

# The Tuesday Minute

*Nutritional information.... one byte at a time*

## *This Week's Topic*

### **Addressing Low Hydrochloric Acid**

Let's start with a question, what do these have in common: chronic fatigue, anemia, asthma, rheumatoid arthritis, acne rosacea, food allergies, gallbladder symptoms, and autoimmune disorders? The answer is a strange one, hydrochloric acid deficiency; in fact, the more chronic the condition, the greater the incidence of hydrochloric acid depletion.

Here's an interesting study. On a college campus, baseline levels of hydrochloric acid were taken from "healthy" college students and before the experimental part of the trial could begin, the flu broke out on campus. This adds a twist to any hydrochloric acid experiments as sickness will diminish hydrochloric acid production. In an effort to salvage time and data, researchers decided to see how long it would take for the subjects to return to their baseline levels of hydrochloric acid after the flu abated. For the majority of the subjects it took 2 months, however, it took up to 6 months for 2 of the subjects.

This should serve as a reminder for all of us who see chronically ill patients that are battling trauma or disease, that there is a good chance there is a digestive component as part of the clinical picture. And unless we fix that part, they will never really return to health.

Let's look at ways to assess hydrochloric acid deficiency. The Heidelberg test is considered the gold standard of hydrochloric acid determination. The procedure is to have patients swallow a capsule which contains a radio transmitter that measures the pH of the stomach. It measures the patient's baseline stomach pH

and then the stomach is challenged with a bicarbonate solution and timed to see how long and to what degree the stomach can recover and return to the baseline pH.

The Balancing Body Chemistry group did thousands of comparisons between digestive symptoms and blood testing using the Heidelberg test. The results showed symptoms were often more important than blood parameters in determining hydrochloric acid need. Symptoms like bad breath, body odor, loss of taste for high protein foods, burning or "acid" stomach that is relieved by eating, gas shortly after eating, indigestion ½-1 hour after eating but can last up to 4 hours, difficulty digesting fruits or vegetables, often seeing undigested food in your stools, and acid or spicy foods that upset the stomach.

You can click on this page for the Health Appraisal Questionnaire they used and look at Category 1 section A. Jonathon Wright, author of "Why Stomach Acid is Good for you", has also tested thousands of patients using the Heidelberg capsule. He adds the following tell tale symptoms of low hydrochloric acid : weak fingernails that crack, peel, or chip; slow hair growth, heartburn, leg cramps, and nutrient deficiencies like iron, calcium, magnesium, folic acid, B12, B 6, and zinc to name a few. After all, if we cannot digest our proteins effectively, we will see slower protein synthesis in the areas which require protein and amino acids like nails, hair, and even hormones.

How prevalent is low stomach acid or hypochloridria? Dr. Wright says the range may go from 4% with patients in their 20's to 75% of people over 60. He

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says as many as 30% of those over 60 may have gastric atrophy. Our stomach lining is geared for low pH, and we have layers of healthy mucus that line the gut to protect us from that low pH. But if the pH goes too high from the fermentation of undigested foods, mild organic acids are given off which can actually irritate our stomachs. So it's rarely too much hydrochloric acid but rather not digesting our foods in the first place that causes the problem.

Dr. Wright's book presents a fascinating discussion on why we need hydrochloric acid, and how we are increasing the population of bacteria like H Pylori and causing more stomach cancers with the use of these antacids when used over a long period of time.

There are different philosophies about when to take hydrochloric acid and how much should be used for each meal. But here is how I have used hydrochloric acid effectively for years. First of all, take the hydrochloric acid in the middle of the meal. If we want to digest food we should take the supplement in the presence of the things we want to digest, food. This way the hydrochloric acid mixes with the food as the body intended.

Also, the reason patients are complaining about indigestion is that the layer of mucus lining in the stomach has become too thin and therefore ANY acid will cause some discomfort. Remember, take hydrochloric acid with food and in the middle of a meal. Our goal is to reach the optimal pH in the chyme so that we can digest the foods in the stomach that are intended to be digested, kill the unwanted bacteria in food, and turn on the enzymatic reactions down the GI tract to continue the digestion process particularly for starches and fats.

The next big key is the dose. Again there are many different points of view. Some say take enough until the symptoms are gone.

This appears to be a good starting point but many patients, especially men, aren't very sensitive to their bodies and may not be getting enough. Certainly, some is better than none but if we want the optimal dose for that person, here's a good rule of thumb. Start out by taking 2 tablets of Hydro-Zyme in the middle of each meal. Hydro-Zyme is a low dose hydrochloric acid by Biotics Research. Stick to this dosage for 3 days. Then, after 3 days add one more tablet. After another 3 days, add one more tablet and continue adding tablets until there is warmth or slight burning in the stomach. Once that level of discomfort has been felt, cut back one tablet.

Now of course we are talking about a normal size meal. If someone eats a smaller portion of food, make sure they use less tablets. Once the first bottle of Hydro-Zyme is gone, if more than 5 tablets per meal are used to optimize digestion, switch to Betaine Plus HP. One capsule of Betaine Plus HP is equivalent to about 3 or 4 tablets of Hydro-Zyme. A healthy stomach will make 60 or 70 grains of hydrochloric acid per meal, the equivalent of 6 or 7 Betaine Plus HP. So do not be surprised if it takes 6 or 7 capsules to feel the warmth.

Now of course we do not want to give hydrochloric acid to people who we know have open stomach or esophageal ulcers even though they may need it. We have to heal the ulcers first. Also, if someone takes starting dosages of 2 Hydro-Zyme and it causes warmth or burning, we want to stop the supplements and heal the stomach lining first, then go back to optimizing the stomach acid. See the previous Tuesday Minute below on Healing the Stomach.

Hydrochloric acid deficiency plays a major role in many conditions. It's worth paying attention to. Thanks for reading this week's edition. I'll see you next Tuesday.