



Hydrogen Therapy Protocol Guidelines

A practical guide to personalising your routine
safely, gradually and consistently

BREATHE HEALTH • BREATHE HYDROGEN

Before You Begin

Important safety information

This guide provides general educational information for adults using an H2=E hydrogen/oxygen inhalation machine. It is not medical advice, does not diagnose or treat disease, and is not a substitute for care from a qualified healthcare professional.

Hydrogen inhalation research is developing, but there are currently no universally accepted clinical protocols for home use. Session length and frequency should therefore be personalised according to the machine output, your goals, comfort and professional guidance.

Seek medical advice before use if you have a diagnosed condition, take prescription medication, are pregnant or breastfeeding, are under 18, or are receiving cancer treatment. Never change medication or delay medical care because of this guide.

Stop the session and seek urgent medical help if you experience chest pain, fainting, severe shortness of breath, confusion, a seizure, weakness on one side, or any other alarming symptom. These should not be assumed to be “detox”.

Core safety rules

- Use only the distilled water and accessories specified for your machine.
- Keep the room well ventilated and the machine away from flames, sparks, smoking and heat sources.
- Use a nasal cannula as instructed; never obstruct gas outlets or modify the machine.
- Start with a short session while awake. Increase only if you remain comfortable.
- Children and vulnerable adults require direct supervision and professional guidance.

How to Use This Guide

Consistency matters more than chasing the longest possible session. Start gently, observe how you feel during and after use, and increase one variable at a time.

1 Start	2 Observe	3 Adjust
Choose the starting time for your machine output.	Record comfort, sleep, energy and any unwanted symptoms.	Maintain, reduce or increase gradually - never push through concerning symptoms.

When might I notice a difference?

Responses vary. Some people report relaxation, clearer thinking or changes in sleep within early sessions; others notice no obvious short-term effect. Research does not establish a guaranteed timeline, and perceived benefits should not be presented as proof that a medical condition is improving.

A useful review point is 8-12 weeks of consistent, well-tolerated use. Consider your overall routine, not just one session: sleep, hydration, nutrition, movement and medical care all matter.

A realistic mindset

Think of hydrogen inhalation as an optional wellness practice. More output or more time does not automatically mean more benefit, and no home protocol can guarantee a particular outcome.

General Wellness Guide

The ranges below are conservative starting frameworks, not prescriptions. Choose the lower end when new to inhalation, then reassess after several comfortable sessions.

Goal	Output	Starting session	Typical frequency
General wellbeing	1200-3000 ml/min	20-45 min	3-5 times weekly
Relaxation / routine	1200-3000 ml/min	20-45 min	As preferred
After exercise	1200-3000 ml/min	30-60 min	After demanding sessions
Healthy ageing routine	1200-3000 ml/min	30-60 min	3-5 times weekly
Longer-term wellness use	1200-3000 ml/min	Build gradually	Discuss with a professional

Output and exposure

A higher-output machine delivers more gas each minute, so a comparable session may be shorter. However, output alone does not determine a health outcome. Comfort, adherence, ventilation and appropriate use remain essential.

For medical diagnoses - including cardiovascular, respiratory, neurological, autoimmune, chronic pain, infection or recovery after surgery - obtain guidance from the clinician responsible for your care rather than relying on a general table.

Standard 7-Day Build-Up

For generally well adults who have already checked that inhalation is appropriate for them. If you are sensitive or have complex health needs, use the slower plan on the next page.

Day	3000 ml/min	1500 ml/min	1200 ml/min
1	10 min	20 min	30 min
2	20 min	30 min	40 min
3	30 min	40 min	50 min
4	40 min	50 min	60 min
5	50 min	60 min	75 min
6	60 min	75 min	90 min
7	75 min	90 min	105 min

After day 7

Stay at the same duration if it feels comfortable. If you choose to increase, add no more than 15 minutes after several well-tolerated sessions. Longer sessions may be split between morning and early evening. There is no requirement to reach 2-4 hours; discuss prolonged daily use with a healthcare professional.

Pause, do not push

If an unwanted symptom is moderate, persistent, unusual or worsening, stop increasing. Reduce or pause and obtain medical advice when appropriate.

Gentle Build-Up Plan

Consider this approach if you are older, medically complex, prone to symptom flares, or simply prefer a cautious introduction.

Starting point

- 3000 ml/min: 10 minutes
- 1500 ml/min: 20 minutes
- 1200 ml/min: 30 minutes
- Leave at least one recovery day between early sessions.

Progression

Complete a block of seven well-tolerated sessions at the same duration, with recovery days between sessions. If you feel well, add 10-15 minutes for the next block. If symptoms appear, do not increase. Return to the last comfortable duration or pause.

After a session	Next step
Comfortable; no unwanted symptoms	Repeat the same duration. Increase only after a stable block.
Mild, brief symptom	Hold or shorten the next session; monitor.
Moderate or persistent symptom	Pause and seek advice before restarting.
Severe or alarming symptom	Stop and seek urgent medical assessment.

Conditions sometimes associated with fatigue, autonomic symptoms or fluctuating tolerance - such as ME/CFS, Long COVID, MCAS or autoimmune illness - warrant individual clinical advice. Avoid explanations that automatically label worsening symptoms as “detoxification”.

Morning, Evening or Split Sessions?

Splitting a longer daily total can make use more convenient and may be more comfortable than one long session. The choice is practical rather than a proven requirement.

Morning	Early evening
May fit a work or wellbeing routine and lets you observe your response while awake.	May suit relaxation. If you feel alert after inhalation, finish several hours before bedtime.

How long does hydrogen stay in the body?

Inhaled molecular hydrogen diffuses rapidly and is also cleared rapidly, largely through exhalation. Exact blood or tissue kinetics vary by concentration, flow, duration and measurement method. Biological signalling may outlast detectable hydrogen, but this does not establish that longer sessions are always better.

Combining with other therapies

Tell your healthcare professional about all therapies and supplements you use. Timing decisions can matter during chemotherapy, radiotherapy, surgery, oxygen therapy or treatment for serious illness. Do not use a generic spacing rule in place of advice from your oncology or medical team.

Responding to Unwanted Symptoms

Headache, fatigue, nausea, dizziness, digestive change, skin symptoms or disrupted sleep can have many causes. They are not reliable evidence of “detoxification” and should be assessed in context.

Level	Examples	Action
Mild	Brief headache, mild tiredness, minor discomfort	Stop or shorten the session. Rest, hydrate normally and review other possible causes.
Moderate	Persistent headache, marked fatigue, nausea, dizziness	Pause use. Seek professional advice if symptoms persist or recur.
Severe	Breathing difficulty, fainting, chest pain, confusion, seizure	Stop immediately and obtain urgent medical care.
Persistent	Any symptom lasting over a week or returning after use	Stop and arrange medical review before restarting.

Hydration

Drink according to thirst and your clinician’s advice. Excessive water intake can also be harmful, particularly with kidney, heart or electrolyte disorders.

Session Tracker

Use one row per session. A pattern over time is more useful than judging one isolated day.

Date	Output	Minutes	Time	Comfort 0-10	Sleep / energy / notes

0 = very uncomfortable • 10 = completely comfortable

Questions for your review

- Did symptoms begin during the session, immediately after it, or later?
- What else changed that day - medication, sleep, food, exercise, illness or stress?
- Was the same duration comfortable on several occasions?
- Is there a reason to speak with a clinician before continuing?

Children and Young People

Professional guidance required

Evidence is not sufficient to recommend a universal home inhalation schedule for children. Use should be discussed with the child's GP, paediatrician or relevant specialist, particularly when a health condition is involved.

If a clinician agrees that use is appropriate:

- A responsible adult must supervise the entire session.
- Begin with the shortest duration and the lowest practical exposure recommended by the clinician.
- Use the correct nasal cannula; do not use a face mask unless specifically directed.
- Keep sessions short and ensure the child can communicate discomfort.
- Stop for dizziness, unusual tiredness, irritability, headache, breathing difficulty or distress.
- Never use during sleep or leave a child unattended.

The weight-band timings in the earlier handout have been intentionally removed because they could be mistaken for paediatric medical dosing despite the absence of an established standard.

Use During Sleep

Do not begin with overnight use. First establish that you can tolerate the machine while awake and that the equipment, ventilation and cannula are set up correctly. Overnight use adds risks because symptoms, displaced tubing, leaks or equipment issues may not be noticed promptly.

Safer setup checklist

- Confirm your exact model is designed and approved for the intended run time.
- Keep the room well ventilated and free from flames, smoking, sparks and heat sources.
- Place the machine upright on a stable, dry surface; keep all vents clear.
- Keep tubing away from the neck, bedding, children and pets.
- Use one suitable medical-grade cannula and the recommended water trap.
- Do not use while sedated, intoxicated, severely congested or unable to respond normally.
- Use the machine timer; prolonged all-night use is not necessary.

When in doubt

Choose a daytime session while awake. Follow the current manual supplied with your exact H2=E model.

Making Hydrogen-Rich Water

Only use a compatible diffusion stone and follow the machine manual. Dissolved hydrogen concentration depends on water volume, temperature, pressure, bubble size, gas composition and contact time, so fixed “one-minute saturation” claims should be treated as estimates rather than guarantees.

Practical method

- Use fresh drinking water in a clean, suitable container.
- Submerge the compatible diffusion stone and operate as instructed.
- Drink soon after preparation because dissolved hydrogen escapes rapidly.
- Do not seal a rigid container while gas is flowing.
- Clean and dry the stone as specified to limit contamination.

At room temperature and ordinary pressure, pure hydrogen water is often described as having a theoretical saturation near 1.6 mg/L. A mixed hydrogen/oxygen gas stream and real-world equipment may produce a different result. Measurement requires an appropriate validated method.

Hydrogen-rich water and inhalation are different delivery methods. Neither should be represented as a treatment for disease, and one cannot be converted reliably into an “equivalent dose” of the other.

Exercise and Recovery

Hydrogen research includes exercise-related oxidative stress and fatigue, but findings are mixed and protocols vary. Inhalation should complement - not replace - sleep, nutrition, hydration, progressive training and appropriate rehabilitation.

Output	Conservative starting point	Suitable context
1200 ml/min	30-45 min	General exercise or low-impact training
1500 ml/min	30-45 min	Regular strength or endurance training
3000 ml/min	20-30 min	Higher output; begin shorter and assess comfort

Timing

A session after exercise may be convenient, but there is no universally proven “best” time. Avoid using inhalation to mask symptoms of injury, heat illness, chest pain or unusual breathlessness.

Performance perspective

Higher output delivers more gas per minute; it does not guarantee faster recovery or better performance. Track outcomes objectively and keep expectations proportionate to the evidence.

Quick Reference

Do	Avoid
Start short and increase gradually.	Treating a protocol as a medical prescription.
Use in a well-ventilated room.	Flames, smoking, sparks or blocked vents.
Follow the exact machine manual.	Changing components or using unapproved accessories.
Track comfort and recurring symptoms.	Calling every unwanted symptom “detox”.
Seek advice for health conditions or medication.	Changing treatment without your clinician.
Stop for concerning symptoms.	Pushing through pain, dizziness or breathlessness.

Your personal plan

Machine / output	Starting duration	Frequency	Review date

Professional notes

Evidence and Further Reading

The scientific literature on molecular hydrogen is extensive but heterogeneous. Many studies are preclinical, small, or use different delivery methods and endpoints. These references are useful starting points, not proof that a home protocol treats a particular condition.

Ohsawa I, et al. (2007). Hydrogen acts as a therapeutic antioxidant by selectively reducing cytotoxic oxygen radicals. *Nature Medicine*, 13, 688-694.

Ichihara M, et al. (2015). Beneficial biological effects and the underlying mechanisms of molecular hydrogen - comprehensive review of 321 original articles. *Medical Gas Research*, 5, 12.

LeBaron TW, et al. (2019). A new approach for the prevention and treatment of cardiovascular disorders: molecular hydrogen significantly reduces the effects of oxidative stress. *Molecules*, 24(11), 2076.

Aoki K, et al. (2012). Pilot study: effects of drinking hydrogen-rich water on muscle fatigue caused by acute exercise. *Medical Gas Research*, 2, 12.

For product-specific instructions, always use the latest manual supplied with your machine. For research updates and support, visit HydrogenTherapyH2E.com.

H2=E Hydrogen Therapy

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