

UNDERSTANDING THE SYSTEM THAT

# FUELS YOUR LIFE

20 million Canadians suffer  
from digestive disorders.

IT'S TIME TO START TALKING ABOUT:

Improving your digestive health

Understanding IBS

Digestive Cancers

Celiac Disease

Probiotics

Fibre

You can feel better. We can help.

A special supplement from the

Canadian  
**digestive  
health**  
Foundation 

www.CDHF.ca

## YOUR DIGESTIVE SYSTEM FUELS YOUR LIFE.

### Respect It. Protect It. Learn More About It.

Digestive disorders can happen to anyone, at any age. The Canadian Digestive Health Foundation (CDHF) estimates 20 million Canadians suffer from at least one digestive disorder each year.

Dr. Richard Hunt, a professor at McMaster University's Farncombe Family Digestive Health Research Institute, says this is partly due to age, population, and lifestyle. "Our population is increasing in size and we're living longer," he explains, "so there's more opportunity for people to develop diseases, including digestive diseases."

But Dr. Hunt is also concerned about the number of young people diagnosed with digestive diseases. "Younger segments of the population are developing serious conditions, like inflammatory bowel disease (IBD), irritable bowel syndrome (IBS), esophagitis and colorectal cancer that often hit when family responsibilities, career development, and the ability to contribute to society are at a peak."

Digestive diseases can have a devastating impact on quality of life. They also cost our healthcare system an estimated \$8 billion annually, represent 12% of all hospitalizations, and account for 18 million lost workdays.

Far too often, early signs of digestive problems are ignored, hidden due to embarrassment and unreported to doctors. The most common complaints Dr. Hunt hears about are heartburn, dyspepsia, bowel irregularities, and rectal bleeding. More severe symptoms can include:

- Blood in the stool
- Persistent abdominal pain
- Unexplained weight loss
- Difficulty swallowing

We must become better advocates for our own digestive health. The CDHF aims to improve public and government awareness of digestive health and disease by teaching us about the digestive system, showing us how to maintain it and urging us to seek medical attention when warranted. The steps you take now could improve – and possibly save – your life.

#### **FIVE WAYS TO PROTECT YOUR DIGESTIVE HEALTH**

- 1 | Eat a broad selection of fresh fruits, vegetables, and whole grains.
- 2 | Drink plenty of fresh, clean water.
- 3 | Talk to your doctor about any digestive concerns you have.
- 4 | Recognize the symptoms of digestive disorders.
- 5 | If you're 50 or older, talk to your doctor about a colorectal screening.

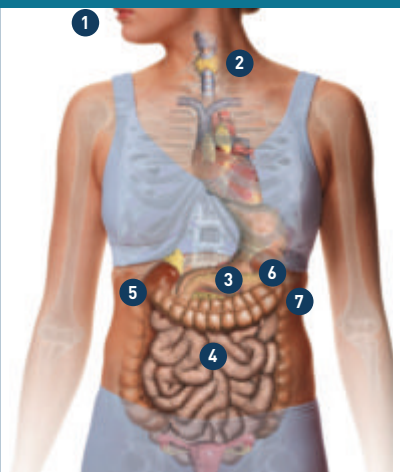
Learn more at [www.CDHF.ca](http://www.CDHF.ca).

# YOUR DIGESTIVE SYSTEM

## Let's Take a Closer Look

The human digestive tract is a complex system spanning several organs and running the entire length of your torso. Here's the path food travels through a healthy system.

### HUMAN DIGESTIVE TRACT



**1 | MOUTH** | Through the process of chewing, food is ground into tiny pieces that mix with saliva to form a thick paste, called a *bolus*.

**2 | ESOPHAGUS** | Within seconds, the bolus travels down this muscular tube into your stomach, where digestion really gets underway.

**3 | STOMACH** | The bolus mixes with enzymes and acid to form chyme – an acidic, nutrient-rich broth that eventually moves into your small intestine.

**4 | SMALL INTESTINE** | This long and winding tube is about six metres long. Here, the body absorbs most of its nutrients including iron, vitamins, protein, carbohydrates, and fat-soluble substances. Any troubles in the small intestine can result in nutritional deficiencies.

**5 | LIVER AND GALLBLADDER** | Bile is created in the liver, stored in the gallbladder, and transported to the small intestine where it's used to break down fats.

**6 | PANCREAS** | Enzymes produced in the pancreas are secreted into the small intestine, where they break apart proteins. The pancreas also regulates blood sugar by producing and secreting insulin.

**7 | LARGE INTESTINE (COLON)** | The final stages of digestion occur in the colon where any remaining nutrients and fluids are absorbed. What's left behind is solid waste, known as *feces*, which travels through the colon and is eventually expelled through the anus.

To learn more about your digestive health, visit [www.CDHF.ca](http://www.CDHF.ca).

## THE ABC'S OF IBS

# Understanding Irritable Bowel Syndrome

Irritable bowel syndrome (IBS) is North America's most commonly diagnosed gastrointestinal disorder, affecting up to 20% of the Canadian population. IBS affects significantly more women than men.

While the medical community has theories on the causes of IBS, we still don't have all the answers. But, we do know IBS can produce a barrage of unpleasant symptoms. According to Dr. Phil Blustein, associate professor of medicine at the University of Calgary, hallmark symptoms include alternating diarrhea and constipation, dominant diarrhea or constipation, and abdominal pain often associated with bowel movements. "There may be other gastrointestinal symptoms like gas, bloating, and nausea," says Dr. Blustein, "as well as fatigue, headaches, sleep disorders, and fibromyalgia."

IBS does not permanently damage the colon, nor does it lead to colon cancer. But the symptoms can be painful and reduce quality of life. According to Dr. Blustein, "if you have problematic IBS, there are

ways to treat the problem, and seeing your doctor can be helpful."

Several non-invasive treatments have been proven effective. For example, a high-fibre diet may provide relief from constipation. If gas and bloating are major issues, your doctor may suggest eliminating certain foods from your diet for a period of time such as products containing caffeine, lactose, gluten, fructose, and sorbitol. Regular exercise, adequate sleep, and stress management are other ways to alleviate symptoms.

Stress can trigger and aggravate IBS. "It's amazing how many times people relate stories of increased stress at the onset," says Dr. Blustein. Think back to any stressful situations that were going on in your life when you first experienced IBS symptoms. "Yoga, meditation, and stress reduction programs can be helpful at managing stress," advises Dr. Blustein.

Visit your doctor if you have changes in your bowel pattern, rectal bleeding, poor appetite, or unexplained weight loss. Learn about IBS at [www.CDHF.ca](http://www.CDHF.ca).

## DIGEST THIS

In the two years following the Walkerton water crisis, people infected by the contaminated water were seven times more likely to develop IBS.

## PROBIOTICS

# Your Daily Dose of Friendly Bacteria

You're probably familiar with the term "probiotic" from the dairy aisle of your grocery store, where yogurt containers advertise millions of friendly probiotic bacteria. But, what are probiotics – and how can they benefit your health?

Dr. Karen Kroeker, a gastroenterology resident at the University of Alberta, explains that probiotics have been studied since the mid-1800s, but the recent hype can be attributed to new findings that indicate a link between the health of your body and the bacteria that live inside the intestines. "In well-conducted clinical trials," says Dr. Kroeker, "probiotic medications have been used to treat some digestive diseases."

### **WHO CAN BENEFIT FROM PROBIOTICS?**

Almost everyone. The microflora in your digestive system may be thrown off by stress, travel, and antibiotic use, which can kill good and bad bacteria alike. Dr. Kroeker says foods with large quantities of probiotic bacteria have the greatest ability to suppress disease-causing bacteria. But, she also cautions that Canadian food manufacturers are not required to accurately indicate the amount of probiotic culture in a product. She advises consumers to choose yogurts

and other fermented dairy products with the highest probiotic bacteria numbers, as these "are likely to be the most beneficial."

### **PROBIOTIC VS. PREBIOTIC.**

#### **WHAT'S THE DIFFERENCE?**

Probiotics contain friendly living bacteria, whereas prebiotics do not. Prebiotics contain non-digestible food particles that support the friendly bacteria already living in your intestines. So, you can benefit from both.

### **SHOULD YOU SUPPLEMENT?**

If you're considering probiotic supplements, keep in mind that many varieties are not yet approved by Health Canada. Dr. Kroeker says, "more research is needed on the benefits and risks before routine supplementation can be recommended." Talk to your healthcare provider to find out if probiotics are right for you.

### **ARE PROBIOTICS SAFE FOR EVERYONE?**

The safety of probiotics is not known in people with impaired immune systems, pregnant women, and the elderly. You should talk with your doctor before adding probiotics or other supplements to your diet. To learn more about probiotics, visit [www.CDHF.ca](http://www.CDHF.ca).

## KNOW ABOUT DIGESTIVE CANCERS

### The Good, The Bad, and The Deadly

The chances of developing colorectal and esophageal cancer may be reduced by living a healthy lifestyle. That's the good news. Unfortunately, Canadians aren't doing enough to prevent these deadly digestive cancers.

#### COLORECTAL CANCER

We don't give much thought or credit to the colon. Yet this complex organ plays a vital role in our digestion and overall health. When things go wrong here, there can be grave consequences — especially in the case of colorectal cancer (CRC).

According to Dr. Clarence Wong, associate professor of medicine at the University of Alberta, one in every 16 individuals will develop CRC, and the Canadian Cancer Society lists it as the second-leading cause of cancer deaths. For these reasons, at-risk individuals are advised to get screened regularly. A family history

of CRC puts certain people at much greater risk, but age, gender, diet, and lifestyle are also factors. "Your risk increases markedly after age 50," says Dr. Wong. "Men have a greater risk than women, and fast food diets and obesity can further increase your risk."

While you can't stop the aging process, you can take measures to reduce your chances of developing CRC. Dr. Wong recommends the following preventative measures:

- Get screened if you are over 50 or have a family history of CRC.
- Eat a high-fibre diet rich in fruits, vegetables, and whole grains.
- Exercise moderately, one hour a day, five days a week. This can cut your risk by 30 to 40 per cent.
- Maintain a healthy weight.
- Don't smoke.

CRC is often curable when diagnosed in its early stages. Unfortunately, the

### You may be at risk for colorectal cancer if you...

- Are 50 years or older.
- Have been diagnosed with intestinal polyps or Inflammatory Bowel Disease (IBS).
- Have a family history of digestive cancer or intestinal polyps.
- Are a smoker and/or heavy drinker.
- Are overweight.
- Are physically inactive.
- Have not undergone a screening test.



first noticeable symptoms may only appear in later stages. Late-stage symptoms include stomach pain, fatigue, nausea and vomiting, blood in or on stools, changes from regular bowel habits, unexplained weight loss, and anemia. Don't wait for these symptoms to appear. Ask your doctor about a routine screening test.

### **ESOPHAGEAL CANCER**

The esophagus is the long muscular tube that delivers food from your mouth to your stomach. Two forms of esophageal cancer can affect this part of your digestive system:

- *Squamous cell carcinoma*. This cancer has been strongly linked to smoking, excessive alcohol consumption, and exposure to industrial toxins.
- *Adenocarcinoma*. This cancer begins with a pre-cancerous condition known as Barrett's esophagus, in which the normal lining of the esophagus changes as a direct result of acid reflux. According to Dr. Wong, a person

suffering from severe, long-term acid reflux is 40 times more likely to develop adenocarcinoma.

As with colorectal cancer, the earliest signs and symptoms of esophageal cancer often don't appear until later stages of the disease.

It's important to diagnose Barrett's esophagus and treat symptoms like acid reflux early on. New techniques can revert Barrett's tissue back to normal. Unfortunately, other symptoms — like the feeling of food stuck in the esophagus, unexplained weight loss, and vomiting — often don't appear until later stages. By then, it may be too late to cure the disease.

If you've experienced frequent acid reflux for many years, visit your doctor soon, because the damage is treatable, and the risks of esophageal cancer increase after age 50. To learn more about digestive cancers, visit [www.CDHF.ca](http://www.CDHF.ca).

## THE IMPORTANCE OF FIBRE

### Getting Your Fill

Despite the many health benefits associated with high-fibre diets, many Canadians don't consume nearly enough. Dr. Michael Gould, a gastroenterologist at the William Osler Health Centre, answers our questions about fibre.

#### *What's the difference between insoluble and soluble fibre?*

According to Dr. Gould, insoluble and soluble fibres have important and separate functions, so it's important to consume an appropriate amount of each. When insoluble fibres — from sources like whole wheat, flax seed, and corn bran — are consumed, they cannot be broken down and absorbed. "Thus," explains Dr. Gould, "they provide bulk to the digestive tract, which improves bowel motility and reduces constipation." They also help regulate food absorption and metabolism.

However, when soluble fibres are consumed — from sources like oats, beans, lentils, and broccoli — they dissolve and ferment within the colon. This produces nutrients that keep the colon healthy, but can also produce the excess gas that can cause pain and bloating.

#### *How much fibre is enough?*

When it comes to bowel function, it's often not a question of how much fibre, but what type of fibre. Dr. Gould usually recommends 30 to 35 grams of insoluble fibre per day. "Insoluble fibre is important for regulating bowel function, and often for helping with constipation and hemorrhoids." Plus, it aids the absorption of other food groups, so they can help regulate blood sugar levels, fat and cholesterol absorption. Dr. Gould also points out the importance of soluble



fibres. “There’s evidence soluble fibres can benefit the cardiac system, nourish the bowel, and help with the bowel’s immune system.”

When it comes to fibre supplements, Dr. Gould says they’re not necessary in a well-rounded diet that includes all food groups. “Supplements are usually expensive and fibre can be acquired from vegetables, fruits, beans, and good fibre cereals.” He adds that fibre cereals are often fortified with vitamins and minerals, so they provide many daily nutritional requirements. However,

if dietary needs are not being met, some good replacement supplements are available.

*Should fibre be increased gradually?*

Dr. Gould advises patients to increase fibre over the course of a few weeks, and balance their intake of soluble and insoluble fibres. “This allows time for the bowel and colonic flora to adapt, and it will limit unwanted gas and bloating.”

To learn more about fibre, speak with your healthcare provider and visit **[www.CDHF.ca](http://www.CDHF.ca)**.

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# Resources

**Canadian Digestive  
Health Foundation**  
[www.CDHF.ca](http://www.CDHF.ca)

**Canadian Cancer Society**  
[www.cancer.ca](http://www.cancer.ca)

**Canadian Celiac Association**  
[www.celiac.ca](http://www.celiac.ca)

**Canadian Society  
of Intestinal Research**  
[www.badgut.org](http://www.badgut.org)

**Colon Cancer Check (Ontario Ministry  
of Health and Long-term Care)**  
[www.coloncancercheck.ca](http://www.coloncancercheck.ca)

**Health Canada**  
[www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)

**World Gastroenterology  
Organization**  
[www.worldgastroenterology.org](http://www.worldgastroenterology.org)

**World Digestive Health Day is May 29, 2009.**

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