

# Warning: Prilosec Can Cause Serious Stomach Infection

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## STORY AT-A-GLANCE

- › Heartburn medications are one of the more popular drugs used in the world; they come with a long list of side effects that may significantly affect your quality of life and increase your risk of infection
- › Research identified a reduction in acid in your arterial system elicited by proton pump inhibitors as one important trigger for heart, kidney and brain side effects
- › Simple, natural and effective strategies will also reduce your chronic heartburn without side effects, including finding your food triggers, adding acid to your diet, drinking ginger root tea and adding coconut oil to your foods

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Heartburn medications in the class of proton pump inhibitors (PPIs) are one of the most commonly used drugs in the world. Once available only by prescription, Prilosec, Prevacid and Nexium are three of the PPIs now available over-the-counter.

Commonly prescribed to relieve symptoms of acid reflux and indigestion, they have a number of unintended consequences that negatively impact your health. Heartburn occurs when acid refluxes up your esophagus, burning tissue not designed to withstand the lower pH fluid in your stomach. Acid is necessary for digestion, and protects you against bacteria.

There are a variety of reasons acid may pass the lower esophageal sphincter (LES) and trigger heartburn, but most are related to a hiatal hernia or an infection with

*Helicobacter pylori* (H. pylori).

Simple lifestyle changes will often treat occasional heartburn effectively, but chronic pain over many weeks may require making a few more changes. It's important to realize that PPIs may actually do more harm than good, as they are associated with a greater risk of bone fractures, kidney disease, cognitive dysfunction and more.

An editorial in the Journal of the American Medical Association (JAMA) in 2010 espoused the idea that less healthcare may result in better health.<sup>1</sup> In the coming years, other editorials advocated the same approach,<sup>2,3,4</sup> as it is difficult to deny the results people get when they eat the foods their body requires to stay healthy.

## **Digestion Requires Acid**

Digestion of food begins in your mouth as the food is broken into smaller pieces and mixed with saliva before traveling down your esophagus and into your stomach. As food passes into your stomach, it mixes with hydrochloric acid required to break down food into even smaller pieces from which your small intestines can extract nutrients.<sup>5</sup>

Your body absorbs nutrients through the small intestines before passing waste products into the large intestines and out the rectum. PPI medications are designed to inhibit the proton pump that produces acid.

PPIs do not specifically target the cells in your stomach, and stomach acid is usually not the primary trigger behind chronic heartburn. Stomach acid is necessary for digestion, and most of the time, a lack of stomach acid is the trigger for heartburn, gastroesophageal reflux (GERD) and chronic indigestion.

In such cases, PPIs can actually exacerbate the problem by decreasing acid further. Unless an endoscopy has confirmed high levels of stomach acid, it's more likely you don't have enough.

There is a simple test you can use to determine if your level is low and this knowledge will help you develop a natural plan to reduce your chronic pain. This simple test is a

rough indicator of how much acid your stomach produces.

Mix a teaspoon of baking soda in 8 ounces of cold water and drink it first thing in the morning, before eating or drinking anything. The combination of baking soda and hydrochloric acid in your stomach creates carbon dioxide gas, causing you to belch.<sup>6</sup>

Time yourself for up to five minutes for how long it takes you to form enough gas in your stomach to belch. Belching in two to three minutes is normal; earlier and repeated belching indicates an excess of acid. If you don't belch after five minutes, you likely don't produce enough acid.

## **Lack of Acid Changes Nutrient Absorption and Increases Risk of Infection**

Together with pepsin, hydrochloric acid is necessary to break down protein in your intestinal tract, so a reduction in acid from a lack of production or from use of PPIs changes nutrient absorption.

Without adequate breakdown of protein, you increase the potential of experiencing dysbiosis,<sup>7</sup> or an imbalance in gut microbiome between pathogenic bacteria and friendly bacteria. As these protein molecules ferment in your intestines, they become food for pathogens such as *H. pylori*, *C. difficile* and candida. An overgrowth of these bacteria may also lead to leaky gut.

There are a number of secondary effects from leaking molecules from your intestinal tract, including a rising number of children suffering from autism, difficulty losing weight and an increasing number of neurological disorders and allergies.

A 2017 study published in the *British Journal of Clinical Pharmacology* also confirms the risk of infection when taking PPIs.<sup>8</sup>

Compared to those not taking PPIs, participants who did had a 1.7 to 3.7 times increased risk of developing *C. difficile* or campylobacter infection. Among hospitalized patients, those numbers increased to between 1.4 and 4.5 times the risk.

Although both of these bacteria trigger abdominal pain and diarrhea, *C. difficile* may become more serious. According to the Centers for Disease Control and Prevention (CDC), nearly 500,000 were infected in 2011 and 29,000 died within the first month.<sup>9</sup> This study was not the first to raise concerns about the increased risk of contracting these infections.

*C. difficile* triggers significant diarrhea and is associated with morbidity and rising healthcare costs in hospitalized patients.<sup>10</sup> A meta-analysis performed using research between 1990 and 2010 found a significant increase in the number of people using PPIs and the risk of contracting *C. difficile*.<sup>11</sup>

## **Heartburn Medications Affect Your Brain Function**

Studies consistently demonstrate PPIs are being over prescribed<sup>12</sup> and used in excess as they are available over-the-counter. Researchers estimate up to 70% of people using the medications have no medically appropriate indication. That number is likely much higher as many may not receive or follow recommendations to make lifestyle changes that may reduce their symptoms.

One devastating effect of the medication are the cognitive changes individuals can experience after even short-term use. One study evaluated the effect of five different PPIs over the course of only one week of use in 60 healthy participants.<sup>13</sup>

Using neurophysiological testing, the study found statistically and clinically significant impairments in the participants' executive functions, visual memory and planning function, each of which is associated with Alzheimer's disease.

Two studies published the following year concluded those taking PPIs were at greater risk of developing Alzheimer's disease.<sup>14,15</sup>

The study published in JAMA also found a strong statistical link between regular use of PPIs and developing Alzheimer's in their pool of nearly 74,000 participants, who did not have dementia at the start of the study.<sup>16</sup>

One characteristic of dementia is the accumulation of beta-amyloid plaques in the brain that provoke inflammation and ultimately kill brain cells. There is strong scientific evidence that use of PPIs not only increases production of beta-amyloid plaques in the brain but slows the ability of the body to eliminate them as well.<sup>17,18,19</sup>

## **Prolonged Use of PPIs Carries Further Risks**

A large data-mining study performed by researchers from Stanford University discovered long-term use of PPIs were also associated with a 16% increased risk of heart attack, while other heartburn medications were not.<sup>20</sup>

This short news video gives you an overview of the findings. Another study published by Stanford Medicine evaluated data from nearly 3 million people. It, too, found that those using PPIs were at higher risk of heart attacks.<sup>21</sup>

Further evidence exists that PPIs are associated with the development of chronic kidney disease.<sup>22</sup> One study evaluated over 10,000 users and found an association between chronic kidney disease and all users. There was a higher incidence in those who took the medications twice a day.

Researchers from Houston Methodist Hospital may have discovered the reason why PPIs can affect the brain, kidneys and other systems. When different cells were grown in culture and exposed to PPIs, cells that line blood vessels demonstrated significant change.<sup>23</sup> PPIs are taken orally and affect the proton pump in more than just your stomach walls.

Blood vessels also produce small amounts of acid in order to break down and eliminate damaged protein molecules. When acid levels drop, microscopic debris begins to build up on the arterial walls, and may result in particularly severe problems where many blood vessels are found, such as the brain, heart and kidneys.<sup>24</sup> Lead author Dr. John Cooke, chair of cardiovascular disease research at Houston Methodist Research Institute, commented:<sup>25</sup>

*"I'm perplexed that the pharmaceutical industry didn't run across this first. This is something that should have been apparent a long time ago and should have been investigated."*

An increased risk of fracture is attributed to an increase of gastrin in your stomach, inhibiting the absorption of calcium and thus altering the function of osteoclasts in your bone.<sup>26</sup> Data from nearly 80,000 women only added to the body of evidence that PPIs increase the risk of fracture, even after adjusting for body mass index, calcium intake and physical activity.<sup>27</sup> Researchers did discover the risk returned to normal after being off the drug for two years.

Reduction of gastric acid secretion is also associated with a vitamin B12 deficiency. This may lead to anemia, nerve damage, psychiatric problems and even dementia. Vitamin B12 deficiency is common in elderly people whose stomach naturally has reduced gastric acid secretion, but also in people who take medications, like PPIs, that reduce stomach acid.

## **How to Properly Wean Yourself Off PPIs**

In the above NPR interview, a patient describes the rebound effect she experienced as she tried to stop taking a PPI. Although the medication does relieve symptoms, the side effects from the drug and the difficulty you may have discontinuing the medication make them a poor choice to treat GERD, indigestion or chronic heartburn.

If you have been using PPIs to manage heartburn, it's important to spend time detoxifying and eliminating the drug from your system. You should NEVER stop taking a PPI cold turkey. You have to wean yourself off them gradually or you'll experience a severe rebound called rebound acid hypersecretion, and the problem may end up being worse than before you started taking the medication.

To minimize your risk of rebound acid effects, gradually reduce the dose of PPI you're taking. Once you're down to the lowest dose, start substituting with an over-the-counter

H2 blocker, like Zantac or famotidine. These are the only two H2 blockers that are known to be safe. Do not take any other types of OTC H2 blockers.

Once you've been taking the H2 blocker for a couple of weeks, you may start weaning yourself off these drugs as well, while introducing the alternative options to reduce your heartburn outlined below.

## **Effective Alternatives to Treat Heartburn, GERD and Indigestion**

Fortunately, there are alternatives that are both safe and effective. Since most people who suffer from reflux do not have an issue with too much acid, but rather with too little, or with a hiatal hernia, it is important to reduce any treatment that inhibits the production of acid.

Remember, suppressing acid increases your risk for infection with *H. pylori*, a common cause of peptic ulcers with symptoms that closely mimic GERD. Before risking your health with medications, try these natural options:

**Address your diet** — The answer to heartburn and acid indigestion is to restore your natural gastric balance and function. To do that, eat lots of vegetables and other high-quality, ideally organic and unprocessed foods, and make sure you're getting enough beneficial bacteria from your diet by regularly consuming fermented foods.

This will help balance your gut microbiome, which can help eliminate *H. pylori* bacteria — which is a common cause of heartburn — naturally. Research<sup>28</sup> also suggests sauerkraut or cabbage juice stimulates production of stomach acid. Another benefit is it can provide you with valuable bacteria to help balance and nourish your gut.

Having a few teaspoons of cabbage juice before eating, or fermented cabbage juice from sauerkraut, will do wonders to improve your digestion. Fresh raw cabbage juice can also be very useful to help heal resistant ulcers.

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**Add acid** – It might seem counterintuitive to add acid to an acidic environment, but as you've already discovered, many cases of heartburn are triggered by low acid production.

One strategy is to take 3 teaspoons of raw, unfiltered apple cider vinegar in 6 to 8 ounces of fresh water before each meal.<sup>29</sup> For a list of other alternatives that can help promote acid production, please see my previous article, "[Acid Reflux May Respond Better to Foods Than Prescribed Pills.](#)"

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**Work with gravity** – Heartburn tends to be worse at night and/or after you lie down. Rather than lying down right after a meal, stay seated or standing for at least three hours, as food pressing on your LES will increase your risk of heartburn. Elevate the head of your bed using blocks sold for that purpose so your bed doesn't slip and cause injury.<sup>30</sup>

Avoid stacking pillows to elevate your head, as this can increase pressure on your LES. High pillows also cause poor alignment of your neck and spine, increasing your risk for neck pain.

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**Ginger root tea** – Ginger root has been traditionally used against gastric disturbances since ancient times. Its gastroprotective effect comes from blocking acid and suppressing H. pylori. To make your own tea, simmer three slices of raw ginger root in 2 cups of water for about 30 minutes. Drinking it 20 minutes before your meal can help prevent heartburn from developing.

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**Avoid tight-fitting clothing** – Tight clothing increases the pressure on your LES and increases the risk of an acid leak into your esophagus.

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**Maintain a healthy weight** – Excess weight around your middle places excess pressure on your LES. Even losing 15 pounds can make a positive difference in your symptoms.

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**Avoid triggers** – Food allergies or triggers may also be a problem, so you'll want to completely eliminate items such as caffeine, alcohol and nicotine products. Track the



foods that increase your personal risk of heartburn. It might take some time, but it is well worth the effort.

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**Organic coconut oil** – Coconut oil is a natural antibacterial, helping to reduce any overgrowth of bacteria in your stomach. It also helps to soothe your esophagus on the way down, and is a very healthy fat that is good for your overall health.

Start with 1 teaspoon to see how your body responds. Common side effects are headache and slight nausea. Gradually work up to 3 tablespoons a day. You could also try adding 1 tablespoon to a cup of tea or coffee.

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