



Maximize Your Nutrition with HCl

(Modified from Charles Poliquin newsletter)

Are your muscles getting all the protein contained in that 8-ounce steak? Does your immune system enjoy all the antioxidant protection from the vitamins and minerals in organic fruits and vegetables? Do your supplements work as well as the manufacturers promise? There's a 50/50 chance that the answer is "No." And the reason is that it's not so much what you eat or what supplements you take but how much you assimilate.

Such a statement might seem peculiar, but it is true. There are clients who seem to do everything right with their diet and training but make little or no progress in the gym. Their problem can often be traced to low levels of stomach acids, a condition known as hypochlorhydria.

Just in the country of Wales alone, it is estimated that over 40 percent of the adult population is deficient in hydrochloric acid. In the US, many experts estimate the deficiency also to be in the range of 40 to 50 percent. Some gastroenterologists are now advancing that it is today's most underdiagnosed ailment.

What does stomach acid do?

Stomach acid breaks down food, chemically altering it so that the body can extract the required nutrients for proper structure and function, including muscle maintenance and growth. The acid begins the digestion of protein in the stomach and then triggers the pancreas to secrete digestive enzymes and the gallbladder to release bile into the small intestine. The acid is also responsible for killing pathogenic bacteria that enters the body via food.

What if we are deficient?

In our land of abundance it is hard to imagine that our body's cells could be starving, especially when we consume high-quality food in sufficient quantities. Yet many of our habits of affluence prohibit us from properly digesting our food, leaving our cells weak from undernourishment.

- **Proteins** will pass into the intestine and putrefy instead of being digested
- **Carbohydrates** will also be left to ferment without adequate digestive enzymes from the pancreas.
- **Fat** digestion is also dependent on the acid's influence on the pancreas to secrete lipase and the gall bladder to secrete bile.

Poor digestion of these macronutrients means poor absorption of our basic energy sources.

What are the results of low stomach acid?

Poor mineral absorption - Low stomach acid prevents adequate absorption of essential minerals such as zinc, manganese and calcium because they cannot be ionized for proper absorption. Cruciferous vegetables are known for their estrogen-detoxification properties through the production of Diindolylmethane from Indole 3C, but this extraction cannot occur without an adequate amount of stomach acid.

Higher risk of food poisoning - Low stomach acid also puts you at an increased risk of food poisoning since you are missing your primary defense against bacterial organisms. It has been shown that the

drugs that inhibit stomach acid, such as Prilosec and Tagamet, can cause an increase in stomach bacteria and inflammation.

Neurological disorders - Undiagnosed low stomach acid is linked to various neurological disorders such as dementia and Alzheimer's because those ailments are linked to folic acid and B12 status. No stomach acid, no folic acid and B12 absorption. In effect, you could go senile just from low stomach acid.

Reasons for low stomach acid:

- B vitamin deficiency
- excess carbohydrate consumption
- hypothyroidism
- food sensitivities
- H. Pylori infection
- soda consumption
- aging
- STRESS (Stress experts estimate that we now have 100 times more stress than our grandfathers did)

Testing for low stomach acid:

- From your blood chemistry screen values, or by a urine test
- A string test where you swallow a string in order to measure your stomach pH – not a pleasant test, incidentally
- An examination of the reflex point on your abdomen, an inch below the bottom of the breastbone on the edge of the left rib cage
- Presence of a zinc deficiency; an insufficient amount of this mineral is associated with hypochlorhydria
- Presence of vertical ridges on your nails
- Stool testing
- Amino acid profile tests
- Home stomach acid testing

Symptoms of low stomach acid:

- belching or gas within one hour of a meal
- bloating and fullness shortly after eating
- bad breath
- loss of taste for meat
- nausea after taking supplements
- brittle fingernails
- undigested food in stool
- foul-smelling stools
- stomach pain
- desire to skip meals
- estrogen buildup
- acne rosacea
- depression

Some quick tips to normalize your stomach acid levels:

1. Avoid carbonated drinks.
2. Avoid all-you-can-eat buffets, as they are America's leading source of food-borne pathogens.
3. Herbal remedies- Raise HCl with gentian, peppermint and ginger, but be aware that very few controlled studies exist on this topic.

Benefits of HCl therapy:

Enhanced sleep – Why? Because they are finally absorbing the supplemental magnesium they have been taking. Minerals need an electric charge to be absorbed. You need sufficient HCl to provide that charge to the minerals.

Dramatic improvements in physique and strength (i.e. gaining lean body mass) –Why? Because your body is actually using the nutrients you are giving it.

Home Stomach Acid Test

There is a simple test you can do at home. Nutritionally oriented physicians often prescribe this test along with a zinc challenge test. It requires a bottle of Betaine HCl, at 200 mg potency per capsule.

Step 1

Prepare a high-protein solid meal (no shakes). Let's say for illustration purposes a moderate-larger (6-12 oz) steak, poultry, or fish and vegetables.

Step 2

Eat roughly half of the protein/meat of the meal.

Step 3

Swallow a 200mg capsule of HCl (e.g. Digestyme or Digest Force).

Step 4

Eat the other half of the protein/meat and the vegetables.

Step 5

Wait 15 minutes.

Step 6

If your stomach acid is normal, you will feel like you just drank a hot cup of tea. If you feel nothing, you need HCl as a supplement. So what do you do next? At every meal repeat steps 1 to 6, upping the dose one capsule per meal until you feel the burning sensation. So if it takes five meals to get a burning sensation, you need on average four capsules per meal. If you get to seven capsules and you have no burning, stop the test – you are achlorhydric!

After the test

You are getting better when you start feeling a burn at your initial determined dosage. For example, if you found that five capsules was your initial need, you may find that three days later it starts to burn, so then you would cut back to four capsules with a typical high-protein solid meal. And so on.

Most people achieve normal levels within eight weeks even when they start at seven capsules, but some individuals take as much as 18 months.

Once you go off HCL, it is suggested by most functional medicine experts to take 2g of histidine a day for eight weeks to support HCl production. Make sure to take a great multivitamin formula once a day upon engaging in HCl therapy, as it will accelerate the healing. Make sure that your HCl product also contains the probiotic pepsin and the digestive enzymes papain and pancreatin, as they have a synergistic effect with HCl therapy.

If you suspect that you are low in stomach acid, you must address this issue with the utmost importance. You cannot make adequate use of your food or your supplements if you cannot break them down for proper absorption. It's true that not only are you what you eat, you are what you assimilate!