A high-speed photograph of water splashing into a pool of water. The water is clear and blue, with many bubbles rising from the point of impact. The background is a solid light blue color.

The Little Book of Hydrogen



The Little Book of Hydrogen

Created by AlkaWay
The Alkaline Water Filter and
Molecular Hydrogen Specialists

The Little Book of Hydrogen is not meant to be a replacement for advice from a health professional.

The information herein is related to published scientific tests but is not meant to purport, infer or recommend a change in your health regimen without proper medical advice.

As such it is purely for educational purposes and is intended to assist the reader in making an informed choice.

Nothing in this book has been submitted to the TGA or FDA.



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Why Hydrogen?

Great question... Lets start with the basics...

Life expectancy has increased markedly over the last century, which is great. But what about maintaining quality of life as we age?



For most people ageing is associated with an increase in aches, pains and health complaints; along with a loss of vitality.

There is something that may change that, helping us to stay healthy, active and vibrantly alive for longer.

That something is Molecular Hydrogen.



Yes, the most abundant element in the universe may have positive health benefits.

Read on to find out just how...

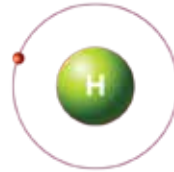
Health Benefits of Hydrogen

Hydrogen is the lightest and most abundant element in the universe. The Hydrogen atom as an element on its own is inert, however...

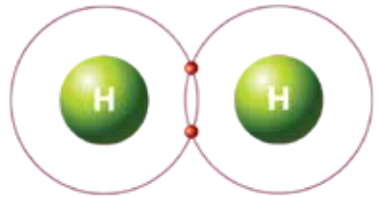
On Earth it is naturally found as Molecular Hydrogen, which is two Hydrogen atoms joined together. Molecular Hydrogen may have great health benefits.

Three major factors behind most disease and discomfort associated with ageing are free radical damage, inflammation and cell signalling (the ability of different parts of the body to communicate with each other) errors.

Studies indicate that Molecular Hydrogen may be an antioxidant, an anti-inflammatory and a cell signalling modifier. It may reduce many of the processes by which the body develops disease and fatigue.



Hydrogen atom (H_1)



Molecular Hydrogen (H_2)

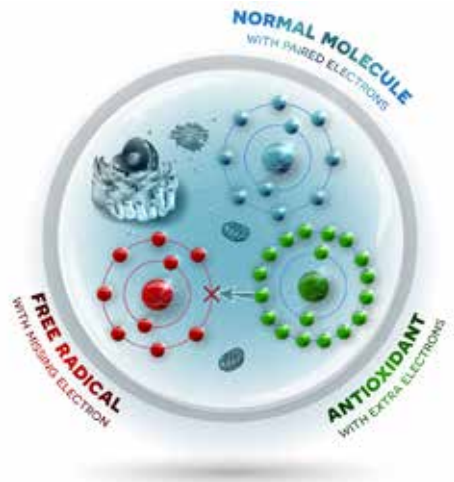
Free Radicals and Antioxidants

A little bit of chemistry (*don't be scared*).

Electrons rotate around atoms and they like to travel in pairs. This makes the molecule stable. A free radical is a molecule with an unpaired electron, which makes it unstable. To regain stability, it needs to steal an electron from another molecule. This can make the donating molecule unstable. If this continues unchecked you end up with damage to cells, tissues and ultimately organs.

Antioxidants are molecules that are willing to donate an electron to unstable molecules. The body makes some of its own antioxidants and we get others from our diets.

Free Radicals can be natural and beneficial as they are part of our immune system. They can help eliminate mutated cells, and invading pathogens.



An antioxidant atom donating an electron to neutralize a free radical

A Natural Antioxidant

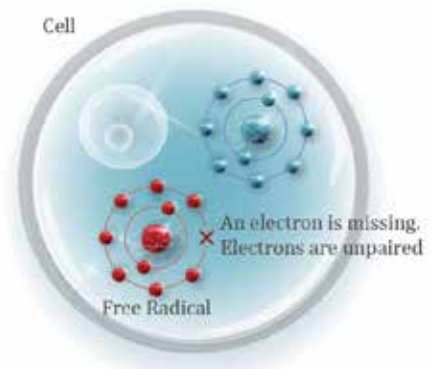
We also get free radicals from the environment such as pollution, cigarette smoke, food additives and preservatives. Our environment is full of free radicals and our body can produce more on its own if given enough stress.

The most aggressive free radical is the Hydroxyl Radical. It can damage virtually all large Molecules in the body, including DNA. Damage to DNA can lead to mutations, early cell death and many types of cancer.

Molecular Hydrogen may be an effective antioxidant support, specifically against the Hydroxy Radicals. It may support our natural antioxidant glutathione to neutralise Hydroxyl Radicals.

A large part of the decrease in vitality with age is free radical damage to the mitochondria (powerhouse) of the cell. Molecular Hydrogen is small enough to enter the mitochondria and mop up damaging free radicals

Also, Molecular Hydrogen may cross the blood brain barrier and in the brain it may reduce the free radical damage that can contribute to cognitive decline.



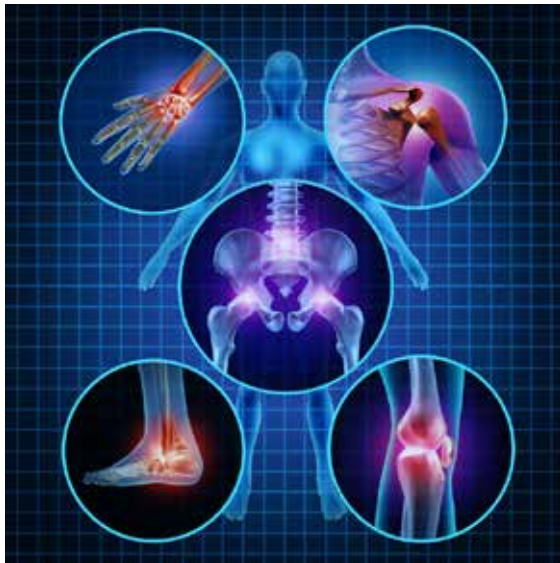
Free radical molecule

Hydrogen and Inflammation

Trauma or infection causes our body to release inflammatory molecules. This is good as it tells the body that there is damage that needs repairing and to send everything needed for healing.

Inflammation is supposed to stop in a timely manner but if it continues, we release more and more inflammatory molecules, resulting in an inflammatory cascade.

If the cascade isn't stopped you end up with chronic inflammation, where the inflammation itself causes more inflammation. Chronic inflammation is thought to be involved in the development of many chronic diseases.



Examples of common inflammation areas

Molecular Hydrogen may work in a similar way to pharmaceutical anti-inflammatories, by switching off the inflammatory cascade. This may reduce the inflammation and pain.

Hydrogen and Cell Signalling

A bit of physiology this time (*still not scary*).

In order for everything in the body to keep working and stay in balance (homeostasis), all the organs and systems in the body need a way to communicate.

For example, the heart can't send a bit of itself down to the adrenals to tell them that something is needed. Instead, it releases a chemical that can travel to the adrenals and this chemical stimulates the release of what is needed by the heart.



Stimulation of neuron signalling in the brain

This Process is called Cell Signalling

Our ability to keep this finely tuned system functioning optimally decreases as we age. This can result in all sorts of imbalances that can lead to many diseases including endocrine disorders, heart conditions and maybe even mental health disorders.

Molecular Hydrogen may help maintain and even upregulate cell signalling, assisting the body to stay in balance.

Molecular Hydrogen (H₂) may reduce Free Radicals, Inflammation and Cell Signalling Abnormalities

Scientific studies have shown many benefits of Hydrogen including:

- May slow ageing and help rejuvenate cells
- May support natural detoxification processes
- May improve liver and kidney function
- May improve metabolism
- May have dermatological benefits
- May improve immune system function
- May improve allergy symptoms and respiratory health
- May improve lipid and glucose metabolism
- May reduce cellular changes and mutations
- May improve cardiovascular health
- May improve energy levels
- May assist in maintaining a healthy weight range

Molecular Hydrogen has unique properties that allow it to rapidly penetrate cell membranes and reach sub-cellular compartments (e.g. *mitochondria, nucleus, etc.*).



Testimonials and Reviews

Rayanna tells all ...

“So, I have been taking water that has this amazing ‘molecular hydrogen’ in it for about 2 months I think. What have I noticed? ENERGY! Smooth hydrated skin (no need for a moisturizer w/haat!?)

HOWEVER the biggest difference I have noticed is whilst being on my twice yearly cleanse/detox. With no starch, sugar, fats, and such you are bound to go through headaches, lethargy, low energy etc... but NO through giving my body what it needs especially through this time, I am feeling great!! I am so grateful to the brilliance of those who have brought this to the likes of you and I.”

Rayanna

After 10 years with an electric ioniser

“I have been using Alkaline water since I purchased the Alphion some 10 years ago now and for the last 6 months have been using the UltraStream and I have to say that I would not use any other kind of water for drinking, we use it for cooking and to boil the jug for coffee and tea and for just drinking a nice refreshing glass of water, nothing like it.”



Michael

For more testimonials and product reviews visit www.alkaway.com.au



The Science behind it all...

Introducing the Molecular Hydrogen Institute

Molecular Hydrogen Institute (MHI) is a non-profit scientific organization with a highly esteemed Advisory Panel consisting of professors, researchers, and other prominent academics.

MHI is the foremost authority on the science of molecular hydrogen, and has three main objectives:

- advance, promote, and publicise hydrogen research
- educate governmental, medical, scientific, and political professionals/organizations.
- orchestrate the hydrogen movement and maintain the integrity of hydrogen research and hydrogen products.



For more information on the Molecular Hydrogen Institute research, published articles and scientific studies visit www.molecularhydrogeninstitute.com.



Live life better with a daily Hydrogen boost

Without water nothing living can survive for very long. Water is made up of Hydrogen and Oxygen (H_2O) and is a source of life. Our bodies benefit from water by using the Hydrogen and Oxygen.

Having a daily Hydrogen boost may help us to stay healthy, active and vibrant as we live longer. Hydrogen may help us to manage our aches, pains and health complaints.

Breakthroughs in the benefits of Molecular Hydrogen are discovered almost every week.

If you would like us to keep you updated, sign up for our Healthemail at www.alkaway.com.au

