absorbing acid (calcium and magnesium salts).

The first PPI introduced into Canada was Losec®, followed by Prevacid®, Pantoloc®, Nexium®, Pariet™, and now Tecta™. While all PPIs are in the same class, each has a unique chemical profile.

A New PPI

The makers of Pantoloc® (pantoprazole sodium) have developed a brand new formulation of this medication, called Tecta™ (pantoprazole magnesium).

As with Pantoloc, Tecta is indicated for the treatment of conditions where a reduction of gastric acid secretion is required, such as duodenal ulcer, gastric ulcer, reflux esophagitis, the symptoms of reflux (heartburn and acid regurgitation), and duodenal ulcers associated with infection by *H. pylori*.¹ As pantoprazole action is distal to the receptor levels, it can inhibit gastric acid secretion irrespective of the nature of the stimulus (acetylcholine, gastrin, and histamine-2).

Tecta has the same drug interaction profile as the original pantoprazole formulation.¹ This factor is of particular importance for those who are currently taking a common blood thinner, Plavix® (clopidogrel bisulfate), which physicians often prescribe to prevent recurrence of certain serious cardiac events.³ Pantoprazoles are considered a safe option for those who need to take a PPI at the same time as Plavix.

Those consuming Tecta can expect the same side effect profile as pantoprazole sodium, including headache (2.1%), diarrhea (1.6%), and nausea (1.2%).¹ Tecta is contraindicated in anyone with hypersensitivity to this drug or to any ingredient in the formulation.

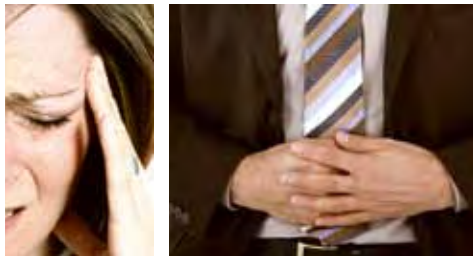
So how is Tecta different?

In animal studies, Tecta demonstrated a longer half-life than Pantoloc.¹ This means that the drug stays in the body for a longer period-of-time, affecting new parietal cells as they form and thus its effect is longer lasting. Your doctor may prescribe Tecta for you if your current medication does not provide adequate symptom control, for example, if your symptoms prevent you from falling asleep, or if they wake you up at night.

Some patients with GERD may experience erosive esophagitis, which is damage to the lining of the esophagus caused by refluxing acid. According to the Tecta product monograph, more patients taking Tecta had their esophageal erosions healed after 4 weeks compared to those taking Pantoloc, although by 8 weeks, the two treatments had equally effective outcomes.¹ All PPIs are considered very safe and effective medications. Tecta is formulated as an enteric-coated tablet, which should not be chewed or crushed and should be swallowed with fluid in the morning either before, during, or after breakfast.



Images: © Jason Walton/Stockphoto.com © Michal Marzaki/Stockphoto.com



Could Headaches and a 'Bad Gut' Have Something in Common?

A Norwegian study looking at the relationship between headaches and some common gastrointestinal (GI) symptoms found the prevalence of headache is higher in persons with GI symptoms than in those who don't have these symptoms.

Both headaches and GI symptoms are common in the general population but the scientific literature about the co-morbidity of these conditions is negligible. This study, published in the journal, *Cephalalgia*, looked at associations between headache, including migraine, and GI symptoms, by analyzing questionnaires completed by more than 43,500 participants in what is known as the Head-HUNT Study.

After adjusting for age, gender, educational level, medication use, depression, and anxiety, the research team noted a significantly higher prevalence of headache among participants who also reported nausea, acid reflux, diarrhea, and/or constipation, compared to those without such symptoms.

Although the association between headache and GI complaints increased markedly with increasing headache frequency, there was no statistically significant association between migraine headaches and GI symptoms.

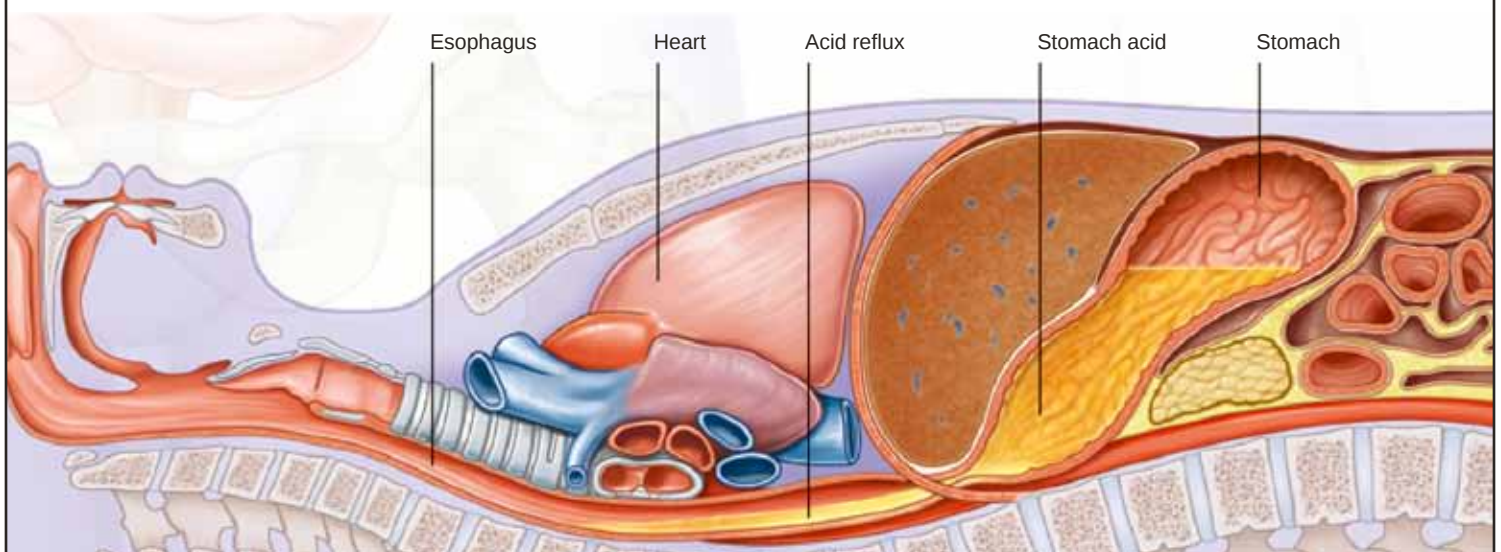
The study intent was to review any possible GI symptoms among those who experienced headaches. Researchers found strong ties between frequent headache and frequent GI complaints, and raise questions about common mechanisms that might make headache sufferers predisposed to GI complaints, speculating that exploration of shared medications or psychological factors among these participants might narrow the search for linkages. They suggest that more research is necessary before determining the meaning of this interesting association.

Source

Aamodt, AH *et al.* Comorbidity of headache and gastrointestinal complaints: The Head-HUNT Study. *Cephalalgia*. 2007;28:144-151.

Night-time GERD occurs as a result of acid reflux into the esophagus at night while you sleep. When you are standing or sitting upright, gravity helps to keep the acid in the stomach. Being in a supine, or lying, position negates the protective effect of gravity and can easily lead to acid reflux from the stomach into the esophagus. Because of the position of the stomach relative to the esophagus, this acid can remain in the esophagus for several hours after an episode of reflux. During the day, reflux episodes tend to resolve much more quickly than while lying down during the night.

Permission to use this image was granted by the artist and Gray's Anatomy to *The Inside Tract*®



April is IBS Awareness Month

To encourage persons with Irritable Bowel Syndrome (IBS) to feel more comfortable discussing their symptoms, CSIR was instrumental in having Health Canada declare April as IBS Awareness Month in 2003.

IBS is a chronic, often debilitating, functional gastrointestinal disorder with symptoms including abdominal pain, bloating, and altered bowel behaviour such as constipation or diarrhea, or alternating between the two stool consistency extremes. It is the most common disorder presented by patients consulting a specialist for gastrointestinal conditions and the most frequent reason



for employee absenteeism after the common cold.

Researchers estimate 13-20% of the Canadian population has IBS, which can begin in childhood, adolescence, or adulthood and can resolve unexpectedly for periods throughout an individual's lifespan, recurring at any age.

Although each patient has a unique IBS experience within the range of known symptoms, a significant reduction in quality of life is evident for those persons who have an irritable bowel. Interestingly, only about 10% of persons with IBS symptoms seek help from a physician.

For full details about IBS, go to www.badgut.org or contact our office.

30-Second IBS Test

Please take this test to see if you might have IBS

Have you had discomfort* or pain anywhere in your abdomen 2-3 times or more in the past 3 months?

YES NO

If yes to above, then:

Does the discomfort or pain sometimes get better after a bowel movement?

YES NO

Is the discomfort or pain associated with a change in the frequency of bowel movements?

YES NO

Is the discomfort or pain sometimes associated with constipation or diarrhea?

YES NO

*discomfort means an uncomfortable sensation not described as pain

If you answered "NO" to any of the questions, then it's Good News! It seems that you don't have IBS. However, you may still want to consult a physician if you answered "YES" to any of the questions.

If you answered "YES" to all of the questions, then it seems that you might have IBS. There are a number of treatment options available to decrease or eliminate your symptoms and improve your quality of life. Contact your physician for a diagnosis.

CSIR Partners With Wal-Mart's Canadian Pharmacies

Wal-Mart Canada's pharmacists are striving to meet patients' healthcare needs at their stores across the country. As part of this initiative, Wal-Mart pharmacies from coast-to-coast regularly feature healthcare topics that align with Health Canada's official Calendar of Health Promotion. This year, five months include appointment-based clinics while four include collaborations with healthcare professionals.

The Canadian Society of Intestinal Research is pleased to work in partnership with Wal-Mart this April to deliver our gastrointestinal disease and disorder resources, with a focus on irritable bowel syndrome (IBS).

As part of Wal-Mart's Health and Wellness Program, special supportive patient information material is available free-of-charge to all customers. This includes a did-you-know fact sheet, a patient self-assessment form, a pharmacists' health assessment plan, a patient care plan, a follow-up form, and an appointment reminder card.

To learn more about IBS, please visit your Wal-Mart pharmacy during Irritable Bowel Syndrome Awareness Month in April. Just Ask.





E. Jan Irvine, MD, FRCP(C)
Staff Gastroenterologist, Department of Medicine, St. Michael's Hospital, Toronto
Professor, Department of Medicine, University of Toronto

Ask an Expert

I heard on the news lately that bowel preparations, like those used before a colonoscopy, are dangerous. Can you tell me more?

During a colonoscopy, a physician inserts a thin flexible tube (colonoscope) with a tiny camera into the colon through the rectum in order to view the bowel for abnormalities, and sometimes takes a small sample of the tissue (biopsy) for further testing. This procedure generally occurs under light sedation, on an outpatient basis. Colonoscopies are a regular part of colon cancer screening and an important diagnostic tool for physicians to assess a number of gastrointestinal symptoms.

Appropriate bowel preparation is one of the most critical components of a colonoscopy. The purpose of advance preparation is to clear your large intestine of fecal matter to allow unobstructed passage of the colonoscope and a clear view of intestinal tissue. Without proper cleansing, results may not be accurate and, on occasion, the procedure may even have to be cancelled. As part of the process, physicians recommend a purgative medication to help eliminate bowel contents. On March 5, 2009, Health Canada issued a warning to Canadians not to use oral sodium phosphate products (such as Fleet® Phospho-Soda®, Phosphate Solution, and Phoslax™) as purgatives. These products have been associated with serious adverse effects, including electrolyte disturbances and kidney damage.

As a result of these concerns, the manufacturer voluntarily discontinued the sale of Fleet Phospho-soda Oral Laxative (Sodium Phosphates Oral Solution) in Canada. This follows a public advisory and a 'Dear Health Care Professional' letter issued by the company in December 2005 about the risk of renal failure

related to the use of oral sodium phosphate solutions as a bowel cleanser.

There are a number of alternate purgatives without these adverse affects:

- Pico-Salax® (sodium picosulfate, magnesium oxide, and citric acid), which has been available worldwide for more than 25 years. When used according to the prescribing information, Pico-Salax is a safe and effective product, indicated for clearing the bowel prior to barium X-ray examination, colonoscopy, or surgery. Pico-Salax does not contain sodium phosphate.
- Polyethylene glycol (PEG) which comes in four flavoured varieties to disguise the salty taste (Colyte®, PegLyte®, GoLYTELY®, Klean-Prep™). A major drawback of this group of medications is the requirement to drink four litres of the solution, which can be too much for some patients to manage.

In February 2009, the Canadian Association of Gastroenterologists issued a statement confirming that sodium phosphate is no longer recommended for colon cleansing prior to colonoscopy and advised physicians to consider alternative products. In their report, they note that many Canadian physicians have found that Pico-Salax® provides reasonable efficacy, patients tolerate it well, and it appears to have a good safety profile.

Always follow your physician's instructions and discuss with him or her any concerns or questions you may have.

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Be Kind to Yourself

Claire Maisonneuve, Registered Clinical Counsellor
Alpine Anxiety & Stress Relief Clinic

We sometimes experience difficult feelings such as anger, fear, panic, or powerlessness as dangerous, unsettling, embarrassing, inconvenient, untrustworthy, and confusing. However, we often don't understand these feelings or know what to do with them.

We may say to ourselves, "I hate feeling this way; I don't have time for this; I shouldn't feel this way; there's really nothing wrong in my life; or, I should be over this by now." We may try to cope with our feelings by distracting ourselves from what's happening inside, through drinking, overeating, taking drugs, gambling, viewing pornography, watching excessive TV, or staying unreasonably busy. All these actions are attempts to tune out, numb, or disconnect from our feelings.

The very way in which we relate to our feelings and what we do with them, can worsen or improve them, leaving us feeling bitter or better. When we dismiss, suppress, or ignore our feelings, they turn into depression, anxiety, and stress, but if we

accept and work through our feelings, then we have a better result.

The first step in working with difficult feelings is to let ourselves experience them and not be afraid of them. Since we can't heal what we can't feel, we must connect with and acknowledge what takes place inside ourselves. We must befriend our feelings rather than push them away and we must bring more understanding and tenderness to what we feel.

Take a minute to read the story in the box below for an example of ways to work more skilfully with feelings and facilitate healing.

In this story, mom's first reaction teaches Suzie that her feelings are weak and a nuisance, whereas her second response shows Suzie that her feelings are okay, that she is not wrong or bad for feeling the way she does, and someone will be there to comfort her when she is in pain. In turn, these lessons will influence how Suzie deals with her own feelings as she is growing up and they will shape her interactions into adulthood.

As adults, it's our job to attend

to our own feelings in a way that will be supportive, caring, and healing in the same nurturing way that a parent might tend to their child's feelings. Our first response in caring for ourselves is to give importance to our feelings. Then others will follow our lead and treat us the way we treat ourselves.

By staying in touch with our feelings, we weaken the power they have over us and we disarm them by not running away from ourselves. Try listening to yourself. What is it that you really need from yourself when you feel this way? Learn to accept what you feel, and suspend your judgments. Take deep breaths as you give yourself permission to experience everything you feel.

Claire Maisonneuve is a Registered Clinical Counsellor and long-time director of the Alpine Anxiety & Stress Relief Clinic. She uses a unique mind/body approach in her treatment of anxiety, stress, depression, and chronic pain. Call or visit her website for free tools to begin your healing and for more details about her unique mind/body approach to counselling at 604-732-3930 or www.AnxietyAndStressRelief.com.

Four-year-old Suzie is playing on a chair, pushing herself off the kitchen table with her feet. This is risky, as the chair may become stuck in the tile grooves and fall. Mom warns her not to play like that but, like any normal four-year-old, Suzie doesn't perceive any danger. Sure enough, her chair becomes stuck in the groove and she goes flying back, hitting her head on the floor. Mom's response to Suzie's feelings will affect how Suzie chooses to deal with her own feelings later on. Mom can say, "I told you not to play like that. It's your fault that you hurt yourself. That will teach you a lesson. Now stop crying or I'll give you something to cry about," or she can hold Suzie, comfort her and say, "It's okay, it's over now. Tell me, are you crying because your head is hurting or because you are afraid? You don't have to be afraid anymore. I'm here."



Image: (bottom) © Fotolia.com/Trutia

More Information on Gastrointestinal Conditions

Free Publications

CSIR produces a number of up-to-date, easy-to-read patient information pamphlets and booklets for wide-spread distribution and provides them free of charge to individuals, healthcare professionals, hospitals, pharmacies, libraries, and other parties throughout Canada. To place an order, please visit our website, www.badgut.org, or phone 1-866-600-4875.

Our current list of pamphlets includes:

Celiac Disease
Crohn's Disease*
Diverticular Disease
Functional Dyspepsia*
Gastroesophageal Reflux Disease (GERD)*~
Heartburn
Hemorrhoids
Hiatus Hernia
Inflammatory Bowel Disease*
Intestinal Gas
Irritable Bowel Syndrome (IBS)*~
Pancreatitis*
Stress Management
Ulcers (Ulcer Disease)
Ulcerative Colitis*
Ulcerative Proctitis

*Also available in French ~Also available in Chinese

IBD & IBS Support Groups

CSIR support group attendees offer one another understanding, comfort, and encouragement. Meetings are without charge and are open to people with gastrointestinal diseases and disorders as well as their family and friends. A large part of each session is dedicated to open sharing and discussion. Meetings sometimes include presentations, mini-seminars, videos, and other features.

Inflammatory Bowel Disease (IBD) Group (Crohn's Disease & Ulcerative Colitis)

Vancouver, BC	
7:30 pm first Wednesdays Apr 1, May 6, Jun 3	Vancouver General Hospital Jim Pattison Pavilion Lauener Room (LP2809) - at Sassafras Café 899 West 12 th Avenue
<i>For more info call:</i> Doug 604-266-4833	

Irritable Bowel Syndrome (IBS) Group

Port Moody, BC	
7:30 pm first Tuesdays Apr 7, May 5, Jun 2	Eagle Ridge Hospital, 475 Guildford Way (Lower Level across from cafeteria)
<i>For more info call:</i> Marilyn 604-942-6059	
Vancouver, BC	
7:00 pm last Wednesdays Apr 29, May 27, Jun 24	Vancouver General Hospital Jim Pattison Pavilion Lauener Room (LP2809) - at Sassafras Café 899 West 12 th Avenue
<i>For more info call:</i> Andrea 604-875-4875	

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