

The Gut/Stomach Acid

The root of all health begins in your gut -which believe it or not is home to the largest part of your body's immune system. When our guts are healthy they produce the proper amount of acid and house good bacteria that serve as the first line of defense against foreign invaders. When our digestion is working well we can extract all the nutrients we need from the food we eat. Good digestion begins with good production of stomach acid. There is a very common misconception that a lot of digestive problems are caused by too much stomach acid – when in fact the problem is too little stomach acid.

*Note: An important part of digestion which many of us don't do - **is to chew your food well**. Digestion of starches begins with saliva in the mouth. The more you chew your food the less stress you will place on your digestive system and you will extract more nutrients. Aim to chew your food **20-30 times before swallowing**. It may be hard at first but over time will become more natural.*

What causes low stomach acid?

Most people with digestive issues have abnormal gut flora which leads to low stomach acid production. Contributing factors are:

- Candida/yeast -toxins produced by candida and other pathogens can reduce stomach acid
- Harmful substances that damage the lining of the stomach impairing its ability to produce acid such as:
 - long term medication – especially NSAID pain medication (Aleve, etc)
 - mercury and other toxins from dental work (which you are continually swallowing and ingesting)
 - a diet of mostly processed food
 - alcohol in excess
- Age - as we age production of stomach acid declines
- Low supplies of zinc and protein that are needed to make stomach acid

Reflux/GERD

Stomach acid not only runs the whole digestive process, but it is the first line of defense against unwanted microbes in what we eat and drink. If we are not producing enough stomach acid all sorts of pathogens and fungi grow on the stomach wall – such as candida, salmonella, streptococci. Some of these pathogens grow at the sphincter muscle at the top of the stomach – thereby making it unable to do its job. The sphincter muscle separates the esophagus from the stomach – and normally does not allow food to go back up. But when pathogens are growing in that area they partially paralyze the sphincter muscle which causes reflux: regurgitation of food back up into the esophagus. Even when you have low stomach acid there is still some acid in the regurgitated food – which burns the walls of the esophagus causing heartburn or acid indigestion. So now what happens? Antacids or proton pump inhibitors (Prilosec, Nexium, Zantac, Tagament) are prescribed which alleviate the immediate symptoms - but in the long run make the whole situation worse by further reducing the production of stomach acid. Long story short – when you have low stomach acid you don't digest your food as well- it comes back up causing heartburn – you take antacids – further reducing stomach acid – and it becomes a vicious cycle.

B-12

What has B-12 got to do with any of this? B-12 is an important vitamin that can only be digested by your body through high stomach acid content, because it takes a lot of acid to break down this vitamin from the food you eat. This is a problem for people with low stomach acid, gastritis, or on proton pump inhibitors. According to Dr. McBride people with gastritis are unable to produce an intrinsic factor for B-12 absorption resulting in a B12 deficiency manifesting as **pernicious anemia**. This essential B vitamin is needed for optimal health so make sure your levels are good. Oral B-12 supplementation won't work with low stomach acid so you can either get B-12 injections or use a Liposomal Methyl B-12 like the one offered by Quicksilver.

How to Test for Low Stomach Acid

The Baking Soda Stomach Acid Test

This test works by drinking baking soda and creating a chemical reaction in your stomach between the baking soda (sodium bicarbonate) and hydrochloric acid (HCL). The result is carbon dioxide gas that causes burping. Ingesting baking soda is an old school natural home remedy for upset stomachs.

Quick Test:

- Mix 1/4 teaspoon of baking soda in 4-6 ounces of cold water first thing in the morning before eating or drinking anything.
- Drink the baking soda solution.
- Time how long it takes you to belch. Time up to five minutes.
- If you have not belched within five minutes, stop timing.
In theory, any belching after 5 minutes indicates a low acid level.

Betaine HCL Challenge Test for Low Stomach Acid

The most reliable test you can perform at home is the Betaine HCL challenge test.

To Perform the Test, Do the Following:

- Buy some Betaine HCL with pepsin
- Eat a high protein meal of at least 6 ounces of meat
- In the middle of the meal, take 1 Betaine HCL pill
- Finish your meal as normal and pay attention to your body

There's really only 2 outcomes from this test:

- The first is that you won't notice anything. As you go about your normal life after the meal, nothing will change. This means it is very likely you have low stomach acid levels.
- If you feel stomach distress, burning, or hotness – then these are signs that you don't have low acid levels.

If you have low stomach acid

- Supplement each meal with 1 capsule of HCL
- The next day supplement each meal with 2 capsules of HCL
- Continue to add a capsule every day until you get the warm feeling in your stomach and that will be your dose.

As your stomach heals it will start to produce the correct amount of acid.

In the interim it will allow your digestion to work correctly. Long-term, you need to work on finding the root cause problem and taper off the supplements.

Note: If you know you have gastritis you should not take HCL. HCL supplementation is meant to be taken as a course until your body starts to produce enough acid its own – it is not to be taken indefinitely.

The Heidelberg Stomach Acid Test

The gold standard medical test for low stomach acid available right now is called “The Heidelberg Stomach Acid Test.” The Heidelberg test works by using a small capsule with a radio transmitter that records the pH of your stomach as you drink a solution of Sodium Bicarbonate. The test is typically not covered by insurance.

Natural Solutions for Low Stomach Acid

There are several natural solutions to address low stomach acid which may be appropriate for people with gastritis or children.

Apple Cider vinegar – start with 1 teaspoon of apple cider vinegar mixed with 8 oz of filtered water - gradually increase up to two tablespoons with your meal.

Digestive Bitters – bitters help to stimulate healthy digestion – use either before or after meals

Cabbage juice and sauerkraut juice – 1 tsp to ¼ cup at the beginning of each meal

Pancreatic Digestive Enzymes & Ox Bile:

Pancreatic enzymes break down the food in your small intestines – normally stomach acid triggers the pancreas to make its own enzymes – which is why stomach acid is so important. Some people will need to take HCL at the beginning of a meal and pancreatic enzymes at the end.

Ox Bile: if you have trouble digesting fats and gall bladder issues consider Ox-Bile It is a suitable supplement to the livers production of bile. There are supplements that contain multiple enzymes such as **Enzaid:** which contains HCL, pancreatic enzymes and ox bile.

Restoring Gut Health

You can restore your gut health through:

- Diet
- Supplementation
- Detoxification

Diet

Most of your effort in restoring your gut should be in cleaning up your diet.

Sugar is the number one enemy – it feeds everything bad in your gut. Eliminate grains and commercial dairy. Eat as little processed food as possible. Say goodbye to soda and all sugary drinks. Become a mean clean eating machine. In addition to digestive enzymes the following supplements are beneficial to restoring gut health: probiotics, Essential Fatty Acids, and Cod Liver Oil.

Supplementation

Supplementation will vary by individual and includes

- digestive enzymes (as discussed previously)
- probiotics

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- essential fatty acids
- vitamin A – cod liver oil

Probiotics

Probiotics are the good bacteria in the form of a supplement or fermented food taken to restore healthy gut flora. When choosing a probiotic supplement quality matters. A high-quality probiotic will have the following:

- ❖ as many different species of bacteria possible,
- ❖ a mixture of strains from the three main groups: Lactobacilli, bifidobacteria, and soil bacteria
- ❖ at least 8 billion of bacterial cells per gram – you need large enough doses to see any improvement
- ❖ testing by the manufacturer

My favorite is Prescript Assist available on www.shopgapsdiet.com

Bravo Probiotic Yogurt – a superstar

Bravo yogurt is fabulous product developed by pioneer Dr. Marco Ruggiero that not only optimizes gut flora, it has the ability to produce GcMAF (Gc protein macrophage activation factor). This specific protein is necessary to induce and optimize our innate immune system that is dampened in chronic disease states. Bravo contains more than 40 different probiotics which are able to recreate the optimal microbiome in the gut. The yogurt is easy to make, they also have a non-dairy juice drink version as well as tablets and suppositories. This stuff is powerful, and you may have a die-off reaction – so start slowly. It is expensive, but I think well worth it. I prefer the yogurt to the non-dairy version – I think it is stronger. If you are lactose intolerant you can still eat the yogurt since the lactose is dissolved/eaten in the fermentation process. The yogurt has helped autistic children as well as people with serious digestive issues and parasites and candida. Some practitioners have found that using Bravo both orally as well as administering in an enema (so they can reach the liver) -can help the entire microbiome repair more quickly. Please take the time to watch the following you tube video where Dr. Marco Ruggiero talks about the benefits and science behind bravo.

<https://www.bravo-probiotics.com/about.html>

Note from website: To make Bravo you can use a raw milk or milk that is not ultra-pasteurized (the picture is of a milk found at Whole Foods that works well with Bravo). It is recommended to supplement with vitamin D – refer to website to purchase and for more info: www.bravo-probiotic-yogurt.com



Essential Fatty Acids

Fish Oil/Krill Oil

Essential fatty acids cannot be made by our bodies unlike other fatty acids we have to get them from food. They are essential because we cannot live without them. People with impaired digestion are deficient in fatty acids and should supplement.

Nearly everyone can benefit from EFA fish oil supplementation – Nordic Naturals is always a good choice.

Vitamin A/Cod Liver Oil

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Vitamin A deficiency can lead to a variety of digestive issues including leaky gut and malabsorption. Cod liver oil is a natural source of vitamin A that is easily absorbed. Cod liver oil supplies EPA, DHA and vitamin D in addition to vitamin A. Supplement with a good quality fermented oil such as Carlsons or my favorite Green Pastures www.greenpastures.org

Detoxification

Details for the following are in the Detox Section

- Juicing
- Coffee Enemas
- Natural Supplements
- Oil Pulling
- Baths
- Reducing your general toxic load