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Betaine-HCL for Improved Digestion

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Stomach acid enables breakdown of food. Stomach acid is the second stage of digestion, after chewing. Very high levels of acid, pH 1-2, are very important for this process. Strong stomach acids:

- **Ionize** minerals to supply mineral and primitive **amino acids**;
- Kill **bacteria**, parasites and organisms in food to protect the body from invasion;
- Supplies acid enable the liver to dump toxins.

Insufficient stomach acid, **hypochlorhydria**, enables bacteria, and other organisms to survive. During digestion, these organisms **ferment** food and create **carbon dioxide**. This flow carries both **gastric acid** and food back up the **esophagus** which causes problems:

- Weak, but still caustic, stomach acid irritates the esophagus causing **heartburn**;
- Cases excessive **burping or belching**;
- Chronic esophageal irritation results in **GERD, or Gastroesophageal reflux disease**;
- Persistent irritation can result in **esophageal cancer**.

What Causes **Hypochlorhydria**?

In simple terms, **any form of biological stress**.

Did you ever notice:

- Digestion stalls immediately with emotional or physical challenge?
- Nausea often accompanies prolonged stress?



Chlorides serve many roles in the body:

- Primary agent for Hydrochloric Acid, HCL, in the stomach to digest food;
- Secondary oxidation agent as a backup to oxygen to burn off (oxidize) toxins;
- Cellular Neutralization of persistent toxins;
- General electrolyte.

[Dr. Emmanuel Revici](#) documented that most, *if not all*, pathogenic cells absorb [chloride](#) into the [double bonds](#) of [unsaturated fatty acids](#).

Revici correlated chloride stress physiology to both:

- Systemic chloride depletion resulting in insufficient stomach acid;
- Appearance of chlorine oxidized lipids on the surface of the intestine resulting in bowel dysfunction;
- As a result of stress.

For the purposes of this paper, stress results in a sequence of digestive dysfunctions which worsen depending on both severity and duration of the stress:

- Phase 1 - Loss of stomach acid (Depletion of chloride available to the stomach for digestion);
- Phase 2 - Intestinal inflammation (Accumulation of chloride oxidized lipoids on the surface of the intestines).

For More information see [Stress Detox HowTo](#).

Betaine-HCL Digestion Protocol

It is impossible to predict how much Betaine will be required. This method determines the number of capsules to aid digestion. Gradually increasing stomach acid to a point of a warming sensation enables determination of the amount which will typically be required for improved digestion.

You will only need to use this method at the first meal. After you know how many Betaine you need, you can just take them at the middle or end of each meal.

Betaine Test Meal Instructions:

- Eat ½ of meal
- Take 2 capsules
- Wait 1 minutes
- Is stomach Warm?
- If Yes, remember number, this is your standard dose. Eat rest of meal
- If No Take another capsule, wait 2 minutes, and so on
- Stop at 10 capsules unless otherwise directed

If 10 capsules does not produce a warming sensation, then you are very acid deficient or lack the ability to produce Hydrogen. Ask your doctor to test if you have H-Pylori. H-Pylori consumes hydrogen and likewise limits creation of stomach acid.

Even if 10 capsules do not produce warming, they will be of big benefit improving food absorption and digestion -- Continue taking them.

If you reach 10 Betaine, you likely have significant stress toxins. See [Stress Detoxification HowTo](#).

Nausea Protocol

For Nausea:

1. Score the Nausea on a Scale of 1-10
2. Take One Capsule if under 60 lbs, two if 60-120 lbs, three if 120 lbs+
3. Wait 2 minutes
4. Score Nausea again
5. Stop if:
 - o Nausea gets worse
 - o Nausea stops getting better
 - o You've hit 6/12/15 capsules (Increase if tolerance last time was good)
6. Continue if:
 - o Nausea is better
 - o There is no change and less than 4+ capsules. [4+ means that you can increase the ceiling each time you use the protocol. I've used 10 with my kids without ill effect.]

If the program does not work, it means that the issue is probably more liver related than stomach.

Pathogens and Chloride

Viruses and other pathogens tend to "pull" chlorine out of circulation, resulting in the inability for the stomach to draw chlorine to make stomach acid. [Dr. Emmanuel Revici](#) documented chloride loss getting bound to double bonds of unsaturated fatty acids in pathogenic cells. Persistent chloride loss results in insufficient chloride available to make stomach acid, hence the normal loss of stomach acid resulting from pathogenic or other stress.

This deficiency eventually disables stomach acid production, and indirectly clogs the bile path. Finally, chlorine deficiency results in systemic lymph and liver toxicity.

Toxin Accumulation

Individuals with viral, and cell wall deficient, pathogens often exhibit an absence of stomach acid due to chronic imbalance in chlorine metabolism.

Long term chlorine deficiency causes liver congestion, and degeneration resulting from systemic toxin accumulation.

With optimal digestion, acid, exiting the stomach mixes with alkali bile. The mix separates food molecules into biologically active charged particles called ions, which the body uses.

The release of bile enables the body to "eliminate" the toxins processed by the liver in feces. When the bile path experiences insufficient release, because of deficient stomach acid, inhibited toxin release enables accumulation.

Stomach acid is essential to detoxification. An absence of stomach acid prevents the liver from releasing bile, which inhibits bile flow, which in turn prevents the entire liver and lymphatic system from releasing stored toxins.

If unaddressed, Gall and liver stones develop from resulting in physical blockage, as toxins condense into solid masses.

Deplete Stomach Acid

When stomach acid is depleted, there are three unfortunate results:

1. Nutrients are not absorbed;
2. Unfriendly organisms flourish in the gut further disrupting digestive health;
3. The liver refrains from releasing alkali bile to avoid burning the gut.

Indicators for inadequate stomach acid are:

- Belching;
- Digestion which stalls in the stomach;
- Heartburn accompanied by belching or upper GI bloating or gas;;
- Chronic constipation.

Over time, the combined absence of digestion bile release causes liver toxins to accumulate, and finally health degenerates due to both malnutrition and toxins.

Betaine-HCL

Betaine is a combination of HCl, or Hydrochloric Acid and trimethylglycine, TMG. In the stomach, the molecules split, and the HCl becomes available for digestion. The increased quantity of HCL improves ionization and breakdown of protein and foods, resulting in improved digestion.

Increasing stomach acidity kills the bacteria and stops the bubbles hence the discomfort.

Betaine-HCL Under Use

Betaine-HCL provides stomach acid and will aid digestion and reduce malnutrition which virtually always accompanies hypochlorhydria.

Use of insufficient amounts of Betaine-HCL may increase digestive discomfort:

1. Heartburn results from fermenting organisms which create gas bubbles;
2. Which carry weak acid up into the esophagus;
3. Causing discomfort because the acid irritates the esophagus;
4. Betaine-HCL increases stomach acid levels;
5. So stronger stomach acid can increase esophageal discomfort;
6. Unless it is strong enough to disable fermenting organisms from producing gas;
7. Enough acid stops the bubbles;
8. Which carry the stomach acid into the esophagus.

To resolve heartburn, take 4 Betaine, preferably 600 mg. Use of a single Betaine usually increases discomfort because it makes the stomach acid strong enough to hurt more, but not enough to disable the microorganisms causing the gas bubbles.

More capsules, **usually 4**, increase the stomach acid enough to disable the organisms. This stops the gas and resolves the heartburn. A small increase in most cases only increases the discomfort by making the acid which hurts the esophagus stronger.

Overshooting Betaine-HCL

Do not take Betaine with carbohydrate only meals. Use Betaine only with meals having protein.

If you take too much, it may cause discomfort, take 1/2 tsp of baking soda in water. It is also possible for the stomach to be too acidic. This is very rare. In this case, Betaine will cause excess discomfort. Add ½ teaspoon of baking soda to a short glass of water and drink. The baking soda, sodium bicarbonate, will quench the stomach acid very quickly and eliminates acidic stomach pain.

Functional Malnutrition

Over time malnutrition is inevitable. Chronic stomach acid insufficiency causes the body to resort to reserves by utilizing constitutional resources to compensate for deficient nutrition.

Loss of muscle and bone reflect nutrient deficiency as the body cannibalizes itself for survival in the absence of nutrition.

It's important to recognize the difference between what you eat and what you absorb. If your digestion isn't working, what you eat is virtually irrelevant.

Long term stomach acid depletion forces the body to digest itself.

When the condition persists, malnutrition, from inadequate protein mineral ionization, not enough mineral and not enough usable protein, result.

Clinical Markers

rH2 is the oxidation reduction potential of the urine. It is an indicator of the ionization potential of blood filtrate, or urine. When it is elevated, it indicates an excess of protons in the blood. When the stomach lacks Chlorine, the stomach does not drain, from the blood, and the result is a tendency for elevated urine ORP. This weakly suggests insufficiency of chlorine in the stomach.

Inversely, a deficiency of protons in the blood, indicated by an elevated ORP. Certain infections, H-Pylori, consume hydrogen in the gut, and cause a lowered urinary ORP.

Bee Propolis is a preferable nontoxic product to reduce H-Pylori in the gut.

Drugs and Digestion

Proton Pump Inhibitors

Often individuals present digestive challenge are given proton pump inhibitors, or PPIs.

PPI's inhibit creation of stomach acid by limiting the stomach's ability to create hydrogen. Normally PPIs are prescribed for heartburn, under the unfortunate assessment that heartburn results from excess stomach acid. This is usually exactly wrong.

In the absence of stomach acid, organisms, like bacteria and yeast ferment food. Fermentation creates Carbon Dioxide gas, which bubbles upward into the esophagus. Bubbles carry the stomach acid which was too weak to kill the organisms into the

esophagus causing a burning sensation.

Use of agents which disrupt acid production to treat conditions caused to insufficient acid reflects a destructive use of an agent, and makes a bad problem to become worse.

If left untreated, the esophagus is damaged resulting in a [hiatal hernia](#), or injury to the [esophagus](#).

Calcium Channel Blockers

Have a similar effect.

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