

Is Honey Good for GERD, Acid Reflux, and Barrett's Esophagus?



Acid reflux, Gastroesophageal reflux disease (GERD), and Barrett's Esophagus are connected and interrelated conditions. Acid reflux is the occasional regurgitation of stomach contents into the esophagus. This leads to a more frequent and severe acid regurgitation, referred to as GERD, which is accepted as the primary risk factor for the development of Barrett's Esophagus [1]. GERD is very common, and it's estimated that 20% of people in the United States suffer from it. [2]

In this article, we'll summarize information from research on these conditions and the most common mitigation and treatment strategies. We'll further introduce the idea of honey as a potential natural approach to symptom management and healing that deserves more attention and further research.

GERD sufferers normally contend with physical discomfort and pain from this condition, as well as a psychological burden when trying to carefully make food choices to avoid triggering symptoms. Hopefully, this article will be informative and potentially provide you with enough information to consider if honey might be a food you can add to your diet that has a positive effect on your health. When Hippocrates, the father of modern medicine, famously said: "Let food be thy medicine and medicine be thy food," maybe he had honey and GERD in mind way back then.



What is Acid Reflux?



Acid reflux, also known as Gastroesophageal reflux (GER), acid indigestion, acid regurgitation, and reflux, is the condition where the stomach's contents occasionally come up into the esophagus. Sometimes people experience occasional acid reflux without experiencing any symptoms. When symptoms do occur, the commonly associated ones include heartburn (a burning sensation in your chest) or a sour taste from the regurgitated food in the esophagus.

The primary cause of acid reflux is the relaxation of the lower esophageal sphincter (LES). The lower esophageal sphincter (LES) is a muscle band at the lower part of the esophagus which acts as a barrier that allows contents to flow in and out of the stomach. When you swallow food, the LES normally relaxes to allow food into the stomach and then contracts in order to prevent the back-flow (reflux) of stomach contents into the esophagus.

In case the LES relaxes at an inappropriate time or is compromised, the acid generated in the stomach flows back into the esophagus, causing reflux. Some common factors known to trigger LES relaxation include too much acid in the stomach, distention of the stomach, and delayed emptying of the stomach.



What is GERD?



Gastroesophageal reflux disease (GERD) is caused by "the reflux of the gastric and duodenal contents into the esophagus." [3] In simple terms, GERD is a more frequent, severe, prolonged long-lasting acid reflux condition that is accompanied by multiple symptoms and may lead to other complications.

Apart from gastric acid, patients also experience duodenal juice reflux, which makes the condition difficult to treat. [3] GERD symptoms include pharyngeal pain, chest pain, chronic cough, asthma, and heartburn.

Causes of GERD



According to research, GERD might be caused by inflammatory factors such as oxidative stress, cytokines, and neuropeptides. [3] Let's take a deeper look.



1. Inflammation

Inflammation starts in the esophageal lining. The esophageal epithelium cells (found in the esophageal lining) produce inflammatory cytokines like IL-8, which lead to inflammation. [3] These cytokines (secreted proteins) play a role in the development of gastroesophageal reflux (GER). To confirm this assertion, researchers in a 2006 study reported that "IL-8 mRNA levels in the esophageal mucosa of patients with GERD were significantly higher than in normal subjects." [3] And in a 2004 study measuring the expression of IL-8 in the esophageal lining of patients with gastroesophageal reflux disease (GERD) reported that "IL-8 in the esophageal mucosa may be involved in the pathogenesis (development) of esophageal inflammation, including non-erosive GERD." [4]

Similarly, a 2003 study confirms this assertion. After investigating the elevated levels of chemokines (chemotactic cytokines) in the esophageal lining of patients with reflux esophagitis, researchers reported that "Our results indicate that chemokines produced locally in the esophageal mucosa may be involved in the development and progression of RE (reflux esophagitis)." [5]

2. Oxidative stress

Although the exact mechanism by which tissue damage occurs is unknown, researchers propose that free radicals play a role in tissue injury associated with GERD. In a 2006 research study investigating the role of inflammation and oxidative stress in the development of Gastroesophageal Reflux Disease, researchers reported that "the expression of various cytokines in the esophageal mucosa causes oxidative stress by inducing the infiltration and activation of inflammatory cells, as well as by increasing the production of reactive oxygen species." [3] Oxidative damage is not limited to GERD only. It may also play a role in the development of Barrett's esophagus.

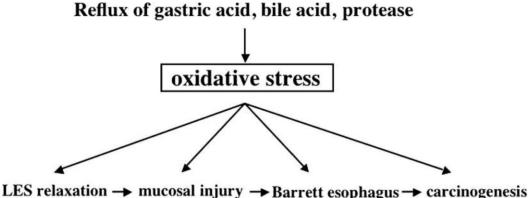


What is Barrett's Esophagus and What Causes Barrett's Esophagus?



Barrett's esophagus often occurs as a result of untreated GERD. According to research, approximately 10% of patients with chronic GERD develop Barrett's esophagus. [6] It is the condition where the tissue lining of the esophagus is replaced with intestinal epithelium. Research reports that normal esophageal epithelium develops into Barrett's mucosa and eventually into esophageal cancer as an adaptive response to chronic gastroesophageal reflux.[7] [3]

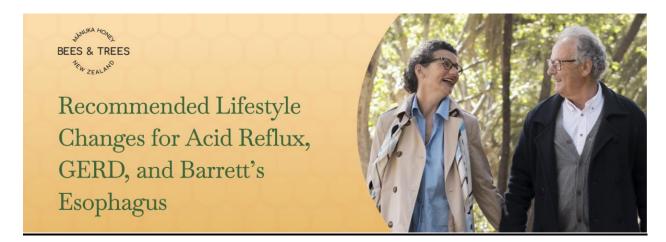
Oxidative stress is a key factor in the development of Barrett's esophagus, as reported in different research studies. In a 2005 study investigating the impact of free radicals and antioxidant systems in reflux esophagitis and Barrett's esophagus, researchers reported that "Patients with GERD show an increase of superoxide dismutase (SOD), an antioxidant enzyme, in the esophageal mucosa, although the activity of this enzyme is decreased due to the nitration of tyrosine residues. This indicates that there are elevated levels of free radicals and peroxynitrite in the esophageal mucosa of these patients." [8]



LES relaxation → mucosal injury → Barrett esophagus → carcinogenesis The development and relation of Acid reflux, GERD, and Barrett's esophagus



Recommended Lifestyle Changes for Acid Reflux, GERD, and Barrett's Esophagus



As mentioned before, GERD is linked to lifestyle. Common recommendations for GERD sufferers suggest lifestyle changes as a starting point. These may include:

- Eating smaller meals A full stomach results in more reflux. Therefore, it is recommended to eat small portions of food more frequently rather than three large meals.
- Avoiding carbonated drinks These may potentially lead to burps, which send acid into the esophagus.
- Not sleeping right after eating A good rule of thumb is to eat three hours before your bedtime. This ensures all food is digested before going to bed in order to avoid regurgitation.
- Avoiding intense exercise/movement right after eating Strenuous exercises and bending over can cause acid regurgitation into your esophagus.
- Elevating your head when sleeping Use a pillow or a foam wedge to support your head and upper body so as to achieve an inclined position. The recommended elevation is 6-8 inches. This helps keep acid in the stomach and avoid regurgitation.
- **Quitting smoking** Nicotine plays a role in the relaxation of the lower esophageal sphincter, which leads to acid reflux.
- **Try losing weight** Extra weight affects the lower esophageal sphincter's muscle support and decreases the pressure that keeps the sphincter closed.
- **Most importantly, change your diet** The food you're eating might be making you experience acid reflux symptoms. Let's explore this in more detail.



What Role Does Diet Play in GERD and Acid Reflux?



According to research, GERD is highly associated with the westernization of the diet (i.e., a diet high in unhealthy fats, seed oils, sugar, and simple carbohydrates). [3] Additionally, research suggested that some foods are more likely to trigger GERD symptoms. [9]

If you suffer from GERD, it is recommended to avoid specific foods that might trigger your symptoms or make your symptoms worse. Some foods commonly associated with GERD include:

- Chocolate
- Garlic, onions
- Tomatoes and tomato products (in some individuals)
- Mint, peppermint, and spearmint
- Alcoholic drinks
- Carbonated beverages
- Caffeinated and decaffeinated drinks like coffee and tea
- Spicy foods
- Acidic foods, such as citrus fruits
- High-fat foods, like fried foods, pastries, nuts/nut butter.

Also, foods that may cause you to burp can lead to more reflux. [9]

As with many health conditions, diet, and lifestyle changes are good starting points to try to eliminate causes and alleviate symptoms before resorting to medication or other treatments. If you suffer from more than occasional acid reflux and/or have been diagnosed by your doctor as having GERD, you most likely are taking or have taken one of the commonly prescribed medicines used to treat this condition.



Prescription Medicine for GERD and Acid Reflux



There are two primary types of medicine recommended by doctors for treating GERD, namely:

- Proton pump inhibitors
- H2 blockers

1. Proton pump inhibitors

Proton pump inhibitors (PPIs) have a strong inhibitory effect against acid secretion and are normally the first line of defense against GERD. [3] They are used to reduce esophageal inflammation by reducing oxidative stress. [3] It is proposed that PPIs have the ability to heal the esophageal lining in people suffering from GERD.

PPIs are available over the counter and can also be prescribed by doctors for long-term GERD treatment. While generally considered to be safe, minor side effects of short-term PPI use include headache, dizziness, rash, diarrhea, nausea, flatulence, and constipation. Serious side effects of long-term PPI use include chronic kidney disease, bone fractures, pneumonia, vitamin B12 deficiency, and Clostridium difficile diarrhea. According to a 2015 study, PPIs also increase the risk of dementia. [10] [11]

2. H2 Blockers

H2 blockers reduce the amount of acid produced by the glands in the lining of your stomach and help heal esophageal inflammation. H2 blockers are available over the counter and can also be prescribed by your doctor. The use of H2 blockers may come with some mild side effects, including headache, drowsiness, fatigue, abdominal pain, constipation, or diarrhea. They carry a lower risk of more severe infections or diseases associated with the long-term use of PPIs. [12]



Apart from prescription medicine, you can also undergo anti-reflux surgery to prevent and treat GERD. In a 2006 study investigating the impact of antireflux surgery on oxidative stress of esophageal mucosa, researchers reported that "the operation normalized reflux symptoms and 24-hour pH monitoring, but it did not completely abolish intramucosal neutrophil infiltration (MPO activity) or restore the decreased mucosal levels of reduced glutathione." [13]

The use of medications and/or surgery is not known to definitively eliminate GERD symptoms or prevent their recurrence. Additionally, long-term dependence on medication may lead to complications and adverse side effects.

Honey may provide an alternative natural treatment approach that is low-risk and contains no known adverse side effects. There is a lot of anecdotal evidence and a long history within traditional medicine that supports the case that honey may be a useful treatment option for GERD sufferers. Let's look into the properties of honey that may play a role in making it a potentially viable treatment option for treating GERD symptoms.

Does Honey Help With GERD and Acid Reflux?



Honey has been used for thousands of years to treat and manage gastrointestinal conditions. This is due to its potent antibacterial, antioxidative, and anti-inflammatory properties.

Before diving into honey's benefits, let's break down the underlying mechanism of action in GERD. Reflux of gastric contents occurs as a result of the relaxation of the lower esophageal sphincter (LES). Mucosal inflammation causes the production of hydrogen peroxide [3], which inhibits the release of acetylcholine from cholinergic nerve terminals which causes LES



relaxation by stimulating the synthesis of prostaglandin (PG) E2 and platelet-activating factor (PAF). [14]

If GERD is caused by pro-inflammatory factors, is it possible to counter its developmental factors with honey which has anti-inflammatory and antioxidant effects? Now let's explore honey's antioxidant and anti-inflammatory properties and how they might help in managing GERD symptoms.

1. Honey's strong antioxidant properties

Honey is known to have strong antioxidant activity, which helps reduce intracellular reactive oxygen species. [15] In a 2001 research study, Lee et al. suggests that antioxidants may play a role in the prevention of esophageal inflammation and Barrett's esophagus by inhibiting excessive cell proliferation. [16]

Honey's antioxidant properties are linked to its <u>phenolic acid and flavonoid</u> content. In a study investigating which type of honey has the highest antioxidant potential, <u>Manuka</u> <u>honey</u> excelled against other kinds of honey [17], because of its high phenolic acid and flavonoid content. [18]

In a 2007 study investigating the antioxidant and radical scavenging activity of honey in endothelial cell cultures, researchers reported that "through the synergistic action of its antioxidants, honey, by reducing and removing ROS, may lower the risks and effects of acute and chronic free radical-induced pathologies in vivo." [19]

2. Honey's potent anti-inflammatory properties

Honey has strong anti-inflammatory effects and may potentially reduce inflammation through the inhibition of nitric oxide and prostaglandin E2 production. [15] Additionally, honey is very dense, has a high viscosity, and is great for coating the mucus membrane in the esophagus. [15]

Honey's anti-inflammatory properties may help initiate or fasten chronic wound healing, which would be beneficial in healing esophageal wounds. A 2003 study reported that "the effect of honey on wound healing may, in part, be related to the stimulation of inflammatory cytokines from monocytic cells. Such cell types are known to play an important role in healing and tissue repair." [20]

A 2016 study reported that Manuka honey has gastroprotective properties which "keep inflammatory cytokines (TNF- α , IL-1 β , and IL-6) in a reduced form, inhibit lipid peroxidation (MDA), and preserve mucous glycoproteins levels." [21]



Is Honey Enough to Heal GERD and Acid Reflux?



Research underscores the role that inflammation and oxidative stress play in the development of these conditions. Research also shows that Manuka honey possesses anti-inflammatory and antioxidative properties. Considering the role honey has played in digestive health within traditional medicine for centuries, it is not too far of a leap to assume that it may directly influence a reduction in GERD symptoms and potentially healing of damaged esophageal tissue.

Our most direct inspiration for writing this article has been the feedback we have received from our customers describing their experiences with symptom relief. Digestive health issues are complex and very individual in nature. Manuka honey is not a magic bullet or cure-all that will work for everyone. It is 100% natural, it may help, and has no known side effects. Given the limitations and risks associated with pharmaceutical-based treatment approaches, it may be worth trying as an alternative or in conjunction with existing medications.



Using Manuka Honey For GERD. What Customers say:



Here are some positive reports we've received from customers who've been able to use Manuka honey to manage their GERD symptoms. We hope this helps offer perspective on how helpful Manuka honey may be.



C What Do Our **Customers Say?**

Mo Werkled Matt Treiber

The 550+ has helped tremendously!

I got the 550+ and it seriously has helped with acid reflux issues. Almost non-existent for me a month later. I take a teaspoon or two a day Just straight from the spoon.

**** 02/07/2023 C Verified Charlotte Wentz Great

Had digestive issues. Couldn't take reflux meds any more. Tried Bees and Trees manuka honey 550+ and my system seems much better. There are still certain foods I can't eat but that's ok, I really don't need them. Thank you Bees & Trees



This is the best honey I have ever tasted. Every morning for the past two months, the first thing I do is have honey "tea" I put a teaspoon of Manuka honey in 8 ounces of hot water. It is delicious. I suffer from GERD and I have been able to decrease my daily Protonix by half and I haven't needed tums either!

J Verified Jennifer Frantz Great product!

This stuff is amazing! It has helped heal my acid reflux, I no longer take meds. It's also helping with IBS symptoms as well. Great taste too.



I have a diagnosis of Barrettes Esophagus, hiatal hernia and GERD. This honey tastes amazing and instantly stops my GERD with one teaspoonful. I also use it every night before bed, let it coat my throat and esophagus and enjoy a great nights sleep without symptoms. I have piece of mind that I am using a natural, healthy approach to my physical condition. I can't wait to order my next jar!



Miracle Honey!

I have suffered from incessant GERD for about four years, trying every over-counter and herbal product I can find, making dietary and lifestyle changes, etc. I also have Lyme disease and two other tickborne co-infections that cause a variety of symptoms and keep me in a near-constant state of inflammation. 2 weeks ago I received my first jar of this honey and for the first time in years, I was not kept awake at night by acid backing up into my throat. I was even able to eat a spicy meal without repercussions. I can get through a work day without popping 1-2 Pepcids. This is completely life-changing. I hope that others read this review and take a chance because this stuff is 110% worth it. I take 1 tsp in the morning and another before bed, sometimes a half tsp before dinner depending on what I'm eating. Just ordered four more jars - I never want to be without this!

G Verified Golda Cain

This is great

This is my second jar has really helped my acid reflux!

K

I love this honey!

I have severe GERD and have been on PPIs for many years. After reading a disturbing study linking long term use of PPIs and a 44% increase in the development of dementia. I went looking for alternative treatments, I came across an article on the benefits of manuka honey for GERD and decided to give it a try. Let me tell you this is a game changer! I have seen immediate positive results, so much so that I'm now set up for monthly deliveries! I'm impressed not only with the quality and taste of the product but with the rapid delivery and the packaging. I'm so happy to have found such a great company!

L 09/06/2022

Consistent, friendly, great product.

I've been ordering from them for over 3 years. They are always on time, they keep you informed on delivery and I love their product. It helps with my IBS, and acid reflux.

K

TAKING FOR SIBO / IBS

Love the honey just because it tastes great-helps me get some really horrible herbs n supplements down to treat my GI issues. A friend is also taking the honey n thinks she has improved due to it. It was prescribed by a naturopath who is helping her thru the same type problem... i get the most potent form, as does my friend.

J

Love my honey 🧡

I have been using it for my acid reflux issues and it has helped tremendously. I am in the process of getting off my meds for it. I think I may finally stop using omeprazole that I have been on for over 20 years.



Conclusion



Honey is a natural alternative that can be used alongside conventional medication in the management of acid reflux and GERD. You can also try it as you make other dietary and lifestyle changes. This makes it a low-cost and easy management option that can save you money spent on otherwise expensive prescription drugs. It may also help you avoid long-term side effects associated with the use of some medications. However, we are not medical professionals, and you should consult with your doctor for specific medical advice.

At <u>Bees & Trees</u>, we focus on producing quality Manuka honey, constantly combing the archives of published scientific and medical research journals for relevant new research and listening to our customers.

As of writing this article, a \$1.3m clinical study has been launched in order to directly study the effects of Manuka honey on digestive health. This study is planned to run over the next two years. We hope that this new research will fill gaps in our understanding and provide objective evidence of Manuka honey's effects. In the meantime, if you suffer from more than occasional acid reflux or have been diagnosed with GERD or Barrett's Esophagus, it may be worth trying Manuka honey for yourself.

Manuka honey's "strength" or potency is established by the concentration of a naturally occurring organic compound, Methylglyoxal (MG). For digestive health, we typically recommend our 550+MG Manuka honey as a starting point. Let us know if it helps or what your experience is by posting a review on one of our product pages. This can be a great way to share your experience with others that are struggling with these same health issues.



References:

- The relationship between gastroesophageal reflux disease and its complications with Barrett's esophagus https://pubmed.ncbi.nlm.nih.gov/8995932/
- 2. Definition & Facts for GER & GERD NIDDK <u>https://www.niddk.nih.gov/health-information/digestive-diseases/acid-reflux-ger-gerd-adults/definition-facts</u>
- 3. Inflammation and Oxidative Stress in Gastroesophageal Reflux Disease PMC https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2291500/#B1
- Interleukin-8 expression in the esophageal mucosa of patients with gastroesophageal reflux disease <u>https://pubmed.ncbi.nlm.nih.gov/15513378/</u>
- 5. Elevated levels of chemokines in esophageal mucosa of patients with reflux esophagitis <u>https://pubmed.ncbi.nlm.nih.gov/12650786/</u>
- Review article: prevalence of Barrett's oesophagus and metaplasia at the gastrooesophageal junction <u>https://pubmed.ncbi.nlm.nih.gov/15456464/</u>
- Gene expression in Barrett's mucosa: acute and chronic adaptive responses in the oesophagus <u>https://pubmed.ncbi.nlm.nih.gov/8282247/</u>
- 8. Free radicals and antioxidant systems in reflux esophagitis and Barrett's esophagus https://pubmed.ncbi.nlm.nih.gov/15884106/
- 9. Diet and risk of gastro-oesophageal reflux disease in the Melbourne Collaborative Cohort Study | Public Health Nutrition <u>https://www.cambridge.org/core/journals/public-health-nutrition/article/diet-and-risk-of-gastrooesophageal-reflux-disease-in-the-melbourne-collaborative-cohort-study/274F1A424FA99A10625C3447D256A318</u>
- 10. Association of Proton Pump Inhibitors With Risk of Dementia: A Pharmacoepidemiological Claims Data Analysis <u>https://pubmed.ncbi.nlm.nih.gov/26882076/</u>
- 11. Proton pump inhibitors and risk of dementia



https://pubmed.ncbi.nlm.nih.gov/27429966/

- 12. H2 Blockers StatPearls NCBI Bookshelf https://www.ncbi.nlm.nih.gov/books/NBK525994/
- 13. The impact of antireflux surgery on oxidative stress of esophageal mucosa caused by gastroesophageal reflux disease: 4-yr follow-up study https://pubmed.ncbi.nlm.nih.gov/16454822/
- Inflammation induced changes in arachidonic acid metabolism in cat LES circular muscle https://pubmed.ncbi.nlm.nih.gov/15550558/
- 15. Honey A nutrient with medicinal property in reflux oesophagitis PMC https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3978955/#ref14
- Involvement of oxidative stress in experimentally induced reflux esophagitis and Barrett's esophagus: clue for the chemoprevention of esophageal carcinoma by antioxidants https://pubmed.ncbi.nlm.nih.gov/11506813/
- 17. Diversity of Monofloral Honey Based on the Antimicrobial and Antioxidant Potential -PMC https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9137981/
- Phenolic acids and flavonoids profiles of commercial honey from different floral sources and geographic sources https://www.tandfonline.com/doi/full/10.1080/10942912.2019.1579835
- 19. Antioxidant and radical scavenging activity of honey in endothelial cell cultures (EA.hy926) https://pubmed.ncbi.nlm.nih.gov/17823875/
- 20. Honey stimulates inflammatory cytokine production from monocytes https://pubmed.ncbi.nlm.nih.gov/12824009/
- 21. Antioxidant, Anti-inflammatory, and Antiulcer Potential of Manuka Honey against Gastric Ulcer in Rats https://pubmed.ncbi.nlm.nih.gov/26770649/