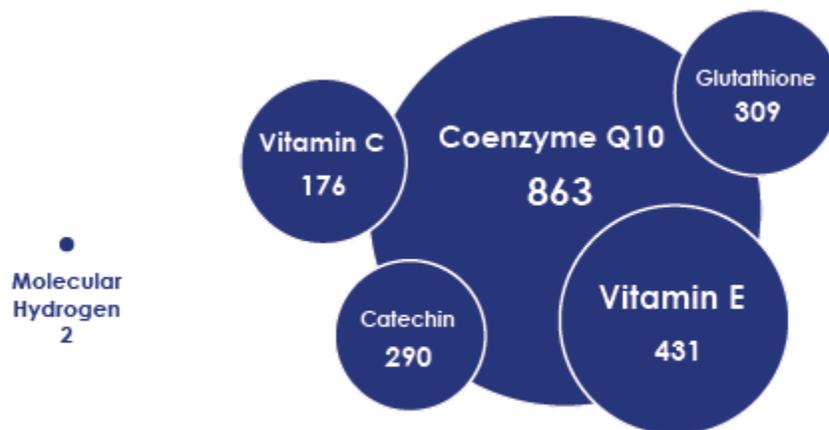


Why H2 Is So Powerful

First, H₂ is an extraordinary antioxidant, a free radical quencher that selectively scavenges the most dangerous and destructive hydroxyl radicals. Hydroxyl radicals initiate their cycle of destruction by stealing electrons from molecules in DNA, proteins, and fats, destabilizing them and setting off a chain reaction of oxidative stress. H₂ readily gives up electrons to hydroxyl radicals, which stabilizes them and stops them in their tracks. It also reduces the toxicity of peroxynitrite, another destructive oxidant, and further boosts the body's defenses by increasing production of natural antioxidants such as glutathione, superoxide dismutase, and catalase.



Relative Sizes of Antioxidants

Second, H₂ has beneficial effects on cell signaling and gene expression. It suppresses

TNF-alpha and other proteins involved in inflammation and turns on mechanisms that protect against cell death. But because H₂ is selective, it does not scavenge essential redox signaling radicals that play a key role as cellular messengers.

Third, recent studies show that H₂-infused water increases the production of a hormone called ghrelin. Secreted in the stomach, ghrelin is best known for stimulating appetite, but it also boosts growth hormone release and has protective effects in the brain, vascular system, liver, and elsewhere.

Fourth, H₂ "nano" molecules are able to diffuse through cellular membranes, enter the mitochondria and nucleus of cells, cross the blood-brain barrier, and exert their positive effects in tissues and organs throughout the body.

Therefore, it's not surprising that benefits of H₂ therapy have been demonstrated in animal models and/or human studies in a wide range of conditions, including traumatic brain and spinal cord injuries, Parkinson's, Alzheimer's, strokes, heart attacks, vascular disease, diabetes, liver and kidney disorders, autoimmune conditions, and lung problems.

The Best Delivery System for H₂ Water

Three primary avenues of H₂ administration have been used in clinical research: inhaling hydrogen gas, injecting hydrogen-rich saline, and – the easiest, safest, and most cost-effective method – drinking molecular hydrogen-infused water.

Hydrogen water can be generated by electrolysis (passing an electrical current through water), which splits H₂O into O₂ and H₂ and dissolves it in the water. Water "ionizers," which sell for thousands of dollars and are supposed to make "alkaline," "structured," or "microclustered" water, actually derive their benefits from the molecular hydrogen they produce.

But there's a more convenient and effective way to make H₂ water. Dunking metallic magnesium in water produces a chemical reaction that breaks the bonds in water molecules and yields molecular hydrogen. My first introduction to this method was Dr. Hayashi's Hydrogen Rich Water Stick, a five-inch magnesium rod that you keep immersed in a bottle of water, drink, and refill as needed. The sticks last several months, but my wife assumed the "rock" in my water bottle was trash and threw it away. I remember thinking at the time that someone should come up with a more user friendly product.

Someone did. A company called Purative has perfected a method of making tablets of micronized elemental magnesium which, when dissolved in water, generate a hefty dose (1.6–2.6 ppm) of molecular hydrogen. You simply drop a tablet in a bottle full of water, close tightly, wait 10–15 minutes as hydrogen micro-bubbles are generated and dissolve in the water, and drink.

Doing this once a day approximates the dose used in the hydrogen therapy research – and literally floods the system with free radical-quenching electrons. And because H₂ is a safe, natural molecule that is common to the body, you can't get too much of it.

Molecular hydrogen water has a promising future as a safe, simple, inexpensive therapy for health maintenance, disease prevention, and treatment of our most common health challenges. I've added a bottle or two of H₂-saturated water to my daily regimen and suggest you consider doing the same. Bottoms up!

To learn more, visit [Dr. Whitaker's web site](#)(link is external)

Reference

Dixon BJ, et al. The evolution of molecular hydrogen: a noteworthy potential therapy with clinical significance. *Med Gas Res.* 2013 May16;3(1):10.