

Stomach Acid: It's Not an Enemy to Be Neutralized

November 2006; Updated June 2007



Michael Cheikin MD
Holistic Medicine & Psychiatry
610-239-8626 drc@c4oh.org

Acid! Burning away at our innards! Wow, that's scary. Scary enough to make me take a purple pill for the rest of my life. NOT!

It saddens me to see my patients turn white when I suggest that they need stomach acid--that a root-cause of their allergy, pain, depression, rosacea, asthma, autoimmune disease, acne, and even heartburn, may be a lack of stomach acid. Our fear of stomach acid is a tribute not to scientific research, but to marketing and lack of information.

What is Acid?

If you remember the concept of "pH" from high school, this value ranges from 1 to 14, with 1 and 14 representing very strong acid and base, respectively. Water is 7, or neutral. Each number lower than 7 increases acidity by a factor of 10, so a pH of 5 is 100 times more acidic than 7, and a pH of 1 is 1,000,000 times more acidic than water! Strong acid, such as hydrochloric acid, can burn you. So can a strong base, such as sodium hydroxide (lye, Draino). Equal quantities of acid and base neutralize each other.

The Role of the Stomach in Digestion

The stomach is designed to maintain a pH of between 1 and 2! We evolved to produce a lot of acid. What is its purpose? There are many. First, this acidic environment kills much of the bacteria, yeast and other evil things that enter our mouths (see H Pylori below). Second, acid is needed for the stomach to release intrinsic factor, a compound which enables the absorption of Vitamin B12 (a deficiency of which can cause neurological and inflammatory problems). Third, a low pH is needed to absorb many minerals such as magnesium.

The next purposes of stomach acid are extremely important and related to the cause of food allergy, malabsorption, irritable bowel syndrome, and other diseases.

Fourth, a very low pH (= high acid) triggers the pancreas and intestines to release enzymes, hormones and other compounds that are necessary for digestion.

Fifth, the enzyme pepsin, also produced by the stomach, requires acid to break down proteins into the basic amino acids that we need for nutrition.

Of utmost importance, if undigested proteins remain in the intestines, due to lack of stomach or pancreatic enzymes, the immune system can react to these as if they are foreign invaders, causing "food allergy" and inflammatory reactions. This can lead to "leaky gut", where toxins from the gut enter the bloodstream and cause more generalized inflammatory reactions (which can be the root cause of the conditions

listed in the second paragraph).

So how come the acid doesn't digest the stomach itself? The stomach produces mucus which coats its lining. Such mucus production can be decreased by drugs such as aspirin, Motrin or Advil (ibuprofen), Alleve (naproxen), and many of the other NSAID's. Stomach lining protection is enhanced by agents such as licorice, ginger and aloe vera.

There is a condition called atopic gastritis, in which the stomach fails to produce enough acid. It is a known cause of ulcer (due to invasion by ulcer-causing bacteria), gastric cancer, malabsorption, nutrient deficiencies, and conditions due to such deficiencies. Taking drugs called Proton Pump Inhibitors ("PPI's) such as Prilosec, Prevacid, Protonix and Nexium turn off stomach acid and essentially cause the same situation. Tums and Zantac are less strong, but do the same thing. However, the long-term effects of taking these drugs have not been studied--more on this later. Since writing the first edition of this article, I have seen numerous adults and children who have been on PPI's for many years and have documented nutritional deficiencies.

The Esophagus and Lower Esophageal Sphincter: GERD, Hiatus Hernia

The esophagus passes through the chest and through the diaphragm to enter the stomach. At this esophagus-stomach junction is a muscular valve called the Lower Esophageal Sphincter, or "LES". If this sphincter doesn't close completely, then there can be "reflux", or washing of the stomach's contents into the esophagus. With "regurgitation" the contents work their way up to the mouth. The esophagus is not supposed to have acid in its contents, and if it does, it causes the burning sensation of heartburn (or variations such as spasm).

Many conditions compromise the integrity of the LES. In obesity and pregnancy, the abdominal contents push up against the stomach contents, weakening the sphincter. Certain foods, such as peppermint, coffee, and chocolate decrease the LES pressure. We also tend to reflux foods to which we are allergic. Allergenic foods, with or without acid, tend to sit in the stomach too long, which causes both reflux/regurgitation and bloat.

In extreme cases, the upper portion of the stomach moves through the diaphragm, which is called a "hiatus hernia". In such a case, the LES is not supported by the muscular diaphragm, and reflux can occur easily.

Testing for Acid

It would seem easy to measure acid in the stomach. Indeed, sending down a probe or tube to take a sample is simple. However, the pH varies with region of the stomach, time of day, type of meal, etc. So, making a diagnosis of "too much acid" is very difficult. In fact, many of the claims made by the drug commercials are not substantiated by scientific fact (listen to the disclaimers during the commercials!).

It is common to measure pH in the esophagus, which should never be acidic. If acid is detected, the conventional treatment is acid suppressing drugs, which people often take for years and even decades. However, the root cause of acid in the esophagus, which might be as simple as lack of stomach acid or enzymes, or food allergy, is never healed with such an approach.

H Pylori

The history of ulcer treatment is typical of medical discoveries. While there were many drugs and surgeries offered over the past 100 years, one scientist claimed that an organism called H. Pylori was the cause. While initially rejected by the medical establishment, this cause was ultimately proven true. Many types of ulcers are now treated with a course of antibiotics with good success. However, the root cause of the H. Pylori infection may be a lack of stomach acid--as the stomach acid is a major defense against all bacterial invasion. Therefore, treatment of H. Pylori may be short lived if the root cause is not healed.

Reflux and Asthma

There is an interesting connection between asthma and reflux. The mechanism is unclear but may involve the autonomic nervous system. In some people, helping their reflux helps their asthma and visa-versa. We all reflux a bit, especially at night when we're horizontal. It's the totality of the situation that determines whether we are healthy or have a dis-ease.

Role of Holistic Medicine

Techniques such as yoga, acupuncture, special diets and special supplements can all help with esophageal and stomach problems. Each has a distinct role, which, in combination, can help with healing.

By the time most patients have come to me, they have already had a million-dollar work-up including routine blood tests, endoscopy (a scope looks at the esophagus and stomach), biopsy (to rule out serious conditions such as Barrett's esophagus and cancer), and other tests such as culture for the H. Pylori infection. In such a case, repeat tests are not needed. However, if such tests have not yet been done, they are important to do to rule out one of these serious conditions.

Oftentimes, patients have been on PPI's for months to years. If these medications are stopped too quickly, there can be a rebound of stomach acid that is quite significant (and which ensures drug sales for years!).

Therefore, the holistic approach involves gradually introducing healthy alternatives, such as supplements, herbals, acupuncture, yoga, etc, and then gradually reducing medications. All of this must be under the supervision of a qualified practitioner.

IMPORTANT NOTE: This educational material should not be used to make decisions about individual medical care without the involvement of a qualified practitioner.

For More Information

- O See Dr. Cheikin's related articles on: Stress, The Courage to Heal, Journaling and other topics
- O Dr. Cheikin's website, www.cheikin.com, has helpful articles on related topics
- O Dr. Cheikin offers Workshops on Journaling, Chronic Pain, Weight Management and other topics, and classes in yoga, meditation, and other styles of personal health and wellness. Call to be placed on Dr. Cheikin's contact list or if you wish to host a Workshop.
- O Wright, Jonathan: Why Stomach Acid is Good for You. M. Evans and Company, Inc, 2001. ISBN 0871-319-314.
- O Murray, Michael & Pizzorno, Joseph: Encyclopedia of Natural Medicine, Revised Second Edition. Three Rivers Press; 2nd Rev edition, 1997. ISBN 0761-511-571.
- O Campbell, TC & Campbell TM: The China Study: The Most Comprehensive Study of Nutrition Ever Conducted and the Startling Implications for Diet, Weight Loss and Long-Term Health. Benbella Books, 2005. ISBN: 1932-100-385.
- O Pizzorno, Joseph: Total Wellness: Improve Your Health by Understanding and Cooperating with Your Body's Natural Healing Systems. Prima, 1997., ISBN 0761-510-94X.
- O Sivananda Center: The Sivananda Companion to Yoga. New York: Simon & Schuster, 1983. ISBN: 0684-87000-2.

The contents of this article are copyright 2006-7 by Michael Cheikin MD and may not be reproduced without express written permission.

Michael Cheikin MD is a holistic physician, Board Certified in Physical Medicine and Rehabilitation ("Physiatry"), Pain Management, Spinal Cord Medicine and Electrodiagnostic Medicine, and licensure in Medical Acupuncture. He has provided leadership to several local medical institutions. Dr. Cheikin has extensively studied yoga, nutrition, metabolism, biochemistry, physiology, neurology, Ayurvedic, Chinese, energy medicine and other alternative modalities for over 30 years. He uses the best of conventional and "alternative" modalities, including special lab tests, medical nutrition, medical yoga and medical acupuncture to develop balanced, natural, individualized programs to enhance the healing of obscure, chronic and severe problems. He accepts most insurances for consultation with adults and children. 610-239-8626 or drc@c4oh.org.