Testing for Low Stomach Acidity

A normal stomach acid level creates a pH of 1.5 to 2.5. But as we age, the parietal cells in the stomach lining produce less stomach acid (HCl). In fact, half of people over the age of 60 have hypochlorhydria (low stomach acid), and by age 85, 80 percent of the healthy people tested had low stomach acid. Use of acid-blocking medications increases stomach pH to 3.5 or higher. This inhibits pepsin, which is a potential irritant to the stomach but is also essential for digestion of protein. Stomach acid is also necessary for absorption of many minerals. In addition, stomach acid provides our first defense against food poisoning, *H. pylori*, parasites, and other infections. Without adequate acid, we leave ourselves open to decreased immune resistance.

Hypochlorhydria has been associated with many common health problems. Overgrowth of bacteria in the small intestine occurs in 20 percent of people aged 60 to 80 and in 40 percent of people over age 80. Adequate HCI is necessary for the absorption of vitamin B12 from food; B12 deficiency causes weakness, fatigue, and nervous system problems. Vitamin C levels are also low in people with poor stomach acid. Several minerals require an acidic environment for absorption, including iron, calcium, magnesium, zinc, and copper. Acid is critical for the breakdown of protein bonds in the stomach, and poor acid content in the stomach causes indigestion. The symptoms of hypoacidity often mimic those of hyperacidity.

Hypochlorhydria may be caused by the following: pernicious anemia, chronic *H. pylori* infection, long-term treatment with proton pump inhibitors (like Prilosec®), autoimmune gastritis, and mucolipidosis type IV.

Common symptoms of hypochlorhydria

- Bloating, belching, burning, and flatulence immediately after meals
- A sense of fullness after eating
- Indigestion, diarrhea, or constipation
- Multiple food allergies
- Nausea after taking supplements
- Itching around the rectum
- Weak, peeling, and cracked fingernails
- Dilated blood vessels in the cheeks and nose (in nonalcoholics)
- Acne
- Iron deficiency
- Chronic intestinal parasites or abnormal flora
- Undigested food in stool
- Chronic candida infections
- Upper digestive tract gassiness

Diseases associated with hypochlorhydria

- Addison's disease
- Asthma
- Celiac disease
- Chronic autoimmune disorders
- Chronic hives
- Dermatitis herpetiformis (herpes)
- Diabetes
- Eczema

- Gallbladder disease
- Graves' disease
- Hepatitis
- Hyper- and hypothyroidism
- Lupus erythematosus
- Myasthenia gravis
- Osteoporosis
- Pernicious anemia
- Psoriasis
- Rheumatoid arthritis
- Rosacea
- Sjögren's syndrome
- Thyrotoxicosis
- Vitiligo

Self-testing and treatment for low HCl/hypochlorhydria

1. Begin by taking one 350–750 mg capsule of betaine HCl with a protein-containing meal. A normal response in a healthy person would be discomfort—basically heartburn. If you do not feel a burning sensation, begin taking two capsules with each protein-containing meal.
2. If there are no reactions after 2 days, increase the number of capsules with each meal to three.
3. Continue increasing the number of capsules every 2 days, using up to eight capsules (or as your healthcare professional suggests) with each meal if necessary. These dosages may seem large, but a normally functioning stomach manufactures considerably more. You'll know you've taken too much if you experience tingling, heartburn, diarrhea, *or any type of discomfort* including a feeling of unease, digestive discomfort, neck ache, backache, headache, or any new odd symptom. If you experience tingling, burning, or any symptom that is uncomfortable, you can neutralize the acid with 1 tsp baking soda in water or milk.
4. When you reach a state of tingling, burning, or any other type of discomfort, cut back by one capsule per meal**.** *If the discomfort continues, discontinue the HCl and consult with your healthcare professional.*
5. Once you have established a dose (up to 8 capsules or less, if warmth or heaviness occurs), continue this dose.
6. With smaller meals, you may require less HCl so you may reduce the amount of capsules taken.
7. Individuals with very moderate HCl deficiency generally show rapid improvement in symptoms and have early signs of intolerance to the acid. This typically indicates a return to normal acid secretion.
8. Individuals with low HCl/pepsin typically do not experience such quick improvement, so to maximize the absorption and benefits of the nutrients you take, it is important to be consistent with your HCl supplementation.

Precautions: Administration of HCl/pepsin is contraindicated in peptic ulcer disease. HCl can irritate sensitive tissue and can be corrosive to teeth; therefore, capsules should not be emptied into food or dissolved in beverages.

When you have adequate HCl, you will have improved absorption of all your nutrients.