DIGESTION

SIMPLE SOLUTIONS for common DIGESTIVE PROBLEMS

your ACTION PLAN for optimal digestion

the GOOD GUT diet

diet magazine presents
If you’re getting your probiotics (live cultures) from the refrigerated section, you might want to reconsider. Moisture is the main enemy of probiotics, not heat. When probiotics are refrigerated, condensation develops, killing these beneficial bacteria. Keeping what’s inside the bottle dry helps keep the probiotics alive.

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Digestive upset is something that Sherry Torkos sees far too often in her pharmacy practice. But instead of drugs designed to simply ease symptoms, Torkos believes that real relief comes from an integrated approach that addresses the underlying causes of poor digestion.

As a holistic pharmacist, author, and certified fitness instructor, Torkos enjoys sharing her passion for good health with others. A graduate with honors from the Philadelphia College of Pharmacy and Science in 1992, Torkos is the recipient of several national pharmacy awards for providing excellence in patient care. She is also the author of 16 books and booklets, including *Saving Women’s Hearts*, *The Canadian Encyclopedia of Natural Medicine*, and *The Glycemic Index Made Simple*.

A leading health expert, Torkos has delivered hundreds of lectures to medical professionals and the public. She is frequently interviewed on radio and TV talk shows throughout North America and abroad on a variety of health matters.

For more information visit www.sherrytorkos.com
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YOUR ACTION PLAN
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Introduction

The BATTLEFIELD in your BELLY

If there was ever any doubt that modern life disrupts digestion, just take a look at the number of ads for antacids, laxatives, and stomach-soothing medications. The typical American diet and a sedentary lifestyle, paired with the sheer speed of life today, can keep our digestive tract in a constant state of turmoil. As a result, most of us are all too familiar with the uncomfortable and potentially embarrassing symptoms of this gastrointestinal unrest—gas, bloating, heartburn, nausea, constipation, and diarrhea.

A properly functioning digestive system plays a critical role in our overall health and well-being. In fact, all of the nutrients needed to sustain life are absorbed through our gastrointestinal tract. If there is a glitch anywhere along the route, we will not get the nourishment we need to be healthy. And yet, unless there is a problem, most of us take our digestive system for granted. After all, digestion seems like a pretty straightforward process: Take food in, extract the nutrients, and eliminate everything else. And yet, chronic dysfunction in the digestive tract is a common problem among Americans, affecting 60 to 70 million of us each and every year.

Digestive issues aren’t just uncomfortable—they can affect our total well-being. As a pharmacist, I see how poor digestion can impact so many aspects of a person’s health and cause a range of both physical and emotional symptoms.

Many of these digestive woes are caused by a poor diet filled with sugar, fat, and overly refined, chemically laced foods. Add in a hectic lifestyle and unhealthy habits and you have a recipe for digestive disaster. Not only does impaired digestion contribute to poor nutrient absorption, over time frequent bouts of relatively minor gastrointestinal ills can lead to more serious problems like hemorrhoids, bowel obstruction, and possibly even esophageal, colon, or rectal cancer. But here’s the good news: Whether it’s heartburn, constipation, digestive upset, or a more vexing problem like irritable bowel syndrome, simply restoring balance is often the key to alleviating or reducing our digestive woes.
FUNCTIONAL FAUX PAS—ARE YOU AT RISK?

Functional gastrointestinal disorders, which include chronic constipation, indigestion, GERD, and IBS, have one thing in common: There’s no apparent structural or biochemical cause. Even though the bowel looks perfectly normal, it doesn’t function properly.

You may be at greater risk of a functional gastrointestinal disorder if you:

- eat a diet low in fiber
- wolf down your food without chewing properly
- have undiagnosed food allergies or sensitivities
- don’t get enough exercise
- travel frequently
- are often stressed out
- resist the urge to have a bowel movement
- habitually use laxatives that, over time, weaken the bowel muscles
- use antacids containing calcium or aluminum
- take certain medicines (especially antidepressants, iron pills, and strong pain medicines such as narcotics)

The good news is that many of these risk factors can largely be controlled through lifestyle changes and smart supplementation.
Whether it’s a temporary bout of nausea or an ongoing battle with heartburn or constipation, digestive problems can make life miserable. Here are the four most common conditions that can upend our digestive tract:

**CONSTIPATION**

If you’re feeling a little backed up, you’re not alone. Constipation—having three or fewer bowel movements per week and hard, dry stools—plagues 12 to 19 percent of us, especially as we age. Stress, poor eating habits, lack of exercise, food allergies, an imbalance of bacteria in the gut, and a lack of digestive enzymes are common constipation triggers. But there are other, less obvious causes, too. Prescription drugs, especially antidepressants and some pain medications, can interfere with regular elimination. A magnesium deficiency can also cause constipation, since this mineral is critical to the body’s production of digestive enzymes.

**GASTROESOPHAGEAL REFLUX DISEASE (GERD)**

GERD occurs when the lower esophageal sphincter (the valve at the end of your esophagus) does not close properly. This allows a mixture of hydrochloric acid and stomach contents to splash back into the esophagus. The resulting irritation can trigger a burning sensation in the throat and chest. While a hiatal hernia may be at the root of GERD, more common causes include being overweight, frequent alcohol use, or being a smoker.

**INDIGESTION**

Gas, bloating, heartburn, stomach upset, and a feeling of fullness, technically known dyspepsia, affects everyone from time to time. The usual culprits include bolting your food, eating when stressed, or simply overindulging in that pepperoni pizza or spicy taco. But when occasional indigestion becomes chronic, it could be a sign of something more sinister, like gallstones or a peptic ulcer.

**IRRITABLE BOWEL SYNDROME (IBS)**

It’s estimated that 20 percent of all Americans suffer from IBS. Symptoms can include constipation or diarrhea, abdominal cramping, bowel urgency, gas, and bloating. What’s behind these uncomfortable and potentially embarrassing symptoms? Under normal circumstances, colon motility (the contraction of intestinal muscles and the movement of the intestines' contents) is tightly controlled by nerves, hormones, and electrical activity in the colon. But eating, stress, depression, and anxiety can cause the colon to overreact. The resulting spasms can increase symptoms in some people. Symptoms can also be triggered by certain foods, such as dairy, wheat, chocolate, alcohol, dietary fats, corn, and “gassy” vegetables like broccoli.
Digestion 101

Digestion is the physical and chemical process that converts food into fuel so we can have the necessary energy and nourishment to thrive. Within 24 to 72 hours, the food we eat makes its way through the entire digestive system. The process begins in the mouth. When we chew, enzymes released in our saliva begin breaking down the food. The food is then swallowed and transported to the stomach, where more processing takes place. Breaking down food into energy requires some pretty harsh chemicals. When food enters the stomach, it is sprayed with hydrochloric acid and enzymes. A thick mucous coating that lines the inside of the stomach protects it from this acidic environment.

Some very significant actions occur during each step of the digestive process, and this is particularly true of the small intestines. While food is in the small intestines, immune cells are released to check for bacterial contaminants. If contaminants are found, they are normally destroyed so they can be safely eliminated without making you sick. Nutrients are also extracted from the food and transported across the intestinal lining into the bloodstream.

The lining of the small intestine, known as the mucosa, secretes a hormone called secretin, which stimulates the pancreas to produce digestive enzymes that help digest food. A healthy intestinal lining only allows properly digested particles from fats, proteins, and carbohydrates to pass through it into the bloodstream. Those nutrients are then delivered to the cells, which require them in order to

Hydrochloric acid kills harmful microorganisms and begins the mechanical breakdown of some of the food and the chemical alteration of other food. The gallbladder then releases bile into the beginning of the small intestine to further help break down the food.

After a journey through about 25 feet of small intestines, the partially digested food makes its way to the large intestine—which is also called the colon. This is where the remaining food is transformed into stool so that the body can eliminate it. During this process, excess water is removed from the waste material before a bowel movement. A healthy bowel movement should occur one to three times a day.
Exposed!

Our bodies have to process thousands of toxic chemicals daily in order to stay healthy. Many of the synthetic chemicals we are exposed to have been directly linked to a variety of chronic illnesses, including reproductive problems and cancer. Besides the skin, the digestive system has the most contact with the outside world because of what we eat and drink. Our ability to detoxify the chemicals and harmful substances we are exposed to every day is critical. Here are just some of the many things we encounter in our daily lives that can weaken our detoxification system:

- Nicotine, including secondhand smoke
- Alcohol consumption
- Prescription and over-the-counter drugs
- Pesticides and industrial chemicals
- Hydrocarbons formed during charcoal grilling

function properly. A healthy intestinal lining also acts as a barrier to keep out disease-causing bacteria, foreign substances, and larger undigested food particles.

Digestive Juices

As I’ve mentioned, digestion starts with the salivary glands. Saliva produced by these glands contains an enzyme called amylase that begins to digest the starch from food into smaller molecules.

The next set of digestive glands is in the stomach lining. These glands produce stomach acid and an enzyme called pepsin that digests protein. A thick mucus layer coats the lining of the stomach and helps keep the acidic digestive juice from dissolving the tissue of the stomach itself. In most people, the stomach mucosa is able to resist the juice, although food and other tissues of the body cannot.

After the stomach empties the food and digestive juice mixture into the small intestine, enzymes from two other digestive organs mix with the food. One of these organs, the pancreas, produces a wide array of enzymes to break down the carbohydrates, fat, and protein in food. Other enzymes that are active in the process come from glands in the wall of the intestine.

The liver produces yet another digestive juice—bile. Bile is stored between meals in the gallbladder. At mealtime, it is squeezed out of the gallbladder through the bile ducts and into the intestine to mix with the fat in food. The bile acids dissolve fat into the watery contents of the intestine, much like detergents that dissolve grease from a frying pan. After fat is dissolved, it is gobbled up by enzymes from the pancreas and the lining of the intestine.
When Food Is Your Enemy

Could your favorite foods be making you sick? For many people, the answer is yes. While poor eating habits are often at the root of digestive issues, there are times when gastrointestinal symptoms can be traced to a food allergy or sensitivity. A food allergy is an abnormal response by the body’s immune system to a particular type of food. If the offending food is eaten, the immune system mounts an often immediate response to something that, for most people, is harmless. The response may be mild or, in rare cases, it can trigger a severe and life-threatening reaction called anaphylaxis. Some of the symptoms of food allergies include abdominal pain, stomach cramps, nausea, diarrhea, skin reactions, and respiratory symptoms. Should any of these things occur directly after a meal, or consistently following the consumption of a particular food, the gastrointestinal distress you are feeling may be due to a food allergy.

Food sensitivities or intolerances are much more widespread than food allergies. With many food sensitivities, the problem lies not with the immune system but with digestion. For example, a person with lactose intolerance can get cramps or diarrhea after drinking milk because he or she lacks the enzyme needed to digest milk sugar (lactose). Other common food intolerances include sensitivities to gluten, food additives, preservatives, and artificial colors.

Common Culprits
According to the Food Allergy & Anaphylaxis Network, 8 foods account for 90% of all food allergies: milk, eggs, peanuts, tree nuts, fish, shellfish, wheat, and soy. If you suspect a food allergy, it’s important to check with your doctor.
Elimination and Detoxification

Proper elimination and detoxification are the final phases of digestion. Every day we are exposed to toxins. We drink them, eat them, and inhale them every minute of every day. Toxins that are not directly eliminated through feces and urine are sent to the liver for processing. The liver is the most important tool we have in detoxifying harmful chemicals. More than two quarts of blood pass through the liver every 60 seconds. The liver filters toxins from the blood and turns them into harmless substances that can safely be removed from the body through healthy elimination. In addition, the liver sends bile into the stomach, which helps digest fats. Bile also attaches to toxins so they can be eliminated in feces.

Along with the barrage of environmental toxins we’re exposed to daily, nutritional deficiencies, specifically iron and vitamins A and C, can undermine the body’s ability to process and eliminate toxins and waste. Fortunately, fostering healthy digestion and elimination may help reduce the dangers of these exposures. As you’ll learn in the coming chapters, one of the most effective ways to do this is by enhancing liver function and correcting bacterial imbalances.

When Things Go Wrong

As complicated as digestion is, it’s little wonder that most of us have experienced digestive upset at one time or another. Most of the time, these stomach problems are a result of the body’s inability to efficiently break down food. We simply don’t have sufficient enzymes to process what we eat. This can leave us feeling gassy or suffering from acute heartburn. A bacterial imbalance can also interfere with proper digestion and lead to bloating, nausea, and an uncomfortable feeling of fullness. While most of us consider these temporary digestive woes as a nothing more than a minor inconvenience, if symptoms become chronic it may signal that the body isn’t getting all the nutrients it needs for optimal health. Symptoms can also worsen over time.

Many people who suffer from indigestion, gas, bloating, constipation, diarrhea, or stomach upset two or more times per week often seek help from their physicians. But since most doctors aren’t familiar with the many natural ways to support digestive health, they often reach for their prescription pad. According to researchers at the Mayo Clinic in Rochester, MN, the top treatments for indigestion include acid-suppressing drugs like proton pump inhibitors and antacids, gastroprokinetic medications (drugs that enhance intestinal motility), antibiotics to eradicate Helicobacter pylori (the bacteria linked to ulcers), and even antidepressants. While medications may be necessary for some, as you will learn in the following sections, lifestyle measures and supplements can offer significant benefits in improving digestion.
Chapter Two

The Enzyme Connection

Enzymes are biologically active proteins that play a key role in every single function that occurs in the human body. For example, enzymes are involved in metabolism. They keep your heart beating and your nervous system functioning. But they’re also essential for digesting the food you eat and for the absorption of nutrients.

These amazing proteins are produced by all living organisms—not just humans—and, like all proteins, they consist of amino acids. What makes enzymes different from other proteins is how they behave in the body. Enzymes are catalysts that make many essential biochemical reactions happen quickly and efficiently without being used up or chemically altered in the process. Some of these reactions would either happen very slowly or not at all if it weren’t for enzymes.

Enzymes work so quickly that they can catalyze up to several million reactions every second. But enzymes are highly specific in the job they do. Just as you wouldn’t hire a plumber to fix a flat tire on your car, each enzyme is designed to do one specific job and nothing else. Having the right enzyme is like having the right key to open a specific lock. And like a key, each enzyme can “unlock” that lock over and over again until the enzyme eventually wears out.
Where Have All the Enzymes Gone?

When we are young, our body creates all of the enzymes it needs for healthy and complete digestion. That may be why you could eat whatever you wanted during your high school and college years. But as you age, this production begins to slow down. Over time, we can find ourselves deficient in the critical enzymes needed for good digestion or to maintain the proper functioning of our vital organs.

In a perfect world, we would be able to replenish the enzymes we need through the foods we eat. But that’s much easier said than done. Raw foods—especially organically grown foods—are literally bursting with enzymes when they are plucked from the field. Some foods, like bananas, will continue to ripen after they’ve been harvested, and some, like potatoes, will not. As a food ripens, its enzyme composition and activity change. To slow this process, some commercial produce growers are intentionally reducing the enzymes in the foods they grow. This discourages spoilage so that fruits and vegetables will have a longer shelf life—but these foods also provide fewer enzymes when we eat them.

The most destructive impact on enzymes occurs when food is processed or cooked. When a food has been heated to 118 degrees or more, the enzymes it contains are destroyed. This means that every processed, canned, or cooked food that passes your lips is devoid of enzymes. Fortunately, you can fortify your body's supply with a variety of supplemental enzymes.
Supplemental enzymes can support the digestive process in the same way as those produced by our own body. When taken with food, digestive enzymes provide the body with what it requires so that the pancreas doesn’t need to produce its own enzymes. This puts less demand on the digestive system, enabling it to better break down the foods we eat.

Scientists have discovered more than 5,000 enzymes the body makes and uses to carry out all of the actions that take place in our bodies. While we can’t take supplements to replenish every one of them, there are some key enzymes we need for good health. Among the most important are four digestive enzymes—amylase, lactase, lipase, and protease. Three of these critical enzymes work to digest a specific type of macronutrient. Protease is a proteolytic enzyme that breaks apart protein. Lipase processes fat. And amylase digests carbohydrates. Without these three enzymes, our body wouldn’t be able to process that cheeseburger we had for lunch. The fourth enzyme, lactase, is needed to digest the milk sugar in dairy products. The intestines in those who suffer from lactose intolerance do not make this enzyme or enough of it.

Taking digestive enzymes with each meal ensures that the digestive tract has sufficient enzyme levels to process the foods we eat. Since we rarely eat foods that contain only protein or fat or carbohydrates, it’s wise to choose a supplement that contains a blend of these four enzymes to support complete digestion.

### KEY DIGESTIVE ENZYMES

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<thead>
<tr>
<th>Enzyme</th>
<th>What It Does</th>
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<tbody>
<tr>
<td>Amylase</td>
<td>Breaks down starch into sugar.</td>
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<tr>
<td>Lactase</td>
<td>Breaks down lactose from milk into galactose and glucose.</td>
</tr>
<tr>
<td>Protease</td>
<td>Breaks down protein.</td>
</tr>
<tr>
<td>Lipase</td>
<td>Breaks down fat molecules into simple fatty acids and glycerol.</td>
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</table>

Supplemental enzymes can support the digestive process in the same way as those produced by our own body. When taken with food, digestive enzymes provide the body with what it requires so that the pancreas doesn’t need to produce its own enzymes. This puts less demand on the digestive system, enabling it to better break down the foods we eat.
**Antacid Angst**

When you pop an antacid, you may get temporary relief from that burning sensation. But according to recent findings, those chewable acid quenchers may be doing more harm than good. Antacids buffer the stomach from hydrochloric acid, which also prevents it from aiding digestion. What’s more, without enough hydrochloric acid, pathogenic bacteria can flourish—especially in the intestinal tract. Hydrochloric acid is also essential for the activation of pepsin. If there’s not enough pepsin in the stomach, protein is not adequately broken down, and this undigested protein may wind up in the small intestine. When this occurs, protein-specific pancreatic and intestinal enzymes have to work even harder to completely break down these molecules. In addition, partially digested protein in the small intestine prevents the stomach from further emptying its contents. The result? Stomach distress.

Of more concern, the regular use of prescription acid-suppressing drugs known as proton pump inhibitors has been linked to a multitude of health problems. According to a report in the *Archives of Internal Medicine*, these medications increase the risk of fracture in postmenopausal women. In this study of more than 161,000 women over age 50, scientists at the University of Washington, Seattle, discovered that those taking proton pump inhibitors had a modest increase in their risk of spine, forearm, or wrist fractures, in addition to total fractures.

Taking a proton pump inhibitor also boosts the risk of *Clostridium difficile* infection by as much as 74 percent, say researchers at Beth Israel Deaconess Medical Center and Harvard Medical School. Another study of 1,200 patients being treated for C. difficile at Boston Medical Center found a 42 percent increased risk of recurrence if proton pump inhibitors were used.

There’s also some evidence that the acid-suppressing drugs known as H2 receptor antagonists can cause problems. A Swedish population-based study suggests that frequent use of these drugs to treat GERD or inflammatory bowel disease (IBD) may increase the risk of acute pancreatitis.

While the occasional Tums probably won’t hurt you, the chronic use of acid-suppressing drugs may contribute to other health problems and do nothing to address the underlying cause of your symptoms. It’s far better to take a daily dose of digestive enzymes paired with a multi-strain probiotic for real, lasting relief.
Enhance Your Enzymes

Incorporating enzymes into your daily routine is an easy way to help maintain good health. When choosing an enzyme supplement, look for a broad-spectrum digestive supplement that contains a balanced blend of amylase, protease, and lipase. Unless otherwise noted on the label, it’s best to take your enzymes with meals or immediately after eating. Taking digestive enzymes on an empty stomach causes them to be rapidly absorbed into the bloodstream before they can help digest the food you are eating.

A broad-spectrum enzyme supplement should be taken daily to help maintain efficient digestion. Other, more specialized enzymes can be taken just before or with offending food substances. For instance, people with lactose intolerance could carry a lactose-specific supplement and take it when needed.

Supplemental enzymes are among the most exciting and promising tools we have to ensure good health and vitality. Taking them daily is one of the simplest and most effective ways to quickly transform your health and well-being. But you can improve your digestion even more when you add probiotics to the equation.
Our gastrointestinal tract is home to more than 500 different strains of bacteria that perform very important functions in our body—from the mouth all the way down to the rectum. But beneficial bacteria’s best-known role in good health is the protection they offer against harmful bacteria, fungi, and viruses. Probiotics produce organic compounds including lactic acid, hydrogen peroxide, and acetic acid that increase the acidity in your intestines. This helps to prevent the “bad” bugs from reproducing. Probiotics also produce bacteriocin, natural antibiotics that kill harmful microorganisms and enhance your immune system by boosting disease-fighting cells.

These friendly flora help your body synthesize vitamins and absorb nutrients. They keep pathogens at bay and interact directly with your immune system to improve your overall health. Intestinal flora are thought to be critical to a vast array of human health issues.

The beneficial microorganisms that inhabit the human colon set up housekeeping shortly after you are born and remain relatively stable throughout your life. So do you really need an infusion of probiotics? Once upon a time, the answer was no. But modern life has created the need for them. The overuse of antibiotics, along with environmental toxins, too much alcohol, and living a typical stress-filled life have made supplemental probiotics a necessity.

Ideally, good and bad bacteria would live in harmonious balance. Unfortunately, this balance is often askew in the real world. Along with the factors...
already mentioned, our fast-food culture, filled with refined flour and sugar, unhealthy fats, and empty calories, undermines beneficial bacteria. And that means you need to send in the reinforcements. Supplemental probiotics, when ingested properly, help to recolonize the digestive tract with friendly, beneficial bacteria.

**The Good Gut**

The two most prevalent types of probiotic bacteria that live in our gut are *Lactobacillus*, found in the small intestines, and *Bifidobacterium*, which resides in the large intestines. Not only do these two types of bacteria favorably alter the microflora balance in the intestines, they also promote good digestion and may help to ease the symptoms of chronic digestive disorders.

One common malady improved by probiotics is irritable bowel syndrome. According to one randomized clinical trial by researchers from the Mayo Clinic College of Medicine in Rochester, Minnesota, simply boosting the number of friendly bugs in the gut may improve both colon function and IBS symptoms. During the trial, 48 patients with IBS were given either probiotics or a placebo twice a day. Those taking the probiotics experienced considerably more relief from gas, bloating, abdominal pain, and diarrhea than those taking the placebo.

While a variety of bacterial strains can benefit those with IBS, another trial of 362 people with the condition found that one specific strain—*Bifidobacterium infantis*—was especially beneficial for reducing abdominal pain,
Has Your Gut Sprung A Leak?

Surprisingly, your intestinal wall is only one cell thick! What keeps it from becoming damaged is the lining, or mucosa. But if the intestinal lining becomes too thin, the intestinal wall can become perforated. This is known as leaky gut syndrome.

Think of it this way: If you have a colander but the holes are too large, food will fall through. The same principle applies to your intestinal wall when you have leaky gut syndrome. Food particles, toxins, and other harmful substances can slip through the microscopic “holes” in the intestinal lining into the bloodstream. Bacterial imbalance, also known as dysbiosis, and leaky gut syndrome go hand in hand. The overgrowth of bad bacteria upsets the bacterial balance in the intestines. This then damages the intestinal lining.

Antibiotics, toxins, poor diet, parasites, or infection can also lead to increased permeability of the gut wall. Whatever the cause, this toxic seepage can cause systemic problems throughout the body and trigger a wide spectrum of symptoms and illnesses. Leaky gut can cause problems ranging from mild constipation to severe liver dysfunction. Unexplainable symptoms such as fatigue or depression can be caused by leaky gut. And nearly all chronic digestive disorders can be linked, at least in part, to a permeable intestinal lining. Fortunately, a leaky gut can often be repaired by fortifying the intestines with supplemental probiotics.

Some Common Symptoms and Conditions Linked to Leaky Gut Syndrome

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Conditions</th>
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<tr>
<td>Bad Breath</td>
<td>Accelerated Aging</td>
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<tr>
<td>Bloating</td>
<td>Acne</td>
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<td>Brittle Nails</td>
<td>Arthritis</td>
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<td>Bruising</td>
<td>Asthma</td>
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<td>Constipation</td>
<td>Attention Deficit Hyperactivity Disorder</td>
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<tr>
<td>Diarrhea</td>
<td>Bladder Infection</td>
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<td>Fatigue</td>
<td>Chronic Fatigue Syndrome</td>
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<tr>
<td>Food Allergies</td>
<td>Candidiasis (Yeast Infection)</td>
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<td>Gas (Flatulence)</td>
<td>Colon Cancer</td>
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<td>Heart Palpitations</td>
<td>Crohn’s Disease</td>
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<tr>
<td>Hyperactivity</td>
<td>Depression and Anxiety</td>
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<tr>
<td>Indigestion</td>
<td>Eczema</td>
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<tr>
<td>Insomnia</td>
<td>Irritable Bowel Syndrome</td>
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<tr>
<td>Itchiness</td>
<td>Liver Disease</td>
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<tr>
<td>Malnutrition</td>
<td>Multiple Chemical Sensitivities</td>
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<td>Menstrual Issues</td>
<td>Osteoporosis</td>
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<tr>
<td>Mood Swings</td>
<td>Pancreatic Dysfunction</td>
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<tr>
<td>Poor Memory and Concentration</td>
<td>Premenstrual Syndrome</td>
</tr>
<tr>
<td>Sinus Problems</td>
<td>Ulcerative Colitis</td>
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bloating, gas and constipation. _Lactobacillus rhamnosus_ is another type of bacteria that fortifies the intestinal barrier and reduces IBS symptoms by up to 42 percent.

Luckily, while IBS can be painful, it doesn’t lead to serious damage. Inflammatory bowel disease, on the other hand, triggers inflammation in the gut that can cause physical damage to the gut wall. Crohn’s disease and ulcerative colitis are the best-known types of IBD and affect as many as one million Americans. Both of these conditions cause abdominal pain and cramping, with frequent and urgent diarrhea often containing blood, mucus, and pus. Worse yet, left unchecked, IBD can lead to abscesses, infection, fistulas, hemorrhoids, intestinal wall perforations, weight loss, and the inability of the gut to absorb nutrients. IBD also increases the risk of gastrointestinal cancer.

A growing number of studies suggest that probiotics can benefit both Crohn’s disease and ulcerative colitis in several ways. Along with competing with bad bacteria for real estate in the gut, probiotics stimulate the immune system and enhance the barrier function of the intestinal walls. New research also shows that probiotics tame the intestinal inflammation that can create future problems. What’s more, research has confirmed that both these bacteria suppress the _H. pylori_ bug that contributes to ulcers and other digestive problems and can be used to treat diarrhea.
The Right Ratio

The majority of bacteria that lives in your body can be found in the colon—at least one billion per milliliter of fluid. The small intestine, on the other hand, has only about 10,000 bacteria per milliliter of fluid. But it’s the ratio between the good bacteria and the harmful bacteria in both your small and large intestines that matters. Ideally, the ratio of good bacteria to bad bacteria should be 85 percent to 15 percent. But for most people, the ratio is out of balance.

When there is a proper balance of good to bad bacteria, the intestinal lining remains strong. This then becomes our internal fortress against invaders. Good bacteria are the soldiers that protect the walls of this fortress. It is here, in the intestinal lining, that the good bacteria compete with disease-causing bacteria for food and space. When the good bacteria are overpowered, the harmful bacteria starve the good and steal their spot on the lining. This is when the intestinal lining becomes damaged. As a result, the irritated and inflamed lining becomes permeable, allowing all kinds of substances to enter the bloodstream that normally would not have gotten through.

Fortunately, you can fortify your army of beneficial bugs with a daily dose of probiotics. There are dozens of beneficial bacterial strains found in commercial probiotics, and they all help the body in different ways. Here are some of the most beneficial for a healthy gastrointestinal tract and more:

<table>
<thead>
<tr>
<th>Probiotic Strain</th>
<th>What It Does</th>
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<tbody>
<tr>
<td>Bifidobacteria bifidum</td>
<td>Strengthens gastrointestinal immunity.</td>
</tr>
<tr>
<td>Bifidobacteria breve</td>
<td>Reduces intestinal inflammation and boosts the immune system.</td>
</tr>
<tr>
<td>Bifidobacteria infantis</td>
<td>Improves IBS symptoms and helps eliminate E.coli in the gut.</td>
</tr>
<tr>
<td>Bifidobacteria lactis</td>
<td>Promotes good colon health.</td>
</tr>
<tr>
<td>Bifidobacteria longum</td>
<td>Enhances immunity. Effective against antibiotic-resistant bacteria. May also reduce LDL cholesterol levels.</td>
</tr>
<tr>
<td>Lactobacillus gasseri (formerly called L. acidophilus)</td>
<td>Produces vitamin K, lactase, and anti-microbial substances such as acidolin, acidophilin, lactocidin, and bacteriocin. May help people with lactose intolerance digest dairy foods. Helps prevent indigestion and diarrhea, as well as vaginal yeast infections. L. gasseri also shows promise in reducing belly fat and lowering body mass index (BMI).</td>
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<td>Lactobacillus rhamnosus</td>
<td>Boosts cellular immunity. Reduces IBS symptoms and helps prevent recurrent bacterial vaginosis.</td>
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Feed Your Good Bacteria

Like any living organism, the beneficial bacteria in your gut need food to thrive.

Prebiotics are a non-digestible type of soluble fiber that promotes the growth and proliferation of good gut bacteria. But preliminary evidence shows that prebiotics don’t just feed beneficial bacteria. They may also play an independent role in digestive health by doing the following:

- improving antibiotic-associated diarrhea
- easing traveler’s diarrhea
- soothing gastroenteritis
- normalizing bowel function
- improving colitis
- reducing irritable bowel problems

Common sources of prebiotics include asparagus, garlic, leeks, onions, Jerusalem artichokes, berries, bananas, tomatoes, chicory, spinach, kale, Swiss chard, mustard greens, lentils, navy beans, garbanzo beans, black beans, whole grains, oats, barley, and wheat. Because prebiotics aren’t affected by cooking or baking, many prepared foods like cereal, bread, drinks, and yogurt can also contain prebiotics in the form of oligosaccharides. Check the ingredient label for one or more of the following prebiotic oligosaccharides: Fructo-oligosaccharides (FOS), inulins, isomalto-oligosaccharides, lactitol, lactosucrose, lactulose, oligofructose, and transgalacto-oligosaccharides (TOS).
How to Buy a Probiotic Supplement

When it comes to probiotics, most manufacturers maintain that more is better. In fact, it isn’t uncommon for supplements to contain two to six billion organisms in each dose. These bacteria are listed on nutrition labels as either the CFU count or simply as the number of cells the product contains. Regardless of the number of bacteria listed on the labels, what really matters is viability.

Unfortunately, not all probiotic manufacturers guarantee that the bacteria in their products are live and viable at the time of consumption. Without this type of assurance, it’s hard to tell exactly how many bacteria cells, if any, are alive when you swallow your supplement. It’s also important to make sure your supplement is resistant to stomach acid. This will ensure that the bacteria will survive the journey through the stomach and into the small intestines.

It’s also smart to choose a product that offers multiple strains of beneficial bacteria. For overall health, look for a supplement that provides several of the most beneficial species of bacteria proven to promote digestive health and a strong immune system.

Some probiotics require refrigeration. However, many now are shelf stable and can be stored at room temperature. While it would seem that refrigerated products are more likely to retain their potency, some non-refrigerated probiotics—particularly those with specific technology to protect the bacteria from heat, light, and oxygen—can also remain viable for an extended period of time. To maintain potency, store shelf-stable probiotics in a cool, dry cabinet away from sunlight. And check the expiration date periodically to make sure your probiotic is still viable.
Along with taking supplements to ensure that you have healthy levels of the enzymes and probiotics your gut needs for proper digestion, it’s also important to eat foods that foster a healthy digestive tract. Of course, that’s easier said than done, especially when that chocolate sundae or greasy hamburger beckons. But, just like any high-performance machine, how well our digestive tract functions depends on the quality of the fuel we give it. A well-balanced diet is a great place to start. But for optimal digestion, consider taking your diet to the next level with these gut-friendly strategies:

- **Strive to get at least 25 grams of fiber a day.** Fiber is important for our overall digestive health. Not only does adequate fiber prevent constipation and help eliminate toxins from the intestinal tract, studies suggest that it may also help prevent certain types of gastrointestinal cancers. Whole grains, spinach, cauliflower, carrots, wheat bran, apples, broccoli, beans, figs, and pears are all great sources of fiber. You can also augment your diet with supplemental fiber. Available as powders you mix with liquid, capsules, or chewable tablets, a fiber supplement can help you meet your daily quota. Just don’t get carried away too quickly. Suddenly adding a large amount of fiber, from either food or supplements, can cause gas, bloating, cramping, and loose stools. And if you opt for fiber
Herbal Help for Post-Meal Distress

Try as we might to eat properly, there are those occasions when we overindulge. That’s when digestive herbs called “carminatives” can come to the rescue. These herbs have a long history of use for relieving gas, bloating, and indigestion. They include the following:

**Black pepper.** Pepper increases the secretion of hydrochloric acid, which helps prevent heartburn. It also helps prevent flatulence by hampering the bacteria that are responsible for formation of gas.

**Caraway.** Best known as the crunchy seed that adorns rye bread, caraway is also one of the best carminative herbs for preventing gas and bloating. Caraway has also been used successfully in combination with peppermint oil for treating IBS symptoms.

**Cardamom.** This sweet, pungent herb is a potent antispasmodic, which makes it handy for relieving stomach cramps caused by indigestion or IBS. Cardamom is often added to digestive bitters formulas.

**Cumin.** A key compound in cumin, thymol, helps relieve gas, bloating, and other gastric problems by stimulating the production of stomach acid and bile.

**Fennel.** This licorice-scented herb is prized for its ability to alleviate intestinal gas. It’s often used in Italian and Indian cooking, not only for its unique flavor but also for its ability to promote healthy digestion.

**Ginger.** The gingerols in ginger stimulate the production of digestive juices and help neutralize stomach acid. Research shows that ginger can also help quell nausea due to pregnancy and chemotherapy. A 2008 study in the *European Journal of Gastroenterology & Hepatology* found that when healthy volunteers took ginger capsules along with a bowl of soup, their stomachs emptied more quickly.

**Peppermint.** A number of studies show that enterically coated peppermint oil capsules can help relieve IBS symptoms, including abdominal cramping and pain. This is attributed to peppermint’s ability to relax the smooth muscles. However, if you’re prone to heartburn, it’s best to avoid peppermint. Those same relaxed muscles can allow more stomach acid to move up through the esophagus.
supplements, make sure to take them with plenty of water, since all types of fiber absorb at least some water.

- **Focus on healthy fats.** Fatty foods, especially those containing saturated fat or trans fat, stimulate contractions in the intestinal tract. This can either slow down the emptying of the stomach and contribute to constipation or trigger a bout with diarrhea. The effect largely depends on the type of fat you eat and your tendency toward constipation or diarrhea. Avoid high-fat foods like butter, ice cream, fatty cuts of red meat, and cheese. Instead, opt for healthy fats, found in nuts, seeds, avocado, coconut oil, and olive oil.

- **Veg out.** Recent studies suggest that eating light green, dark green, and yellow vegetables may help prevent certain types of digestive cancer, thanks to their high levels of beta-carotene, vitamins C and E, and folate.

- **Dine in the raw.** Raw foods—fruits, vegetables, and sprouted seeds and grains—are rich in enzymes that enhance digestion. Try to nibble on something raw every day to help support essential enzyme activity in your gut.

- **Get juiced.** Preliminary lab research shows that both blackberry and cranberry juice contain phenols that may neutralize gastrointestinal pathogens like *E. coli* and salmonella.

- **Support your beneficial bugs.** Choose prebiotic-rich foods like asparagus, bananas, garlic, Jerusalem artichokes, leeks, and onions, which naturally contain soluble fiber. Other foods boasting prebiotics, such as some processed cheeses and cereal bars, usually have added inulin, a soluble fiber extracted from chicory root.

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**TIP:** If you lose weight, your GI tract will feel better. Extra abdominal pounds increase pressure on the lower esophageal sphincter, which separates the stomach from the esophagus. That pressure makes the valve open more often, allowing food and acid from the stomach to backwash into the esophagus, causing heartburn. But carrying less weight helps prevent abdominal discomfort and acid reflux.
How to Eat

Eating is simple, right? Open mouth, insert food, chew vigorously. But eating for optimal digestion takes practice, especially in our hectic, fast-paced world. Try incorporating the following tips at your next meal. You may find that you not only enjoy your food more, but that you feel better after eating.

- **Chew your food well.** Ideally, you should chew each mouthful about 30 times before swallowing. This breaks the food into small particles and allows the salivary enzymes to begin their work digesting the food.

- **Slow down.** Put the fork down between each mouthful and swallow one bite before taking another. If you’re accustomed to bolting your food, this is a good way to learn a more leisurely, relaxed way of eating.

- **Eat in a peaceful and relaxed environment.** Avoid watching television, reading, working, or arguing with others when you eat. You will feel the difference.

- **Avoid overeating.** Eating too much at any one meal burdens the entire digestive system. Ancient Ayurvedic medicine recommends consuming only the amount of food that will fit into two cupped hands. Practice moving away from the table while you are still a bit hungry.

- **Sit still and relax.** Digestion is an amazing process—it turns the food we eat into cells and tissues. Resting for a few minutes after eating gets this very complicated process off to a good start by allowing the body’s resources to focus fully on the digestive engine.
One of the easiest ways to increase the friendly flora in your gut is with probiotic-rich foods. Strive for at least one serving of the following foods every day:

**Yogurt.** Laced with healthful bacteria like *Lactobacillus gasseri*, yogurt is one of the main foods that people think of when they think of probiotics. Just be sure the yogurt you buy contains live cultures and carries the “Live Active Culture” seal.

**Brine-Cured Olives.** Brine-cured olives made via traditional methods also carry high concentrations of various strains of *Lactobacilli*. But many commercially available olives are pasteurized to ensure shelf stability. They may also contain sodium benzoate for longer shelf life. Both pasteurization and this preservative will kill any probiotics in the product.

**Buttermilk.** Buttermilk is another food that contains large amounts of beneficial bacteria. Many people like its tangy flavor. Those who like neither the flavor nor the texture might want to consider adding buttermilk to smoothies with fresh fruit.

**Kefir.** Pronounced “key-fur,” this drink is made from milk fermented with kefir “grains.” Despite their name, these are not cereal grains. They are a mixture of bacteria and lactose. Kefir, like yogurt, is available in a range of flavors. Unlike yogurt, however, kefir is a beverage, albeit a thick one.
Beneficial Bugs

**Kim Chi.** The odor of kim chi is unforgettable. This dish is fermented cabbage, somewhat like sauerkraut but much more pungent. It can be made a number of ways, but is normally quite spicy. In Korea, kim chi is used as a side dish or a relish.

**Miso.** This Japanese seasoning is produced by fermenting soybeans, barley, or other grains. It is used in soups, sauces, and spreads. Miso can be characterized by many factors, including the bean or grain that it is made from, the flavor, or the color, but all forms contain beneficial bacteria.

**Sauerkraut.** Sauerkraut is fermented or pickled cabbage. But, while natural sauerkraut contains beneficial bugs, be aware that many commercially available brands of sauerkraut have been pasteurized, a process that destroys any friendly bacteria. To ensure live bacteria, avoid canned sauerkraut and instead choose a jar or package in the refrigerated section of your supermarket.

**Tempeh.** Tempeh is a fermented soy product that has the chewy texture of meat. Unlike tofu, tempeh uses whole soybeans that are allowed to ferment. A type of beneficial probiotic mold forms, which binds the soy together. Tempeh can be used in many vegetarian dishes as a high-quality protein and is one of the few vegetarian sources of vitamin B12.
YOUR ACTION PLAN FOR Optimal Digestion

LIFESTYLE

✶ Be sure to engage in at least 30 minutes of physical activity most days of the week. In a study of 1,800 obese men and women, researchers discovered that exercise and a healthy diet reduced gastrointestinal problems such as stomach pain, diarrhea, and IBS symptoms.

✶ If you suffer from frequent nighttime heartburn, try sleeping on your left side. Some studies have shown that this helps with digestion.

✶ Chew sugarless gum to boost the production of saliva, which neutralizes stomach acid.

✶ Take steps to stop smoking. Along with its harmful effect on the heart and lungs, tobacco use also contributes to heartburn and peptic ulcers.

Plus, smoking increases the risk of Crohn’s disease, and possibly gallstones.

✶ Drink moderately. Not only does overindulging contribute to frequent heartburn, too much alcohol can inhibit the absorption of nutrients in the small intestine and increase the transport of toxins across the intestinal wall. Limit yourself to no more than one to two drinks per day.
SUPPLEMENTS

- Make sure to take your digestive enzymes with a meal. It’s also smart to look for an enzyme supplement that contains protease, lactase, lipase, and amylase, like Kyo-Dophilus Plus Enzymes.

- Keep your bacterial balance in check by adding a probiotic supplement like Kyo-Dophilus One Per Day to your daily routine.

- For even more digestive support plus immune-boosting benefits, look for a probiotic supplement that contains a wide variety of both Lactobacilli and Bifidobacteria strains like those found in Kyo-Dophilus 9.

DIET

- Add one half-cup serving of fresh fruit or vegetables to each meal to boost antioxidants, fiber, and prebiotics.

- Reduce saturated fat by choosing lean cuts of meat and removing the skin from poultry.

- Avoid processed and fried foods.

- Instead of sticking to three squares a day, opt for smaller, more frequent meals throughout the day.

- Take a few minutes after eating to breathe deeply and relax. Stress can interfere with the digestive process and worsen IBS symptoms.
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work, stress, frequent travel and the environment can disrupt your intestinal well-being.

Bad food, alcohol, smoking, and daily stress can destroy good bacteria leading to diarrhea, constipation, bloating, gas, and other uncomfortable conditions.

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When stress, travel, icky weather and antibiotics bring on the sniffles and intestinal yuckiness, our balance of good and bad bacteria is thrown off.*

When I think that 70 percent of the immune system is in our digestive tract, that means keeping our immune system strong partly comes down to making sure we're supporting our intestinal health as well. That's why probiotics are so important.*

I take Kyo-Dophilus, a heat-resistant blend of beneficial bacteria shown to support healthy digestion and a strong immune system. It's guaranteed stable at the time of consumption so I know we are getting live and active cultures. And because it doesn't need to be refrigerated, it's as convenient as it is effective.*

So, c'mon life, bring it on. We're ready for you.


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