



www.renewlife.ca

Your Source For Digestive Care And Cleansing!

- ✓ Renew Life product information
- ✓ Health condition information & self tests
- ✓ Current articles and research
- ✓ Watch or listen to Brenda Watson, N.D., CNC, C.T.
- ✓ Find out about upcoming events
- ✓ And so much more...



RENEW LIFE CANADA

8-1273 North Service Road East, Oakville, ON L6H 1A7
(800) 485-0960 www.renewlife.ca

www.renewlife.ca It's informative, interactive & FREE

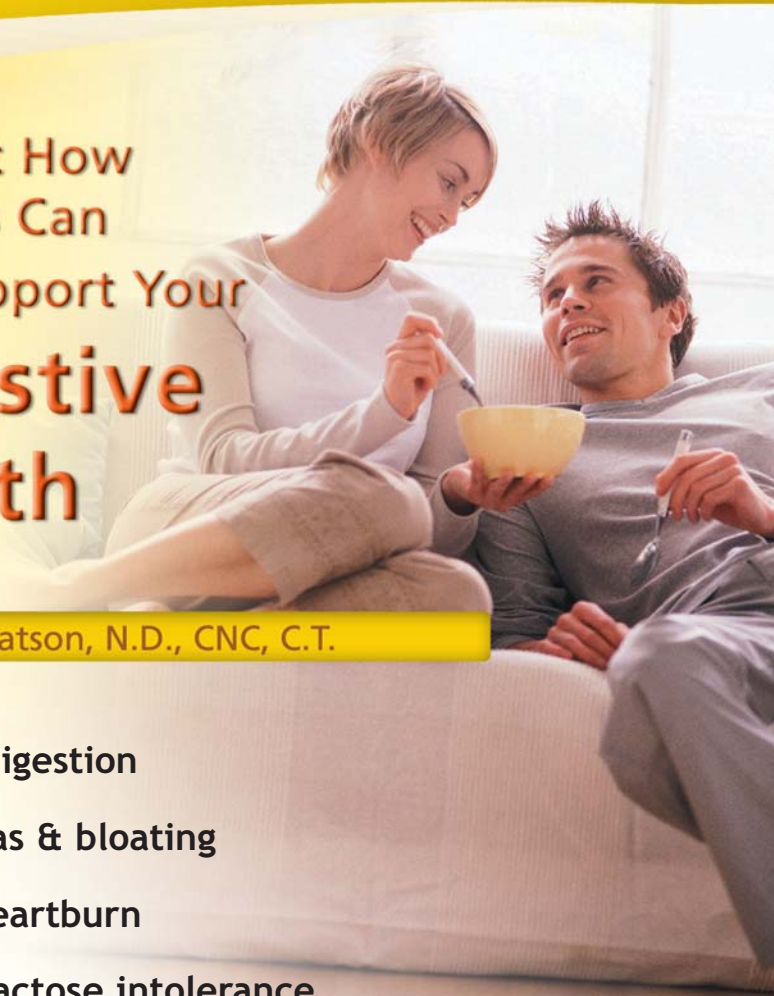


Enzymes And Digestive Care

Find Out How
Enzymes Can
Help Support Your
**Digestive
Health**

By Brenda Watson, N.D., CNC, C.T.

- ✓ Improve digestion
- ✓ Combat gas & bloating
- ✓ Reduce heartburn
- ✓ Help for lactose intolerance
- ✓ Improve your overall health
- ✓ Have more energy





Most Canadians suffer from some sort of digestive complaint such as upset stomach, bloating, gas or heartburn. What many people fail to realize is that these digestive problems can be due to a lack of digestive enzymes. This brochure will explain what digestive enzymes are, how a lack of enzymes can cause digestive upset, and which supplemental digestive enzyme can help ease the symptoms of a specific complaint.

What are Enzymes?

Enzymes are protein-based molecules that work as catalysts for chemical reactions within the body; such as the breakdown of food into smaller, usable components.

How Do Enzymes Work?

Many enzymes are catabolic, which means they help to break things down into simpler substances. Digestive enzymes are catabolic and break apart the bonds that hold nutrients together. For example, the enzyme protease breaks down protein in meat into amino acids which are the building blocks of human cells.

What are Digestive Enzymes?

Digestive enzymes are found in the mouth (saliva), stomach (gastric juice), and intestines (pancreatic juice, intestinal juice, and intestinal mucosa); and change starches, proteins, fats and sugars into substances the body can digest.

Enzymes Are Essential for every function within the human body including:

- Digesting food
- Delivering nutrients to the entire body
- Transport of toxic waste
- Blood clotting and purifying the blood
- Supporting kidney and liver function
- Delivering hormones
- Balancing cholesterol and triglyceride levels
- Breathing, talking, movement and behaviour
- Strengthening the immune system

During digestion food is broken down into molecular components by specific enzymes. Carbohydrates (starches) are broken down by the enzyme amylase into maltose, glucose and fructose. Proteins are broken down into individual amino acids by enzymes called protease and fats are broken down into glycerol and fatty acids by the enzyme lipase.

Digestive Enzymes Not Produced by the Human Body

There are some digestive enzymes that the human body can not produce but when taken supplementally, can be very helpful. These include; cellulase which breaks down plant fibre (cellulose), invertase which breaks down refined sugars, and pectinase which breaks down phytates. It is very important that phytates and phytic acid are broken down (phytic acid is found in seeds, legumes and grains). If not, they can bind with calcium, magnesium and zinc in the intestine, blocking the absorption of these important minerals.

Will Taking Enzymes Stop the Body from Producing its Own?

It is a common misconception that by taking supplemental digestive enzymes, your body will stop producing them. This is not the case. Just as your body adapts to the different types of foods you eat, taking digestive enzymes relieves the body from the burden of having to produce extra digestive enzymes. During the time that food is sitting in the upper portion of the stomach, the body is calculating the quantity of enzymes it needs to make to digest the food. If supplemental enzymes do some of the work, the body doesn't have to make as many enzymes and can allot more energy to making metabolic enzymes for functions such as cell repair.

The pancreas does not stop producing enzymes, it just adapts to what it needs to digest food. If you stop taking supplemental digestive enzymes the body will adapt. It will return to producing more of its own digestive enzymes. This is referred to as the Law of Adaptive Secretion of Digestive Enzymes by Dr. Edward Howell in his book "Enzyme Nutrition".

What Causes Enzyme Deficiency?

Digestion begins when we see or smell food. This causes us to salivate which starts to release digestive enzymes. Many people do not produce enough enzymes due to the following reasons:

- They make poor dietary choices and consume too few vitamins, minerals and electrolytes which the body requires to make enzymes.
- Their age; over time, we produce fewer enzymes.
- They overheat enzyme-containing foods; enzymes naturally occurring in food are destroyed when heated above 47°C (118°F).
- They eat a diet of processed and packaged foods which contain very few, if any, enzymes.
- They eat food that is exposed to air and light. Limp and pale looking vegetables are enzyme depleted.
- They drink fluoridated water which paralyzes enzymes.
- They have existing body imbalances. Conditions such as pancreatitis, gall bladder removal & pH imbalance will inactivate or deplete enzymes.



What are the Symptoms of Digestive Enzyme Deficiency?

- Gas
- Bloating
- Malabsorption of nutrients
- Belching
- Diarrhea
- Constipation
- Flatulence

What is Gas & Bloating?

Gas is the release of air from either the mouth or rectum. The feeling often described as 'bloating' occurs when gas fills the abdomen and the area appears distended. Everyone passes gas to some degree, but if you are not breaking down your foods properly, than foul smelling gas can become a much more embarrassing problem. This can happen to anyone.

What Causes Gas & Bloating?

There are different ways that intestinal gas is produced. People normally swallow small amounts of air while drinking and eating. Sometimes, an excessive amount of air is swallowed, either while talking too much when eating, eating too rapidly or drinking carbonated beverages. This can create an odourless rectal gas that is high in nitrogen and oxygen. If gas is formed in the upper stomach, then this can cause belching.

If your foods are not broken down properly, this can also cause intestinal gas through bacterial fermentation in the colon. This gas, composed of methane and hydrogen sulfide, gives off the familiar foul odour that is similar to rotten eggs.

What are the Consequences of Gas & Bloating?

Social embarrassment is usually the most common consequence of gas. There is also the fact that clothes do not always fit properly if bloating occurs. For many people, deciding what to wear to a function has more to do with which outfit will hide their bloated bellies after eating than it does with fashion.

Excessive gas can also be a sign of a more serious gastrointestinal (GI) disorder. It might indicate pancreatic insufficiency, or it could be a sign of candida (yeast overgrowth) or parasites.

Solving the Gas & Bloating Problem

The first thing you need to do is determine what is causing your gas and bloating. Have you noticed that there are specific foods that set you off? Different supplemental digestive enzyme combinations can be effective depending on the type of food that is causing your symptom (see chart below on page 7). Foods



which commonly cause gas and bloating include:

- raw vegetables
- beans / legumes
- heavy protein meals (beef or pork)
- combining proteins with carbs (i.e. steak and potatoes or pasta and meatballs)
- dairy products



What is Lactose Intolerance?

Lactose intolerance is a condition where the body does not digest lactose, the sugar found in milk. Lactase is the main enzyme required to break down dairy based products. Unfortunately, people who are lactose intolerant have an absence or a deficiency of the lactase enzyme which causes painful gas, bloating, diarrhea, and other digestive upsets.

Since lactose occurs mostly in milk, in most mammals the production of lactase gradually decreases with maturity due to a lack of constant consumption. Many people who live in Europe, the Middle East, India and parts of East Africa maintain normal lactase production into adulthood. In many of these areas, milk from mammals such as cattle, goats and sheep is used as a large source of food.

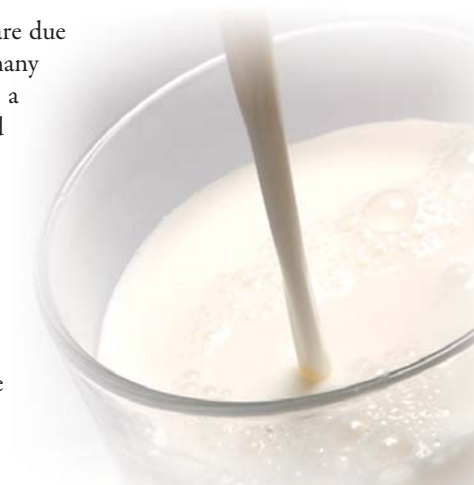
What are the Consequences of Lactose Intolerance?

Many people who are lactose intolerant avoid dairy altogether. Lactose intolerance sufferers need to read labels carefully and avoid prepared foods that contain lactose, milk, or milk products. Other names for lactose or milk include dry milk solids, whey, curds, milk by-products, and nonfat dry milk powder. A safe bet would be to look for foods with labels that say "lactose-free" or "vegan."

Lactose is also found in some medications. It is the base for more than 20% of prescription drugs and about 6% of 'over the counter' medications. Some examples include antacids (taken for heart burn and acid indigestion), menopause medications, and various types of birth control pills. Talk to a pharmacist to determine if there is lactose in your medication.

Dealing With Lactose Intolerance

In most cases, problems digesting dairy products are due to trouble breaking down lactose. However, for many people, lactose is not the only problem. Dairy is a complex food including carbohydrates, protein and fat. There are some who find that lactase pills do not help their digestion because they also have difficulty breaking down the fat and protein contained in dairy. This is often the case for people who find heavy rich creams and cheeses difficult to digest. These people require a supplemental digestive enzyme that can break down lactose as well as fats and proteins (see LactoZYME in the chart below on page 7).



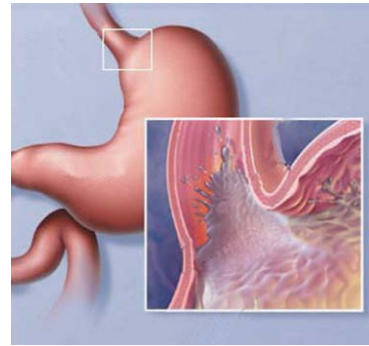
What is Heartburn?

Heartburn, (also known as acid indigestion, acid reflux, or GERD), is an irritation of the esophagus caused by acid that comes up (refluxes) from the stomach. People often recognize heartburn as a burning discomfort that is felt in the chest just behind the breastbone. The burning sensation results when harsh stomach juices come in contact with and irritate the delicate lining of the esophagus.

What Causes Heartburn?

The interesting thing about heartburn is that a large portion of people with symptoms actually have too *little* stomach acid being produced. When there is a lack of stomach acid, the body does not send the proper signal to close the Lower Esophageal Sphincter (LES). With this sphincter not properly closed, stomach acid is free to move from the stomach into the esophagus, causing heartburn.

Stomach acid is the body's natural defense against ingested bacteria, parasites, and other toxic pathogens. When there is a lack of stomach acid, the stomach is no longer a sterile environment. This allows bacteria, parasites, and other pathogens to infiltrate and colonize in the stomach, intestinal tract, and colon. As it relates to heartburn, this increased amount of bacteria in the stomach can cause volatile gasses and fatty acids to be produced. The combination of gas and volatile acids creates pressure in the stomach that is greater than the pressure exerted by the Lower Esophageal Sphincter which allows acids from the stomach to be forced up into the esophagus.



What are the Consequences of Heartburn?

Frequent heartburn can severely impact the productivity, daily activities and quality of life of those who experience it. Chronic excessive gastric output can result in very serious gastrointestinal problems such as:

- o Gastritis
- o Stomach irritation
- o Stomach ulcers
- o Esophageal cancer
- o Barrett's Esophagus - which often leads to esophageal cancer

Reducing Heartburn With Enzyme Supplementation

If you suffer from heartburn, you should relieve the symptoms as they occur or you can cause damage to the esophagus. In the long term, you need to supplement with digestive enzymes and hydrochloric acid in order to assist the body with the entire digestive process (see DigestMORE HCl in the chart below). What you do not want to do is to stop gastric secretions of stomach acid for a long period of time (this is what pharmaceutical acid blocking drugs do).

*Almost 30%
of Canadians*

have upper gastrointestinal problems. Of that 30%, roughly 43% were heartburn.

(American Journal of Gastroenterology, 1999)






While these acid blocking drugs may be necessary for some people, the majority of people can control heartburn naturally while at the same time, improve their overall digestive health.

Renew Life Digestive Enzymes

There are many reasons to take supplemental digestive enzymes. As each person is unique, there are different combinations of enzymes that will work for different people. Renew Life carries a number of different enzyme formulations, including:

- DigestMORE
- DigestMORE HCl
- LactoZYME
- DigestMORE Ultra
- GasSTOP

Which Renew Life Enzyme is Best for Your Condition?

| Enzyme formulation | What to take it for | When to take it |
|--|---|--|
|  DigestMORE | <ul style="list-style-type: none"> • Difficulty breaking down <u>large meals</u> or <u>specific foods</u> like protein. • Gas or bloating after <u>certain types</u> of foods. • Gas or bloating after <u>combining</u> carbs and proteins. | With meals when required. |
|  DigestMORE Ultra | <ul style="list-style-type: none"> • Difficulty breaking down <u>all</u> meals, all the time. • Gas or bloating after eating <u>regardless</u> of food type. • Stomach upset, belching or regurgitation after eating <u>regardless</u> of food type. | With all meals. |
|  DigestMORE HCl | <ul style="list-style-type: none"> • Heartburn and acid reflux caused by low stomach acid. | With meals and never on its own. |
|  GasSTOP | <ul style="list-style-type: none"> • Difficulty breaking down raw vegetables, sulphur containing foods like garlic or onions, beans and legumes. • Gas, bloating, stomach upset or belching after eating beans, legumes and cruciferous vegetables. | With meals that cause gas and bloating. <i>*Please note that if you are taking any of the DigestMORE products, you do not need to take GasSTOP as well.</i> |
|  LactoZYME | <ul style="list-style-type: none"> • Difficulty breaking down dairy products. • Gas, bloating, stomach upset or belching after eating dairy products. | One capsule per serving of dairy products. (1 serving = 250ml or 1cup). |

References

Canadian Association of Gastroenterology. Heartburn [Internet]. [cited 2006 Nov 14]. Available from <http://www.cag-acg.org/patinfo/gerd.htm>
 Dietitians of Canada. Milk Matters [Internet]. [cited 2005 Aug 24]. Available from http://www.dietitians.ca/english/factsheets/ef1997_10.html
 GERD Information Resource Center. An Introduction to GERD [Internet]. Cited 2005 Oct 18. Available from: <http://www.gerd.com/intro/frame/frame.htm>
 Gursche, Siegfried and Rona, Zoltan (1997). *Encyclopedia of Natural Healing*. Burnaby, BC: Alive Publishing Group Inc.