“More than 60 million Americans get heartburn at least once a month, “ (Increasing). It is clear that heartburn and acid reflux are common occurrences in the United States.

Acid indigestion, acid reflux, and heartburn are all names used to describe an uncomfortable feeling one may sense habitually or just periodically. It is generally a primary result from Gastroesophageal Reflux, which is when hydrochloric acid and the enzyme pepsin from your stomach get sloshed up into your esophagus instead of continuing to flow through the digestion tract (Janowitz 42). To understand completely what Heartburn is, it is important to review how digestion works, and even more specifically how the stomach and esophagus play an important role in digestion.

Food first enters one’s digestive system through the mouth where it is softened by saliva, broken down into very small pieces, and swallowed. The food pieces then move through the esophagus, where no digestion takes place, and the pieces of food are transferred to the stomach where most of the digestion occurs (Elgin 28). At the end of the esophagus, the food flows through the cardiac opening through the esophagus sphincter and down into the Fundus, the upper part of the stomach. Next, the food travels from the Fundus to the Pylomus where the bulk of the disassembling of food pieces happens (Parker 23). Inside the stomach, enzymes are released that help break down the food into even smaller molecules which can be easily digested. Pepsin and Trypsin break down the protein molecules while Amylase and Maltase break down the molecules of carbohydrates. Lipids need a special lipid soluble enzyme called Lipase to digest them (Parker 12).

These enzymes are part of what is known as gastric juice, or the acid that breaks down all the food we consume. In addition to the enzymes, Gastric Juice contains high amounts of Hydrochloric acid, which, not only breaks down food, but also destroys a large amount of bacterium that might be present (Elgin 34). Once the food molecules have traveled through the stomach and have been almost completely digested, then leave the stomach in the form of Chyme and enter into the small intestine to finish their passage through the digestive tract (Parker 24). This is where problems might arise.

Acid indigestion could occur just after the stomach has finished its digestive jobs; it might have trouble emptying itself into the small intestine, which would be the next stage of digestion. In this case, pressure would build in the Pylomus and push the Chyme up into the Fundus, which would put pressure on the Esophageal Sphincter. This could cause the sphincter to flap open and permit Chyme, Hydrochloric acid and partially digested food, up into the esophagus (Janowitz 44). The pain felt is a result of the lining of the esophagus coming in contact with an extremely acidic environment that it is not accustomed to. This is one form of acid reflux.

More often, acid reflux is a result of a weak or malfunctioning Esophageal Sphincter muscle. The job of this muscle is to soften when one swallows to allow food into the stomach, and then to snap shut once the food has passed (Carper 149).

The reason most people feel discomfort in their chest due to heartburn is because of their eating habits. "Most often, the predisposing culprit [to weakening the sphincter] is your dietary pattern," (Carper 147). Certain foods have a tendency to relax the sphincter muscle and make heartburn a more frequent occurrence. Some of these foods are chocolate, peppermint, coffee, alcohol, and raw onions. Other foods such as citrus and spicy foods have a tendency to irritate the esophagus and can trigger the burning sensation without weakening the sphincter (Carper 154). Coffee drinkers tend to experience Acid Reflux more commonly because of the chemicals in coffee. Coffee is a stimulant and can over stimulate the esophageal sphincter. This allows random movement of the muscle and therefore acidic fluids to be pushed back up into he esophagus. Also, people who are overweight tend to experience more heartburn than those people who have an average weight. Pressure can build up on the esophageal sphincter when a person is overweight and cause the muscle to slip open, especially after meals, allowing acid and Chyme from the stomach up into the esophagus (What is). Eating habits play a large role in the onset of Acid Reflux, but there are other factors that can trigger heartburn.

Smokers and women who become pregnant are also greatly affected by heartburn. The chemicals in cigarettes and other tobacco products tend to be relaxants that can affect the sharpness of movement of the sphincter muscle (What is). This muscle becomes relaxed easily by tobacco and in turn, does not do its job to the highest capability and allows for Chyme to flow through. In pregnant women, the added pressure of a fetus upon the stomach and lungs makes heartburn a more common occurrence. 25 percent of pregnant women experience heartburn every day, while 50 percent have occasional occurrences of heartburn (What is).

Overall, 40 percent of the world’s population experience heartburn and Acid Reflux (What is). This number includes infants, children, adolescents, and adults. Although it is a common affliction and sometimes only a temporary one, acid reflux should always be taken seriously since it may lead to more serious conditions.

For example, acid indigestion and heartburn is not only very painful, but it can be a symptom of a more serious gastrointestinal disorder (Wolfe 113). In The Fire Inside, Dr. Wolfe described a patient who had reoccurring heartburn for many years, but just took antacids to treat it. He began to complain of difficulty breathing. It was soon discovered that the patient had lung cancer that had stemmed from a condition known as Barrett’s Esophagus (Wolfe 114). This condition progressed into esophageal cancer, which metastasized into lung cancer. Barrett’s Esophagus is a condition that can develop from chronic Gastro Esophageal Reflux Disease. The normal cells that line the esophagus, called squamous cells, turn into a columnar cell, which is not usually found in humans. (Healthlink). Wolfe feels if he had been able to properly treat the patients condition he might have been able to prevent his death.

Although Dr Wolfe described an extreme example of acid indigestion, acid reflux can lead to other non-fatal, but serious problems if left untreated. Heartburn is also a known symptom of a Hiatus Hernia, which is a condition where a small part of the stomach protrudes into the diaphragm and into the chest. This condition can be fixed by surgery; however, if left untreated is very painful (Balch 21).

Another problem associated with heartburn and acid indigestion is Dysphagia, or difficulty in swallowing (BDF). Acid reflux can lead to inflammation of the esophagus, which in turn causes difficulty in swallowing. Dysphagia can also be a sign of other serious problems, like myasthenia gravis or esophageal cancer. (Belch 19) Myasthenia Gravis is a condition where the immune system attacks the receptors that lie on the muscle side of the neuromuscular junction (Merrick 333).

High concentrations of stomach acid that are associated with heartburn can also lead to esophageal ulcers which are caused by repeated regurgitation of stomach acid into the esophagus. This also causes swelling of the esophagus, which is a condition known as esophagistis (Merrick 496).

Acid indigestion can be the source of many problems if left untreated; however, using antacid every time discomfort is felt is not a beneficial solution to the problem. Every year, Americans spend close to three billion dollars on medications to treat heartburn. One survey showed that around 25 million Americans take antacids twice a week (Wolfe 12). Taking so many drugs is not good for the body because many of them interfere with the absorption of nutrients and also give the body another chemical that it needs to get rid of (Balch 7). These drugs do not solve the problem; they just treat the symptoms. Antacids can also cause trouble because most patients do not know the limitations and proper use of the drugs (Wolfe 49).

Aside from causing more long-term problems, antacids have a variety of side effects, including: diarrhea, problems metabolizing calcium, and kidney diseases (Rosenthal 75).

Some antacids are made with calcium, and while calcium is good for the body, this medicine should not be taken as a supplement. Calcium based antacids can cause acid rebound where the stomach produces even more acid, causing the reverse effect that was desired (Balch 13).

Other antacids are made with magnesium hydroxide and magnesium carbonate, which both have a laxative effect and are therefore mixed with aluminum compounds, which tend to cause constipation. The excess aluminum can accumulate in the brain may eventually be a factor in Alzheimer’s disease. They also can cause problems with people who have kidney trouble. People with kidney trouble cannot expel all the magnesium and the minerals can accumulate, causing high blood pressure (Balch 13).

It is due to all these complications that finding natural ways to beat indigestion is so critical. As nutritional supplement expert Earl Mindell, R.Ph., Ph.D., said, “Manufacturers won’t admit it-but their antacids are often the cause of chronic stomach pain. Please don’t take antacids for indigestion...You can beat indigestion naturally” (Balch 14).

Heartburn is a huge problem in the United States and is often treated in harmful ways. Although there are many alternative ways to treat heartburn, most people use over the counter medicines that have negative effects on their heath. The problem of antacids brings up questions regarding the effectiveness of natural cures for heartburn. Can natural foods act as alternatives to antacids in relieving the pain of heartburn and reducing the level of acidity in the stomach? We feel it is important to discover how effective alternative treatments to acid indigestion can be in order to find cures that are beneficial to the body.