

Could Hydrogen-Rich Water Support Your Body's Own GLP-1? Here's What a Clinical Trial Found

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STORY AT-A-GLANCE

- › In a small, eight-week trial, participants who drank 1 liter of hydrogen-rich water daily showed higher GLP-1 levels than those drinking plain water
- › Participants who consumed hydrogen-rich water experienced substantially larger reductions in food cravings than those who drank regular water, which may make it easier to resist unnecessary snacking
- › The strongest improvements occurred in physical hunger-related cravings, which may reflect an effect on the body's appetite signals rather than simple appetite suppression, though the study did not test this mechanism directly
- › Along with supporting appetite regulation, hydrogen-rich water improved subjective sleep quality and lowered both total cholesterol and LDL cholesterol without causing serious adverse effects
- › Combining hydrogen-rich water with better gut health, adequate protein, easy-to-digest carbohydrates and the removal of seed oils may help create an environment where your body's natural appetite-control system can work more effectively

Few hormones have attracted as much attention in weight-loss research as glucagon-like peptide-1, or GLP-1. This naturally occurring gut hormone helps regulate appetite, signals fullness to your brain, and influences blood sugar control after meals. The growing popularity of GLP-1 drugs has sparked a bigger question: Is there a way to support your body's own production of this hormone without relying on medication?

Researchers in Serbia recently put one surprisingly simple candidate to the test — hydrogen-rich water.¹ The people drinking it fared better than those drinking plain water. Moreover, what stood out was where they improved — in the appetite signals that often become dysregulated in obesity.

Just as compelling, researchers reported no serious adverse effects. Those findings raise an intriguing possibility. Instead of replacing the body's appetite-regulating system the way medications do, molecular hydrogen appears to influence the pathways that help support it. To understand why that matters, let's look at what happened when researchers tested hydrogen-rich water against a placebo, and how those changes affected appetite, metabolism, and sleep.

Hydrogen-Rich Water Appeared to Strengthen Natural Fullness Signals

The study, published in *Medicina*, investigated whether drinking hydrogen-rich water every day for eight weeks would affect food cravings, body composition, sleep quality, cholesterol levels, and **GLP-1**, a hormone involved in appetite regulation.²

The trial included 36 sedentary men and women with obesity who were randomly assigned to drink either 1 liter of hydrogen-rich water containing 15 milligrams (mg) of molecular hydrogen or regular water each day. Because the study was randomized, placebo-controlled, and double-blinded, neither participants nor researchers knew who received which drink until the study ended, helping strengthen the reliability of the findings.

That said, the trial involved a small number of participants, lasted only eight weeks, relied partly on self-reported questionnaires, and did not formally monitor diet or activity. The hydrogen-rich water was also supplied by a commercial hydrogen-product company that employed one of the study authors — all reasons to treat the results as preliminary.*

- **The strongest appetite benefits showed up in craving scores** — Participants who consumed hydrogen-rich water experienced a significantly greater reduction in overall **food cravings** than those who drank regular water. Researchers reported that total craving scores fell by 7.4 points in the hydrogen group compared to only 1.3 points in the placebo group.

For someone who constantly battles the urge to snack or overeat, that difference matters because fewer cravings often make healthy choices easier and require less willpower throughout the day.

- **Physiological hunger signals improved the most** — One of the largest improvements occurred in what researchers called "cravings as a physiological state." This refers to hunger-driven urges that feel physical rather than emotional. The hydrogen group showed significantly greater improvements than the placebo group, suggesting participants experienced fewer intense signals pushing them toward food.

The statistical effect size was large, meaning the difference was substantial enough to stand out even in a relatively small study population.

- **Women appeared to experience the greatest appetite-related benefits** — Although improvements occurred across the study population, researchers found particularly strong effects among female participants.

The female subgroup showed significant improvements in both physiological cravings and overall craving scores, with large effect sizes compared to placebo. This finding suggests that **hydrogen-rich water** influenced appetite regulation more strongly in women, although additional studies are needed to determine exactly why.

- **Participants achieved these improvements after only eight weeks of daily use** — And without adding exercise programs, weight-loss drugs, or specialized diets. Researchers specifically instructed participants not to start other weight-

management interventions during the study period, allowing the results to be attributed primarily to the hydrogen-rich water. The intervention required only three servings per day totaling 1 liter.

- **The hormone changes may help explain why cravings declined** — Researchers found that hydrogen-rich water produced a mild-to-moderate, but statistically significant increase ($p = 0.05$), in circulating GLP-1 levels while the placebo produced no meaningful change. Hydrogen influences systems that regulate hunger and fullness through multiple routes.

Molecular hydrogen is thought to act as a signaling molecule that may help regulate cellular communication, reduce oxidative stress, and support mitochondrial function — the energy-producing structures inside your cells. When those systems function more efficiently, appetite-regulating signals appear to work more effectively as well.

- **Researchers also noted that hydrogen's antioxidant and anti-inflammatory effects may help normalize hunger and satiety signals that become distorted in obesity** — That means the body's natural appetite-control system appears to work more like it was designed to work.
- **The gut-brain connection may play a central role** — Researchers discussed evidence that hydrogen affects communication between the digestive tract and the brain through the gut-brain axis. This network constantly exchanges information about hunger, fullness, and energy needs.

Researchers proposed that hydrogen may also influence neurotransmitters involved in appetite control and may improve the function of specialized intestinal cells that release GLP-1. By strengthening those signals, your brain receives clearer messages that enough food has been consumed.

**These findings are from research conducted in clinical settings. Results may not apply to all individuals.*

Support Your Body's Natural Appetite-Control System

If your goal is to reduce cravings and improve appetite control, start by supporting the biological systems that regulate hunger in the first place. The study suggests hydrogen-rich water helps support GLP-1 production and appetite regulation, but lasting results depend on more than a single intervention. Your cellular energy production, gut health, and overall metabolic function all influence how hungry you feel and how satisfied you remain after eating.

- 1. Use hydrogen-rich water correctly** — If you decide to use hydrogen-rich water, preparation matters. Drop a hydrogen-generating tablet into room-temperature water and wait until it fully dissolves. Once the water turns cloudy, drink it immediately. That cloudy appearance indicates the hydrogen gas has been released into the water and is ready for consumption.

Look for products that produce roughly 8 to 10 parts per million (ppm) of hydrogen and undergo independent purity testing. Don't wait too long after the tablet dissolves because hydrogen gas escapes quickly. Don't swallow the tablet whole or consume partially dissolved fragments. These tablets are designed to react in water first, and the reaction generates heat that can irritate tissues if the tablet dissolves directly in your mouth or digestive tract.

Keep in mind that the featured study delivered 15 mg of molecular hydrogen per day through prepared water and product potency varies widely, so real-world intake is hard to standardize.

- 2. Use hydrogen strategically instead of continuously** — During periods when cravings, poor sleep, or metabolic stress are most noticeable, daily use often makes the most sense. Once those symptoms improve and become more stable, consider taking occasional breaks before resuming use again.

I view this similarly to exercise training. Your body responds best when it remains adaptable. Short pauses help prevent your system from becoming overly accustomed to a single stimulus. The goal is to maintain responsiveness rather

than creating dependency on any one intervention.

- 3. Remove the factors that interfere with cellular energy production** — If seed oils remain a major part of your diet, appetite regulation becomes far more difficult. Soybean oil, corn oil, canola oil, sunflower oil, and similar seed oils are loaded with **linoleic acid** (LA), a fat that accumulates in tissues and contributes to oxidative stress and mitochondrial dysfunction.

Replace these oils with more stable fats such as grass fed butter, ghee, or tallow. At the same time, eliminate ultraprocessed foods and reduce restaurant meals whenever possible, since seed oils dominate most commercial food preparation. A practical goal is to lower daily LA intake below 5 grams and ideally closer to 2 grams over time.

- 4. Rebuild your metabolism by supporting healthy gut signaling and GLP-1 production** — Your gut bacteria help convert carbohydrates into short-chain fatty acids, including **butyrate**. Butyrate serves as a primary fuel for the cells that line your colon and helps maintain the gut environment that supports healthy appetite regulation. A healthy gut microbiome also plays an important role in the production and release of hormones involved in fullness and satiety, including GLP-1.

Start with easy-to-digest carbohydrates such as whole fruit and white rice, then gradually expand your food choices as your gut health improves. Avoid overwhelming a compromised digestive system with large amounts of fiber too quickly, as this often increases digestive distress and endotoxin production.

Pair those carbohydrates with adequate protein — about 0.6 to 0.8 grams per pound of ideal body weight — and obtain roughly one-third of that protein from collagen-rich foods such as slow-cooked meats, homemade stock, or bone broth.

As your gut environment improves, the signals between your digestive tract and brain become more effective. Hunger becomes more predictable, fullness lasts longer, and your body's natural appetite-control mechanisms are better able to do their job.

5. Track whether your cravings are actually changing — Use hydrogen-rich water during the part of the day when cravings usually hit hardest, then track what happens for two weeks. Rate your cravings from 1 to 10 before you drink it and again 30 to 60 minutes later. This gives you a simple way to see whether your appetite signals are improving.

Also, track your sleep quality, energy, and late-night snacking. The goal is to notice whether your body is becoming easier to work with. If cravings become less intense, meals feel more satisfying, and your appetite feels more predictable, those are signs your internal signals are moving in the right direction.

FAQs About Hydrogen-Rich Water and GLP-1

Q: What is GLP-1, and why is it important for appetite control?

A: GLP-1 is a hormone released by your gut after you eat. It helps signal fullness to your brain, slows the movement of food through your digestive tract, and supports healthy blood sugar regulation. When GLP-1 signaling works properly, you feel satisfied sooner and are less likely to overeat.

Q: Did hydrogen-rich water increase GLP-1 levels in the study?

A: Yes, though the increase was mild-to-moderate. Researchers found that participants who drank hydrogen-rich water for eight weeks experienced a statistically significant ($p = 0.05$) increase in circulating GLP-1 levels, while the placebo group did not. This increase was accompanied by reduced food cravings and improvements in several appetite-related measures.

Q: How much hydrogen-rich water did participants consume?

A: Participants drank 1 liter of hydrogen-rich water daily, divided into three servings throughout the day. The water provided a total of 15 mg of molecular hydrogen per day. Researchers instructed participants not to change their diet, exercise habits, or weight-loss strategies during the study.

Q: What benefits did participants experience besides higher GLP-1 levels?

A: In addition to higher GLP-1 levels, participants reported fewer food cravings and better subjective sleep quality. Researchers also found reductions in total cholesterol and LDL cholesterol, often called "bad" cholesterol. No serious adverse effects were reported during the trial.

Q: What else supports healthy GLP-1 signaling naturally?

A: Healthy GLP-1 production depends on more than a single supplement or beverage. Gut health, sufficient carbohydrates, healthy appetite signaling, and strong cellular energy production all play important roles. Reducing seed oil consumption, supporting your gut microbiome, and maintaining a nutrient-dense diet help create an environment where your body's natural appetite-regulating systems function more effectively.

This article is for informational purposes only and does not constitute medical advice. Consult a qualified health care provider before making changes to your health regimen.

Sources and References

- ^{1, 2} [Medicina July 18, 2025, 61\(17\), 1299](#)