



Low Stomach Acid Levels: Causes, Symptoms & Natural Treatment Options Explained

By Kelley S. Mulhern, MS, DC, MPH, CFMP®

Low stomach acid, also known as hypochlorhydria, is a condition where your stomach does not produce enough hydrochloric acid (HCl). This acid plays a crucial role in your digestion and immunity, helping your stomach break down food and properly use nutrients.

As we age, our stomachs may naturally produce less acid, leading to hypochlorhydria and various digestive issues. Understanding the causes, symptoms, and natural treatment options can help you manage low stomach acid levels and improve your overall digestive health.

Some common symptoms of low stomach acid include bloating, gas, indigestion, heartburn, and nutrient deficiencies. Having low stomach acid levels can also increase your risk of developing infections due to an imbalanced gut environment.

Fortunately, there are natural treatment options available to help regulate your stomach acid levels. By incorporating these methods into your daily routine, you can support your digestive system and improve your overall health.

One natural treatment option is to consume apple cider vinegar before meals. This can help balance the pH levels in your stomach, aiding in digestion.

Role of Stomach Acid in the Digestive System

Protein Digestion and Enzymes

Your stomach plays a crucial role in the digestion process, particularly when it comes to breaking down proteins. Stomach acid, also known as hydrochloric acid, helps to denature protein, meaning it unfolds them into a more digestible form.

This facilitates the action of an enzyme called pepsin, which breaks proteins into smaller peptides and eventually amino acids. These smaller units can then be absorbed in your small intestine. Without sufficient stomach acid, proper protein digestion would be difficult, potentially leading to protein deficiencies and other health issues.

Absorption of Nutrients

Stomach acid not only aids in protein digestion, but it also plays a significant role in the absorption of important nutrients. Hydrochloric acid helps your body absorb essential minerals such as calcium, magnesium, and iron.

Additionally, it assists in the absorption of certain vitamins like vitamin B12, which relies on an acidic environment to be separated from its protein-bound form and absorbed efficiently. Low stomach acid levels can, therefore, lead to poor nutrient absorption and ultimately impact your overall health.

Prevention of Bacterial Infections and Overgrowth

Another critical function of stomach acid is to act as a barrier against harmful bacteria. The highly acidic environment of your stomach helps to kill off most of the bacteria and other microorganisms you ingest with your food. This minimizes the risk of bacterial infections and overgrowth, such as small intestinal bacterial overgrowth (SIBO) and *Helicobacter pylori* (H. pylori).

By maintaining a healthy balance of stomach acid, you can help prevent infections and support the proper functioning of your digestive system.

Causes of Low Stomach Acid Levels

Age and Lifestyle Factors

As you age, your body may produce less stomach acid, which can result in hypochlorhydria. People over the age of 65 are particularly susceptible to this change in stomach acid production ([source](#)). In addition, certain lifestyle factors can contribute to decreased stomach acid levels. Smoking cigarettes and drinking alcohol can deplete nutrients in your body, leading to a reduction in stomach acid production ([source](#)).

Diet and Nutrient Deficiencies

Your diet plays a significant role in maintaining adequate stomach acid levels. Poor diet choices, such as consuming processed foods and high amounts of sugar, can contribute to low stomach acid levels. Moreover, nutrient deficiencies, particularly of iron, zinc, and B vitamins, can impair stomach acid production ([source](#)).

Stress and Chronic Health Conditions

Chronic stress can negatively impact your stomach acid production. High stress levels may trigger the release of stress hormones, which can inhibit the secretion of stomach acid ([source](#)). Additionally, certain chronic health conditions, such as autoimmune diseases, can lead to low stomach acid levels. This is because they may interfere with the normal function of the immune system and affect the cells responsible for producing stomach acid.

Medications and Antibiotics

Some medications, including antacids and proton-pump inhibitors, can reduce stomach acid production by blocking the action of stomach acid-producing enzymes ([source](#)). Antibiotics, while helpful in treating infections, can disrupt the balance of beneficial gut bacteria that assist in stomach acid production. Consequently, taking these medications may lead to low stomach acid levels over time.

General Symptoms of Low Stomach Acid Levels

Digestive Issues

Low stomach acid levels often lead to digestive problems, as hydrochloric acid is essential for breaking down food and absorbing nutrients. Common issues include [heartburn](#), gas, bloating, constipation, diarrhea, nausea, and indigestion. If you experience these symptoms frequently, it could be an indication of low stomach acid levels. That's right! Feeling heartburn can be a symptom of both low AND high stomach acid levels!

Nutrient Deficiencies and Anemia

Since stomach acid is crucial for nutrient absorption, low levels can result in deficiencies, particularly in [iron](#), minerals, calcium, and vitamin B12. These deficiencies can lead to health issues like osteoporosis and anemia. Iron deficiency anemia, in particular, may be a sign of low stomach acid, as your body needs sufficient acid to absorb iron properly.

Skin and Hair Problems

Interestingly, low stomach acid can also contribute to skin and hair problems. Nutrient deficiencies caused by low stomach acid may manifest in brittle nails, thinning hair, and skin issues. If you notice these symptoms alongside digestive problems, it might be time to consider whether low stomach acid levels could be the underlying cause.

Acid Reflux

Hypochlorhydria, or [low stomach acid](#), can lead to acid reflux. When your stomach doesn't produce enough hydrochloric acid, it struggles to break down food efficiently. This can cause undigested food to rise into the esophagus, leading to the sensation of heartburn and acid reflux.

Leaky Gut Syndrome

Leaky gut syndrome is a condition where the lining of the small intestine becomes damaged, allowing bacteria and toxins to “leak” into your bloodstream. While the exact cause of leaky gut is unclear, there's a possibility that low stomach acid may contribute to its development. Insufficient stomach acid can lead to an overgrowth of harmful bacteria, which in turn may cause inflammation and damage to the intestinal lining.

Bloating and Gas

Low stomach acid can also cause bloating and gas. Since hypochlorhydria impairs your ability to properly break down and digest food, partially digested food can remain in your stomach and start to ferment. This fermentation process produces gas, leading to symptoms like bloating, abdominal pain, and flatulence.

Gastritis and Stomach Ulcers

Gastritis is inflammation of the stomach lining, often caused by an infection with the bacteria [Helicobacter pylori](#). Low stomach acid levels can increase the risk of developing gastritis and stomach ulcers, as it allows harmful bacteria like H. pylori to flourish, causing damage to your stomach lining. Adequate stomach acid levels are essential for maintaining a healthy gastrointestinal environment and preventing such issues.

To maintain optimal gastrointestinal health, it's important to address low stomach acid by focusing on proper nutrition, stress management, and natural treatment options like apple cider vinegar or digestive enzymes. By taking these steps, you can help protect your gut, prevent the development of further complications, and improve your overall well-being.

Diagnosis and Testing for Low Stomach Acid Levels

At-Home Tests

An at-home test to assess your stomach acid levels is the bicarbonate of soda test.

To perform this test, mix 1/4 teaspoon of baking soda in 4 ounces of cold water, and drink this mixture on an empty stomach. The baking soda reacts with your stomach acid to produce carbon dioxide gas, which should result in belching.

If you don't burp within 2-3 minutes, this might indicate low stomach acid levels, also known as hypochlorhydria¹. Keep in mind that this test is not conclusive and should be followed up with medical testing for a more accurate diagnosis.

Another way to identify if your symptoms are due to low stomach acid is to drink 1 tsp of organic Apple Cider Vinegar diluted with 1/4 cup water. If this relieves your symptoms, you likely have low stomach acid. If it increases your symptoms, you likely have excess stomach acid.

Medical Examinations and Procedures

Your healthcare provider may conduct two types of medical tests to diagnose low stomach acid levels: achlorhydria and hypochlorhydria. Achlorhydria refers to the absence of stomach acid, while hypochlorhydria indicates very low levels of stomach acid². To determine your stomach acid levels, doctors may use a combination of blood tests, stool tests, and other tests, including:

1. **Upper Gastrointestinal (GI) Endoscopy:** A thin, flexible tube with a light and camera is inserted down your throat to examine your upper digestive system³.
2. **Heidelberg Gastric Acid Test:** A small capsule is swallowed, which measures the pH levels in your stomach and sends results to a computer outside the body⁴.
3. **Gastric Acid Secretion Test:** Measuring the amount of acid produced in the stomach over a specific period⁵.

Based on the results from these tests, your healthcare provider will determine whether your stomach acid levels are low and recommend a suitable treatment plan.

Keep in mind – it's best to consult with a healthcare professional before attempting self-treatments for low stomach acid.

Footnotes

1. <https://www.medicalnewstoday.com/articles/at-home-stomach-acid-test>
2. <https://www.healthline.com/health/hypochlorhydria>
3. <https://www.mayoclinic.org/diseases-conditions/gerd/diagnosis-treatment/drc-20361959>
4. <https://www.webmd.com/digestive-disorders/what-is-hypochlorhydria>
5. <https://my.clevelandclinic.org/health/diseases/23392-hypochlorhydria>

Functional Medicine Treatment Options for Low Stomach Acid Levels

Dietary Changes and Nutrient Supplements

Making dietary changes is essential for treating low stomach acid levels. Focus on consuming whole, unprocessed foods that aid in digestion.

Minimize or eliminate caffeine, alcohol, and processed sugar from your diet. Including zinc-rich foods like oysters, pumpkin seeds, and beef in your meals can help address a [zinc deficiency](#). You should also consider the following supplements:

- **HCL supplements:** Increase stomach acid levels and aid in the breakdown of proteins. However, do NOT take HCL supplements if you have, or suspect you have, an ulcer.
- **Magnesium:** Essential for digestion and absorption of nutrients, magnesium can be found in almonds, spinach, and avocado.
- **Multivitamins:** Ensure you're getting essential nutrients to support overall health and digestion.

- **Digestive Bitters:** Concentrated blends of herbs and botanicals in a base of alcohol or vinegar that stimulate the release of gastric juices and enzymes.

Stress Management and Lifestyle Modifications

Chronic [stress](#) can contribute to low stomach acid levels. Incorporate stress management techniques like yoga, meditation, deep breathing exercises, and mindfulness into your daily routine. Engage in regular physical activity and prioritize getting an adequate amount of sleep to promote overall well-being and optimal digestive health.

Herbal and Home Remedies

Several herbal and home remedies can help maintain a healthy digestive system. Some of these include:

- **Aloe:** Can help soothe gastrointestinal inflammation.
- **Apple cider vinegar:** Dilute 1-2 tablespoons of apple cider vinegar in water and consume before meals to assist with digestion.
- **Dandelion root:** Stimulates digestion and gastric secretions.
- **Gentian root:** Believed to increase stomach acid production and support digestion.
- **Ginger:** Include fresh ginger in your cooking or make ginger tea to support healthy digestion.
- **Licorice root:** Can help soothe gastrointestinal inflammation.
- **Manuka honey:** Consume a spoonful of manuka honey before meals to soothe the stomach and promote digestion.
- **Slippery elm:** Coats and protects the digestive tract.

Probiotics and Digestive Enzyme Supplements

A healthy gut flora plays a vital role in maintaining proper stomach acid levels. Consuming fermented foods rich in probiotics, like yogurt, kimchi, and sauerkraut, can help replenish and maintain the good bacteria in your gut. Probiotic supplements can also be an effective option.

Incorporating [digestive enzymes](#) can further support optimal nutrient absorption and digestion. These supplements often contain a blend of enzymes like protease, lipase, and amylase to break down proteins, fats, and carbohydrates, respectively. Consult with a healthcare professional before beginning a new supplement regimen.

Prevention and Long-Term Care for Low Stomach Acid Levels

In order to prevent and maintain long-term care for low stomach acid levels, it's important to address certain lifestyle changes and factors that could contribute to hypochlorhydria. Here are a few key points to consider:

Lifestyle Changes: Making adjustments in your daily routine can have a significant effect on your digestive health. Eating a balanced diet and incorporating more whole foods, while avoiding processed foods, can provide essential nutrients to support your digestive system. Furthermore, engaging in regular exercise and maintaining a healthy weight can improve your gastrointestinal function and reduce stress on your stomach.

Managing Chronic Stress: Chronic stress can negatively impact your digestive health, leading to gastrointestinal issues like hypochlorhydria. Finding ways to manage and reduce stress, such as through mindfulness practices, meditation, or gentle exercises like yoga, will not only improve your overall well-being but also promote a healthier digestive system.

Stomach Surgery and Gastric Bypass: If you've previously undergone stomach surgery or gastric bypass, it's essential to maintain regular check-ups with your healthcare provider to ensure your gastric acid levels remain stable. Monitoring your stomach health will be vital in preventing potential complications, such as hypochlorhydria.

Monitoring Gastric Acid Production: Paying attention to signs and symptoms like excessive belching or the inability to burp can indicate issues with your gastric acid production. Keep a symptom diary and discuss any concerns with your healthcare provider, who may recommend

tests to assess your stomach acid levels and identify possible underlying conditions.

Promoting Strong Immunity: Your immune system can be impacted by low stomach acid levels, as a leaky gut allows harmful bacteria to enter your bloodstream. Consuming a diet rich in essential nutrients, such as vitamins and minerals, will ensure your immune system remains strong and resilient against potential infections.

Regular Check-ups: Regular consultation with your healthcare provider will help monitor your digestive health, identify any unexpected changes in your gastric acid levels, and provide guidance for maintaining optimal digestive function. Establishing a collaborative relationship with your healthcare provider will allow you to proactively address any potential health concerns and maintain your long-term gastric health.

By adopting these preventive measures and actively working towards long-term care, you can significantly improve your digestive health and reduce the risk of developing hypochlorhydria.

Conclusion

Addressing low stomach acid, or hypochlorhydria, is crucial to maintaining optimal digestion and overall wellbeing. By understanding the potential causes and symptoms, you can take proactive steps to improve your digestive health.

Low stomach acid levels may result from deficiency in essential nutrients such as [iron, vitamin B12, and calcium](#). Ensuring a well-balanced diet and consulting a nutrition professional can help address these deficiencies. Additionally, maintaining a healthy lifestyle and avoiding certain medications can aid in promoting optimal stomach acid production.

Common symptoms of hypochlorhydria include hair loss, undigested food in stools, weak fingernails, and fatigue. If you're experiencing these symptoms, consult a healthcare professional for accurate diagnosis and treatment recommendations.

To support natural treatment options, consider incorporating stress management techniques and regular physical activity into your daily routine, as these factors can positively impact stomach acid levels. Furthermore, incorporating [holistic treatment approaches](#) like supplementation with digestive enzymes, probiotics, and dietary changes may help alleviate symptoms related to low stomach acid levels.

In conclusion, taking charge of your digestive health is essential for overall wellbeing. By being attentive to potential causes and symptoms of low stomach acid, you're better equipped to make informed decisions about your health and seek appropriate treatment when necessary.

Frequently Asked Questions

What are the common symptoms of low stomach acid levels?

Low stomach acid, or hypochlorhydria, can manifest in a variety of symptoms. Some common signs may include acid reflux, heartburn, gas, undigested food in the stool, and nutrient deficiencies related to poor absorption of iron, zinc, and B vitamins. You might also experience nausea while taking supplements and hair loss, or brittle fingernails caused by nutrient deficiencies [source](#).

How can I naturally increase my stomach acid levels?

There are several ways to support healthy stomach acid production naturally:

1. Practice mindful eating by taking the time to chew thoroughly and eat in a relaxed environment.
2. Incorporate apple cider vinegar into your diet by adding 1-2 tablespoons to water before meals.
3. Try consuming foods that support digestive health, such as fermented foods like kimchi, sauerkraut, and kefir.
4. Limit your intake of processed foods, sugar, and alcohol as these can inhibit stomach acid production.

5. Ensure proper hydration by drinking enough water throughout the day.

What are some effective ways to treat low stomach acid?

Treatment options for low stomach acid may include addressing the underlying cause, such as improving your diet or managing stress, alongside targeted supplementation. Your healthcare provider may recommend hydrochloric acid (HCl) supplements to help increase stomach acid levels and digestive enzyme supplements to improve nutrient absorption [source](#).

How can I test if I have low stomach acid?

To determine if you have low stomach acid, your healthcare provider may perform one or more diagnostic tests. This could include a Heidelberg test, which measures the pH of your stomach, or blood tests to evaluate nutrient deficiencies. Additionally, at-home testing methods, such as the baking soda test or the apple cider vinegar test, can provide preliminary insights, but it's essential to confirm the results with a healthcare provider [source](#).

Which foods help in boosting stomach acid levels?

Foods that can help improve stomach acid levels include:

- Apple cider vinegar
- Lemon juice
- Fermented foods like kimchi, sauerkraut, and yogurt
- Ginger
- Zinc-rich foods like oysters, pumpkin seeds, and grass-fed beef

Incorporate these into your diet to support healthy stomach acid production and overall digestive health [source](#).

Are there any herbs that can improve stomach acid levels?

Various herbs and natural remedies can help support stomach acid production and overall digestive health. Some of these include:

- Dandelion root, which stimulates digestion and gastric secretions
- Gentian root, which is believed to increase stomach acid production and support digestion
- Licorice root, which can help soothe gastrointestinal inflammation
- Slippery elm, which coats and protects the digestive tract

Always consult with a healthcare professional before adding any new herbs or supplements to your routine [source](#).

Sample