



HYDROGEN INHALATION MACHINE

INSTRUCTION MANUAL USAGE INFORMATION

Normal Usage of the Hydrogen Machine

Your machine is designed to be used for three different types of applications:

- Inhalation
- Infusing Water
- Direct Gas Application

Before we discuss the three different ways that Molecular Hydrogen can be used for health, based upon studies, we offer a recommendation about one aspect:

Studies have shown that the hormone **Ghrelin** has a lot of great effects in the body. However, it is only expressed by the body when Hydrogen hits your stomach. The only way to get Hydrogen directly into your stomach is to infuse water and then drink it. It is recommended to drink 16 oz. of infused water, once per day at a minimum, even if your intention is to use Inhalation as your primary mode of delivery of the Molecular Hydrogen to your body.

Once again, from studies, here are the effects that Ghrelin creates in the body:

- Well known to function as an appetite stimulant (useful for Chemotherapy) if appetite is not working correctly – it does not cause you to get more hungry if you are already healthy
- Secretagogue* for Growth Hormone
- Neuroprotective (protects nerves)
- Enhances Cognition
- Favorably impacts vascular health
- Exerts anti-inflammatory activity (useful in autoimmune disorders)
- Is markedly Hepatoprotective (protects the blood)

* A secretagogue is a substance that causes another substance to be secreted.

Now, let's discuss the three ways that Molecular Hydrogen can be used to improve your health!

Inhalation

The gas that the machine produces has been shown to be completely safe through many studies and even testing by the U.S. Navy for deep diving

without exposing divers to the risks of Decompression Sickness, commonly known as The Bends. Inhaling the gas gives the body an enormous amount of Molecular Hydrogen and makes it immediately available to the body by having the lungs directly transmit it into the blood. One minute of inhalation is equivalent to the power of 30+ liters (quarts) of infused water for drinking!

To inhale the gas, simply connect a Nasal Cannula to the unit and insert into your nose, with nasal tubes pointing downward. Then gently position each side of the tubing over the top of your ears and let it fall down the back side of the ears, and hang under your chin. You're now ready to experience the power of direct inhalation!

Before stating the recommendations, let's start with the fact that Molecular Hydrogen is a gas that is already known to the body - it is made in the intestines each day in a quantity of about one liter. It is not a foreign substance and the body knows what to do with it. There has been no unsafe upper limit determined, and several customers have added it to their sleep regimen, breathing it the entire night. However, as with anything new, it is always prudent to start slowly, and then increase over time.

Starting Out: Because Molecular Hydrogen is highly available in the gas and so easily absorbed through the lungs, it is recommended to begin breathing 1/2 hour per day in the beginning. After a few days, you can increase to 1/2 hour in the morning and 1/2 hour in the evening.

Daily Usage: Once your body has experienced the Molecular Hydrogen gas for the first week with the Starting Out protocol, you may begin to increase the time, if you desire. If possible, breathe the gas at least 1/2 hour morning and evening, or as you desire throughout the day. Results will happen faster if you can breathe 1-2 hours (or more) per day. The eyes are the organs most susceptible to oxidation stress. People who breathe the gas longer have reported sharpening of their vision in as little as four weeks.

Advanced Usage: You can continue to increase the time as you feel right for your body. Some customers will use the Nasal Cannula while they work at their desk, as it doesn't interfere with work, or even with speaking on the phone. Another way to use it is to sleep with the Nasal Cannula attached and enjoy Molecular Hydrogen the entire night. Experiment to find out how you'd like to use it to enhance your life!

Some Thoughts on Inhalation Time and Duration: Each breath you take provides your body with 78% Nitrogen, 21% Oxygen, and 1% other gases. These go into the lungs, are absorbed into the blood and then are circulated to cells in the body. However, that one breath does not reach all of the trillions of cells in your body instantaneously. The body is replenished only over time - with a continuous stream of the gases that the body needs. The blood is also removing Carbon Dioxide and other gases on each breath exhale, as well, so things are really busy. In similar manner, Molecular Hydrogen is available only while it is dissolved in and circulating in the blood. Studies show that within 12-15 minutes, the blood becomes saturated with Molecular Hydrogen and the blood can carry it to the trillions of cells in the body - but, once again, one breath does not reach all cells - it is a constant availability that allows the Molecular Hydrogen to start to reach into the recesses of the body and do its job. Think about the time that you're willing to commit to changing your life with Molecular Hydrogen. When attempting to make serious changes in the body, studies show that longer is better.

Cleaning the Nasal Cannula: Go to the sink, hold the nostril holes down, and let the water run over it. Then gently rub it between your fingers. Dry it with a towel and your Nasal Cannula is now ready for the next usage.

Odors and Smells: The new Nasal Cannulas might have a slight "plastic" odor when it is first used. This will go away over time. If you are sensitive to this odor, simply hook the Nasal Cannula up to the machine and let it run for several hours until the odor is eliminated. Molecular Hydrogen has no odor or smell, but Oxygen does. You may notice the smell of Oxygen as you're breathing, and this is expected and normal.

Breathing CAUTION: It is important to breathe normally when using the Nasal Cannula. Over-breathing (similar to Hyperventilation - breathing too often, too deeply and too fast) can lead to light-headedness. When you are breathing too much, too fast or even too deeply on each breath, you can cause an imbalance in the blood chemistry known as Alkalosis of the blood. This occurs when the body removes too much Carbon Dioxide from the blood. This is not the Molecular Hydrogen causing the lightheadedness, but simply too much breathing. Relax and breathe normally and this will not occur.

Infusing Water with Molecular Hydrogen

This machine makes it simple to infuse Molecular Hydrogen into drinking water. Infusing the water will accomplish the following:

- Infuse (dissolve) Molecular Hydrogen into the water
- Lower the ORP (get ORP reduced to -407 in 10 minutes!)
- Infuse (dissolve) Oxygen into the water
- Greater hydration is possible with this water, as the surface tension is reduced
- Other benefits that science is just starting to understand

To infuse the water, connect the infusing stone accessory to the Hydrogen Generator and place the infusion stone into a glass of clean water. Hydrogen dissolves more readily into colder water, so feel free to refrigerate the water prior to infusing, for maximum absorption of Molecular Hydrogen into the water. However, even at room temperature, great infusion rates occur, as show below.

Recommendation: Fill a 16 oz. (500 ml) glass with water and press the "5" minute button. Our testing has shown that this has the greatest benefit in the least amount of time. Infusing longer will provide more available dissolved Hydrogen and Oxygen, but the table below shows the amount of time needed for greatest benefit in the shortest time. Infuse and drink this water TWICE per day, at a minimum. If you have two people that want to drink the water, put the infusing stone in a quart (32 oz./1 liter) of water and bubble for 10 minutes, then share.

Tip: When pouring the infused water, treat it like a fine Champagne, and gently pour down the sides of a glass. Agitation will remove the dissolved gases, similar to any carbonated beverage. Gentleness is recommended for maximum retention.

Here is a chart that lists the times for optimum water infusion with this unit. If water is warmer, increase the time.

Quantity (@ 68 degrees F)	Recommended Time
8 oz / 250 milliliters	5 minutes
16 oz / 500 milliliters	5 minutes
32 oz / 1 liter	10 minutes
64 oz / 2 liters	10 minutes
1 gallon / 4 liters	15 minutes
5 gallons / 20 liters	30 minutes

Drink the water as soon as possible, as the dissolved Hydrogen will begin to escape immediately after infusion. Similar to how soda loses its "fizz" when left open. Complete dissipation occurs over time, with the half-life of infused Hydrogen being about 2 hours (at 2 hours, only one-half of the infused Hydrogen remains in the water), if left undisturbed. The Hydrogen will escape more quickly with agitation or large surface area.

To gain the full health benefits of drinking this special water, it is recommended that you use "Well" water, Natural Spring water, Distilled water, Reverse Osmosis water, or filtered water for this. It is not recommended to use normal "City" or "Tap" water with chlorine, fluoride, etc. Use that only as a last resort, if you have no access to the other waters mentioned.

Recommendation: For even better infusion rates, use metal (Aluminum* or Stainless Steel) drinking water bottles. Hydrogen will not escape as quickly because metals (Aluminum, specifically) more effectively contain Hydrogen.

* Important Safety Note: There has been a lot of concern about Aluminum and Alzheimer's. However, because of the nature of drinking water and Aluminum, unlined Aluminum bottles are not a concern, as Aluminum oxidizes in drinking water immediately. This oxidation process places a protective barrier between your drinking water and the Aluminum metal - the container is "lined" with a layer of protection.

The Aluminum of the unlined drinking water bottle never comes into contact with your drinking water. Therefore, you are not in danger of getting Aluminum particles or ions in your water. If you are still unsure, you may use Stainless Steel but it will not be as effective in containing the Hydrogen in the water for longer storage.

Novel Uses for infused water

- You can water your plants with the infused water - and watch what happens!
- Use as a skin toner after washing your face, neck and hands. Splash/spritz on, and let air dry
- Use to help with minor burns (Sunburn, 1st and 2nd degree). Soak in infused water for several minutes - or apply to burned area and keep moistened by wetting occasionally and enjoy the results! When immersed, results happen within a few minutes, when moistening skin, changes can occur in as little as 30 minutes.
- Place wash cloth on sore muscles and soak with infused water.
- Use after shaving to reduce skin irritation and redness.
- Bug bite and stings: Apply water to area and keep wet. Pain can subside in a short time.
- Apply to wounds to promote faster healing. The water contains Oxygen in an active state which studies show may also promote healing. WARNING: DO NOT RELY SOLELY ON INFUSED WATER FOR WOUND CARE. Infused water is NOT a substitute for proper wound care. If you experience redness around the wound, immediately consult your physician, or if you have any other medical questions.

And now, a word about how long the Hydrogen Gas will last in containers.

Dissolved Hydrogen Water Test Results

Test Conditions: All water was close to room temp (approx 68F / 20c) - with "cold start" (room temperature) of the unit, so it was producing the least amount of gas that will be produced during normal usage. This means that even more will be available to dissolve when the generator is heated up and producing maximum gas. In studies, .5 PPM is the accepted minimum for therapeutic effects.

1 Liter Well Water

5 minutes = .636 PPM - so this can be used if in a hurry.
10 minutes = .861 PPM
30 minutes = .912 PPM

1 Liter Distilled water

10 minutes = .770 PPM

1 Gallon Well Water (in plastic jug - no Aluminum*):

10 minutes: .504 PPM (over therapeutic recommendation** of .5 PPM)
15 minutes: .662 PPM

* In testing, Aluminum amplifies the dissolved Hydrogen concentration by quite a bit, so this is lower than expected with Aluminum. I'm not aware of any convenient 1 Gallon size Aluminum containers, so these are real-world numbers.

** In studies, effectiveness was shown to occur when dissolved Hydrogen

levels were over .5 PPM

Shelf-Life Test - "Storing and Giving To Neighbors Test"

Well Water, 1 Liter Aluminum container, bubbled 10 minutes (assumed starting concentration of approx. .861 PPM, which was not tested because agitation needed for test would cause loss of dissolved Hydrogen), container sealed with plastic cap and stored upside down (turned over gently to minimize disturbing the dissolved Hydrogen) to minimize Hydrogen leakage through plastic cap:

Aluminum Bottle 1 -- 12 Hours: .604 PPM (approx. 30% loss)

Aluminum Bottle 2 -- 24 Hours: .439 PPM (approx. 50% loss)

50% drop in 24 hours yields a 12-fold increase in storage time vs. the standard two hour half-life of dissolved Hydrogen. But, even stored in Aluminum and upside-down, it gets out quickly.

"H2 Blue" Drops and Other Hydrogen Testers

The "H2 Blue" drops available for sale on the internet for measuring dissolved Hydrogen WILL NOT WORK with water infused with this machine. The reason for this is that the chemicals in the H2 Blue drops are meant to read the amount of "reducers" in a solution (Hydrogen is a reducer) and the solution cannot have any oxidizers (Oxygen is an oxidizer) present, otherwise the chemical test will not work accurately - in fact, it will be WAY OFF and not reliable.

The Hydrogen Generator infuses BOTH Hydrogen and Oxygen, and therefore, both Hydrogen and Oxygen are dissolved and present in the water, once infusion has occurred. We have reached out directly to the manufacturer of the H2 Blue drops, and they told us that the H2 Blue drops will not work when dissolving both Hydrogen and Oxygen.

This same situation happens with the "Hydrogen Meter" out of Japan. That Hydrogen meter is a glorified "ORP" (Oxidation-Reduction Potential) meter that, once again, cannot read Hydrogen accurately in the presence of Oxygen.

We reached out to Tyler LeBaron of the Molecular Hydrogen Institute for clarity on this issue, and he recommended using a Hydrogen meter that ignores all other items in the water.

Since portable testers in the U.S. run \$10,000-\$15,000 each (they are used in the nuclear power industry to test streams, etc.), we purchased a tester from Russia for a more reasonable (4-digits) price, after discussing the mechanism that it uses with Tyler LeBaron. It tests against a known concentration (Sulfuric Acid) and Tyler was confident it would give proper results, as that is what is required. This meter ignores EVERYTHING else but Hydrogen, and this is the tester we used for the concentration tests above.

Lastly, here is a quote from their website selling H2 Blue drops: "It [H2 Blue] is not a laboratory grade solution and is not 100% reliable as there are meters and electronic devices that cost hundreds to thousands of dollars to test the presence of molecular hydrogen and its concentrations properly. H2 Blue is

a more cost effective way of testing molecular hydrogen but should not be relied on to prove concentrations, present in water.”

Direct Gas Application

Some wonderful things have been observed when applying the gas directly to areas of pain. Hook up the Extension Hose and connect the flexible Gas Applicator. Once connected, use it to apply the gas to a particular spot. Results that last can happen in as little as 10-15 minutes.

You may also use a re-sealable plastic storage bag to place your hand or foot into, and then connect one end of the Extension Hose to the machine and place the other end of the Extension Hose into the bag and seal it down so that the gas cannot freely escape. Placing the open side of the bag facing down will let the gas collect in the bag so that it can be applied to the hand or foot.

When you have pain that is acute, apply the gas directly to the point of pain. When you have finished applying the gas there, it is recommended to also place the Applicator Cup underneath the area having pain, and let the gas flow UPWARDS through the location. This is particularly important for joints, etc. In this way, the gas has a better chance of getting into the area that needs help.

Research has shown that Molecular Hydrogen as produced by this machine may assist the body's natural healing processes in the following conditions:

- Muscle aches and pain
- Tight muscles
- Joint pain
- Arthritis Pain (including Rheumatoid)
- Contusions
- Bumps
- Bruises
- Gout
- Inflammation
- Lumbago
- Unknown Reason for Joint Weakness/Pain
- Proprioceptor mis/dysfunction
- Instability of Joints in doing certain activities

For help with hands, attach the Extension hose to the Gas Output and place into a baggie (zippered baggies work well). The picture on the right illustrates how to do this.

Experiment with direct application and let us know what you find helpful.

