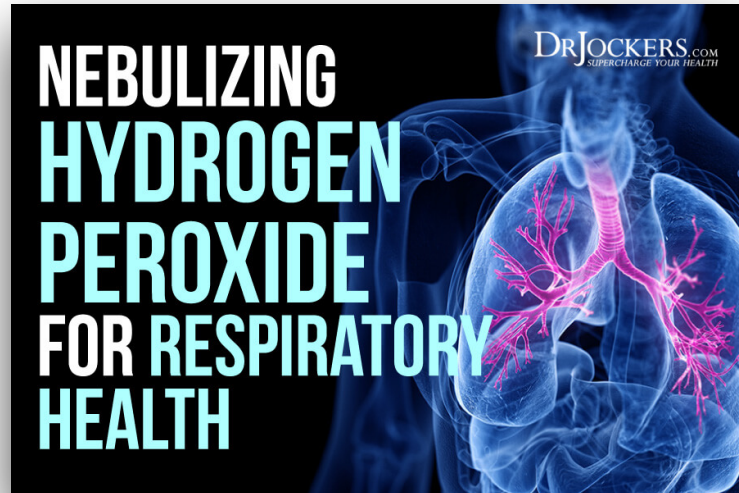


Nebulized Hydrogen Peroxide

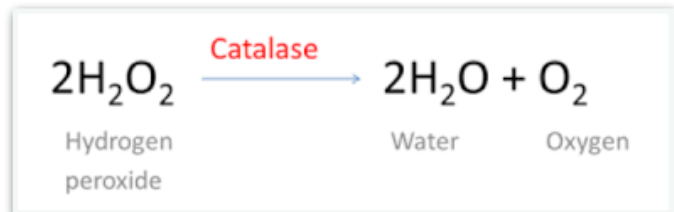
Adapted from articles by Dr. Jockers at <https://drjockers.com/nebulizing/> and <https://madisonarealymesupportgroup.com/2020/09/14/nebulized-peroxide-covid/>



Hydrogen peroxide (H₂O₂) is an antiseptic agent that is used to fight pathogens. Increasing evidence suggests that it may be beneficial for your respiratory health when nebulized. Nebulizing changes medications or other therapeutic agents from liquid to mist. Inhaling hydrogen peroxide through a nebulizer may help you improve your respiratory system and regain your health quicker if you are feeling unwell.

How Hydrogen Peroxide Works

Hydrogen peroxide releases a negative oxygen ion that breaks the integrity of the cell membrane of bacteria, fungi and other pathogens. This kills the pathogens and reduces the microbial load. Our immune cells create hydrogen peroxide as a part of their defense against pathogens and cancer cells in our body. Our healthy cells have catalase enzyme to break H₂O₂ down into water and oxygen.



What is Nebulizing?

A nebulizer is a piece of medical equipment that changes certain medications or therapeutic supplements from a liquid form to a mist, allowing you to inhale it into your lungs. Nebulizing helps to quickly administer the medication or supplement directly into your lungs. Nebulizers have a mouthpiece or face mask to put over your face to inhale the mist through it. The therapeutic agent then goes straight into your nose, sinuses and lungs—exactly where you need it to take effect.

Nebulizers (nebs for short) are often recommended for people with asthma or other respiratory issues such as COPD. Nebs may be used for acute respiratory infections.

The good news is that nebulizers are fairly affordable. Most home nebulizers start at around \$45-\$75. They can be purchased as a handheld or desktop model.



Handheld models are small, convenient for travel, and tend to be quieter than desktop models. You can find a number of different models on Amazon. Look for one that uses vibrating mesh technology that creates a mist with particles less than 5 microns (um) in size.

Dr. Gering personally bought this portable neb for ~\$45 and it seems to work well. Portable Nebulizer - Nebulizer Machine for Adults and Kids Travel and Household Use, Handheld Mesh Nebulizer for Breathing Problems APOWUS. <https://a.co/d/0r360bu>

Alternatively (esp for those with chronic lung problems such as asthma or COPD), you may want to purchase a desktop nebulizer.

Desktop versions are stronger than handheld battery operated models and they produce a very fine mist. Dr. Shallenberger recommends using the Standard Pari Trek S Compressor Aerosol System, which is available online for ~\$60. Note: The additional Li-Ion battery option is unnecessary as you can simply plug in the device to run it when you need it. <https://www.healthproductsforyou.com/p-pari-trek-s-portable-compressor-nebulizer-aerosol-system.html>



The Pari Trek S is designed to treat asthmatics, and therefore only comes with a mouthpiece as shown in the photo. While this gets mist into the lungs, it does nothing to reach the sinuses, which is also an area that should ideally be treated if you have a respiratory infection. For this reason, it's worth purchasing some face masks as well.

<https://www.healthproductsforyou.com/p-pari-adult-aerosol-mask.html>

<https://www.healthproductsforyou.com/p-respironics-sami-the-seal-children-mask-for-sidestream-plus-nebulizer.html>

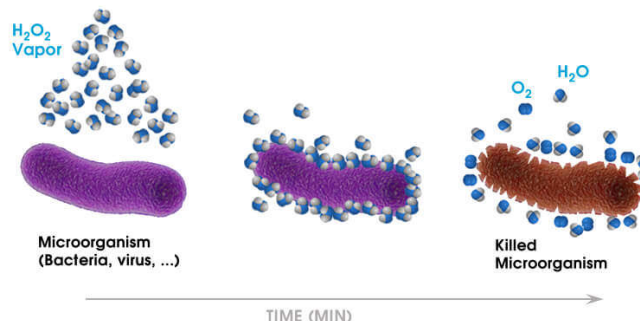


What is Hydrogen Peroxide?

Again, hydrogen peroxide (H₂O₂) is a mild antiseptic agent that is made up of two hydrogen atoms and two oxygen atoms. Hydrogen peroxide releases oxygen when applied to affected areas, which causes foaming action. This is because the blood and

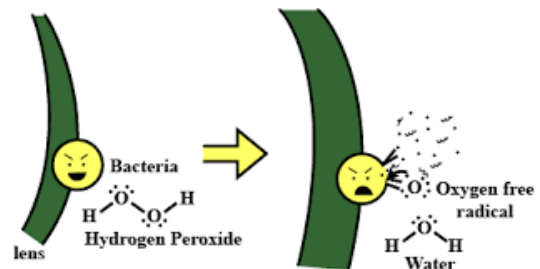
most living cells contain the enzyme catalase, which breaks down hydrogen peroxide and converts it into water (H₂O) and oxygen (O₂).

The oxygen free radicals have a negative charge that interacts with pathogens, and damages their cell walls. This helps to destroy bacteria, clean areas, and remove dead cells. Your white blood cells make and use hydrogen peroxide to fight bacteria, viruses, fungi, and other pathogens.



Hydrogen peroxide has long been used as an accepted, safe, and affordable disinfectant for surfaces, cuts, scrapes, burns, and minor wounds. It may also be beneficial as a mouth rinse that helps to relieve canker sores, gingivitis, and other minor mouth irritations, and reduce mucus. Furthermore, hydrogen peroxide may be beneficial for your sinus, lung, and overall respiratory health.

It turns out that the friendly bacteria in the mucous membranes of your lungs, sinuses, nose, mouth, digestive system, and urinary tract thrive in environments that are rich in oxygen. Hydrogen peroxide is very high in oxygen which may help these friendly bacteria thrive, but cause harmful pathogens to die.



Hidden Epidemic, a book by Dr. Thomas Levy published by MedFox Publishing in 2017, discusses the role of hydrogen peroxide in acute viral respiratory infections (1). Following the infection, your mouth and nose cavities stay in a low-grade infectious state with a biofilm of disease-causing colonies of viruses.

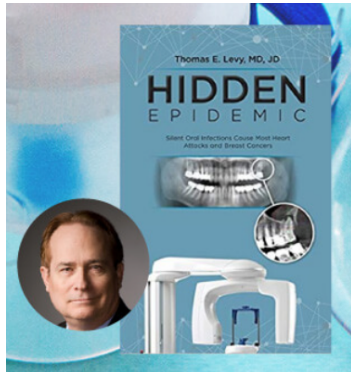
As a result, they may persist chronically in your oral cavity, such as your tonsils. As pathogens get swallowed, the ongoing infection may also compromise the health of your teeth, gums and gut. This may lead to ongoing oxidative stress in your gut, which can result in leaky gut syndrome. Dr. Levy argues that nebulizing hydrogen may be a way to tackle these infections.

Using Nebulized Hydrogen Peroxide

As prescription medications became more popular, the interest in the benefit of hydrogen peroxide declined in the 1940s. However, recently, there has been increased attention to hydrogen peroxide and nebulizing with hydrogen peroxide. Many functional medicine doctors, including Dr. Levy and Dr. Mercola, have been recommending nebulizing hydrogen peroxide.

Acute Illness - Dr. Mercola recommends starting nebulizing with hydrogen peroxide the same day as you notice a respiratory infection coming on (2). He believes that nebulizing with hydrogen peroxide can be an effective treatment in itself. However, adding supplements such as vitamin D/K2, zinc, and quercetin may be highly beneficial.

Nebulizing H₂O₂ becomes less effective as the respiratory infection gets worse, so it is important to focus early on and do it for 5-15 minutes at a time, every waking hour. After you feel better, you can cut back to every 4–6 hours until you feel close to 100%. The goal is to stop the virus before it gets deep in the lungs where it causes severe inflammation and can progress to serious illness.



Dr. Thomas Levy has written extensively, including in his book, about nebulizing hydrogen peroxide for respiratory issues (3). He explains that nebulizing hydrogen peroxide may help to break down and inactivate viruses. He recommends daily treatments several times a day until a few days after you feel completely normal. He believes that nebulizing hydrogen peroxide may also be a great **preventative** strategy. For example, you may want to do a neb when you get home after spending time in crowds or at a doctor's office.

Chronic Respiratory Conditions - For exercise induced asthma, try nebulizing H₂O₂ before activity. You can always use albuterol as well if needed, but you may find that it's not necessary. For chronic conditions such as asthma and COPD, nebulize H₂O₂ twice daily, and afterward you can use albuterol if needed. Also use your steroid inhaler as prescribed by your doctor, but the goal would be to eventually be able to wean off the steroids if possible, as steroids can increase risk of certain infections such as thrush. For acute illness on top of chronic pulmonary conditions, increase frequency as recommended above.

Dr. David Brownstein also recommends nebulizing with hydrogen peroxide in a scientific article published by the Institute for Pure and Applied Knowledge (IPAK), Public Health Policy Initiative (PHPI) in 2020 (4). According to this observational case series, nebulizing a hydrogen peroxide/saline mix with Lugol's iodine seemed effective for respiratory infections. In this case series, patients received individualized treatment,

and some were also treated with intravenous hydrogen peroxide, vitamin C solutions, and/or intramuscular ozone.

When done correctly, nebulized hydrogen peroxide is extremely safe. Dr. Brownstein has used it for 25 years with known no ill effects reported. It's also inexpensive, and you can administer it at home, without a prescription. Per Dr. Shallenberger, nebulized hydrogen peroxide is one of the absolute best therapies for viral infections like SARS-CoV-2 or even worse respiratory viruses that may be unleashed in the future.



Health Benefits of Nebulized Hydrogen Peroxide

Nebulizing hydrogen peroxide may offer a number of health benefits, including respiratory, oral, and digestive health.

Improved Respiratory Health

One of the main benefits of nebulizing hydrogen peroxides is improved respiratory health. A 1996 study published in *Respiratory Medicine* found that nebulizing may be an effective therapy for respiratory and lung health (5). A 2020 review published in *Medical Hypothesis* found hydrogen peroxide may be beneficial for viral infections (6).

Reduced Oral Pathogens

Nebulizing hydrogen peroxide may also help to reduce oral pathogens. A 1995 review published in the *Journal of Periodontology* found that hydrogen peroxide may help to reduce plaque and gingivitis (7). A 2016 study published in the *Journal of International Society of Preventative and Community Dentistry* found that hydrogen peroxide may help to reduce gingivitis in periodontist patients (8).

Improved Digestive Health

Hydrogen peroxide may also benefit your digestive health. A 2017 study published in *Gut Microbes* found that hydrogen peroxide may help to control pathogens in the intestinal mucosa (9). A 2020 study published in *Cell Host & Microbe* also found that hydrogen peroxide may help to reduce the microbial load in the gut (10).

Studies on Nebulized Hydrogen Peroxide

There have been a number of recent studies on the potential benefits of nebulized hydrogen peroxide. A 2016 study published in *Food and Environmental Virology* found that nebulizing hydrogen peroxide may be beneficial for various respiratory infections

(11). A 2020 review published in Medical Hypothesis found that hydrogen peroxide may be helpful for viral infections (6).

According to a 2020 article published in Infection Control and Hospital Epidemiology said that using nebulized hydrogen peroxide may help to reduce the hospitalization rate related to respiratory infections (12). A 2021 case series published in Evidence-Based Complementary and Alternative Medicine found that nebulizing with hydrogen peroxide may be a beneficial option for respiratory infections (13).

How to Do Hydrogen Peroxide Nebbs

Again, when fighting viral infections, it is important to have the neb machine and ingredients on hand BEFORE you need them. The sooner you treat an infection, the better your results will be. Purchase a neb machine and also FOOD-GRADE hydrogen peroxide to have at home before you need it. (NOT the stuff in the brown bottle.) It's also good to have amber glass dropper bottles, so you can store diluted H₂O₂.

Food-Grade Hydrogen Peroxide

Food-grade hydrogen peroxide come in 3%, 12% or 35% solution. Since 36% hydrogen peroxide is very caustic and cause burns to the skin, we recommend 3% or 12% solution. To use hydrogen peroxide for nebs, you MUST to dilute it with SALINE (0.9% salt water) to make a 0.1% hydrogen peroxide-saline mixture.

- * NEVER use full strength 3% or 12% hydrogen peroxide
- * For nebs, you must dilute the hydrogen peroxide to 0.1% with saline.

If the hydrogen peroxide is too strong, or if you use plain tap water, you may harm your lungs. However, if you follow the instructions below, you can make your own solution at home safely and affordably.



Hydrogen Peroxide Dilution for Safety

If purchasing 12% H₂O₂, to make it easier to use, you may want to dilute it with distilled water to make a 3% solution (which you will further dilute with saline to use as a neb, as directed below)

- this is easy to do - simply use 1 part 12% H₂O₂ and 3 parts distilled water
- practical example: if you have a 4 oz amber dropper bottle fill with 3 oz distilled water and add 1 oz of 12% hydrogen peroxide
- note: one fluid ounce = 2 Tablespoons
- if you choose to NOT first dilute the 12% down to 3%, please use chart below to see how much to add to saline
- If purchasing 35%, use safety precautions!
 - to dilute down to 3% use 1 part 35% H₂O₂ and 11 parts distilled water
- be sure to LABEL THE BOTTLE as “3% Hydrogen Peroxide” - this is NEVER nebulized - see step 3 on how to dilute it to 0.1% with saline

Safe Saline Solution

Do NOT use saline solution for contacts, because it contains preservatives that may cause irritation to the lungs. Instead, you can make your own saline solution at home. Alternatively, you may choose to purchase a quality preservative-free saline solution, which come in 3mL or 5mL vials, typically 100 per box. <https://a.co/d/8kppCdt>



How to Make Homemade Saline Solution

Ingredients:

- 1 cup (8 oz) of purified water (ideally distilled or at least filtered, NOT plain tap water)
- 1/2 tsp salt (make sure it is non-iodized salt without preservatives or "flow agents"; non-iodized sea salt or Redmond Real Salt <https://a.co/d/esiqCOR>)

Instructions:

1. If using distilled water, using a clean measuring cup, simply measure out 1 cup (8 oz) of water. If using filtered tap water, to be safe, bring 1.5-2 cups of water to a boil. Boil for ~10 minutes. Let it cool a bit, then using a clean measuring cup, measure 1 cup (8 oz) of water.
2. Mix salt into the water and stir until dissolved.
3. Let the mixture cool to lukewarm temp before using it.
4. You can store plain homemade saline in a sealed jar for up to 3 days in the fridge.

How to Prepare Hydrogen Peroxide for Nebbs

- Make a 0.1% solution - see below for dilution on how to dilute
- Add 2 teaspoons of 3% food-grade hydrogen peroxide to the 8 oz. saline water you just prepared. However, if you are starting with 12% food-grade hydrogen peroxide, then you add just 1/2 tsp to 8 oz of saline. (See below for chart.)
- Transfer this mixture to a glass dropper bottle. Example on Amazon at <https://a.co/d/fQxFgBK>
- Since H₂O₂ is naturally antiseptic, you can keep this solution refrigerated for quite a long time.



Starting H ₂ O ₂ Concentration	Hydrogen Peroxide	Saline	Ending H ₂ O ₂ Concentration
3%	2 tsp (10 ml)	1 cup (8 ounces)	0.1%
12%	1/2 tsp (2.5 ml)	1 cup (8 ounces)	0.1%
35%	0.167 tsp (16-17 drops)	1 cup (8 ounces)	0.1%



How to Set Up Your Nebulizer

- Read the instructions of your nebulizer carefully.
- Connect the tubing to the nebulizer.
- Open the nebulizer medicine well and add 5 mL (1 tsp, which is ~3-4 full droppers) of your 0.1% H₂O₂-saline solution mixture.
- Start machine, put on mask & breathe in the nebulized 0.1% H₂O₂-saline solution.

Alternative - using Pre-Filled Preservative Free Ampule Option

If you choose to buy 3ml saline ampules, then simply add 0.1ml (2 drops) of 3% food-grade hydrogen peroxide directly to the nebulizer well with the saline to make a 0.1% mixture. Or if you have 5ml saline ampules, use 0.167 ml (3.3 drops - so use 3 or 4) of 3% food-grade hydrogen peroxide. To measure the hydrogen peroxide more precisely, you can use a 1ml TB or insulin syringe that you can buy online, or from your pharmacy, or our clinic. <https://a.co/d/55i4EPs>

Starting H ₂ O ₂ Concentration	Hydrogen Peroxide	Saline	Ending H ₂ O ₂ Concentration
3%	0.13 ml (~3 drops)	3 ml	0.1%
3%	0.21 ml (~5 drops)	5 ml	0.1%

Hydrogen Peroxide Mixture for Purchase at Spero

If you prefer to not mess with making your own hydrogen peroxide solution, we can mix up hydrogen peroxide and saline for you to take home. This can be used for asthma*, COPD* and/or acute respiratory illness**.

There are 2 options that we make, depending on availability of components:

- (1) mixed in a 100cc or 250cc sterile IV bag of saline
- (2) mixed in a 100cc to 250cc bottle of saline

Store both the bag or bottle of H₂O₂ Normal Saline in the refrigerator. If cared for carefully, the IV bag may last up to 1 year. The bottles won't last nearly as long as the bags, because they are opened and closed, which will allow some of the peroxide to escape. But if closed up and put back into the fridge promptly, the bottle should last a month or so.

NOTE:

* You can also use albuterol and other inhalers as directed if needed

** If respiratory illness worsens, please call your doctor or go to urgent care for evaluation and treatment

Additional Options

Besides nebulizing hydrogen peroxide, there are other substances that you may try nebulizing with to support your respiratory health naturally. I recommend the Brownstein protocol, nebulizing silver, and nebulizing glutathione.

Brownstein Protocol - Add Iodine

You may benefit from the Brownstein Protocol by Dr. David Brownstein for respiratory health. Dr. Brownstein also recommends nebulizing with hydrogen peroxide in a scientific article published (4).



In an observational case series by the Institute for Pure and Applied Knowledge (IPAK), Public Health Policy Initiative (PHPI) in 2020, Dr. Brownstein and his team found that nebulizing a hydrogen peroxide/saline mix with 2 drops of 2% Lugol's iodine. <https://a.co/d/crZbwyH> If you feel fine with that you can increase your dosage to 5–6 drops of the iodine. You do this each time you nebulize.

The Lugol's has potassium iodine. Dr. Jockers personally recommends using a pure nascent iodine instead. So he adds 3–6 drops of a nascent iodine such as Detoxadine Iodine to your hydrogen peroxide solution. <https://a.co/d/hYJjsFm>



Dr. Jockers Recommendation - Nebulized Silver

You may also benefit from nebulizing colloidal or nano silver for respiratory issues. A 2008 study published in the Journal of Royal Society of Medicine found that colloidal silver may be beneficial for lung health (14). A 2021 animal study published in the Journal of Equine Veterinary Science found that colloidal silver may be helpful for respiratory bacterial infections (15).

Follow these directions for nebulizing with colloidal silver:

- Fill the medicine cup of your nebulizer with a non-diluted nanosilver up to the 2 ml mark. I recommend using Silvercillin Spray for nano silver. Avoid using homemade silver as the particles are too large and concentration may not be correct.
- Following the directions of your nebulizer, turn it on, put the mask on, and inhale deeply. Hold it in for a second, then exhale.
- If you have an acute infection, Dr. Jockers recommends 6-7 minutes 3 to 5 times a day. Use it for about 6-7 minutes each session once or twice a day for prevention. If you are using it for lung regeneration, start it with one time a day.



Nebulized Glutathione

You may also benefit from nebulizing with glutathione for respiratory health. Glutathione is an antioxidant that can help to reduce cellular damage. A 2000 case report published in Alternative Medicine Reviews found that nebulizing glutathione may be helpful for emphysema (16). A 2005 study published in Free Radical Biology & Medicine found that nebulizing glutathione may be beneficial for lung health (17).

A 2008 study published in Evidence-Based Complementary and Alternative Medicine found that nebulized or aerosolized glutathione can benefit respiratory and lung problems (18). A 2015 study published in the Journal of Cystic Fibrosis found that nebulized glutathione may be beneficial for lung health (19). Glutathione can be especially good for helping to improve chronic lung diseases.



Follow these directions for nebulizing with glutathione:

- Set up your nebulizer according to the directions.
- We using reduced L-Glutathione for nebulizing.
- Break 1 capsule of glutathione open. Pour the content of the capsule into the medicine cup of your nebulizer. Add about 1 teaspoon or 5 ml of saline solution. Let it sit for a bit until the solution looks perfectly clear.
- Once ready, put the mouthpiece on and begin inhaling. The treatment of 1 capsule lasts for about 4 minutes.

Final Thoughts

Hydrogen peroxide is an antiseptic agent that may be beneficial for your respiratory health when nebulized. Consider following the above tips for nebulizing hydrogen peroxide to improve your respiratory system and regain your health quicker if you are feeling unwell.

Sources in This Article Include:

1. Levy, Thomas E., Rapid Virus Recovery, (Henderson, NV:MedFox Publishing, 2021). https://www.booksamillion.com/p/Rapid-Virus-Recovery/Thomas-E-Levy/9780998312415?gclsrc=aw.ds&gclid=CjwKCAjw5dggBhBNEiwA7PryaJf9cP-ojhqKmM6-q8JHfLLB2XT2OYlqBxuhr5amk2tJVL0GVWi81hoCt2kQAvD_BwE
2. Dr. Mercola. Nebulizing peroxide. Link no longer available.
3. Levy T. 2020.An at home treatment that can cure any virus. <https://www.janssendentalclinic.com/wp-content/uploads/2020/03/H2O2-nebulization-therapy-3.19.2020.pdf>
4. Brownstein D. Institute for Pure and Applied Knowledge (IPAK), Public Health Policy Initiative (PHPI). <https://www.talkingaboutthescience.com/wp-content/uploads/Brownstein2020-h2o2.pdf>
5. O'Driscoll BR, Bernstein A. A long-term study of symptoms, spirometry and survival amongst home nebulizer users. *Respir Med.* 1996 Oct;90(9):561-6. doi: 10.1016/s0954-6111(96)90149-3. PMID: 8984531
6. Caruso AA, Del Prete A, Lazzarino AI. Hydrogen peroxide and viral infections: A literature review with research hypothesis definition in relation to the current

- covid-19 pandemic. *Med Hypotheses*. 2020 Nov;144:109910. doi: 10.1016/j.mehy.2020.109910. Epub 2020 Jun 1. PMID: 32505069
7. Marshall MV, Cancro LP, Fischman SL. Hydrogen peroxide: a review of its use in dentistry. *J Periodontol*. 1995 Sep;66(9):786-96. doi: 10.1902/jop.1995.66.9.786. PMID: 7500245
 8. Rashed HT. Evaluation of the effect of hydrogen peroxide as a mouthwash in comparison with chlorhexidine in chronic periodontitis patients: A clinical study. *J Int Soc Prev Community Dent*. 2016 May-Jun;6(3):206-12. doi: 10.4103/2231-0762.183114. Epub 2016 May 30. PMID: 27382535
 9. Knaus UG, Hertzberger R, Pircalabioru GG, Yousefi SP, Branco Dos Santos F. Pathogen control at the intestinal mucosa – H₂O₂ to the rescue. *Gut Microbes*. 2017 Jan 2;8(1):67-74. doi: 10.1080/19490976.2017.1279378. Epub 2017 Jan 12. PMID: 28080210
 10. Miller MB. 2020. *Cell Host & Microbe*. [Link Here](#)
 11. Zonta W, Mauroy A, Farnir F, Thiry E. Virucidal Efficacy of a Hydrogen Peroxide Nebulization Against Murine Norovirus and Feline Calicivirus, Two Surrogates of Human Norovirus. *Food Environ Virol*. 2016 Dec;8(4):275-282. doi: 10.1007/s12560-016-9253-5. Epub 2016 Jul 6. PMID: 27384526
 12. Caruso AA, Del Prete A, Lazzarino AI, Capaldi R, Grumetto L. Might hydrogen peroxide reduce the hospitalization rate and complications of SARS-CoV-2 infection? *Infect Control Hosp Epidemiol*. 2020 Nov;41(11):1360-1361. doi: 10.1017/ice.2020.170. Epub 2020 Apr 22. PMID: 32319881
 13. Cervantes Trejo A, Castañeda ID, Rodríguez AC, Andrade Carmona VR, Mercado MDPC, Vale LS, Cruz M, Barrero Castellero S, Consuelo LC, Di Silvio M. Hydrogen Peroxide as an Adjuvant Therapy for COVID-19: A Case Series of Patients and Caregivers in the Mexico City Metropolitan Area. *Evid Based Complement Alternat Med*. 2021 Jul 3;2021:5592042. doi: 10.1155/2021/5592042. PMID: 34335827
 14. Baral VR, Dewar AL, Connett GJ. Colloidal silver for lung disease in cystic fibrosis. *J R Soc Med*. 2008 Jul;101 Suppl 1(Suppl 1):S51-2. doi: 10.1258/jrsm.2008.s18012. PMID: 18607021
 15. Frippiat T, Paindaveine C, Duprez JN, Delguste C, Mainil J, Art T. Evaluation of the Bactericidal Effect of Nebulized Silver Nanoparticles on Common Respiratory Bacteria in Horses- In Vitro Studies. *J Equine Vet Sci*. 2021 Aug;103:103635. DOI: 10.1016/j.jevs.2021.103635. Epub 2021 Apr 28. PMID: 34281634
 16. Lamson DW, Brignall MS. The use of nebulized glutathione in the treatment of emphysema: a case report. *Altern Med Rev*. 2000 Oct;5(5):429-31. PMID: 11056412
 17. Hartl D, Starosta V, Maier K, Beck-Speier I, Rebhan C, Becker BF, Latzin P, Fischer R, Ratjen F, Huber RM, Rietschel E, Krauss-Etschmann S, Griese M. Inhaled glutathione decreases PGE₂ and increases lymphocytes in cystic fibrosis lungs. *Free Radic Biol Med*. 2005 Aug 15;39(4):463-72. doi: 10.1016/j.freeradbiomed.2005.03.032. Epub 2005 Apr 14. PMID: 16043018
 18. Prousky J. The treatment of pulmonary diseases and respiratory-related conditions with inhaled (nebulized or aerosolized) glutathione. *Evid Based Complement Alternat Med*. 2008 Mar;5(1):27-35. doi: 10.1093/ecam/nem040. PMID: 18317545
 19. Turino C, Melillo E, Buonpensiero P, Di Pasqua A, Raia V. Randomized, single blind, controlled trial of inhaled glutathione vs placebo in patients with cystic fibrosis. *J*

Other References:

- * Dr.Frank Shallenberger <https://www.secondopinionnewsletter.com/Health-Alert-Archive/View-Archive/14089/This-AtHome-Treatment-Can-Knock-Out-Any-Virus--Including-the-Coronavirus.htm#>
- * HOW NEBULIZED PEROXIDE HELPS AGAINST RESPIRATORY INFECTIONS <https://madisonarealymesupportgroup.com/2020/09/14/nebulized-peroxide-covid/>
- * How Nebulized Hydrogen Peroxide Is Being Used to Help With Respiratory Infections, Like COVID. <https://www.docsoutsidethebox.us/post/how-nebulized-hydrogen-peroxide-has-been-used-to-help-with-respiratory-infections-like-covid>
- * Dilution Table for Hydrogen Peroxide <https://www.mychemicalfreehouse.net/2020/03/dilution-table-for-hydrogen-peroxide.html>
- * I-PREVENT: COVID, Flu and RSV Protection Protocol <https://covid19criticalcare.com/treatment-protocols/i-prevent-protect/>
- * I-CARE: Early COVID Treatment <https://covid19criticalcare.com/treatment-protocols/i-care/>
- * I-RECOVER: Long COVID Treatment <https://covid19criticalcare.com/treatment-protocols/i-recover-long-covid-treatment/>