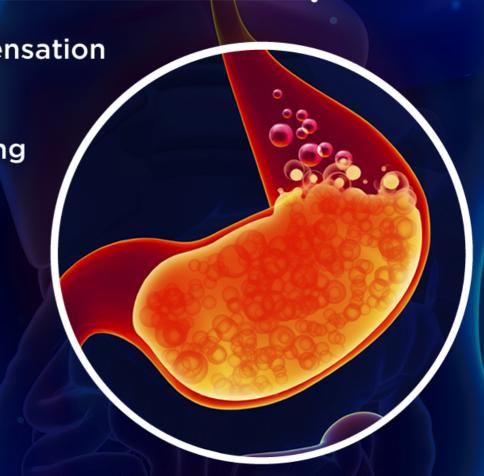
# THE REFLUX SOLUTION

Stop Burning Sensation in Your Chest,

- Stop the Belching and Bloating in Your Stomach,
- Eliminate Heart Burn.



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First Edition 2010 Revised Edition 2018

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### The Reflux Solution

### What is The Reflux Solution?

In this course, you will discover how to holistically get rid of heartburn and acid reflux. Heartburn is a very disturbing condition for many people, causing a burning and painful sensation in the upper chest and the back of your throat which is often accompanied by a sour, metallic taste in the mouth. It is also one of the most common condition that affects millions of people around the world, especially if they come from a fast-paced and highly stressful environment.

Different people have different level of knowledge as well as the understandings of the topics covered, our course would be covering on all the topics. You may know some of these topics but I still strongly encouraged you to read through the whole book itself as some of them are opposing what we have learnt in our daily life.

Before beginning your journey to The Reflux Solution, I've included a section on how the digestive system works, and the causes of heartburn. Understanding the causes of heartburn will help you to identify the various remedies in The Heartburn Solution to heal your heartburn.

There's also a section which discusses the conventional medicine currently available and commonly prescribed by physicians. And here's the thing, many of these drugs are actually doing more harm than good to your digestive system! You may be surprised to hear this, but do read through the entire section so you'll understand that the science behind this theory has been around for some time and it's not just a recent radical shift. Therefore, it's advisable to slowly move away from over-the-counter medications and adopt a natural solution to treat your heartburn permanently.

### The Reflux Solution 5-Step Program

I know you're excited about having the remedy, so i'm going to give you The Reflux Solution straightaway. The Reflux Solution focuses on practical how to cure your Heartburn steps and recommendations. As we know that your body is a harmonious interactions of different entities and does not work on an organ basis, it's important that we do not adopt an 'anatomical structures' mindset while curing our heartburn.

Besides the remedies in this main manual, you can also refer to the Alternative Treatments Manual as well as the Ultra Gut Yummy Recipes to complement what's in this manual. They are also referred to as Step 6 and Step 7 of this entire Reflux Solution Program. It is recommended that you try some of these treatments to see which one works best for you. However, before consuming any form of prescription medicine or alternative treatments, you should always consult your physician.

Live your life to the fullest and embark on the natural way to cure your heartburn by consuming foods that are soothing to your gut and boost your digestive functions which will help your body to reduce and even completely get rid of the heartburn symptoms. And we should also not forget exercise which is also a major contributing factor towards your path to recovery. Remember to adopt healthy habits that will help to reduce the burning sensation in your chest.

With The Reflux Solution, you are well on your way to a heartburn-free life!

To your good health, Tom Lane

### A Snapshot of Heartburn



Gastroesophageal reflux disease - or GERD, as commonly called, has a huge impact on our life. It is one of the most common digestive disorder that we suffer from today.

### **Heartburn Encounters**

Have you encountered any of the following situations?

It's the end of your work day. Feeling pumped up and wanting to get your adrenaline going, you decided to go for a run. As you turn round the corner you feel a sharping burning pain in your abdomen.
Feeling exhausted from the burning pain, you took a rest and headed off for dinner. Dinner was delicious and you helped yourself to a fair share. But barely an hour after the meal, the burning pain recurred again, this time round at the lower part of your torso. You could feel a acrid acid taste in your mouth.
You're tucked in bed and hope for a good night's sleep. Soon after you lie down, the burning pain has made another appearance, this time round the pain travels all the way to the middle of the chest.

If you've read those these experiences and are able to relate to the symptoms and burning pain, the fact is that you are also suffering from GERD. The Reflux Solution will help you to know more about heartburn, and more importantly, the remedies to alleviate this situation.

Heartburn can happen anytime and cause distress to the simplest activity that you perform.

### **Heartburn Facts and Figures**

According to the National Digestive Diseases Information Clearinghouse (NDDIC), which is part of the National Institute of Diabetes and Digestive and Kidney Diseases, the incidence of acid reflux is positively alarming.

Let's take a look at some statistics.

- $\checkmark$  60 to 70 million people suffer from all types of digestive diseases.
- ✓ Approximately 20% of the U.S. population experience reflux symptoms once
  a week
- ✓ Not less than 25 million Americans experience heartburn every day.
- ✓ On average, 25% of pregnant women experience heartburn every day.
- ✓ The risk of heartburn increases with the age.
- ✓ Babies have heartburn too, but too often, they are mistaken for colic.

Heartburn does not only affect Americans. Let's discuss the GERD statistics from other countries:

- ✓ According to the New England Journal of Medicine, 75% of heartburn sufferers continue to experience reflux symptoms after taking conventional or OTC medicine. According to Gut, 20% of British people experience reflux symptoms at least once a week.
- ✓ According to the Canadian Medical Association Journal, more than 20 million Canadians experience digestive disorders every year. 5 million Canadian experience reflux symptoms at least once a week, and 42% of GERD patients are not satisfied with the result of conventional drugs.

### **How Heartburn Affects Your Lifestyle**

Heartburn does not just cause physical discomfort, it also affects your personal, work and social life.

- ✓ More than two thirds of the heartburn patients have problems getting a
  good night's sleep
- Close to half of people with heartburn feedback that heartburn interferes with their concentration at school and at work.
- ✓ More than three quarters of people who suffer from heartburn says that the reflux prevents them from enjoying a proper meal.

### **Heartburn Organizations**

It's good to belong to a community where you can get support from fellow friends who are suffering from heartburn.

### **Gastro-Intestinal Research Foundation (GIRF)**

GIRF is a not-for-profit organization located in the University of Chicago Medical Center and raises funds for clinical and laboratory research in digestive gastroenterology diseases

### **National Heartburn Alliance**

The NBHA is an organization that aims to promote heartburn causes and relief to the public. It conducts surveys every year to find out how Americans are coping with heartburn and how it affects them.

These are the results from NBHA:

- ✓ More than 50% of heartburn sufferers experience diminishing quality of life due to the burning pain.
- √ 9 in 10 of them have attempted to seek relief from OTC treatments, but out
  of these, 40% are not satisfied with the results.

### What is GERD or Acid Reflux?



Heartburn is a common problem that affects millions of people from different parts of the world. According to statistics, at least once a week, 15 per cent of people worldwide suffer from heartburn. In connection to that, more or less 7 percent of those people are affected by it on a daily basis. Heartburn is common for both men and women. However, pregnancy and old age increase the risk of heartburn.

### **Prevalence of Digestive Problems**

Problems in digestion usually create a huge impact on the lives of people suffering from them. Experiencing heartburn is not an exception. It will not be surprising if right now, you are nodding your head, able to relate with how heartburn affects different aspects of your life.

People are afflicted with episodes of heartburn usually after eating meals. It is also typical to be disrupted by it as it often occurs at night. Because of the discomfort and burning sensation in the chest that worsens in the evening, it usually affects sleep patterns.

Losing important hours of sleep results to decreased productivity in the workplace as well as at home. Also, a person may not be able to enjoy the company of friends and family due to the said discomfort in the chest that may also reach the throat at times. This affects socialization and relationships with others. In addition to that, due to its digestive origin, heartburn also influences one's diet. A patient's food preference is affected and it stops him from eating the ones that he used to enjoy.

### **GERD Terms**

Before discussing the condition further, it is important to understand some terms.

### **Esophagus**

It is a 10-inch muscular tube that allows food passage from the pharynx leading to the stomach. Muscle contractions of the esophagus propel food through it. It has upper and lower esophageal sphincters that regulate food movement into and out of the esophagus.

### Lower Esophageal Sphincter (LES)

The muscle around the lower part of the esophagus which is connected to the stomach. Its function is to maintain a barrier that prevents backwards flow of acids and other contents of the stomach to the esophagus.

After eating food, the valve opens to allow the food into the stomach. Once the food moves into the stomach the valve close tightly to prevent the acidic contents from flowing to the esophagus.

### Heartburn

When the LES does not properly close, stomach acid travels back to the esophagus. This results to sensation of discomfort, more specifically burning in the chest region just around the heart. It is usually characterized by a sharp pain once the acid travels to the esophageal lining.

The location of the pain is the reason why "heartburn" got its name, but it should not be confused with heart problems as it is really a condition that is related to the digestive tract.

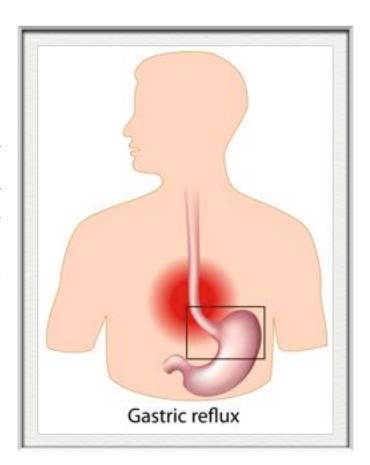
### **Reflux**

This means "to flow back". In digestion, food that has been pushed to the stomach, along with other stomach contents, is not supposed to go back to the esophagus. Reflux usually refers to the acidic contents that flow backwards through the LES to the esophagus.

Typically, doctors label patients who encounter reflux more than twice or thrice per week to have frequent reflux.

### What is GERD?

People who experience heartburn twice a week usually have GERD or acid reflux. But what exactly is GERD? It is short for Gastroesophageal Reflux Disease, a disorder in digestion that involves an incompetent LES. Ideally, food should only flow from the esophagus down to the stomach where it will be digested.



### **Problems with the LES**

As mentioned earlier, when the LES cannot fully function due to many factors, stomach contents which include acid go back up to the esophagus. This presence of stomach contents, which may include digestive juices, bile, and acid in the esophagus causes irritation that in turn gives way to the burning sensation that has a name – **heartburn**.

A well-functioning LES guarantees that there is one-way passage of small bits of food during digestion. Strong gastric acids do not irritate the stomach because its inner lining can resist the acidity of those juices.

On the contrary, the lining found in the esophagus gets easily irritated or inflamed when exposed to those strong juices. This sensitivity is not really a problem when the LES functions properly because it has the ability to keep gastric juices safe inside the stomach. However, due to insufficient closing pressure and other factors, the LES becomes weak, loose, and unable to stop the acid from the stomach from refluxing back to the esophagus.

### Signs and Symptoms of Reflux



Have you experienced any of the following symptoms below? If your answer is yes to any of them, you are very likely to suffer from a spate of acid reflux.

### Heartburn

Being the most common symptom of acid reflux, heartburn is the burning sensation felt in the chest area. It occurs when acid flows back from the stomach up to the esophagus.

This discomfort can also travel behind the breastbone and up to the throat and neck. It may also be felt in the abdomen and back.

Heartburn usually worsens after consuming meals. Although considered the most common, there are also other symptoms or conditions felt as a result of acid reflux.



### Swollen Throat, Larynx, and Lungs

Reflux liquids also irritate the throat and larynx. These organs become swollen and voice becomes hoarse when they are exposed to acidic stomach contents.

Also, there are a few times when those liquids find their way to the lungs. In this situation, the patient may choke or have coughs.

### **Asthma and Cough**

The exposure to stomach acid contents not only damages the lining of the esophagus; it also injures underlying nerves and stimulates them.

The injury of these nerves make the lung tubes narrower. With narrowed lug tubes, sever coughing may be experienced. If the lungs absorb stomach contents, it may result to aspiration that leads to episodes of asthma.

### **Nausea**

Nausea is uneasiness felt in the upper stomach that may be accompanied by an uncontrollable urge to vomit. This symptom is quite rare. Intense feeling of nausea usually signals severe acid reflux cases. A good way to relieve nausea is to chew on some peppermint gum or sour candy. Both of them can inhibit stomach spasms which may result to vomiting.

It is very important to remember that blood in vomit or even in stool is an emergency sign that prompts immediate consultation to the physician.

### Regurgitation

Regurgitation is the throwing out of undigested food or blood from the mouth, pharynx, or esophagus. With GERD, it happens when reflux liquids go back up to the mouth. It has a hint of acid and is seldom accompanied by food. When this happens frequently, tooth enamel may potentially be damaged gradually.

To prevent stomach contents from regurgitating, keep an upright position right after a meal. If you really want to sleep just after eating, do not lie flat on the bed.

Instead, opt to find a chair or recliner which will allow you to comfortably keep your back upright or semi-upright. The said position will still help keep stomach contents from refluxing.

## Common Explanations for Heartburn



Many doctors and gastroenterologist commonly explain heartburn as excessive acid that travels up the digestive pathway. Let's examine each of the conventional causes in detail.

### **Digestive System Related**

When it comes to heartburn, most of the causes in medical literature pinpoints to the various anatomy in the digestive system. Specifically, one of the concerns is the weakening of the lower esophageal muscle.

There are three specific factors that influence the severity of acid reflux. The first in the list is the muscle tone or contractile ability of the LES. The second is the amount and kind of liquid that refluxes from the stomach to the esophagus. Finally, it is the innate ability of the esophageal muscles to detoxify and keep the lower part of the esophagus clean.

### **Hiatal Hernia**

When it comes to suffering from episodes of heartburn, people with a weakened LES and those who have hiatal hernia, a condition where the diaphragm has a loose opening, are considered to be genetically predisposed.

This means that they may be prone to having heartburn at any point of their lives. However, according to studies, a group of people who are afflicted with heartburn do not necessarily have a weakened LES of hiatal hernia. This will be further discussed in the following sections.

### **Medication**

It is important to consider that some medications may be a far worse culprit. Drugs like calcium channel blockers, which act to dilate or relax blood vessels may also lessen the muscular tone of the LES which in turn weakens it and causes reflux. Patients with hypertension leading to increase in blood pressure are often prescribed calcium channel blockers and

### **Production of Saliva**

Saliva is alkaline which helps to neutralize stomach acid. In the night time, production of saliva decreases. With lesser amounts of saliva which can neutralize the acidity of the stomach contents and the exposure to the strong acids, the esophagus is more prone to damage.

It is a good thing that our body has complex mechanisms that protect us whenever one organ fails to function properly. When it comes to protecting us from the damages and discomfort brought about by misplaced stomach contents, saliva production is increased especially after eating.

With the natural composition of saliva, it helps neutralize the stomach acid and somehow relieves the burning sensation in the chest or throat. In addition, when we are awake, our upright position and gravity help keep digestive juices in the stomach.

### The Stomach Acid Juices Explanation

As you might have guessed, the explanation for heartburn in conventional medicine will ultimately link back to the prevalence of stomach acid juices. When it comes to the stomach contents, it has been assumed, and accepted, that many people with acid reflux have much acidic gastric juices compared to non-acid reflux sufferers.

Also, these highly acidic liquid is found to stay longer in the esophageal lining of people with acid reflux than those who do not experience it.

### **Undigested Food In the Stomach**

Due to this, particles of food that is undigested or rotten remain inside our system. Absorbed to the blood stream, they are later on deposited in the stomach and intestines. Because they are not part of the normal environment of the digestive tract, they increase the risk for a number of ailments including acid reflux.

### **Summary for Digestive-Related Factors**

- ✓ Build-up of toxins in different body organs such as the intestines, kidneys, lymph, and blood
- Depletion of friendly bacteria that may be a result of antibiotics or prescription drug intake, and chlorine
- ✓ When the immune system is weakened, it cannot function well, and this
  results to Candida overgrowth

### **Lifestyle - The Main Factor**

More than inheriting structural or muscular defects in the esophagus or stomach, it is our lifestyle and habits that influence acid reflux in a bigger way.

Of course, when digestive functions are at their best, bacteria and other microorganisms that should not be in the digestive tract are easily removed. However, when digestion is disrupted due to several reasons related to dietary intake, it results to an internal system that is not properly cleansed.

### **Tilted Acid-Alkaline Balance**

Still related to food intake, the acid alkaline balance should also be taken consideration of. Eating too much acidic food does not just affects general health, it also has a huge impact with our digestive system.

Extreme levels of acid in the blood, promotes the growth of Candida; more details about Candida will further be discussed in the next pages. In this situation, stomach contents also become too acidic. This causes more damage to the esophagus once the pressure of LES cannot keep

them safe in the stomach.

### **Position of the Body**

During the night time, acid reflux becomes worse. There is no swallowing because of the horizontal position of the body that in turn counteracts the effects of gravity. This causes stomach acid to stay even longer in the delicate esophageal lining. Coupled with a lower production of saliva, acid reflux worsens.



### **Summary for Lifestyle Factors**

- ☑Daily routine or lifestyle habits that lessen the contractile ability of the LES
- Diet choices that include foods that weaken the LES, refined carbohydrates (white flour, sugar, white rice), foods that are highly toxic, and a diet that excludes fresh fruits and vegetables.

Acid reflux is an intricate medical condition that can be caused by a number of different factors. This is what makes GERD hard to control. Because of this, doctors still find it difficult to manage and get rid of this condition using different kinds of drugs.

# Acid Reflux and Conventional Medicine



Generally, conventional medicine is backed up by the Theory of Diseases. This theory states that a person gets health problems when he acquires a disease. Diseases can be contracted in different ways, each ailment is then diagnosed, and treated independent of the person affected. Simply put, it emphasizes the disease and not the sufferer.

There are a number of conventional medications and treatment procedures that aim to treat acid reflux. Numerous conventional drugs are available in the market. Every day, they are endorsed or promoted using different advertising techniques. They are everywhere, and it is hard not to spot such products or drugs.

### Synthetic vs Natural

However, it is important to note that synthetic chemicals, the ones that are artificial and made in laboratories, are not compatible with man's natural bodily processes. They cannot be completely taken in or processed by the body because of their artificial origin and chemical bases. This awful truth is reflected by the adverse effects that they bring forth to the body, along with the 'therapeutic effect' that they are supposed to provide.

Contrary to the aim of holistic medicine which is to bring the body back to its most optimal state by helping it cleanse itself, conventional medicine tries to calm symptoms of the disease and make the patient comfortable for the time being. In other words, its effects are more focused on providing temporary relief that fleets along time. With these temporary solutions, the problems are not directly addressed. In time, this may even make things worse for the acid reflux sufferer.

Physicians are well aware that the medications they prescribe to patients just provide calming effects that cannot last for long.

These treatments, especially the ones available over the counter, just address symptoms of reflux. They offer relief that wears off after a period of time.

Although there are doctors who focus on nutrition in order to properly treat acid reflux, most physicians prescribe drugs and other products to GERD patients even if they know that they do not really help get rid of reflux disease.

The well-being of the patient is often overlooked by medical practitioners as they are too focused on scientific thoughts and researches that are funded mainly by pharmaceutical companies. These companies that manufacture drugs for GERD pressure doctors to prescribe their products. This means that the manufacturers of reflux disease medications get the benefit and not the reflux sufferers who would take anything just to improve their condition.

When it comes to Western medicine, we have been made to believe that many ailments are genetic in nature. Since they are innate conditions, we become trapped into believing that there is no cure, and the only thing that we can do is to live with such diseases.

This is one of the reasons why conventional medicine has a tunnel vision that especially focuses on just alleviating symptoms that bother afflicted patients and not hitting the main cause of the illness. With this in mind, patients are made to take medications for a long period of time, and sometimes, even during their entire lifetime.

The truth that we should all know is despite the presence of genetic susceptibilities, we can still have control of our health and general well-being. By knowing the internal problem that gave way to the disease and performing responsible lifestyle changes, you can control both your health and life without having to bear with the side effects of conventional medicine.

This is the time to put a permanent halt to this belief.

# **Limitations**

The following are two examples of the limitations of conventional medicine:

They are temporary remedies. By trying to just alleviate symptoms like inflammation in the esophageal lining, the root cause of the problem is left behind. This means that after taking conventional GERD medicines and receiving their fleeting therapeutic effects, symptoms can come back again after some time.

There are many side effects brought about by a number of anti-acidic treatments. These different side effects can vary from mild to severe. Sometimes, they can be serious or life-threatening, outweighing the supposed temporary wellness that they provide.

# **Types of Conventional Medicine Drugs**

A sudden episode of reflux disease can be alleviated by taking over-the-counter drugs. It is important to note though, that even if they help keep digestive processes smooth and lower the levels of acidity, they can gradually make the problem worse by causing irritation to the stomach or the lining of the esophagus.

Do you know that Americans spend more than \$1 billion annually for OTC heartburn drugs? More astonishing is the fact that \$6 billion is spent annually on a single drug, Omeprazole (Prilosec).

The side effects of prescription GERD medications may sometimes be more severe compared to that of the OTCs. However, it is important to know that OTCs still have serious side effects like severe stomach ulcers and bleeding.

To be safe, it is better to consult a doctor before getting some OTC drugs. Ideally, this safety rule should also apply even when the symptoms are severe. Of course, Heal Your Heartburn is determined to help you get rid of such occurrences in a natural way that involves no side effects.

Anyway, it will still be important to discuss the three broad categories of acid reflux medications along with their effects on reflux disease.

# **Neutralizing Stomach Acids**

# **Antacids**

Esophageal lining are delicate and not thick enough to withstand the burn from stomach acids. Antacids act by neutralizing stomach acids. This effect is achieved by utilizing calcium, magnesium, and aluminum, together with hydroxide or bicarbonate ions. When this happens, liquids that reflux will be free of acid and not cause discomfort to the afflicted person. They work fast and alleviate heartburn in a timely manner.

In short, antacids is a base which neutralizes the acids from the stomach.

Acid + Base = Salt (Neutral pH) + Water

To clarify, although antacids has alkalizing properties, it does not stop your stomach from producing stomach acids. It also does not completely neutralize your stomach's pH to 7.

Antacids also reduce the speed where pepsin is produced. Pepsin is a digestive enzyme produced by the stomach which helps to digest proteins. But if it touches the esophageal lining, it may cause damage to it.

Antacids even work better once taken before meals or an hour after meals. However, their effects quickly go away once acid re-accumulates the stomach. Some generic names of antacids are aluminum hydroxide, magnesium hydroxide, and calcium carbonate.

Here are some of the commonly prescribed antacids in the market and their components

Antacids	Formula	Alkaline Metals Present	
Alka Seltzer, Bromo Seltzer	Sodium Bicarbonate	Sodium	
Amphojel	Aluminum hydroxide	Aluminum	
Duracid	Magnesium Carbonate and Aluminum Hydroxide	Aluminum, Magnesium	
Gaviscon, Gelusil, Maalox	Magnesium Hydroxide and Aluminum Hydroxide	Aluminum, Magnesium	
Mi-Acid Gelcaps, Mylagen Gelcaps  Magnesium Carbonate and Calcium Carbonate		Calcium, Magnesium	
Milk of Magnesia	Magnesium Hydroxide	Magnesium	

#### **Side Effects**

Antacids are easily available over the counter without the need for a prescription. The side effects of antacids can vary from one person to another. It also depends upon the type of antacid taken, along with other medications or foods consumed. The most common side effects though, involve bowel function changes such as constipation, diarrhea, and gas.

All these have specific root causes. Constipation is caused by aluminum and calcium. Aluminum is also researched and found to aid in brain degenerative diseases like On the other hand, diarrhea happens as a result of magnesium intake. In addition, it is important to know that antacids that have calcium as base can stimulate gastrin release.

Gastrin is a hormone that prompts the production of stomach acid. This effect somehow counters the supposed therapeutic effect of the calcium-based antacids. Aluminum compounds may also cause loss of phosphates from your bones and is not very safe for patients who suffer from kidney diseases.

Aside from the side effects mentioned, low acid concentration in the stomach also poses some health threats. With lower pH levels, the stomach's ability to digest and absorb nutrients is impaired. This kind of environment also increases risk for stomach infections.

#### Caution

Some serious side effects can arise from the overdependence of antacids, one of which is alkalosis. Once the body is more severely hit by excess alkalinity, the kidneys begin to fail.

Also known as the milk-alkali syndrome, alkalosis occurs when the blood pH exceeds the neutral level of 7. The onset of alkalosis is often aided by having an overdosage of the alkaline calcium salt in the body, by consuming calcium based antacids like Gelcaps and Rolaids.



All of the above side effects give you enough reasons why you shouldn't be consuming antacids by the mouthful.

# **Pepto Bismol**

Some antacids are prescribed by doctors, while others can be easily brought over the counter. One kind of over-the-counter antacid is Pepto Bismol. It can promote smooth digestion and alleviate nausea. It also relieves acid reflux symptoms in a limited period of time. Pepto Bismol has bismuth subsalicylate which inhibits the growth of stomach bacteria, specifically H. Pylori, which is responsible for stomach ulcers. A prominent side effect of Pepto Bismol is ringing in the ears.

# **Foaming Agents**

Foaming agents are some other kinds of antacids that help avoid acid reflux by covering the contents of stomach with foam. They are best taken after meals as acid production is active during this period of time.

Foaming agents contain aluminum hydroxide gel, magnesium trisilicate, and alginate as their active ingredients. When taken with other drugs, their medicinal effects will be maximized. However, it should be noted that intake of foaming agents will not be beneficial when the esophagus is already damaged.

There are times when OTC medications are not enough to treat the symptoms of GERD. Because of this, other antacids maybe prescribed, along with some other kinds of medications.

# **Blocking the Burning Sensation**

Also known as acid suppressors, these drugs block the production of acid and are categorized into 2 categories: H2 receptor blockers and Proton pump inhibitors.

# **Histamine 2 receptor blockers**

What happens when you place a foreign object into the tap. The tap gets stuck and water is not able to flow through. Similarly, H2 blockers work this way by blocking the production of stomach acid.

H2 blockers or histamine antagonists work by attaching themselves to receptor cells in the stomach. As a result, acid production is suppressed as the action to secrete stomach acid is not conveyed to the cells which produce acid. This action stops histamine from promoting acid production.

H2 blockers effectively alleviate GERD symptoms but cannot reduce esophageal inflammation. In simpler terms, H2 blockers only reduces the acid production in your stomach, but does nothing to stop reflux from occurring.

#### The Famous Four Blockers

- ✓ Cimetidine (Tagamet)
- √ Famotidine (Pepcid)
- ✓ Ranitidine (Zantac)
- ✓ Nizatidine (Axid)

H2 Blockers	Brand Name	Duration of Medicinal Effect	Before/After Food
Cimetidine	Tagamet HB 200	2 ½ hours	½ before your meal
Famotidine	Pepcid AC*	4 hours	Before your meal or when heartburn is experienced
Nizatidine	Axid AR	2 hours	2 times a day
Ranitidine	Zantac 75	3 hours	2 times a day, unless stated otherwise by the doctor

Source: Handbook of Nonprescription Drugs, 13th edition; The Essential Guide to Prescription Drugs 2003 (New York: Harper Collins, 2003)

Cimetidine, famotidine, ranitidine, and nizatidine the most common H2 blockers. Compared to antacids, they are considered to have more advantages. First, they offer much greater efficacy. Also, they provide relief for a longer period of time. In addition, they are also effective prophylactics that can lessen episodes of heartburn when taken before meals.

The body responds well to H2 blockers, although cimetidine can bring about adverse effects like low blood pressure, headache, diarrhea, constipation, confusion, and rash. In a study involving African Americans in 2007, it was revealed that with long term usage of H2 blockers, the risk of cognitive decline goes higher.

# **H2 Blockers Comparison Chart**

When taking H2 blockers, you have to remember the following: (1) compared to standard doses, the ones with higher doses are more effective but pose more risks to the body; (2) to get their maximum effect, use them twice a day; and (3) they are less pricey compared to proton pump inhibitors.

#### **Downsides**

#### **Does not strengthen LES**

H2 Blockers are definitely no miracle pill. Your reflux may not hurt as much, but they don't reduce the number of times of reflux.

#### **Longer Time to Kick Into Action**

Compared to antacids, H2 Blockers takes a longer time to kick into action. Though it works for a longer time for up to 4 hours once it starts as compared to antacids.

#### **Side Effects**

Like your usual OTC drugs, side effects are aplenty. These are the possible side effects experienced by stomach medication.

- ① Headache
- ① Constipation
- ① Vomiting and nausea
- ① Pain in the stomach

There are also adverse side effects, which include:

- Heartbeat is slower
- ① Dizziness, confusion and hallucination
- ① Slight decrease in blood pressure
- ① Mild anemia

Some studies have also shown that H2 blockers may affect sexual performance. If you are pregnant, consult your doctor before taking H2 Blockers as it is rated Category B drugs for pregnant women. Category A is the safest category under the Pregnancy Risk Categories with the most hazardous being Category X.

There is a also a small likelihood of impotence in males, though it is rare. Taking H2 Blockers on a long term basis may cause slight swelling and tenderness of the breast, leading to abnormal breast enlargement.

# **Proton Pump Inhibitors**

#### How does PPIs work?

The system in your stomach which secretes stomach acid is known as the proton pump. As its name suggest, PPI inhibits the production of stomach acid and block the pump from furthering producing acid. In this way, the inflamed esophagus is kept safe from acid reflux and given time to heal.

Thus, the protons activates cells in the walls of the stomach to pump out the acidic stomach juices. At the same time, the PPI also inhibit the activity of the enzyme, in particular, hydrogen, potassium,-ATPase. ATP refers to adenosine 5-triphosphate.

Proton pump inhibitors can lessen the symptoms of acid reflux more effectively compared to H2 blockers. Just one tiny PPI tablet is known to block secretion of stomach acid by up to 95%. They are usually given to acid reflux sufferers when H2 blockers do not effectively suppress acid.

#### When does PPIs start working?

The PPI pill is expected to start destroying these enzymes not more than 5 minutes after consumption. The height of its activity happens between half an hour after consumption to two hours, and it may provide all-day long relief. However, even if they are capable of suppressing acid production after meals, they cannot control acid reflux while the person affected sleeps.

Omeprazole and Lansoprazole are some examples of prescribed proton pump inhibitors. They are the drugs of choice when the inflammation of the esophageal lining is severe. Some uncommon side effects of Omeprazole are nausea, headache, abdominal pain, and diarrhea.

Since PPIs decrease the level of stomach acids, the absorption of drugs such as promotility agents is affected. This is because the absorption of the said drugs depends upon the level of stomach acid. Pregnant women, as well as lactating mothers should only use PPIs unless necessary. Children should only consume PPI under the strict guidance of a pediatrician.

#### **Side Effects**

There are also adverse side effects, which include:

- ① Headache
- ① Indigestion
- ① Diarrhea
- ① Stomachache

#### Caution

But let me share with you the most dangerous aspects of consuming PPIs in the long run - the stomach acid drought, also known as the achlorhydria. And we'll discuss in the next section why is his so.

#### **Prokinetics**

Prokinetics, also known as pro-motility drugs, target to increase the speed of stomach emptying, improve the stomach muscle tone, and make the LES stronger. When taken before meals and at bedtime, pro-motility drugs give the most favorable results.

#### **Caution**

The FDA have issued a caution to the use of pro-motility drugs as clinical tests have shown that using motility drugs, especially the brand Propulsid, may possibly lead to irreversible heart damage. It is best not to even touch these drugs.

If lifestyle changes along with OTCs or drugs do not bring about positive changes related to your heartburn, you may have to take additional tests like pH monitoring, barium swallow radiograph, biopsy, and endoscopy. Your doctor may also recommend that you undergo the following procedures:

# **Surgery**

When drug therapy has already been proven ineffective to improve reflux disease, surgery becomes the remaining option to manage GERD. It is also recommended by doctors when too many drugs are required to control symptoms of reflux disease.

Here's some of the 'justifications' why a chronic heartburn patient may need to undergo surgery.

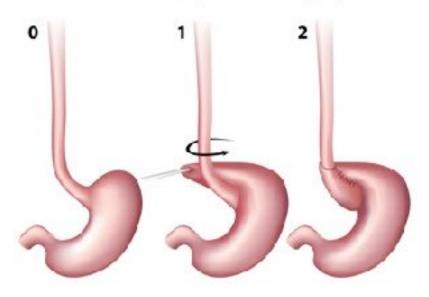
- (I) Chronic regurgitation that cannot be properly treated by drugs prompt surgery.
- (2) The presence of Barrett' esophagus which requires surgery to permanently get rid of reflux disease and prevent cellular aberrations in the esophagus that might lead to cancer.

# **Fundoplication**

Nissen fundoplication is a surgery for reflux sufferers. Because there are a lot of complications associated with it, fundoplication is not recommended unless all other treatment options have already failed. This surgery is done by wrapping a part of the stomach fundus around the part of the esophagus where the sphincter is. This helps make the lower esophageal sphincter stronger and prevent stomach contents from entering the esophagus.

These are some of the complications after the surgery: abdominal cramps and bloating, nausea, hiatal hernia, small bowel obstruction, inability to burp or vomit, retching, difficulty swallowing, and hypoglycemia.





# The Astonishing Truth

If you are suffering from long-term reflux, the above mentioned drugs shouldn't sound too foreign to you. What do these drugs have in common? They suppress stomach acid, prevents them from forming. It seems that the obvious culprit here is stomach acid. Is this really the case or are the big pharmaceutical companies hiding some facts from you?

# Understanding Stomach Acid



Acid plays an important role in digestion by helping many essential nutrients to be absorbed by the body. It is like sunlight that nourishes the tree, enabling it to produce chlorophyll. Without stomach acid, there won't be life.

Earlier on, we have debunked the myth that stomach acid is bad for our body and highlighted the intentions of the media for 'branding' stomach acid in this manner. We now know that the culprit is often not stomach acid per se, but the loosening of LES or other lifestyle factors. The benefits of stomach acid, and its impact on our overall health, are listed below:

# **Supports the Digestive System to Absorb Nutrients**

Getting the nutrients and minerals to be absorbed in the body is a pre-requisite. If the body does not absorb what is required, we would become chronically malnourished. No amount of healthy meals or tonics are able to enhance bodily systems if it's not absorbed by the body.

These are the vitamins and nutrients that require stomach acid for digestion and absorption:

- Amino acids, from breaking down of proteins
- √ Vitamin: Vitamin B9 (Water soluble folic acid), Vitamin B12
- ✓ Minerals: calcium, copper, iron, zinc

Stomach acid helps to maintain the ideal pH environment for digestion and absorption and it also stimulates digestive enzymes and pepsin production. What is the ideal pH for optimal digestion? It is around pH 2.0, which constitutes low acidity for digestion to take place efficiency.

The margin of pH level for optimal digestion is very narrow. Above a certain pH level (where the environment turns more alkaline) chemical digestion is below efficiency and malabsorption occurs. Prolonged periods of hypochlorhydria paves the way for degenerative diseases like fatigue, heart diseases and osteoporosis. However, it must also be noted that excessive acid, though rare, erodes the lining of the stomach as well as digestive tract, giving ulcers a good environment to form.

# **Promotes Production of Pepsin**

We need protein to stay alive, provide energy, build tissues and maintain a healthy immune system. Proteins is the basic building blocks of life. When we consume foods which contains proteins, it gets broken down into amino acids and peptides. During this process, pepsin is the enzyme that is required to facilitate this process.

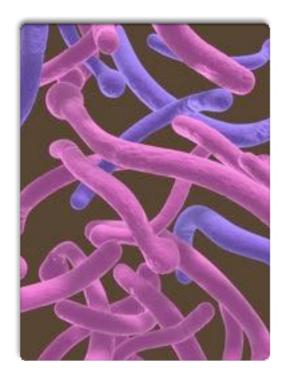
A digestive protease, pepsin primary synthesis takes pace between pH 1.5 to pH 2.0, where pH 2.0 provides the optimal efficacy for the breaking down of proteins. When the pH environment in the stomach exceeds 6.5, the enzyme loses the ability to digest proteins. A shortage of essential amino acids, tryptophan, phenylalanine and non-essential amino acid, tyrosine, will lead to feelings of inadequacy and anxiety, leading to diseases like depression, trauma, and insomnia.

Besides causing a deficiency in essential amino acids, undigested proteins travel out of the blood vessels into the bloodstream. Since it is not normal for proteins to escape out of the gut, our body's immune system sounds an alarm and mobilize antibodies to 'fight' against these foreign intruders, resulting in autoimmune diseases like Type I diabetes and rheumatic arthritis.

Moreover, it is often marred by food allergies. So, if you are suffering from various food allergies, it is likely that food is often not well digested after each meal and there's a presence of low levels of stomach acid.

#### **Reduce Candida Growth**

Many of us have been in chemistry laboratories performing science experiments when we were in school. You would have noticed that most of the chemicals like hydrochloric acid, sulphuric acid and sodium hydroxide are always diluted and stored in glass containers. Concentrated acid are usually kept with the teacher and will only be used when there is a special experiment to be demonstrated.



The reason for this safety precaution is simple. Acids are highly corrosive and they corrode metals and buildings. Even the slightest contact with dilute acid produces a stinging effect on your skin. How is this relevant to digestion? The strong corrosive nature of acid means that it has the ability to kill bacteria and fungus as well.

Along the digestive tract, the most acidic region is found to be the stomach due to the continuous presence of stomach acid. The strong acidic nature kills bacteria and fungus in the stomach so it is less prone to infections as compared to more alkaline regions in the mouth, esophagus and small intestines.

You also have to bear in mind that bacteria thrive in an alkaline environment, and multiply very quickly to colonize the gut. Since the stomach produces acid naturally, bacteria is unlikely to live for long in the stomach.

In the absence of stomach acid especially after taking acid-blockers, the stomach becomes susceptible to fungal and bacterial colonization. Firstly, bacteria that enters our body through exterior openings like the nose and the mouth may multiply in the absence of stomach acid along the GI tract. Once they interact with other microorganisms in the body, the imbalance results in digestive illnesses like constipation, diarrhea and stomachache. Examples of such microorganisms include Salmonella which can be found if food is not prepared properly.

Secondly, good bacteria resides in the small intestine and aids digestion but may instead choose to go up to the stomach as it is more alkaline and conducive for bacteria growth.

#### **Side Effects**

#### **Bad Breath**

One of the symptoms of candida is extremely bad breath. No matter how many times you brush your teeth or gaggle mouthwash, the embarrassing smell just doesn't go away. This odor is produced by the bacteria that is residing comfortably in the stomach!

# Foul-Smelling Gas

Another consequences of carbohydrates fermenting in the intestines is the constant bloating and farting.

# **Inhibiting Absorption of Important Nutrients**

#### Loss of water

Diarrhea due to intestinal bacterial can lead to a loss of water and vital nutrients.

#### **Fats**

Digestion of fats starts at the small intestine, where bile from the gall bladder and enzymes from the pancreas aids to digest the fats. Bile helps to emulsify the fat, breaking them down into smaller globules so that the pancreatic enzyme has a larger surface area to act on it.

However, the presence of intestinal bacteria disrupts the process by breaking down bile acids through a process through deconjugation. When this happens, insufficient bile is present to break down fats, leading to fat malabsorption.

# **Carbohydrates**

Consuming excessive carbohydrates coupled with low levels of stomach acid may lead to malabsorption of carbohydrates.

# **Healthy Stomach Acid Prevents Depression**

Low levels of stomach acid and pepsin are associated with a reduced ability to digest proteins. Poor digestion of proteins means that there is little of the end product amino acids for the brain to make the neurotransmitters, norepinephrine and serotonin. The essential amino acids are phenylalanine, tryptophan and tyrosine. A deficiency in this aspect results in weaker brain functions like forgetfulness, insomnia, depression and irritability.

# **Summary**

Well-documented medical journals and records show that doctors were very concerned about low levels of stomach acids and the resulting disorders in patients. It was only until recently that pharmaceutical companies cloud us with the high stomach acid confusion. Low levels of acid, also known as hypochlorhydria, or near-zero stomach acids, achlorhydria, is positively correlated to an increase in age.

Here is a list of serious disorders and degenerative diseases that is a result of low stomach acid:

- ✓ Anemia
- ✓ Candida growth in stomach and small intestine
- Depression
- ✓ Food allergies
- ✓ Malabsorption of amino acids, vitamins and minerals
- Osteoporosis
- Poor digestion
- Rheumatoid arthritis
- ✓ Skin problems: e.g. acne,eczema, hives
- √ Type I diabetes

Since stomach acid very important for digestion and maintaining a healthy body, it does not make sense to consume acid blockers to permanently halt its production. According to studies, here is a "dose-dependent malabsorption of protein-bound cyanocobalamin (vitamin B12) when healthy volunteers receive omeprazole therapy." Even after a person has stopped consuming acid blockers, achlorhydria may still haunt him two years after that and reduce the levels of stomach acid to far below normal levels.

Source: Omeprazole Therapy Causes Malabsorption of Cyanocobalamin (Vitamin B12) Stefan P. Marcuard, MD; Lisa Albernaz, RN; and Prabhaker G. Khazanie, PhD

Carey J, Wetherby M. Gastric observations in achlorhydria. American Journal of Digestive Diseases 1941, 8: 401-407

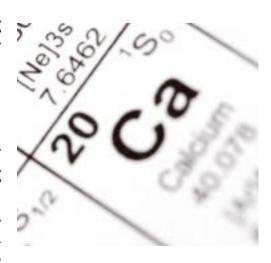
It's time for us to seriously to rethink the safety of consuming acid-blockers and acid-suppressants.

# **Vitamins and Minerals Absorbed**

#### **Calcium**

We often hear food companies advertising food products that are high in calcium, or fortified with calcium. From this it's not hard to fathom the importance of calcium.

Not only does calcium helps our body to build strong bones and teeth, it is also essential for many cellular processes in the brain, including neurotransmission of nerve signals and controlling the movement of muscles. A deficiency in calcium leads to osteoporosis, a dangerous disease where the bones become brittle.



# Acid blockers/ suppressants hinder calcium absorption

In the 1960s, an interesting twist led to the discovery between achlorhydria and calcium deficiency. Researchers administered calcium carbonate to patients with peptic ulcers but were worried about the adverse effects of excessive calcium in the body. To their surprise, very few of the calcium was absorbed. It must be further noted that low acid levels is common in peptic ulcers patients (stomach pH 6.5).

So while it is important to consume fruits and vegetables that are high in calcium, do not be too quick to ride on the calcium wave as no amount of fortified calcium will enter the body's system when there is low stomach acid level.

Another point to consider is the source of calcium. Vegetarian calcium sources are extracted and then combined with the stomach acid to form a soluble calcium compound to be absorbed by the body. From a study, the threshold for the calcium compound to be absorbed cannot exceed pH 4.5 and antacids have the ability to increase the pH of the stomach far below that level.

Source: Ivanovich P, Fellows H, Rich C. The absorption of calcium carbonate. Annals of Internal Medicine. 1967, 66: page 917- 923

Bo-Linn GW, Davis GR, Buddrus DJ, Morawski SG, Santa Ana C, Fordtran JS. An evaluation of the importance of gastric acid secretion in the absorption of dietary calcium. The Journal of Clinical Investigation. 1984, 73: page 640 - 647

#### **Folic Acid**

Folic acid is also known as folate or Vitamin B9, which is essential for maintaining a healthy cardiovascular system as well as preventing unborn babies from being born with serious neural tube defect, a birth defect. Folate also helps to lower the levels of homocysteine, which may be important in preventing cardiovascular diseases. However, the levels of folic acid in our body decreases as we age.

The levels of HCl in our stomach corresponds closely to the amount of folic acid being absorbed into the body. When there is low stomach acid, the small intestine pH is high, inhibiting folate absorption. Interestingly, there is an irony - most older achlorhydric patients have healthy folate levels. Why is this possible?

In a low-acid environment, candida is able to flourish. The growth of candida also indicates that the bacteria are able to produce folate themselves, making up for the deficiency of folic acid due to achlorhydria. However, the 'establishment' of candida in the gut means competition for food and nutrients, increasing the chances of infections. Therefore, it is not good to rely on bacteria for folate. Instead, have a diet that is rich in folic acid!

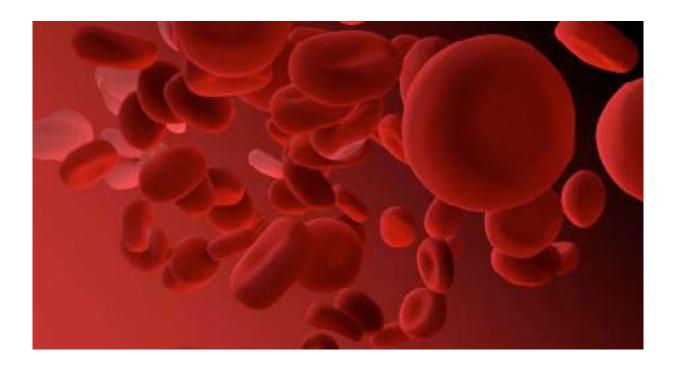
# Acid blockers/ suppressants hinder Folic Acid absorption

According to a study conducted by the U.S. Department of Agriculture (USDA), consuming antacids or acid-suppressants reduces folate absorption in healthy participants. The drugs in question are Mylanta II, Tagamet, and Zantac. This may give rise to an increased risk in cardiovascular diseases.

Source: Russell RM, Golner BB, Krasinski SD, Sadowski JA, Suter PM, Braun CL. Effect of antacid and H2 receptor antagonists on the intestinal absorption of folic acid. Journal of Laboratory and Clinical Medicine. 1988, 1112: page 458 -463

#### Iron

Iron is crucial for the production of haemoglobin, which carries oxygen and transports it to every part of our body. During a shortage of iron, the body is in serious need of oxygen, causing us to feel fatigue and weak, resulting in iron-deficiency anemia. Studies have shown that there is a connection between anemia and low levels of stomach acid. In one study, 80% of the participants who suffer from anemia have lower than normal levels of stomach acid.



If your dietary iron comes from mainly plant sources, the iron component will be in the form of ferric salt, which will not be absorbed if the pH of the stomach exceeds 5. On the other hand, when your intake of iron is mostly from animal sources,

Source: Ogilvie J. The gastric secretion in anaemia. Arch Dis Childhood. 1935, 10: page 143 - 148 Jacobs A, Lawrie JH, Entwistle CC, Campbell H. Gastric acid secretion in chronic iron-deficiency anaemia. Lancet. 1966, 2: page 190 - 192

#### Vitamin B12

Vitamin B12, a water-soluble vitamin, is essential for the production of neuro-transmitters for normal brain function. Cobalamin can be produced by synthesizing bacteria so it can also be found in non-animal fortified foods. But, Vitamin B12 is mostly found from animal sources like eggs.

# Acid blockers/ suppressants hinder Vitamin B12 absorption

Some studies have shown that consuming Prilosec, a PPI, have significant impact on the amounts of vitamin B12 being absorbed by the body. The group that undergone short-term Prilosec treatment was found to have low levels of hydrochloric acid and pepsin which inhibits the absorption of Vitamin B12. As you can imagine, consuming PPIs and other acid blocking drugs in the long-term will likely result in chronic deficiency of Vitamin B12 in the body.

# Stomach acid helps the absorption of vitamin B12

In order for the body to get sufficient of Vitamin B12, sufficient concentrations of stomach acid and pepsin must work together to separate it from the protein source and combine it with glycoproteins which is found in salivary glands, stomach, liver and pancreas.

Subsequently, it enters the small intestine where pancreatic enzymes break down this compound into the standalone Vitamin B12. Another active process takes place where the gastric parietal cells found in stomach, secrets another glycoprotein to combine with the Vitamin B12 to form an intrinsic factor. After this, the Vitamin B12 intrinsic factor complex travels down the small intestine and is being absorbed at the ileum, the end of the small intestine.

If you were to review the process of vitamin B12 absorption, you would have realized that without sufficient concentration of stomach acid, the spark to kickstart this entire of chain of reaction will have extinguished.

There are certain groups of people who are prone to deficiencies of Vitamin B12. It tends to occur in most older adults who faces decreasing amounts of stomach acid and lower pepsin production. In the absence of concentrated stomach acid and pepsin the vitamin B12 consumed just remains attached to the protein and does not get assimilated into the bloodstream.

#### Pernicious anemia

Pernicious anemia is a chronic deficiency of vitamin B12 in the body, when there is insufficient intrinsic factor (IF) in gastric secretions. This happens when the parietal cells have been very severely damaged and is unable to secrete HCL and the intrinsic factor.

#### **Breeding of candida**

Another consequence of low stomach acid is the breeding of candida in the stomach. The bacteria may produce more vitamin B6 and folic acid but take away the nourishing meant for vitamin B12 for their own.

Source: Pedrosa M, Russell R. Folate and vitamin B12 absorption in atrophic gastritis. Holt P, Russell R, eds. Chronic Gastritis and Hypochlorhydria in the Elderly, page 157 - 169. Boca raton, FL: CRC Press. 1993

Steinberg WM, King CE, Toskes PP. Malabsorption of protein-bound cobalamin but not unbound cobalamin during cimetidine administration. Digestive Diseases and Science 2. 1980; 25: page 188 to 191

# **Z**inc

There are many health benefits from including zinc in our daily diet, many of which points to improving our metabolism and boosting our immune system so that we will be less prone to infection.

Zinc is also known to promote good skin health, reduce stress level and improve digestion and tissue growth. In one study, the use of the H2 blockers is found to reduce zinc absorption by half. Another H2 blocker is also found to increase the gastric pH to over 5, inhibiting the absorption of zinc.

#### Source:

Wood R, Serfaty-Lacrosniere C. Effects of gastric acidity and atrophic gastritis on calcium and zinc absorption in humans. Holt P, Russell R, eds. Chronic Gastritis and Hypochlorhydria in the Elderly, page 187 -204, Boca Raton, FL: CRC Press, 1993

Sturniolo GC, Montino MC, Rossetto L Martin A, D'Inca R, D'Odorico A, Naccarato R; Inhibition of gastric acid secretion reduces zinc absorption in man, et al. Journal of the American College of Nutrition 1991, 10: 372 - 375

# **Risk of Low Stomach Acids**

#### **Stomach Cancer**

Helicobacter pylori is a bug in the stomach that has amazing survival ability. Even in a low pH environment, it is able to produce an enzyme to form carbon dioxide and ammonia. The chemical reaction of these two compounds produces ammonium bicarbonate. Ammonium bicarbonate forms a protective blanket around H.pylori and being alkaline, it can neutralize the surrounding stomach acid.

From some studies, it has been found that *H.pylori* is one of the main causes of atrophic gastritis, gastric and duodenal (small intestine) ulcers. The former is a diffused damage that has spread in the stomach, while the latter is a localized damage inflicted by *H.pylori*.

Since the *H.pylori* is contained in the chamber of the stomach (what is known is the pyloric antrum), how does it spread to the small intestine? The antrum is at the end of the stomach, closely connected to the opening of the small intestine, or the duodenum.

H.pylori excite the cells that stimulates gastrin irritates the ulcers in the duodenum. An extensive exposure to acid causes irritation, which may lead to peptic ulcers and duodenal ulcers developing. Over time, this constant exposure may lead to gastric cancer.

To summarize, hypochlorhydria and achlorhydria increases the risk of stomach cancer by creating a favorable environment for bacteria to breed, as well as increasing the gastrin level in the stomach.

#### Source:

Mertz H. Helicobacter pylori: Its role in gastritis, achlorhydria, and gastric carcinoma. In: Holt P, Russell R, eds. Chronic Gastritis and Hypochlorhydria in the Elderly, page 69 - 82. Boca Raton, FL: CRC Press. 1993.

# **Food Allergies**

Through his own research and interactions with numerous patients, Dr George Bray has discovered that there is a vicious cycle between food allergies and hypochlorhydria. For a group of people whose bodies react very quickly to allergens like dust mites and chemicals, the airways are often the first to get hit. The windpipe gets swollen and mucus starts to line up the walls.

One of the food responsible for this is dairy products. The dairy industry and the government, has purported cow's milk to become one of the healthiest foods that children can ever consume. The truth could not be further from this.

Cow's milk is found to cause GERD in babies and hormones present in milk may result in auto-immune diseases in adulthood, notably Type I diabetes. In Finland, researchers have found that out of the 8 babies under the study, all of them had inflammatory reaction to cow's milk, which further led to atrophic gastritis. All these factors combined may inhibit the absorption of vitamin B12.

# **Leaky Gut Syndrome**

The inflammation from consuming cow's milk damages the intestinal walls, resulting in intestinal permeability. What this simply means is that undigested foods can escape from the walls of the intestine and enter the general circulation.

In a healthy gut, only amino acids (from proteins), vitamins and minerals are able to pass through the walls of the intestines, to be transported to all parts of the body. Within it there is also a defensive mechanism to prevent unwanted substances like fungi, bacteria and viruses to enter the bloodstream.

In the case of an allergic attack, the body reacts to bacteria and viruses that have 'leaked' out of the gut by fighting it, materializing into skin conditions like hives, stomach discomfort, and attacks on the respiratory system.

In severe cases, it can trigger a bout of autoimmune diseases like multiple sclerosis and rheumatoid arthritis. It is not hard to imagine the cause - lack of HCl in the stomach! Maintaining a low level of stomach acid impedes digestion, letting proteins go undigested and possibly escaping through the intestinal walls.

#### Source:

Vaarala O, Knip M, Paronen J, et al. Cow's milk formula feeding induces primary immunization to insulin in infants at generic risk for type 1 diabetes. Diabetes, 1999, 48: page 1389 - 1394

Paronen J, Knip M, Savilahti E, et al. Effect of cow's milk exposure and maternal type I diabetes on cellular and humoral immunization to dietary insulin in infants at generic risk for type I diabetes. Finnish Trial to Reduce IDDM in the Genetically at Risk Study Group, *Diabetes*, 2000, 49: page 1657 - 1665

Kokkonen J, Simila S, Herva R. Impaired gastric function in children with cow's milk intolerance. *Eur J Pediatr.* 1979, 132: page 1 - 6

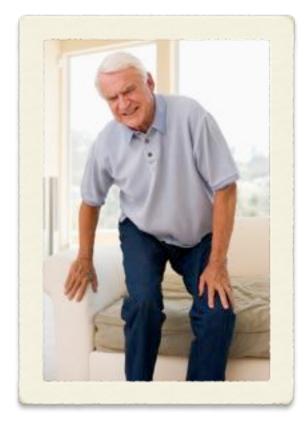
#### **Rheumatoid Arthritis**

Rheumatoid Arthritis (RA) is a painful illness that cripples the joints, making

walking painful and unbearable. This systemic inflammatory disorder can overtime, cause swelling of fibrous tissues, and inflame the lungs. In many circumstances, RA is the result of a leaky gut.

Once undigested food particles leaked out of the gut, the body sends signals to the immune system which responds with antibodies to fight the foreign invaders. If one does not treat the leaky gut syndrome, no amount of conventional medicine is able to treat it as RA is a lifelong disease.

Moreover, conventional medicine for treating RA includes suppressing the inflammation through the use of nonsteroidal anti-inflammatory drugs (NSAIDs), steroids and COX-2 inhibitors, all of which have very dangerous side effects.



#### Source:

Lichtman SN, Wang J, Sartor RB, et al. Reactivation of arthritis induced by small bowel bacterial overgrowth in rats: Role of cytokines, bacteria, and bacterial polymers. Infect Immun. 1995, 63: page 2295 to 2301

#### **Gallbladder stones**

Bile is produced by the liver and stored in the gallbladder. After a meal, the gallbladder releases bile to digest fats. From a study done in 1920, more than half of patients with gallstones were tested to have low levels of stomach acid. There is also another research conducted which found that consuming foods which causes allergy may infect the bile ducts. This in turn may interfere with the regular flow of bile and result in formation of gallbladder stones.

#### Source:

Fravel R.The occurrence of hypochlorhydria in gallbladder disease. Am J Med Sci. 1920, 159: page 512 - 517

Breneman J. Allergy elimination diet as the most effective gallbladder diet. Ann Allergy. 1968, 26: page 83 to 87

# The Keys to Heartburn Free Life



In this section, you will discover the principles behind having a heartburn free life. In the first portion, you will discover the causes of acid reflux and lifestyle factors that can be avoided. Later in the chapter, you will understand some principles behind a healthy diet that will help to cure your heartburn and preventing heartburn.

We have previously established the importance of stomach acid in the digestive process and a shortage of stomach acid is often the reason behind heartburn. But this only completes one side of the equation.

Genetic Factors are triggers that cannot be eliminated. Since they are tendencies that are passed on from parents to children or risks that are innate and natural in origin, they cannot be changed or prevented from happening.



#### **Causes of Acid Reflux**

#### The Truth: Weakened LES

When the contractile ability of the LES is lessened, the barrier that it creates also weakens. As a result, acid from the stomach is more likely to flow back to the esophagus.

#### The Truth: Random relaxation of the LES

The lower esophageal sphincter opens when a person eats. This allows passage of food and drinks to the stomach. For other people, the LES opens for a longer amount of time that allows acid to reflux.

# The Truth: Candida overgrowth

Candida albicans is a foreign microorganism that causes distinct health problems. When they are in the digestive tract, they can possibly multiply and produce numerous toxins. By the time that they get out of control, the immune system becomes defeated, and they break through the walls of the colon. They begin the process of fermentation and allow stomach contents to flow back to the esophagus.

Reflux problems start off from the colon. It happens as a consequence of fungal yeast infection that develops over a long time in the colon. Candida albicans is a type of yeast that does not cause diseases among healthy people. They only impose threat once the immune system is compromised or when the normal environment of the digestive tract is altered.

This alteration in environment happens when the amount of good bacteria in the colon is decreased. With a diminished quantity of good bacteria, Candida multiplies uncontrollably. As a result, they start a fermentation process that make the sufferer experience a lot of symptoms including acid reflux.

# How do you check for Candida?

There is a very simple way to know whether or not you have Candida overgrowth. This should be done when the stomach is empty, meaning it is ideal to do this early in the morning when you have not eaten any food or drinks yet. Fill a clear glass with reverse osmosis or mineral water. The next thing that you should do is to spit a generous amount of saliva into the glass. Leave this glass for an hour.



There is no overgrowth of Candida if the saliva stays floating. On the other hand, string-like formation will start traveling down if there is a mild case of yeast infection. Moreover, the saliva will descend further down the bottom if there is a severe case of yeast infection.

It is important to note that most people fail this test. It is unusual for the saliva to remain on the top-most part of the glass. However, it may also keep on floating if Candida has already been eradicated.

# The Truth: Difficulty in swallowing

When there are problems in swallowing, the passage of food from the esophagus to the stomach becomes too slow. This results to acid build up that injures the esophagus.

Aside from the factors discussed earlier, there are also non-genetic factors. If you have been worrying about genetic triggers, there is no need to fret as there are also factors that can be eliminated. Since non-genetic factors are mostly associated with lifestyle habits and activities, they can be modified or altered. Given proper consideration and a good amount of discipline and effort, changing such habits can give way to a lot of positive impacts that will help lessen, if not prevent acid reflux and episodes of heartburn.

#### The Truth: Hiatal hernia

It is the condition where the uppermost part of the stomach is abnormally pushed up in between the diaphragm and the LES. Due to this, stomach contents easily go back up from the stomach to the esophagus.

Hiatal hernia is caused by increased pressure in the abdominal area which may be due to abrupt physical exertion, excessive coughing, straining, and vomiting. Also, pregnancy and obesity make an individual more susceptible to having hiatal hernia. Although a lot of people over the age of 50 may have mild hiatal hernia, it can still happen to people of varying ages.

There is also a chance that hiatal hernia may lead to the accumulation of acid in the part that connects the stomach to the LES. This is called a hiatal sac, and the acid present there may possibly reflux to the esophagus.

Also, there are times when hiatal hernia changes the angle at which the esophagus and the stomach are connected. This makes the LES incapable of performing its function which is to prevent stomach contents from flowing back to the esophagus. This condition is known as "broken door".

# **Auto-intoxication**

This is what happens when there is a buildup of toxins in the body, particularly in the digestive tract. Toxins accumulate in the colon due to the deposit of undigested food. Among the problems that auto-intoxication or self-poisoning causes is acid reflux.

Every day, each of us are exposed to countless toxins from our surroundings, the food we consume, the medications we take, and even from the air we breathe in and the water that we drink. Over time, they can all accumulate inside our body, giving way to temporary or permanent health damages. One of them is acid reflux.

Taking different supplements, herbs, and OTC drugs for heartburn will not be beneficial unless you decide to cleanse your digestive tract as well as your internal system.

Believed to be the cause of numerous Western medical conditions that includes acid reflux, auto-intoxication happens as a result of large deposits of undigested food and fecal matter in the intestinal tract, and it is worsened by a digestive system that is incapable of functioning well.

With this said, poor digestion is undeniably one of the main factors that cause heartburn. Through detoxification, bodily processes will surely improve, and symptoms of GERD such as heartburn will be eradicated.

# **Lifestyle Factors**

As mentioned earlier, there are a number of factors that are related to lifestyle choices. It is important to take note that what you eat, the amount of time you spend doing physical activities, and other things related to taking care of yourself really a have huge impact with acid reflux and its related heartburn symptoms. It is of the essence to know and learn these factors because you can unlearn these habits. Moreover, knowing these empowers you on what causes heartburn discomfort.

#### Diet

Meal size and schedule affect reflux disease. The more amounts of food that you eat results to a larger load that the stomach has to digest. Those contents will have to be churned in the stomach for a longer period of time.

# **Healthy eating habits**

A great way to prevent this instance is by eating small amounts of food frequently by day and eating only a light meal at night. Eating late at night can also pose a problem. This is because when you lie down, stomach contents can easily flow back to the esophagus. Please refer to the section on 'Healthy Habits to Heal Your Heartburn' on how to have a proper posture.

To prevent this, make sure that your meal has already passed along the stomach by the time you go to bed. This means that three to four hours before you sleep, avoid any intake of foods or drinks. If you usually sleep at 10 pm, the latest time that you should eat dinner is 6pm. It will also help if you will not do any strenuous activity just after eating.

It is also important to remember that too much consumption of food causes obesity. The normal body mass index (BMI) of a person is between 18.5 –25. For overweight people who have a BMI that is greater than 25, their likelihood of experiencing acid reflux is heightened. This is because excessive fat cells prevent the digestive system from carrying out processes easily. In addition, with too many fats, the abdomen is subjected to a lot of pressure that also influences reflux of gastric contents.

# **Obesity**

Obesity is usually a result of poor dietary choices. It triggers heartburn because when there are increased fat cells, organs cannot properly function. Also, the pressure caused by the additional fat cells increases reflux activity of the stomach contents into the esophagus.

#### **Stress**

Moving on to stress, emotional problems, apprehension, and sleep disturbances are some examples of stressors. Various research works have been able to establish the relation of stress to a number of problems that include ailments in digestion and degradation of the immune system.

Also, bodily reactions release a hormone called cortisol and blood sugar levels are also increased. Both circumstances promote Candida overgrowth that results to acid reflux problems and heartburn.

The effects of stress is not limited to the psychological aspect of life, it also imposes problems with digestion. A stressful life is usually related to lack of exercise and proper sleep.



When this happens, the normal functioning of different body systems are affected. More specifically, the efficiency of digestion is reduced. This causes a variety of digestive problems that in turn leads to an increased chance of experiencing heartburn.

### **Smoking**

Smoking is a habit that brings about plenty of health threats. It is a habit that can aggravate reflux disease. The following are some of the effects of nicotine that promote GERD: (I) suppresses saliva production, and saliva helps neutralize reflux acid by coating the esophagus; and (2) significantly weakens the LES.

# **Alcohol Consumption**

Also, drinking alcohol is another thing that can aggravate GERD. When taken in small amounts, alcohol can help protect some body organs and even speed up stomach emptying. This is favorable for people who have acid reflux because the sooner the stomach gets emptied of its contents, the lesser the chance that the esophagus will be exposed to stomach acid.

However, this benefit is outweighed by the fact that too much alcohol consumption can inflame the lining of the esophagus and weaken the LES. In addition, if small amounts of alcohol speeds up stomach emptying, too much alcohol significantly slows down stomach emptying.

Excess fat cells usually disrupt a lot of bodily processes. Too much fat deposits can potentially clog not only the blood vessels but also important organs of digestion. When this happens, there is extra pressure that makes it harder for the digestive system to function fully. This pressure also allows contents of the stomach to flow back easily to the esophagus.

For people who are obese, obtaining a more healthy weight will surely give a lot of desirable benefits. It is important to remember that the aim is not to lose weight but to gain health. Take note that an individual does not have to be thin to be considered healthy. He should focus on getting healthy weight which can easily be maintained without having to undergo some fad diets or too much trouble.

# The Reflux Solution



To get rid of reflux disease effectively, it is paramount not to simply target symptoms. More importantly, the main causes of acid reflux that make the stomach environment prone to heartburn should be directly targeted. The Reflux Solution does that exactly, and the notable part is it gets rid of the costs and untoward effects of conventional drugs.

#### 100% Natural and Holistic

In any program, it is important to religiously follow all the steps and make sure that you will be able to complete each phase to ensures long-term heartburn relief. As early as now, I urge you not to be tempted to just choose certain parts and leave some other steps undone.

This program is 100% natural; therefore, it does not pose any health threats. Of course, there are some items that will be needed in order to make this program, and they are not hard to find. Some of them can be easily found in your home, bought from a local store, or ordered online. If you are not a budget, I'll advise you to choose fresh, organic produce.

While undergoing this program, expect that you will have to change your diet and eating habits. You will also get some supplements or items that will increase stomach acid, detoxify and cleanse your internal system and suppress Candida overgrowth. To make this program more effective, there should be a balance between exercise and sleep while managing stress effectively.

The best thing to do in order to make heartburn only a thing of past is to implement all steps included in The Reflux Solution. By doing this, the environment of your stomach will be of the optimal acidity, and acid reflux will surely be eliminated permanently. Remember that a acidic stomach environment is what you need to really get rid of reflux disease.

Read the entire program and for sure, you will be able to do away with pricey conventional medicines that just try to calm your symptoms with their supposed therapeutic effects that are accompanied by some side effects; you will also be able to regain control of your life. I can assure you that doing this program will make all the difference – you will feel rejuvenated, younger, and even healthier.

# Step 1:Determine the Cause of Heartburn



Nearly all of us encounter occasional indigestion from overeating- whether it's at a free-flow buffet, your best friend's wedding dinner, or from stuffing yourself during a stressful period. You know it's time to take a stomach acid test when heartburn has become a frequent occurrence.

# Taking the stomach acid test

#### At home

It is important to get an idea whether or not your stomach creates enough hydrochloric acid (stomach acid) before beginning the 2 Day Reflux Treatment System. Since this system is innovative and anything but traditional, we will use an easy home procedure instead of the common assessment types done in clinics.

#### What you need:

- Clock
- Baking soda
- Cold water

#### **Procedure:**

- I. When you wake up in the morning, do not eat anything yet. Prepare eight ounces of cold water and add one-fourth teaspoon of baking soda to it.
- 2. Drink the solution that you have made and wait for five minutes.

#### Interpreting the results:

- Did you belch once during the first 3 minutes? If you answered yes, your stomach makes enough hydrochloric acid.
- Did you belch repeatedly? Belching several times means that you have too much hydrochloric acid in your stomach.
- Did you not belch at all? This means that your stomach does not create enough hydrochloric acid.

#### From a doctor

Most doctors do not agree with age-old solid science that has been determined by physicians and gastroenterologists years ago. Instead they have fallen into the stomach suppressing trend. It's unfortunate that most physicians do not provide tests to measure the levels of stomach acid in your body.

#### Test for severe heartburn/ GERD

If you suffer from severe heartburn, acid reflux or GERD for a long period of time, you should consult a gastroenterologist to check for esophagitis, Barrett's esophagus, GERD or peptic ulcer.

# Step 2: Food and Drugs to Avoid



We are what we eat. The food that we put into our mouth daily will have a direct impact on the state of your health. Eat healthily and you can avoid most illnesses but binging on unhealthy foods will give your body undue stress to eliminate the toxins and the body will become susceptible to diseases. For heartburn patient with occasional bouts of reflux or a LES, there are some food on the healthy list that you should avoid.

Having originated from the digestive system, it is not surprising that diet really plays an important role when it comes to acid reflux. Some foods or drinks directly affect reflux disease by lessening the muscle strength of the LES, by irritating an already inflamed esophageal lining, or even by bloating the abdomen which results to increased pressure towards the esophagus.

#### Foods That Weaken the LES

Foods that affect the contractile ability of the LES are coffee, alcoholic beverages, tea and soda with caffeine, chocolate, peppermint and spearmint, garlic, and onions. Smoking also has the ability to weaken the LES. Lastly, carbonated drinks cause bloating. Consumption of the said foods should be limited into small amounts if not avoided.

# **Stop Smoking**

An important note about smoking and GERD: Through the duration of the program, smoking should be minimized. This is to lessen their negative impacts on health and to reduce their bad effects on the esophagus.

GI ailments can be intensified by smoking. Also, a person is more likely to acquire stomach ulcers if he smokes. By lessening the strength of the LES, acid easily flows back to the esophagus. This in turn exaggerates the symptoms of acid reflux.

#### **Stay Away from Temptation**

There are many times when smokers become tempted to smoke cigarettes. Such times are after eating, when drinking liquor or caffeinated beverages, and while interacting with people who are also smoking.

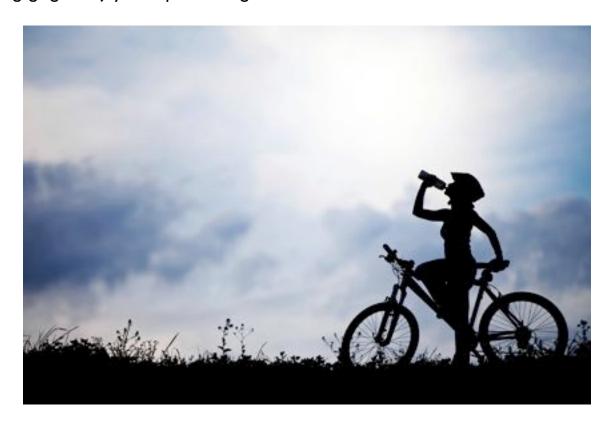
By going outside to breathe fresh air after meals, drinking herbal drinks and water as a replacement for alcohol and coffee, and socializing with nonsmokers in places where smoking is prohibited, you will be able to stay away from situations that will make you want to smoke.

Craving to smoke a cigarette usually lasts for only 10 minutes. After this short time-period, the urge will subside. Smokers get to overcome this urge by doing some breathing exercises. Deep breathing, coupled with visualization of the lungs as they get filled with clean air, helps a smoker to abstain from lighting a cigarette.

Smoking can be avoided by doing some pleasurable activities. By engaging in activities like painting, knitting, cooking, or gardening, your hands will be busy with something. This distracts you from thinking of smoking. Learning a new skill or taking higher-level education can help you focus on something else.

#### **Exercise**

Stress is one of the reasons why smokers engage with their habit. With regular exercise, stress levels are minimized. Participation in physical activities and engaging in enjoyable sports are good forms of exercise.



#### **Finding Substitutes for Cigarettes**

When smokers try to lessen the numbers of cigarettes that they puff, they miss the feeling of having something in their mouths. To counter this feeling, there are some substitutes that can be taken. For instance, sugar-free gum and crunchy fruits and vegetables can be eaten. There are also non-food options like putting drinking straws or toothpicks in the mouth.

# Foods That Irritates the Esophagus

In addition, some foods that raise the acidity of the stomach are caffeinated drinks, pepper or chili peppers, tomato, and citrus fruits. This should only concerned you if you suffer from overdosage of stomach acid (which is only one in a dozen, as majority of heartburn patients suffer from low levels of stomach acid).

Foods and Medications To Avoid	
Irritates the Esophagus	Weakens the LES
<ul> <li>Foods</li> <li>Carbonated Drinks (bloats the abdomen)</li> <li>Citrus fruits</li> <li>Coffee</li> <li>Spicy Food (containing chili peppers)</li> <li>Tomato (Food containing tomatoes or ketchup)</li> <li>Medication</li> <li>Alpha-adrenergics</li> <li>Alendronic acid (Alendronate, Fosamax)</li> <li>Potassium chloride</li> <li>NSAIDs</li> </ul>	<ul> <li>Foods</li> <li>Alcohol</li> <li>Coffee</li> <li>Chocolate</li> <li>Garlic</li> <li>Onion</li> <li>Peppermint/ Spearmint</li> </ul> Medication <ul> <li>Alpha-adrenergics</li> <li>Anti-cholinergics</li> <li>Bronchodilators (ephedrine, theophylline)</li> <li>Calcium Channel Blockers (e.g. Cardizem)</li> <li>Dopamine</li> <li>NSAIDs</li> <li>Pain relievers</li> </ul>

Note: You should not confuse the immediate acidity of certain foods with the alkaline ash they produce later. Certain foods like citrus fruits, chili peppers and tomato are acidic immediately when they enter the stomach but leaves an alkaline ash after digestion. Do not consume these foods on an empty stomach.

For the reason that spicy foods do not really cause heartburn, they are not mentioned in the lists of foods given above (with the exception of chili peppers and pepper). Spicy foods do not contribute to factors that cause heartburn. What really happens is spices in the esophagus worsen irritation when stomach acid gets in contact with the esophagus.

#### **Medication**

Certain drugs actually worsen reflux disease. The following medications cause the LES to relax or weaken: pain relievers, sedatives, anti-cholinergics, alpha-adrenergics, dopamine, and calcium channel blockers. In addition, calcium channel blockers and anti-cholinergics can slow down gastric emptying.

Alendronate or Fosamax can also damage the lining of the esophagus. To prevent this, take Fosamax first thing in the morning with a glass of 6-8ounce of water. Do not sit within 30 minutes.

Moving on, the lining of the esophagus can be wounded by potassium and iron pills. Some antibiotics also make the esophagus more sensitive to acid. Moreover, some medications that are used to treat ulcers by eradicating Helicobacter pylori, a bacteria that is associated to the prevention of acid reflux, also increase the likelihood of GERD.

Remember to inform your physician of your acid reflux condition, so they can make proper adjustments with the medications that they prescribe.

# **Gas-Forming Foods**

Gas formation is a normal and natural part of digestion. However, for people who have medical conditions related to the digestive system, gas formation becomes a problem. It may lead to Irritable Bowel Syndrome and may even cause spasms in the esophagus. Those spasms can make GERD worse.

There are particular foods that promote formation of gas. Limiting their amounts in the diet will surely lessen your problems in digestion including acid reflux disease.

#### **Eat Lesser of These Foods**

Dried beans and legumes such as lentils, kidney beans and peas are known to promote gas. To lessen gas contained by beans, soak them in water overnight until they turn soft and cook them slowly.

Cruciferous vegetables like broccoli and cabbage tend to produce more gas. Common spices like leeks, chives and onions are known to give you gas after a meal - that's why people avoid them .



# **Limiting the Use of Spices**

In the table, we have discussed how spicy foods can irritate the esophagus. Upon eating it, especially with an empty stomach, it can intensify leaky gut syndrome, irritable bowel syndrome, and esophagitis. Also, intake of spicy foods may trigger sudden spasms in the esophagus.

#### **Herbs to Avoid**

Black pepper, chili, garlic, curry, mustard seed, and cloves are all known to exacerbate reflux disorder the most.



# **High-fat and High-cholesterol Food**

#### **Not All Fats Are Bad**

It is true that not all fats can wreak havoc or injure your esophagus. There are good fats such as omega-3 fatty acids, canola oil, and olive oil that are considered essential in bodily processes. However, hydrogenated and saturated fats should not be taken in large amounts because they are associated with cancer, stroke, heart disease, and other problems in digestion.

# Why Excess Fats is Bad

When it comes to acid reflux, excess fat can prevent the gallbladder from working properly. Aside from that, they can also lessen the strength of the LES. This will result to reflux disease. Also, fatty foods can make you gain too much weight which can worsen reflux disease.

# **Decreasing Intake of Calories**

Taking note of your calorie intake and maintaining your ideal weight are important things that you should do if you want a stomach environment that is free of reflux disease.

# **Obesity and GERD**

It is important to know that being overweight or obese may lead to chronic diseases like diabetes, cancer, and heart disease. Also, they cause problems in the liver and the pancreas. More importantly, excess weight in the abdomen puts increased pressure in the LES that may in turn cause GERD.

Limiting intake of calories in order to lose weight and prevent problems related to being overweight will be much more effective if healthy meals will be eaten and healthy food choices will be made. This means that careful consideration should be done in order to minimize foods that have high calorie contents and choose healthy and nutritious foods.

Optimizing the function of the digestive system and engaging with in regular exercise will surely help keep your ideal weight.

#### **Animal Sources of Food**

#### **Red Meat**

#### Why Red Meat is Harmful

Pork and beef contain uric acid and steroids which are toxic for the body. Animal proteins from red meat are also difficult to digest because red meat passes through the digestive tract slowly. It takes a significantly longer time for it to be digested as compared to other kinds of meat. Due to this, it is likely to just rot in your system. As toxins are released to the bloodstream, reflux disease gets worsened. Problems in digesting red meat also triggers allergies that promote Candida growth.

Also, red meat contains harmful hormones, antibiotics, and possible diseases that the animals might have contracted from the factory farm. Excessive consumption may disrupt hormonal balance and result in early puberty in growing children.



## **Make a Transition Away from Red Meat**

If possible, it is advisable to remove red meat completely from your diet. On the other hand, if you are transitioning from a meat to a plant diet, you can opt to eat organic meat in small servings on certain days. By doing this, you will be able to smoothly alter your diet and ultimately remove meat from it gradually.

You can also eat the organic slow-cooked meat with foods containing fiber to make it easier to digest. Such foods are non-starchy vegetables and high alkaline-forming.

# **Dairy Products**

### **Trigger Allergy and Mucus Production**

Dairy products, especially cow's milk, can trigger allergic reactions and promote heavy mucus production. After drinking milk, it is not common to encounter more phlegm, increasing your tendency to clear the air passageway by sneezing and coughing. Also, they can potentially clog the digestive tract because they become sticky when they enter the intestines. The reason behind this is that dairy products are full of different hormones which are injected to animals for the purpose of increasing their milk production.

#### **Contains Antibiotics**

Dairy products also contain antibiotics which can be detrimental to the body and also affect hormonal balance. These antibiotics are injected to the cow on a very frequent basis to stimulate milk production. As a matter of fact, humans are the only species that consume the milk produced by other species. Since our digestive system is different from theirs, we cannot fully digest the milk that they produce and risk having antibiotics affecting our genetic make up.



#### **Undigested Proteins**

Also, their milk contains protein that we cannot process. Undigested protein causes different types of allergies, mucus production, and digestive conditions that are favorable to Candida overgrowth which also leads to GERD.

#### **Pasteurization**

Milk undergoes pasteurization, which is a method that changes sugar into betalactose Betalactose is much more soluble which can be assimilated by the blood very easily. During pasteurization, 20 per cent of the natural iodine is stripped and the milk loses vital nutrients. Pasteurization also makes calcium insoluble, leading to poor formation of teeth and rickets.

#### **Acidic Nature**

In addition, milk is acidic. For this reason, it has a tendency to absorb calcium which is alkaline. Milk drains the calcium from your bones in order to keep an ideal pH balance. As milk robs calcium from the body, an individual becomes more susceptible to dental problems and osteoporosis. For this reason, never make the mistake of consuming milk to increase calcium intake in your body.

#### Lactase

Though presented with the negative side effects of consuming dairy products, many people can't seem to wean off the habit. Thus, it is a good idea to introduce lactase supplements in your diet. Some research have shown that consuming lactase supplements is able to relief gas and stomach pain from lactose intolerance. With all that said, it's best to cut down on dairy products.

Source: Ramirez FC, Lee K, Graham DY. All lactase preparations are not the same: Results of a prospective, randomized, placebo-controlled trial. American Journal of Gastroenterology. 1994, 89: page 566 - 570

# Preserved, Processed, or Fermented Foods

Do not forget to always check the list of ingredients in the products that you buy. When you encounter unfamiliar ingredients or if they sound artificial, do not purchase the product. Do not eat them especially if contain additives, preservatives or flavor enhancers.

Also, limit your consumption of pickles, preserved canned products, and ready to eat meals because they have many unidentified chemicals. Do not sacrifice you health for the convenience of these foods.

# **High-Fructose Corn Syrup**

Soda and other beverages contain sugar fructose in the form of high-fructose corn syrup. Since they are difficult to absorb, they may cause symptoms like gas, bloating, abdominal pain, and diarrhea. You can just lessen your consumption of dried fruit, fruit drinks, and soda in order to avoid those symptoms.

#### **Wheat and Yeast**

Wheat products like flour, bread, and pasta contain gluten, a kind of protein that triggers allergic reactions in some people when their body responds to IgE and mast cell. Also, even if we we disregard gluten allergy, due to the glue-like nature of wheat, it can still cause problems in digestion by clogging the digestive tract.

Candida increases in the presence of yeast and wheat. Therefore brewer's yeast, baker's yeast, and baked products with yeast such as rolls, crackers, bread, pastries, and bagels should not be included in the diet.

#### **Foods Which Contain Vinegar and Yeast**

Foods containing mushroom, vinegar, beer, and yeast extract should also be reduced in your diet as they are believed to promote fungal infection and Candida overgrowth. Vinegar is also made with a certain kind of yeast, so it should be consumed in lesser quantities.

Some foods that contain vinegar can be divided in these categories:

#### **Vinegars**

balsamic vinegar white vinegar red wine vinegar

#### Sauces/ Spreads

BBQ sauce
chili sauce
ketchup
mayonnaise
mustard
salad dressing
soy sauce
steak sauce
shrimp sauce
worcestershire sauce

#### **Processed foods**

mustard mincemeat pickled vegetables

#### **Processed Grains**

This includes white flour, white rice, processed puffed grains, cereal, bran, and extruded rice.

Different kinds of grains contain pulp that is full of nutrients and vitamins, but it also contains phytic acid, which inhibits the absorption of important minerals like magnesium, iron and calcium. In the past, after a rice harvest, farmers would let the grains 'sit' in the fields for a few days to allow them to sprout, thereby breaking down the phytic acid. However, the trend today does not include sprouting rice.

In addition, once they become refined, they lose all their nutritious qualities that is found in the bran and germ, such as fiber. Whatever nutrients that is left is only in minuscule amounts. They become a glue-like substance that can potentially block the digestive tract.

When this happens, there will be toxic deposits that may pollute the blood and allow Candida to grow uncontrollably. This allows the symptoms of heartburn to worsen.

#### **Healthy Alternatives:**

Non-gluten whole grains, brown rice (ideally organic and the long version), wild rice, quinoa, millet.



# Refined White Sugar - The Sweet Killer

Refined white sugar is derived from sugar cane but when it went through processing, its essential fiber and nutrients have been removed. It does not contain fat, calcium, or protein. White sugar is one of the main culprits that promotes Candida overgrowth, and earlier on we have established the link between Candida and acid reflux.



#### **Robs Vitamins and Minerals**

Since refined white sugar is 100% chemical which is hardly recognizable to the body, it takes away vitamins and minerals. As you consume it, white sugar noticeably increases blood sugar levels in a quick manner.

#### **Excess Insulin**

In order to metabolize the glucose in sugar, the pancreas creates excess amounts of insulin. With the production of excess insulin, blood sugar levels are quickly reduced. This causes decreased energy levels and fatigue. Consequently, too much sugar in the diet may lead to diabetes.

#### **Excess Androgenic Hormones**

The negative effects from refined white sugar do not stop there. The body also produces androgenic hormones to metabolize glucose once sugar is consumed. Excess amounts of androgenic hormones cause added undue stress to the liver and gives way to hormonal imbalance that may in turn lead to heartburn. Moreover, once the liver has already converted sugar in long-chain fats, they infect the blood and enhance Candida overgrowth that aggravates GERD.

#### **Weakened Immune System**

Also, sugar is believed to have the ability to decrease the function of the immune system which makes the body susceptible into acquiring infections and diseases. It can also promote a stomach environment that is too acidic (favorable for Candida), trigger allergic reactions, enlarge the liver (interrupts it from filtering toxins and hormones that had already been used), and allow the growth of bad bacteria in the intestines.

Simply put, it causes problems to organs of digestion that leads to more deposits of toxins and Candida that in turn gives way to more episodes of heartburn.

It will be really wise to completely remove white sugar from your diet. Even if you do not suffer from heartburn, it will also be a wise thing to do. You will earn different benefits by doing so.

#### Tip:

Make it an obligation to ensure that the products you consume do not have white sugar. This includes soft drinks and sweetened fruit drinks.

#### **Healthy Alternatives:**

Pure unheated raw honey (in moderation), molasses and stevia.

# **Hydrogenated Oils**

Both hydrogenated oils and partly hydrogenated oils are composed of molecular oils that had been altered. They undergo the process of hydrogenation in order to increase their shelf life. After the method, they become twisted fat acids that the body cannot recognize and may affect our health negatively.

#### **Effects of Hydrogenated Oils**

The following are the effects of hydrogenated oils to your body: Create obstructions in the liver, muscles, kidneys, and spleen. They also add up fatty deposits which can accumulate inside the body and create different health problems. This can result to overgrowth of Candida and promote heartburn.

Hydrogenated oils also interrupts the electric flow that makes cell division, heartbeat, mental balance, and nerve functions possible.

Foods that contain hydrogenated oils are salad dressing, mayonnaise, bread, cakes, donuts, muffins, candies, margarine, vegetable oil, partly hydrogenated and hydrogenated soybean oil, and different processed foods.

#### **Healthy Alternatives:**

Flaxseed oil, pure extra virgin olive oil



# **Alcohol and Beverages with Caffeine**

There are many health problems brought about by alcohol consumption. One particular thing that they can do is worsen problems in digestion. Injured stomach lining, gastritis, problems related to the liver, diarrhea, growth of Candida, malnutrition, Irritable Bowel Syndrome, and reflux esophagitis are just some of the damages that alcohol brings about.



To maintain a reflux-free stomach environment, caffeine intake should be strictly minimized. Caffeine affects our body in many negative ways. It encourages increased acid secretion, difficulty in digestion, and lessens the contractility of the LES that leads to reflux disease. Domestic brands of tea, tea bags, cola, chocolate, and coffee contain caffeine.

#### **Healthy Alternatives:**

Some healthy options that you can use are coffee substitutes made of bran, molasses, chicory, beets, rye, and barley. Green tea and herb tea are also good choices. It is important to note that decaffeinated coffee is not really healthy and may even be worse compared to regular coffee.

# Step 3- What To Eat



Before starting on this holistic diet which will eliminate the root source of GERD, the main concern will be to alleviate the discomfort and distraction brought about by the symptoms of heartburn. With an uncomplicated, safe to follow, and all-natural treatment system, your heartburn symptoms will be gone in no time. The first section talks about what you should eat for immediate relief, the second section discusses what you should include in your daily diet and lastly, vitamins and minerals will be introduced that will help bring relief to your heartburn.

# **Experience Immediate Relief**

For this treatment system, the items can easily be found in your house or local store. They are also not costly. This section will discuss what you need to prepare and what you need to do before you can start the procedure.

# I. Organic Apple Cider Vinegar

Take organic apple cider vinegar when you have symptoms of heartburn.

Some people suffer from heartburn because they do not have enough stomach acid that is essential for digestion. As a result, food is not digested and remains in the stomach. Then, they get fermented and release gas that worsens heartburn.

You should only get apple cider that is raw and made from organic apples. Apple cider works well against bacteria and infection. What it will do to your system is to cleanse it and help keep the acid-alkaline balance in your colon.

You can find raw or organic apple cider at local health stores. To serve as a guide, the Bragg brand is not pricey and also works well.

Take note that if you belched within 5 minutes during the stomach acid test, the result revealed that you do not have enough stomach acid. In this case, apple cider vinegar will aid you in hydrochloric acid production.

On the other hand, if within 2-3 minutes, you experienced belching, this means that you have enough levels of acid, and typically, ACV will no longer help in alleviating symptoms. However, it is alkaline-forming and therefore, whether or not you have adequate stomach acid, apple cider vinegar will surely help you.

To relief the heartburn, take I or 2 teaspoons of organic apple cider vinegar. Since it is alkaline forming, it can improve the pH balance in your stomach. When you consume apple cider, you will feel a temporary burning sensation which will go away in more or less 5 minutes. A great feeling of comfort will then follow.

Organic apple cider and raw honey are likely to work best against the symptoms of your reflux disorder. If your esophagus is easily irritated, do not drink on an empty stomach but consume it earlier in your meals instead.

To see what works best against your discomfort, try to take Manuka honey first without the organic apple cider before a meal. Alternatively, you can dilute apple cider vinegar in water. If drinking this solution still doesn't alleviate your symptoms, you can try taking organic apple cider alone.

# **II. Raw Honey**

Pure or raw honey is in the form of smooth crystals. They are unheated and not yet processed that is why they are not yet in liquid form. Raw honey is proven to be effective against bacteria and viruses and can act as anti-oxidant. It can also work in healing wounds quickly and stopping growth of infection.

One of the most popular honey in the market is Manuka honey. Manuka honey that are certified with UMF (Unique Manuka Factor) even has a It will surely allow your inflamed esophagus to heal and get better. Avoid giving children below I honey as it is not safe for their consumption.

# III. Lemon/Lime Juice

An economical replacement for apple cider vinegar would be freshly squeezed lemon or lime juice. However, the apple cider vinegar would be a better choice as it contains more digestive enzymes than lemon juice. Another benefit of lemon is after digestion, it leaves an alkaline ash.



#### The Demise of Natural Food

Consuming healthy foods and eating those that have high enzyme content are good for your health and digestion. However, due to the methods of growing, preserving, and food preparation that people use today, food quality has been significantly lowered.



# Go Organic

Rich natural minerals from the soil, which are good for the body, have been replaced with poor minerals from fertilizers. Due to this, most plant products no longer contain enough nutrients and minerals. Plants, just like the water we consume, are mostly contaminated with herbicides and pesticides. These toxic substances like these remove essential nutrients from our crops. This is the very reason why the food we eat is not enough to supply the vitamins and minerals that our body needs.

Unlike organic produce which are packed with high amounts of vitamins and minerals, vegetables from conventional farming methods do not have as much nutrients. Because the body receives a generous amount of nutrients simply by consuming fresh produce, I would like to emphasize that taking supplements is only considered as a last option. The general rule of thumb is to choose fresh produce over supplements.

# **Choose Your Food Wisely**

Ensuring that a person gets enough nutrients does not stop during childhood. To allow normal functioning of different organs, adults should also make sure that they get essential nutrients that keep the body in its best shape. However, when the food does not have adequate vitamins and minerals, bodily processes decline. More so, the immune system gets easily defeated by disease-causing organisms like Candida. When they multiply, digestive ailments like acid reflux are worsened.

# **Changing Your Diet**

Besides consuming foods to relieve your heartburn, you should also attempt to change your diet by including these foods that can helps to alleviate your heartburn condition.

#### **Low-Fat Diet**

Eating a diet that is low in fat brings about many health benefits. Such helpful effects include heartburn and IBS (Irritable Bowel Syndrome) relief, as well as diarrhea, cramps, and colon cancer prevention.

To achieve favorable results, the fats that you consume should not exceed 30% of your daily caloric intake. Therefore, you should avoid food sources of bad fats such as margarines and different desserts. Also, stay away from refined oils like soybean, sunflower, and corn. In addition, intake of cheese, cream, mayonnaise, and meat fat should also be avoided as they are sources of saturated fats.

Include good fats in your diet. One example is avocado, a monounsaturated fat which can significantly lower unhealthy LDL cholesterol.

By decreasing your cholesterol intake to get rid of reflux disease, you will also be able to protect yourself from other ailments that afflict the cardiovascular system and the other parts of your body.

#### **More Fiber in Your Diet**

Diets that are high in fiber are good for the health for the reason that they effectively eliminate wastes and toxins that may cause diseases. They also prevent ulcers, help in stool formation, and alleviate constipation. Aside from that, they are effective when it comes to weight management and blood sugar level control. You may now be wondering about the consequences of not having enough fiber in your body. Low-fiber diets are believed to cause serious digestive problems. Also, they are associated with colon cancer and hiatal hernia which may result to acid reflux disease.

#### **Soluble and Insoluble Fiber**

There are two kinds of fiber that has different functions. The first one is soluble fiber which can be derived from fruits, vegetables, and oatmeal. The second one is insoluble fiber which can be obtained from whole grains. Non-starchy vegetables are considered to be rich sources of fiber.

For a complete and balanced diet, the body needs 25-40 grams of fiber on a daily basis. There is no need to worry about being fiber deficient if you love eating fruits and vegetables particularly the non-starchy ones. Since dairy and animal products have no fiber at all, it will be wise not to eat them.

# **Dairy Substitutes**

If you really have to use butter, one such replacement that you can choose is sesame seed butter. It is an excellent protein source as it is made from ground whole sesame seeds. In addition, it can also be a

good source of calcium because it contains as much as 1100mg of calcium per 100g.

For dairy products, some good alternatives that you can opt for are nut milks (almonds, sesame seeds, etc) and nut creams (cashew and macadamia nuts). You can also choose soy products as an alternative. However, remember that too much consumption of soy products is connected to problems in the thyroid. Therefore, only take them in little amounts.

Other good alternatives are milk products from sheep and goat. They are more preferable if they have not undergone the pasteurization process. However, you are encouraged to take an elimination diet and allergy test before using them as substitute.



When it comes to chocolate, you can eat dark chocolate, preferably the ones with higher cocoa compositions as they have less amount of dairy. Also, chocolates made of carob powder taste so good.

People with lactose intolerance develop intestinal ailments when they consume lactose which can be found in different milk products. Minimizing lactose consumption will surely help alleviate different symptoms of acid reflux and allergies, promote good digestion, and lessen digestive problems like gas and diarrhea.

# **Eat Cleansing Foods**

## **Sprouts**

Sprouts contain high amounts of vitamins and enzymes and can easily be digested. For all the nutritious goodness they provide, they can be considered super foods. The longer you allow them to germinate, the higher their nutritional value will be and their enzyme content will also increase.

You can eat any amount of sprouts. By buying different kinds of sprouts and growing them at the comfort of your own home, you will be able to get different kinds of nutritional benefits.

Growing your own sprouts is a smart thing to do because you will be able to easily get access to a daily serving of fresh and healthy food. When you buy them, choose the fresh ones because once they get spoiled, they can be toxic.

#### **Good Sources**

An excellent source of protein is sprouted lentils and mung beans. When eaten with brown rice, they become perfect protein sources.



#### **Fruits**

Rich in various types of nutrients, fruits are great cleansers of the body. Since different fruits contain gives different health properties, make an effort to consume different varieties of fruits.

In addition, it will also be better if you eat them on an empty stomach and without peeling off their skin to aid digestion. They should also be served raw because once cooked, the fruit sugar that they contain will be converted into a form that is detrimental to the body.

A good thing to remember about fruits is to never eat them excessively. They contain sugar which may promote the growth of Candida and worsen reflux disease. Therefore, only eat them in moderation.

#### **Blood Cleansing Fruits**

Some blood-cleansing and healthy fruits are grapes, lemons, peaches, tangerines, apples, grapefruits, limes, pears, berries (blackberries, strawberries, blueberries)watermelon, and avocados.



#### **Lessen Consumption of These Fruits**

Take note to eliminate the following from your diet: frozen fruit juice, canned and dried fruit because they usually contain an usually high amount of sugar. Some examples of drinks that can irritate the esophagus are citrus fruits: grapefruit juice, tomato juice, and orange juice. Therefore, they should also be avoided.

# **Non-starchy Vegetables**

Celery, green pepper, cucumber, collards, brussels sprouts, spinach, cauliflower, and all kinds of celery (except iceberg) are non-starchy vegetables, and they are as nutritious as sprouts. They are great sources of complex carbohydrates and can provide energy. Bear in mind that if you tend to pass out gas after eating cruciferous vegetables, avoid them.

# **Wheatgrass**

Wheatgrass is also an example of super food with high chlorophyll content, which has a great ability to detoxify the liver, keep the colon clean, and eliminate toxins from the blood. If eaten every day or a few times every week, it can greatly improve your heartburn condition and treat GI ailments.

Besides helping to keep the skin in great condition, wheatgrass can act as an anti-inflammatory, antiseptic, and an excellent antioxidant. As a result, it helps open wounds to heal, boosts re-growth of tissues, aids in detoxifying the liver, lessens pain from swollen wounds, and gets rid of bacteria and fungi which may further worsen GERD.

To get its full benefits, squeeze the wheatgrass and take it every morning on an empty stomach.



#### Whole Grain Rice

By now, you already know the negative effects of refined carbohydrates and white rice is an example of rice that has been stripped of its mineral content. A good thing to remember is to opt for whole rice, brown rice or wild rice. Instead of short-grain rice (typically used in making sushi), it will be more preferable to choose organic long grain rice.

Just like beans, you should also soak rice in water overnight if you can afford the time. Cook it slowly on a long period of time. By doing this, the gas that it contains will be reduced, and it will be less difficult to digest.

#### **Non-Gluten Grains**

Whole grains or complex carbohydrates are excellent protein sources. They are rich in minerals and vitamins, provide fiber, and have low fat content.

#### **Sources of Non-Gluten Grains**

Non-gluten grains are the greatest sources of whole grains. Amaranth, millet, rice and quinoa are some examples of non-gluten grains. On the other hand, it's best to choose non-gluten grains over gluten grains. Gluten whole grains like gamut, rye, oats, buckwheat, and barley are gluten whole grains.

Always remember to eat non-gluten grains in moderation. This means that you should only consume up to 2-3 servings every day.

#### **Fish**

Fish used to be excellent protein source. However, excess water pollution introduced high levels of mercury and other toxic metals in lakes and oceans, as such consuming fish has become almost unsafe. It can only be considered truly safe if it is organic. Generally, it is advisable for you to reduce your consumption of fish.

#### **Seeds**

Pumpkin seeds, sunflower seeds, and sesame seeds have high zinc content. They also provide fatty acids and enzymes that aid in digestion and contain minerals.

#### Water

Drinking a large amount of mineral or filtered water daily has great cleansing effects and accelerates the wound healing process. Through the main organs of elimination, water helps the body eradicate toxins which reduces toxic accumulation that worsens heartburn.

#### **Drink Filtered or Mineral Water**

To ensure effective detoxifying and cleansing of the body, a minimum of 2 liters of mineral or filtered water should be taken. With a few drops of cayenne pepper or lemon, the cleansing effect of water will be more potent. You can also take 2 tablespoons of extra virgin olive oil after this to allow your liver to purge toxins and making sure that it is functioning well.

A large amount of purified water helps to keep the kidneys healthy by getting rid of waste, averting the formation of kidney stones. When the kidneys function sub-optimally due to low cleansing, the liver will be burdened. This leads to accumulation of toxic deposits that may later on cause heartburn.

### Herbs and Leaves

Different nutrients can be found from herbs and salad leaves, especially from parsley. Leaves provide chlorophyll, an important component of every plant. It should also be noted that herbs are rich sources of antioxidants that fight parasites, Candida, free radicals, and heartburn.

Cinnamon, sage, thyme, and paprika are some examples of foods that are not likely to cause you any reflux. Some examples of excellent herbs are coriander, parsley, basil, fennel, mint, thyme, oregano, and dandelion.

### **Hot Peppers and Chili (Capsaicin)**

Spicy food is known to irritate the esophagus, but it may not be all true. If your stomach is easily irritated by spicy food, try to start from mild spiciness instead of going for the very spicy dishes. And if you suffer from reflux esophagitis, do not consume spicy food as they can irritate your esophagus.



Research have indicated that capsaicin may form a protective layer to prevent damage caused by alcohol and aspirin on the gastric mucosal lining. Once it enters the stomach, capsaicin activates the nervous cells in the stomach lining to secrete mucus and improve blood flow in times of an "emergency". Therefore, it's extremely important to consult your doctor to check if you have an inflamed esophagus before proceeding to consume hot peppers.

Besides helping to improve digestion, capsaicin can also help to relief sinus infections by clearing nasal congestion.

Source: Foshi D, Del Soldato P. Effects of capsaicin on ethanol damage in the rate. Gastroenterology. 1991, 100: page 1155 - 1156

Holzer P, Pabst MA, Lippe IT, et al. Afferent nerve-mediated protection against deep mucosal damage in the rat stomach. Gastroenterology. 1990, 98: page 838 - 848

### **Bitter Herbs**

Bitter herbs are the unpopular herbs for consumption - because they leave a bitter taste in the mouth. But you may be surprise that this bitter property is what stimulates digestion. Once the bitters hits your mouth, saliva secretion will increase. Also known as digestive stimulants, bitters belong in a group of herbs that has the ability to rouse digestive processes though maximizing the production of saliva and digestive enzymes like bile, HCl, gastrin, pancreatic enzymes and pepsin.

Research has attempted to explain why bitters is able to stimulate digestion. One explanation is that the body tends to associate bitterness with poison - and thus activates the acid and enzyme production to quickly digest the poison.

Bitter herbs do not only help to stimulate digestion, research has also shown that it can help to strengthen the LES muscles.

### How to consume bitters?

Bitters are often consumed in very small amounts - sometimes from the freshly grounded herbs or the powder or liquid form can be purchased in health food stores. To get the full effect of the bitters, dissolve the powder, fresh herbs or liquid in a little warm water and do not over dilute the bitter taste. It's important that you taste the bitterness so as to stimulate enzymes and digestive juices.

### **Artichoke**

A natural diuretic, artichoke is known to cure digestion problems which stems from the lack of bile production. Next time, do not aim straight for the artichoke's heart as its leaves are where most of the goodness lies. Artichoke leaves contains cynarin, a polyphenol antioxidant which helps to increase the flow of bile. Studies have shown that patients with digestion problems show considerable condition in a double-blind study on artichoke. Artichokes also contain more antioxidants than any other vegetables

Source: Kraft K. Artichoke leaf extract - recent findings reflecting effects on lipid metabolism, liver and gastrointestinal tracts. Pytomedicine. 1997, 4: page 370 - 378

Kirchoff R, Beckers C, Kirchoff G, et al. Increase in choloresis by means of artichoke extract. Phytomedicine. 1994, 1: page 107 - 115

### **Ginger**

A popular Asian herb, ginger has been used for centuries in India, China and Southeast Asia in cuisines. Specifically, ginger is prized for its ability to detox the body and improve digestion. Ginger tea has been brewed to ease menstrual cramps and dispel colds, chills and fever. Recent studies have found that ginger is able to protect our digestive tract the same way as capsaicin do. Being a great gut cleanser, ginger is also found to prevent colon cancer.



### **Examples of bitters**

✓ Artichoke

🗹 Barberry bark

- ✓ Bitter orange
- **✓** Bitter melon
- √ Caraway
- ✓ Centuary
- ✓ Dandelion
- √ Fennel
- ✓ Gentian root
- √ Ginger
- ✓ Goldenseal root
- ✓ Hops flower
- ✓ Horehound
- ✓ Milk thistle
- Peppermint
- 🗹 Prickly ash
- √ Wormwood
- √ Yarrow
- ✓ Yellow duck

Source: Moorehead L. Contributions to the physiology of the stomach. XXVI-II. Further studies on the action of the bitter tonic on the secretion of gastric juice. J Pharmacol Exper Therap. 1915, 7: page 577 - 589

Carlson A, Torchiani B, Hallock R. Contributions to the physiology of the stomach. XXI. The supposed actions of the bitter tonic on the secretion of gastric juice in man and dog. JAMA. 1915, 64: page 15 - 17

Bone K. Bitters - still a valuable concept. Nutrition and Healing Newsletter. 1998, 5: page 3 - 7

### **Carminatives**

Carminatives are yet another family of spices and herbs. They help improve cases of indigestion, intestinal tract spasms, irritable bowel syndrome, bloating, excessive gas, and other digestion problems.

What makes these herbs really good for the body is their anti-inflammatory properties that help ease irritated or swollen digestive tract membranes. Inflammation in the esophageal lining due to GERD can greatly be reduced with carminatives.

### How to consume carminatives?

Simmer these herbs in boiling water and leave it to stand to brew tea. They are also available in capsules from health store.

### **Chamomile**

Having an inflamed esophagus can be really unbearable and chamomile can help to soothe the inflamed membranes in your gut. Traditionally, chamomile tea has been used to help irritable bowel syndrome, and helps your body to better digest foods. Chamomile also helps to relax our mind, giving us better and deeper sleep.

① Some people are allergic to chamomile. If you have experienced similar allergies with chrysanthemum, daisy, or marigold, you should consume chamomile with caution. Pregnant women should also avoid consuming chamomile.

### **Turmeric (Curcumin)**

Freshly grounded turmeric powder is a must in many curries. Besides giving it the bright yellow color, turmeric has long been used as a natural treatment for many gastrointestinal disorders in India and in the Middle East.

### **Examples of carminatives**

- ✓ Allspice
- ✓ Chamomile
- √ Clove
- √ Fennel
- ✓ Lemon balm
- **√** Sage
- **√** Thyme
- **√** Turmeric

### **Other Foods**

### **Mastic**

Mastic, a precious medicine cultivated in the Greek island of Chios, has been valued to cure gastrointestinal conditions. In the case of heartburn, mastic is known to heal peptic ulcers. This can be attributed to mastic's anti-microbial and anti-bacterial properties.

Source: Huwez Fu, Al-Habbal MJ. Mastic in treatment of benign gastric ulcers. Gastroenterol Jpn. 1986, 21: page 273 - 274

### **Probiotics**

You will have to re-introduce probiotics bacteria to your system in order to maintain an environment with a healthy balance of bacteria and prevent recolonization of Candida. Thus, always see to it that your intestines have friendly intestinal flora or probiotics.

In ancient Greek, the word "probiotic" means "for life". Cultured in laboratories, good bacteria bring back the balance in the flora of your digestive system. They move along your system and live inside your intestines. Many studies have shown that flora supplements specifically battle against symptoms of acid reflux as they are also good for you general health by restoring good bacteria in your health.

They also help you achieve smooth digestion, improve your immune responses, help resist infection, suppress bad bacteria (including *H.plori*) from colonizing your system, and create natural side effects like giving free antibiotics that are capable of elimination destructive organisms like Candida. Two bacteria strains, *Lactobacillus acidophilus* and *Bifidobacterium bifidum* produce enzymes which contain lactase to help digest diary products.

Source: Jin LZ, Ho YW, Abdullah N, Jalaludin S. Digestive and bacterial enzyme activities in broilers fed diets supplemented with Lactobacillus cultures. Poult Sci. 2000, 79: page 886 - 891

Mustapha A, Jiang T, Savaiano DA. Improvement of lactose digestion by humans following indigestion of unfermented acidophilus milk: Influence of bile sensitivity, lactose transport, and acid tolerance of *Lactobacillus acidophilus*. J Dairy Sci. 1997, 80: page 1537 - 1545

### **How about Yogurt?**

It is a popular belief that yogurt can help bring about probiotics in your system. However, it may a myth altogether. A large majority of yogurts that can be bought from supermarkets are heated. Although heating can help prolong its shelf life, it eliminates good bacteria in the process.

## Is yogurt really that good for intestinal health?

It is important to know that many brands that have "made with active friendly bacteria" written can be misleading because all yogurts have active cultures of bacteria. However, a majority of them only contain little if not zero good bacteria due to heating. Food labels also provide little information on the levels of the strains of certain live cultures like "Lactobacillus acidophilus" or "Bifidobacterium", which is one common secret used by manufacturers of this trade.

To obtain friendly bacteria from yogurt, search for one that is not heated, sugar-free, and has no coloring or additives, and also, you will have to consume a lot of it to get ideal amounts of probiotics.

### **Reestablish Good Bacteria**

Re-establishing good bacteria effectively depends of specific conditions:

To successfully aid probiotics to stay alive as they pass along stomach acids before they can reach the intestines, you have to eat prebiotic foods to support the growth of good bacteria (this will be discussed later).

Finding the appropriate probiotic supplement is a must. When you look for a supplement, make sure that it has high levels of lactobifidus and has high acidophilus content which is balanced with lactobifidus.

### **Prebiotics**

Providing your digestive system with live bacteria is not as easy as it appears to be. The good bacteria's survival as they make their way through the stomach fluids is not guaranteed. For this reason, it is of the essence to use a probiotic supplement of excellent quality along with prebiotic foods.

It has been confirmed that good bacteria are able to thrive in the intestines because they eat certain nutrients from certain kinds of food. These kinds of foods are known as prebiotics, non-digestible fiber that is not altered by heat or stomach acid.

Prebiotic carbohydrates or fructooligosaccharides (FOS) can be derived from honey, tomatoes, banana, garlic, Jerusalem artichoke, onion, leeks, and asparagus. These foods should be added with excellent probiotic supplements to create favorable conditions for the good bacteria to live and aid the digestive system to successfully get rid of its own poisons.

### Foods to Heal Esophagus and Ulcers

### **Aloe Vera Juice**

Through alleviating the swelling of both the esophagus and stomach tissues that are harmed by acid reflux, aloe vera can help relieve heartburn.



Besides these benefits, it is a great detoxifying agent, and also helps to treat diverticular ailments, ulcers, and other kinds of problems in digestion. Remember to drink aloe vera juice on an empty stomach.

### Vitamins and Minerals to Relieve Heartburn

Since you have already made the necessary dietary modification to improve and optimize digestion, this is the perfect time for you to enhance the performance of your immune system and supply your body with missing nutrients by making an effort to consume ample amounts of vitamins and minerals.

With them, your body will be provided with the special "power" that it badly needs in order to dispose toxins, eliminate Candida, and aid in healing and rebuilding the body.

### Vitamin A

Naturally found in carrots and spinach, Vitamin A is known for its characteristics that promotes strong and healthy bones, teeth, nails, hair, skin, and gums. It aids the skin in removing dead cells in order to allow the growth of new ones.

Vitamin A is also important in preventing night blindness, boosts the body's defenses, and fights against infection of the kidneys and inflammation.

Beta carotene is a derivative of Vitamin A. It helps the immune system to function at its best. They can be found from vegetables like carrots and fruits like mangoes, tangerines, peaches, and oranges. Dark leafy vegetables are also known to have ample supply of beta carotene.

With the help of Vitamin A, the body is able to create beta carotene. On the other hand, the body cannot convert beta carotene into Vitamin A. Therefore, you should avoid consuming Vitamin A supplements because it may lead to toxicity. It will be better to eat foods that are high in beta carotene.

### **Vitamin B-Complex**

B-Complex vitamins include thiamin(B1), riboflavin (B2), niacin (B3), pantothenic acid (B5), pyridoxine (B6) and cobalamin (B12). All these vitamins are needed to keep the eyes, skin, and nerves at their best. In addition, they help food absorption and metabolism. This is important to control Candida and keep a reflux-free environment. Royal jelly and bee pollen are known to be good Vitamin B-Complex sources.

In the case of severe shortage of stomach acid (achlorhydria), Vitamin B12 is not absorbed well. A deficiency of Vitamin B12 gives the following response: poor sleep, disrupted sleep pattern, anxiety and nervousness. Some doctors may prescribe Vitamin B12 injections to "test" if there is a shortage of hydrochloric acid or prescribe Vitamin B12 supplement. Do not attempt to do so without a doctor's prescription.

### Vitamin C

Vitamin C is an effective antioxidant which speeds up tissue recovery and aids in collagen production. It is also known to protect Essential Fatty Acids. Reducing stress and neutralizing toxic stomach environment are some of its responsibilities.

Green leafy vegetables, parsley, broccoli, red bell peppers, strawberries, oranges, kiwi, watermelon, and lemons contain vitamin C.

Get ample supply of vitamin C from organic citrus or strawberries. Get the juice of organic lemon and dilute it with water. This solution will provide vitamin C, and more than that, it can effectively cleanse your system. Every morning, drink this solution on an empty stomach. I 000mg is the recommended daily amount of vitamin C.

### **Magnesium**

One of the most significant minerals for GERD patients is magnesium. It can effectively stabilize hormones and can work within the muscles to counteract stress. By taking magnesium, numerous people who have heartburn and acid reflux were able to totally eliminate excruciating attacks of the said symptoms.

How does magnesium work in favor of reflux sufferers? The answer is simple. Spasms of the stomach result in the backflow of acid to the esophagus. A healthy stomach is especially designed to use acid.

Unfortunately, for people suffering from GERD, their stomach cannot effectively use the acid and this leads to reflux. Being a natural relaxant, magnesium allows the muscles to relax. In the absence of magnesium, muscles will become chronically contracted.

The benefits of taking magnesium are not limited to the things listed above. They can also help prevent other chronic disorders like insomnia, anxiety disorders, ADD in children, autism, depression, eating disorders, asthma, PMS, migraines, chronic fatigue syndrome, diabetes, high blood pressure, congestive heart disease, kidney stones, and hypoglycemia.

### **Chlorella**

Chlorella is a rich source of chlorophyll and natural enzymes of digestion. Digestive function will be drastically enhanced by taking chlorella because it has a great capability to help tissues recover quickly from wounds and infection, help promote alkalinity in your system, promote the growth of good bacteria, and get rid of heavy metals that have accumulated in your body.

Chlorella is certainly a supplement that you must take in order to get rid of different problems in digestion including GERD.



### **Essential Fatty Acid**

An inadequate amount of prostaglandins is one of the important factors that influence hormonal imbalance. Prostaglandins control hormones by mediating between hormones and cells. One of the causes of Candida that often leads to different reflux symptoms is hormonal imbalance.

Unfortunately, the body cannot create enough levels of prostaglandins in the absence of their important building blocks which are essential fatty acids (EFAs). Omega3, omega6, and omega9 are some examples of EFAs, and the body needs them to produce prostaglandins.

### **Properties of EFA**

Specifically, omega3 has been proven to have potent anti-inflammatory property. This certain characteristic will surely aid your damaged and swollen esophagus. EFAs are also needed when it comes to the regulation of metabolism and quick recovery of tired muscles. Both the nervous system and immune system benefit from EFAs.

### **Sources of EFA**

A healthy Western diet typically has enough omega6 and omega9 from olive oil and canola oil. However, it lacks omega 3. Ideally, your omega 3 intake should be two times higher compared to omega6 and omega 9 combined. Rich sources of EFAs include cold fish (salmon and tuna), flax oil, soybean, sunflower seeds, walnut, safflower oil, and borage.

The sufficient intake of EFA supplements will give your body enough prostaglandin building blocks which will eliminate Candida, inflammation, and bacterial infection and regulate hormones,

### **Coconut Oil**

Coconut oil helps to complement the absorption of EFAs. You can consume your daily intake of EFAs along with 2 tablespoons of coconut oil. Tip: use coconut oil in your salad dressings as well as cooking.

Here are some of the many benefits that coconut provides:

- ✓ Helps prevent EFAs from being oxidized once you mix it with them
- ✓ Controls and regulates levels of blood sugar
- Allows the liver to function better
- ✓ Aggressively protects the body from Candida and other toxic blood parasites and wastes
- ✓ Optimizes digestion



### **Digestive Enzymes**

Digestive enzymes are complex proteins that are highly necessary in the processes of digestion and assimilation. For the optimal functioning of the immune system, timely growth and repair of tissues and bones, and toxin-free blood and tissues, digestive enzymes must be present in our system.

As we grow older, our body produces less digestive enzymes. Complementing your meals with raw and fresh produce, as well as digestive supplements, is necessary as the usual foods that we eat do not contain enough nutrients. When the body is deficient of digestive enzymes, different GI ailments are then triggered.

Protein that is undigested due to lack of stomach acid can cause acid reflux. Proper protein digestion can be achieved with the help of digestive enzymes. One such example is papaya enzymes which contains papain and others that contains HCl or betaine.

Organic papaya enzymes also encourages smooth digestion by aiding in dissolving fat, breaking down protein, and processing carbohydrates. The best part is papaya enzymes does not have any side effects. Overtime, the digestive enzymes will take care of bloating, formation of gas, and candida overgrowth that oftentimes lead to heartburn. With it, your metabolism will also improve.

### **General Tips**

### Strategy #1

Consume foods that are soft and has cleansing effects for at least 3 days. For three days, the focus is to let the esophagus heal by giving it a slight break, especially if the esophageal lining has been damaged. Crunchy foods can scratch and injure the esophagus.

To avoid worsening the condition of your esophagus, you should avoid eating foods like nuts, toast, cookies, and other crunchy foods. What you should eat is soft food that can cleanse the esophagus. Such foods are cooked vegetables, sprouts, juices, and brown rice, among others.

### **Strategy #2**

Make sure to chew your food properly and drink water after meals.

One way to make digestion a lot smoother is by properly chewing your food into smaller bits. With smaller bits or particles of food, they become softer and cause less damage to the esophagus as they move along to the stomach.

In addition, drinking water after meals helps cleanse the lower esophageal sphincter. With these, the LES can function better and properly close in order to keep stomach contents in. Also, to avoid bloating and burping, you should drink warm water to help release gas instead of cold or iced water.

### Strategy #3

Each time you are bothered by GERD symptoms, stand and loosen restrictive or tight clothing.

Do not lie down at least 3 hours after eating because the position makes it easier for stomach contents to flow back to the esophagus. In addition, loosening tight clothing and standing upon feeling heartburn may ease your discomfort.

# Step 4 - Working on a Better Body



Do you have heartburn? Sadly, nothing can be done over night to modify your internal organs, particularly your lower esophageal sphincter. On the other hand, you can do something to change the surrounding body parts. In this way, you will get the relief that you really deserve. For instance, you may try to lessen intestinal pressure that causes reflux. A good exercise program may ease stress, which is another heartburn trigger.

Exercise and diet are two connected methods that can give way to a more slender and healthier you. This chapter teaches you ways to achieve your goal by opting for a safe and effective diet and an exercise program that prevent the common pitfalls.

### Who Can Be Considered Overweight?

Having excess weight can make you more likely to develop different health problems including arthritis, diabetes, and heart disease. Aside from the diseases mentioned, you are also vulnerable to heartburns. The way it works is clear: Excess pounds in the middle part of the body push up against the lower region of the esophagus. This increased pressure increases the LES' likelihood of popping open, which allows stomach acids to flow back into the esophagus.

For this matter, losing weight may be considered as the answer. However, it is important to remember that before engaging on a weight-loss diet, spend some time to ensure that you really have excess weight. This can be done by determining your Body Mass Index or BMI, a measurement introduced by the National Heart, Lung, and Blood Institute (NHLBI) in the United States in 1990.

BMI is a description of weight relative to height that is suitable to both males and females. A number such as 25 represents the ratio which serves as a predictor of an individual's risk for weight-related problems like arthritic pain, diabetes, gallbladder disease, high blood pressure, heart disease, and stroke.

Repeated studies in the past decade have revealed that BMI is a more appropriate guide to know who can be considered overweight and to learn who are likely to get weight-related problems compared to just getting your weight by using a scale. In other words, the higher the BMI, the more at risk you are. Therefore, it is important to calculate your BMI.

### **Calculating Your BMI**

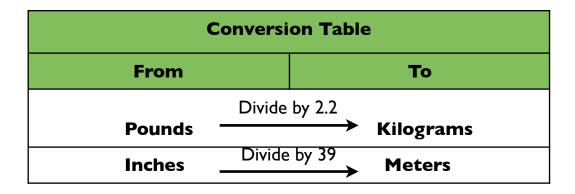
There is an original equation that can help you calculate your BMI. Kilograms is used for weight (W) while meters is utilized for height (H): BMI = W/H2. If you are from Asia, Canada, or Europe, you can easily use your own personal metric numbers. For example, you can use 65 kilograms (kg) and 1.640 meters (m) and start calculating.

#### **BMI Calculation**

BMI = Weight /(Height x Height)

BMI = 65 kg / (1.640 meters x 1.640 meters)

BMI = 65 kg/ 2.689 square meters = 24.17



For Americans who use pounds to measure weight and inches for height, these measurements must be converted to their metric equivalent so that the original BMI equation can be used.

BMI Calculation (Conversion from lb and inches to kg and meters)	
BMI = Weight /(Height x Height) * 705	
BMI = 110 pounds / (65 inches x 65 inches) * 705	
BMI = 110 lbs / 4225 square inches * 705 = 18.35	

On the other hand, there is a BMI equation that uses inches and pounds. You just have to multiply the result by 705. You can simply use your personal numbers. For example, if your height is 5'5" or 65 inches and your weight is 110 pounds, you can compute it this way:

### **Interpreting the Figures**

Now that you already know how to get your BMI, the next thing that you should be wary of is how to interpret the results. Based on data from the NIH, Health Canada, and World Health Organization, this is how BMI experts classify your body:

- BMI lower the 18.5 = underweight
- BMI between 18.5 and 24.9 = acceptable
- BMI ranging from 25.0 to 29.9 = overweight
- BMI higher than 30 = obese

BMI is a good tool. However, BMI is not necessarily applicable for certain groups of people:

### **Athletes**

For athletes, BMI is not always a reliable tool. This is because muscle tissue is denser and heavier compared to fatty tissue. Therefore, a fit athlete may weigh heavier compared to an inactive person. However, this does not necessarily mean that he is more at risk of having weight-related health problems.

### **Children**

BMI is not applicable for kids. The bodies of chubby children are still continuously changing. Toddlers and teens who have excess weight may consult their doctor to get some advice regarding weight loss.

### Senior citizens

A BMI number that is considered slightly excessive for younger people may be acceptable for people over 65. This is because fat padding can protect old people by lessening the impact of accidental falls on hip bones.

### Women who are expecting or nursing

For women who are pregnant or lactating, it is not safe to use the BMI as guide since the excess weight is not fat, but a fetus.

### **Getting Rid of Reflux through Exercise**

In ordinary circumstances, exercise is ideal for your body. When you the body is in motion, your muscles and bones are strengthened while your immune system is enhanced and your mood becomes better. The following table shows how exercise boosts various parts of the body:

This list reveals that exercise is beneficial for the digestive tract, only, it does not prevent heartburn. It should be noted that working out may even aggravate reflux.

At least one in every seven people who have heartburn experience exercise-related reflux. According to a survey done by Oklahoma Foundation for Digestive Research, which involved 10 runners, 10 cyclists and 10 weightlifters, the heartburn intensity after a standard 60 minutes exercise varies for different groups of athletes.

Part of the Body	Effect of Exercise
Blood (fats)	Decreases total cholesterol level Decreases low-density lipoproteins or the bad cholesterol Increases high-density lipoproteins or the good cholesterol Decreases the levels of triglycerides
Blood Vessels	Allows blood vessels relaxation Lessens risk for high blood pressure and stroke Promotes healthier blood flow
Bones	Prevents the natural process of bone loss Lessens risk of osteoporosis

Part of the Body	Effect of Exercise
Digestive Tract	Allows food to move faster through the digestive tract Lessens risk of constipation
Fatty Tissue	Burns fatty tissues as fuel
Immune System	Enhances immunity and reduce the body's susceptibility to foreign bodies
Lungs	Makes elasticity of tissues more improved Promotes respiration
Muscles	Increase muscle mass and strength
Others	Helps shed extra weight Promotes faster metabolism

As the workout becomes more extreme, the symptoms also become more severe. Weightlifters experience the most heartburn, followed by runners, and cyclists experienced the mildest heartburn. Mild reflux is developed by 9 out of 10 cyclists.

### **Exercise and Heartburn**

To give you more ideas, here are the links between exercise and heartburn:

### **Bent bodies**

Bending at the level of the waist reduces the distance between the stomach and esophagus. Muscles in the stomach tend to stiffen. In turn, your abdomen presses your stomach up against your LES. This loosens the LES, which is the primary heartburn cause. The same level of distress and discomfort may be caused by simple aerobics.

### **Physical activity**

Engaging in physical activity slows down the passage of food from the stomach. When your stomach is filled with food for a longer time period, they can easily reflux to your esophagus while you move around.

### **Eating Appropriately for a Pleasant Workout**

If working out triggers heartburn or if the mere thought of engaging in physical activity makes you want to grab onto your antacid bottle, the National Heartburn Alliance (NHBA) has some recommendations for you.

### **Consuming low-fat meals in tiny portions**

High-fat foods stay longer in the stomach because it takes a longer time to digest. The longer these foods spend in the stomach, the higher the danger that they will flow back into the esophagus and trigger heartburn. Low fat carbs are more preferable. They do not stay in the stomach for extended periods of time. In fact, they leave the stomach in a fast manner. For example, rice or potatoes is an example of a high-carb dish.

Also, do not forget to eat them in smaller portions. This is more ideal because tiny amounts of food are digested faster in the stomach.

### Staying away from food right before exercise

Do not exercise immediately after consuming a meal. The usual advice is to wait an hour before swimming or running, and longer if you ate a heavy meal. For adults, two hours after meals is even safer. The only activity that is exempted from this rule is a leisurely after-meal walk. While walking, even if you are in motion, you are still in an upright position, so the stomach does not press against the LES and causes heartburn.

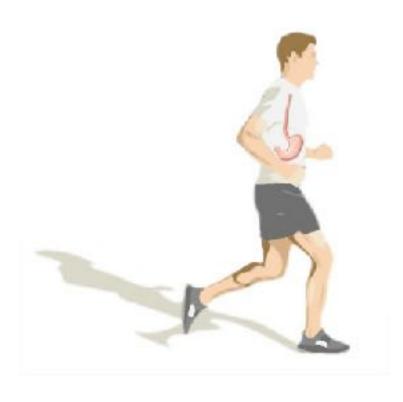
### **Consuming plenty of water**

Water is significant for every efficient exercise program. Drinking sufficient amount of water will help replenish the liquids you lose through perspiring. In addition, they also aid in moving food down to the digestive tract.

Adding more water to your diet also dilutes high carbohydrates concentration that you have eaten earlier on. This allows your stomach to empty more quickly after you drink some water. Remember that when there is less food and liquids in the stomach, there is also a lower chance of reflux.

### Modifying your exercise according to your reflux

Usually, people think of athlete-level or a very difficult workout whenever they hear the word 'exercise'. In fact, you can still exercise and not act as if you are going to compete in a sports tournament.



Exercise is simply a form of movement. By simply playing your favorite sport or by doing housework, you are already exercising. Another good form of exercise is

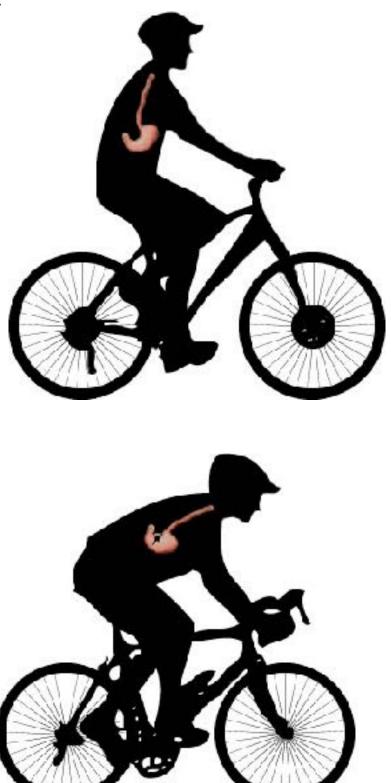


walking. In fact, it may even be considered an excellent form of exercise, especially for reflux disease. Compared to jogging which causes your internal organs to bounce, walking keeps almost every part of the body in motion, giving way to a smooth interplay of muscles.

Most importantly, walking is ideal for people with heartburn as it prevents bending or twisting the body or stiffening the muscles, which are movements that usually give way to heartburn. If you cycle, it will also be good if you will avoid bending so as to avoid reflux.

Always exercise in an upright position. In an upright position, there is no pressure on the LES.

However, when in a bent position, the stomach is in a position whereby it pushes against the LES.



You can also make simple adjustments so that exercising does not cause pressure to your digestive tract. Instead of cycling in a bent position for a prolonged period of time, keep your posture upright when cycling to prevent the stomach from pushing against the LES.

In an upright cycling position, there is no pressure on the LES.

However, in a bent cycling position, pressure is exerted on the LES.

### **Creating Acceptable Exercise Standards**

Let's say that you have not heard of the words heartburn and reflux. But you definitely have an idea of what exercise is, and you have thought of trying an exercise regimen in order to:

- Shed some weight
- √ Tone some muscles
- ✓ Enhance blood circulation
- ✓ Make you feel better in many ways

Performing some safe and effective exercise takes good planning and effort. A good way to start is considering the options that are available and setting ground rules. The following are some good examples:

### **Consulting your doctor**

Only start with your new exercise program after you have checked with your doctor. This is to know if you are suitable for the program that you have picked.

### Choosing an exercise that you enjoy

Exercising should be something that is fun and not exhausting. If you do not like basketball, jogging, tennis, or some other activities, you can try to create an exercise regimen that focuses on activities that are enjoyable to you.



### Making a schedule and sticking to it

You should exercise consistently to make it more effective. Remember that it is better to spend at least one hour of walking each day, rather than doing an extreme form of exercise once a year. Also, you have the choice to break down the one hour regimen into 3. For instance, you can have 3-20minute power walks and still get positive outcome.

### Step 5 - Healthy Habits to Heal Your Heartburn



It's still possible to enjoy a comfortable lifestyle when you have acid reflux. Paying closer attention to little details like the furniture you buy, your sitting and sleeping postures are some of the good habits you can adopt to alleviate your heartburn.

### **Getting Furniture that Combats Heartburn**

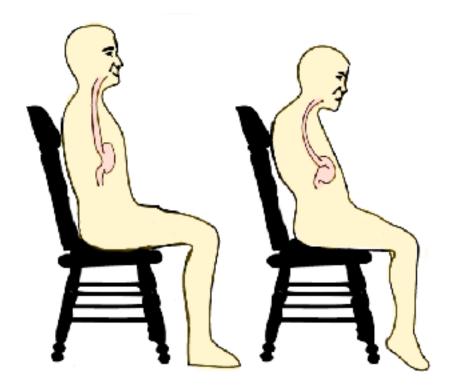
Standing is an easy and simple task for the digestive tract. This is because when you are upright, all the body organs are positioned accordingly. This minimizes your likelihood of getting heartburn. However, the opposite happens when you sit or lie down.

### **Choosing an Appropriate Chair**

Sitting may seem like a simple task that doesn't require much attention. However, if you bend your body just to match the couch, recliner, or chair that you may be using, you may experience acid reflux.

To help you select the best chair for your heartburn condition, you should pick one that has a square seat and straight back, with just the right height so your feet just touches the ground nicely.

The Shaker chair is one example that meets the given criteria. With it, you can achieve the proper sitting posture. In this case, the organs of digestion are in an upright position and not 'squashed'. On the other hand, if you sit on an oversized plush armchair or a recliner, your backbone slides down into the pillows, giving your back an uncomfortable C-shape which harms your spine.



Your stomach can move up against your esophagus if you do not sit up straight. This raises the chance that your LES will open, resulting in the reflux of acid contents that gives way to heartburn. You may enjoy chairs that are plushy or slouching while you are seated, however, remember that they are not good for the digestive organs.

Tip: While eating, remember that sitting straight is also a good position because it creates a straight passageway from your mouth down to your tummy.

### **Having a Quality Sleep**

Nighttime or nocturnal reflux is a condition that is experienced by approximately 80% of American adults who have heartburn. To give light on what nighttime reflux is, here are some descriptions:

- Compared to daytime heartburn, it is more painful.
- ✓ It causes loss of quality sleep.
- $\checkmark$  It gets in the way of completing work that should be done on the next day.
- ✓ When compared to diabetes and hypertension, nighttime reflux causes more psychological issues. In fact, it gives forth almost the same level of psychological discomfort that angina and congestive heart failure bring.

Unfortunately, a lot of evidence shows that nighttime reflux may potentially cause more damage than daytime reflux. This is because when a person is lying down, the acid remains in the esophagus for a longer period of time. For this reason, nighttime reflux may be deemed to be a very damaging disorder.

There are also some studies which showed that the symptoms of nighttime heartburn are II times more likely to lead to esophageal cancer compared to people who do not have them. It can be presumed that this is due to the acid that lingers in the esophagus for extended periods of time while sufferers lie down on bed.

Going back to the earlier images, you can see that the digestive tract is a long tube from the mouth down to the anus.

✓ While lying flat on bed, your digestive tract also remains in a flat position.

This makes the contents of the stomach flow back into the LES and injures your esophagus.

✓ On the other hand, if you raise the level of your head, stomach acid is less likely to reflux.

There is a big difference to your heartburn between the positions stated above. You might be wondering how you can get a comfortable version of the second position. To achieve it, good furniture will be beneficial.

### Getting a mattress

You mattress is essential when it comes to having quality sleep. Basically, there are two choices when picking a mattress: hard and soft. If you choose a mattress that is too soft, your body will be bent in the middle like a huge U-shape.

In this case, even if your head is more elevated compared to your middle, your legs are also raised higher. If you try to sleep in this contorted position, you will definitely wake up with aches in different parts of your body.

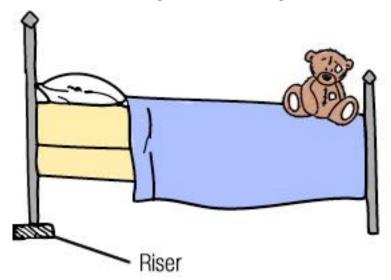
A medium-firm or firm mattress is the better option. Either kind of mattress provides you with sufficient support when you lie flat. Now that you know the ideal kind of mattress, you can now focus on the proper positioning of your upper body that will keep the esophagus above the stomach in a comfortable manner.

### **Generating an incline**

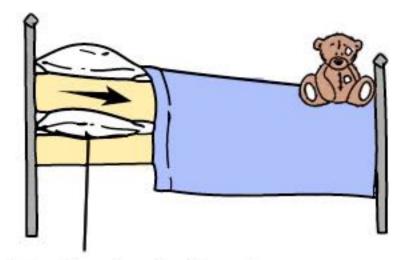
You have a lot of choices that will help you raise your head above your esophagus. When this happens, gravity will aid you in keeping acidic fluids in the stomach and away from the esophagus. Some choices are much better compared to others. You can opt to pile up pillows behind your head. However, doing this will create a steep angle that can be very uncomfortable to your neck.

These are the following approaches that I recommend:

☑ Under the back legs of your bed, place a riser, which will elevate the head of your bed approximately 6 inches above the foot. If you opt to do this, be certain to place the riser securely to the bed frame. Also, you will have to be more careful to avoid crashing the entire thing down to the floor.



A good thing to do if you are by yourself in bed is to try putting one regular or wedge-shaped pillow below the mattress. This will help create a sloping incline.



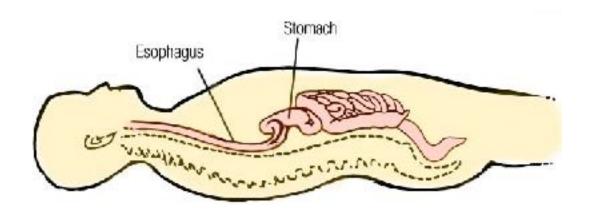
Extra pillow placed under mattress

☑ On the other hand, if you have a partner, make him or her understand that the bed will be slightly uneven. In any case, if you opt to choose firm synthetic foam or firm feathers, the inclined part starting at just below the shoulders will be smooth and steady. On top of the mattress, place a comfortably soft regular pillow.

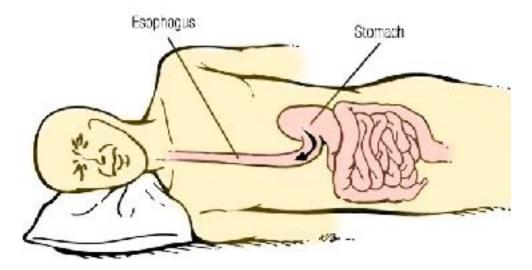
### **Choosing a Comfortable Position**

Your position whenever you settle down to rest and sleep may influence your likelihood of getting nocturnal heartburn. The aim is for you to keep your stomach on a level that is lower than the esophagus in order to lessen the possibility of having stomach acids flowing backwards to injure the esophagus. Following the steps below will aid you understand proper positioning when sleeping.

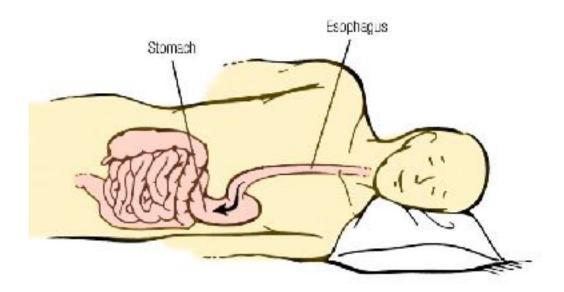
1. The figure below illustrates your digestive tract, which is a long tube that begins from the mouth and ends at the anus. With this image, you can see that the stomach, an organ that resembles a balloon and is located behind the left ribs, in one area of the tube.



2. On the bedroom, recline on the bed, flat on your back. Referring back to Figure 1, you can imagine that your digestive tract is flattened out too in that position. This means that acids from the stomach may reflux through a loose LES and get into the esophagus.



3. On your right side, lie on bed. In this position, your stomach appears to be more elevated compared to the esophagus. As a result, stomach acids can easily flow down into the esophagus. With gravity, the acids remain in the esophagus.



- 4. This time, lie on your left side. Check out Figure 3, which shows that in this position, your stomach is lower than the esophagus. This means gravity is on your side, making you safe from the backflow of stomach acids.
- 5. Have an extra lift. Put a wedge-shaped pillow below your head or under the mattress to help elevate the head of the bed.

# The Reflux Solution - Are You Going To Take Action?



Heartburn is a dreadful illness - you have to withstand the painful, burning feeling in your chest, sourish and bitter taste at the bad of your mouth, and the pain can be so unbearable that it radiates to the throat or the jaw. If the condition worsens, heartburn may lead to GERD, where there is inflammation of the esophagus. The question that is in our mind is, "Is there a permanent solution to my heartburn?"

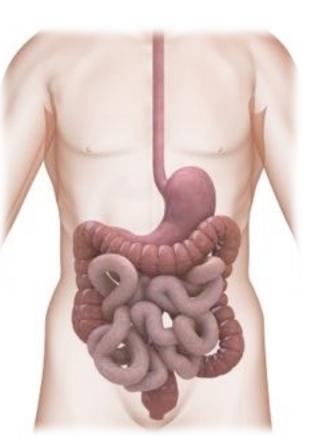
You have now gone through the entire course. From the introduction of the digestive system to how it functions, the causes of heartburn, the pitfalls of conventional medicine and lastly The Reflux Solution 7-Step Program. By now you should have a good understanding of the gut and the causes of GERD.

But do you know that majority of heartburn sufferers do not fully recover from heartburn even when they are on conventional medicine? In fact, more than half of heartburn sufferers fall into the acid trap because of poor diet and lifestyle choices. The bulk of the heartburn population suffer from stress-related problems from today's rat race society, an unhealthy diet, and an overdosage of medication, some of which prove to permanently halt the production of stomach acid and worsen heartburn even further.

Despite this fact, many doctors and gastrointestinal specialists have prescribed drugs like antacids and Proton Pump Inhibitors that claim to alleviate the symptoms of heartburn by drastically reducing the amount of acid in the body. Most of these drugs are potentially harmful in the long run, despite the fact that they may bring about temporary relief from heartburn. That's because our body requires acid for proper digestion, especially that of protein. And a malfunction in digestion will lead to an onslaught of problems, and that does not just refer to heartburn alone.

In other words, heartburn cannot be permanently halted just be consuming drugs. Drugs just makes heartburn spiral downwards. The pharmaceutical industry is an industry which sacrifices the health of heartburn patients for the desire to earn more profits, and it has proved to be a cash machine industry; many doctors prescribe heartburn drugs to acid reflux sufferers for life, helping pharmaceutical companies to generate billions of profit not just in a single year, but in mere days, it goes ka-ching, ka-ching, and the money just rolls in. They are doing nothing more than just damage to your body.

Also, the Standard American Diet has given rise to a very unbalanced internal system and wrecked havoc in our body, so much so that our internal pH is tilted to the acidic side. The acid forming food will slowly eat away the energy in our body, causing us to be tired and this eventually paves the road to stress-related problems and finally, digestive problems and heartburn.



### **The Simple Solution**

The solution brought about by our modern hectic lifestyle cannot be easily reversed overnight - neither is it possible to pinpoint your heartburn to one cause and one solution. The digestive system is a very complex system, and that's the reason why you have to take a total holistic approach to tackling the issue.

That means from avoiding certain foods, consuming the right diet, performing the right exercises, relieving stress using nutrition, exercise and aromatherapy, to meridian massage, cleansing and fasting... There are NO shortcuts! It's a matter of tweaking your health, step by step, one step at a time back to restore it to a harmonious healthy state. The effects of a healthy you will cascade down to alleviating the burning sensation in your chest.

Do not hope for a push button formula. There are NO push button formulas. OTC medication and quick fix formula give you temporarily relief but the side effects will kick in and you'll be trapped in the vicious cycle again.

You have to be consciously performing healthy and meaningful task to stop heartburn. It's a matter of committing yourself to The Reflux Solution every day. Many people have spent their entire life building their wealth, only to use the wealth to regain the health later on in their lives. Do not fall victim to this. You can design your health by committing yourself to good diet and habits every day. The Reflux Solution offers to do just that; restore your health and bring serenity and peace to your life. It is up to you to take action and be healthy.