

THE  
LITTLE  
BOOK  
OF  
HYDROGEN



This 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 TGA or FDA.

# WHY HYDROGEN?

- If you have a cupboard full of supplements like us this is good news for you. A supplement unlike *any* other supplement.
- If you are seeking better performance but constantly disappointed by so-called superfoods and supplements, we have news for you.
- If you are concerned with the inevitability of ageing and degeneration this little book is for you.
- If you are open to something totally different in performance and health support.. read on!

Please take the time to read, to learn and to benefit from what may be the biggest discovery in alternative health this century.



“ To say I LOVE H2 is a true statement! I have now thrown out my multiple daily tablets and am happy to recommend this tablet to others looking for increased performance whether in strength training, running or even just everyday general health. ”

Tanja, Mullumbimby





## 3 Minutes

In the beginning, (that's 15 billion years ago) - the birth of the universe happened in 3 minutes. In those 3 minutes all of the hydrogen that is in the universe today was created.

Approximately 73% of the mass of the created universe is in the form of hydrogen. Helium makes up about 25% of the mass, and everything else represents only 2%.

We are a very, very small percentage of that two percent! But.. hydrogen is still within us. We create ten to fifteen litres of it a day from fibrous food, burping and farting much of it out.

And yet.. hydrogen is what creates life on earth.



*I'm training harder, with heavier weights and more consistently than any time in my life.* »

~Keegan Smith, Performance Coach  
[coachkeegan.com](http://coachkeegan.com)



We believe molecular hydrogen to be the most important and effective single element in the maintenance and support of the human body.

There are now 400+ scientific studies of more than 150 disease conditions showing the effectiveness of molecular hydrogen - all since 2007.

**Read on to learn about the 3 BIG HEALTH CONDITIONS that H<sub>2</sub> may help.**

The following incomplete list is of disease and medical conditions studied related to Hydrogen gas.

Cerebral Infarction Neontal Brian hypoxia Restraint-induced Dementia Alzheimer's Senile Dementia  
Parkinson's Cerebral Infarction Traumatic Brain Injury Spinal Cord Injury Glaucoma Corneal Burn Hearing Disturbance  
Lung Cancer Oxygen-Induced Lung Injury Myocardial Infarction Heart Transplant Irradiation-induced Heart Injury Hepatic Ischemia Hepatitis Obstructive Jaundice Cisplatin Nephropathy Hemodialysis Acute Pancreatitis Intestinal Graft Ulcerative Colitis Atherosclerosis Diabetes Mellitis Metabolic Syndrome obesity Tongue Carcinoma Allergy Sepsis Radiation Injury

Please note: This list is displayed purely for educational purposes. It does not purport or infer any therapeutic benefit. Always consult your health practioner before making any health regimen change.

# 1. Free Radicals:

## The 'Thinking Antioxidant'

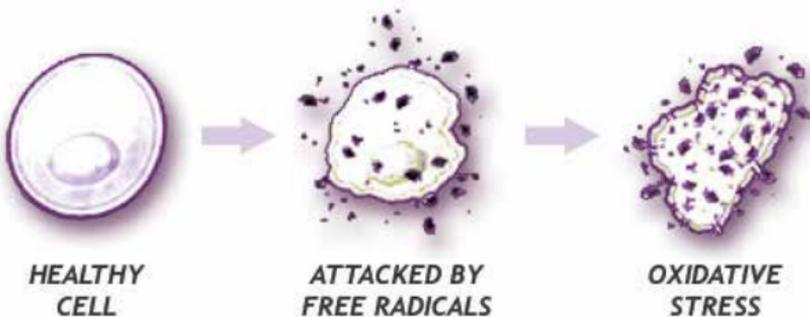
If we are going to talk about why molecular hydrogen is a superior anti oxidant - different to all others - we need to spend a few lines on describing the much maligned free radical.

## JAPAN'S SECRET: HYDROGEN RICH WATER

It wasn't until 2007 that western science admitted any Japanese scientific papers to a Western journal on the subject of the therapeutic potential of molecular hydrogen. And yet... there were NO western scientific papers on the subject.

The journal was the prestigious 'Nature' journal. Even though some western scientists took notice, the vast majority of scientific studies since 2007 still come from Japan, which is far advanced in H2 research.

Let's now look at why molecular hydrogen isn't 'just another supplement'. And why we believe it is essential in any serious health-oriented person's strategy for vitality.



# The True Definition of a Free Radical.

A free radical is simply an unstable molecule.

To regain stability, it steals energy from other molecules, thus creating more unstable free radicals.

If a molecule is damaged by a free radical it is termed as being oxidised (rust is a form of oxidation).

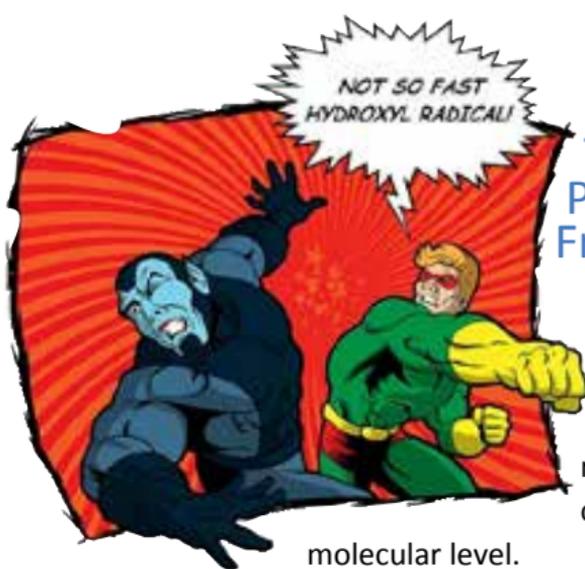
Left unchecked, this oxidation can cause damage to our tissues and organs.

And yet... most free radicals are essential to our immune system. They help to eliminate viruses, bacteria - even some cancer cells. We never hear about the good free radicals, only the bad. Why? Because antioxidant suppliers don't *want* you to know about the good ones.

**'Good' Antioxidants stabilize unstable molecules, without damaging other beneficial molecules in the process.**

'Bad' free radicals never cease trying to bond with something else to regain stability. Unfortunately in the body 'bad' free radicals lack of 'good manners' means they are very reactive and cause damage to surrounding molecules.

**However (*and this is where the free radical has received a bad rap in the health press*) many free radicals are also useful because they help important reactions take place in our bodies.**



## The Real Problem with Free Radicals

The vast majority of free radicals in the body are useful. Their role is janitorial. They oxidise and clean up at a

molecular level.

We have been told that when we are stressed, we produce more free radicals than needed. When we eat fatty foods, smoke and drink alcohol, the same imbalance results. Pollution in our environment exposes us to further free radicals. An imbalance in the levels of bad free radicals can contribute to diseases such as cancer, arthritis, stroke, diabetes, genetic damage, as well as the ageing process.

While as a general statement this is true, it ignores the presence of beneficial free radicals and treats them all as bad, which just isn't so. There are free radicals that behave... and one in particular that misbehaves. It's called...

### the **Hydroxyl Radical.**

Why have we never heard this before?  
*Because vendors of antioxidants want 'nice' simple messages so you don't get confused and question the whole idea.*

**“Take my product, kill all your free radicals, and you'll be healthy.”**

*If they told you that an antioxidant product, be it Vitamin C, or Broccoli sprouts killed the 'bad' free radicals AND the 'good' ones, would you buy the product?*

There is only one known substance with the ability to discriminate good and bad free radicals, leaving all the good little radicals to get on with their broom and shovel daily tasks. It's  $H_2$  - Molecular Hydrogen.  $H_2$  simply unites with the hydroxyl radical, creating.. you guessed it! Water!

## The Unique Antioxidant: Molecular Hydrogen

The scientific studies are clear.

Molecular Hydrogen has strong selective antioxidant potential. It 'reduces' ONLY the nasty Hydroxy Radical to water, but leaves the 'good guys' alone.

How and why it works so well is a mystery.

A Japanese pioneer in  $H_2$  science said: “  
The scientist who works out how an infinitely small amount of hydrogen can so effectively neutralise only bad free radicals will be eligible for a Nobel Prize.”



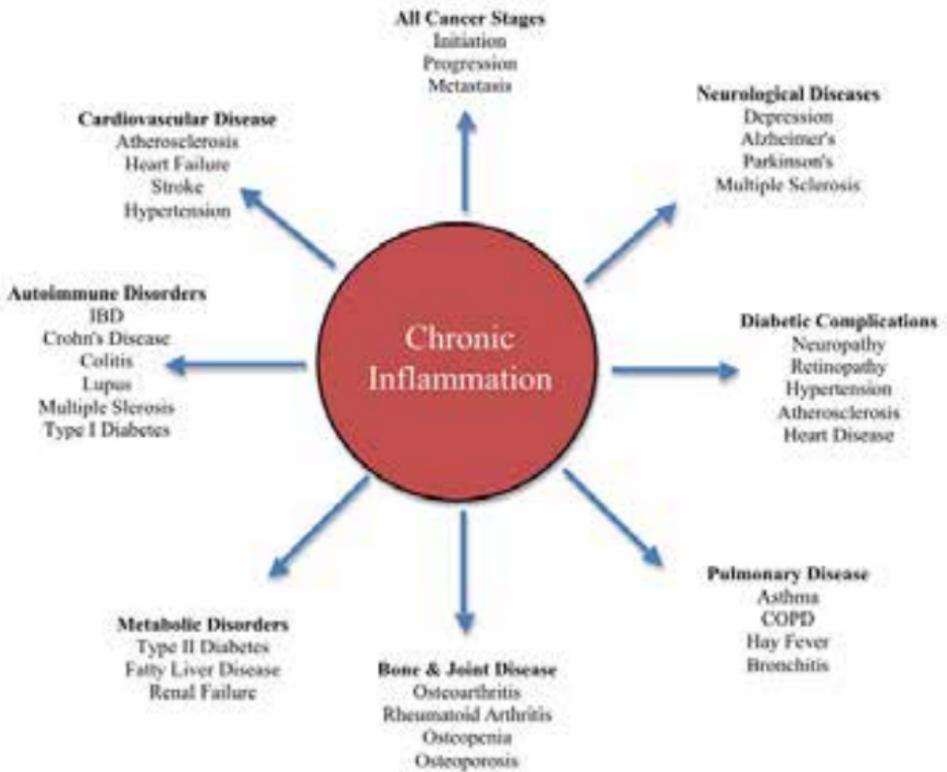
“ 68 Years old, 6 month shoulder injury, torn ligament, taking one tablet per day. No pain after 4 days. Very impressed!

~ Diana Michaels WA ”

## 2. Inflammation

### The Second BIG Health problem

Ask any health professional what is the most common ailment that precedes serious disease and their answer will invariably be inflammation.



Studies of hydrogen have pinpointed another unique property; the ability to reduce inflammation. L

**“Inflammation is a reaction of the body to trauma or an underlying health condition such as cancer, autoimmune conditions, infections and obesity.”**

When damage or infection occurs, we send in “special forces” - molecules that reconnoitre the site, and decide what needs to be done for healing to occur.

These messengers are called inflammatory mediators. They signal to the body that it needs healing. This signal initiates an increase in fluid to the affected area so all the right molecules can easily get to the ‘battle ground’.

This is called inflammation, and it’s natural and essential, It’s a healing process, but it comes with pain, heat, acidity and loss of function.

Pharmaceutical pain killers and anti-inflammatories act on these ‘special forces’. They are inflammatory mediators, reducing the levels of ‘special forces’.

**Unfortunately, drugs also carry with them side effects such as damage to the stomach lining.**

Molecular hydrogen studies have shown reduction in the levels of inflammatory mediators, so it appears to have the same anti-inflammatory effect, but without the side effects. Because molecular hydrogen is so infinitesimally small it can penetrate far more effectively than supplements.



*Sunday night at the Byron Blues Festival I had the awesome experience of being 6 rows from the the front, “bouncing” with the 20 year olds in the mosh pit for 2 hours. I noticed that my legs were coping extremely well and I actually felt more “bouncy” than I had for years! I am 53. ~Leon B. Age 53.* 

# 3. Cell Signalling

## Hydrogen supports and 'reinforces' our cell signalling system.

To maintain moment-to-moment health and vitality we have an elaborate, highly refined cellular communications system. This inner 'network' allows different parts of the body to send messages to each other to maintain balance. When we feel 'off' it's likely that our cell signalling system isn't doing its job.

**Here's how it works.** If your heart needs more of something the kidney produces, it can't send a cell off to the kidney to ask for more. Heart cells have to stay in the heart, but the heart *can* release 'signal' molecules that travel to the kidney. These 'signallers' tell the kidneys to release more of the required substance, which will then be 'despatched' to the heart.

It was long thought that only proteins such as hormones and neurotransmitters - and minerals such as sodium, potassium, calcium and magnesium were capable of being used as cell signalling molecules. Now we know gases can also act in this role. Gases which act as cell signalling agents include Nitric Oxide, Hydrogen Peroxide, Hydrogen Sulphite, Carbon Monoxide and (*we now know*) **Hydrogen**.

Think about this for a moment. How amazing it is that our body can send something so small, with laser targeted accuracy. Now think how this system would be affected by a toxic or acidic inner environment.

**When our cell signalling isn't working it's like having an intermittent virus in our computer. Unexplained adverse health effects 'just happen'!**

Many of molecular hydrogen's abilities to reduce oxidative damage and inflammation stem from its role as a cell signalling agent. We can look at it as anti-virus software, constantly monitoring and 'tweaking' our cell signalling system.

**Of course, like other Hydrogen qualities it seems impossible that a simple gas can achieve this.. but the studies are in, and show it does!**



## Energy

Hydrogen plays a huge role in energy production in the body.

We need energy in the form of adenosine triphosphate (ATP). Our natural metabolism processes break down carbohydrates, proteins and fats to produce ATP, the molecule that stores energy. It's like a miniature battery. These basic parts are then further broken down, leaving your body with acetyl CoA.

Acetyl CoA is then broken down into hydrogen, oxygen and carbon.



The Hydrogen is transported to the mitochondria of the cells, which then uses the Hydrogen to create ATP. Energy. Raw energy in its purest form.



“  
*I've just recovered from a triple bypass. I love my golf, but just couldn't manage a round without really suffering afterwards. After using H<sub>2</sub> I am back on the course and loving it!*  
Dave, Mullumbimby NSW





# Anti Ageing

Hydrogen has emerge as a very significant potential health strategy with antioxidant, anti-inflammatory and protective effects on cells and organs.

After our own research we too believe it may really be the missing link in slowing down the ageing process. The ageing of tissues in the body is believed to be caused by free radicals (active oxygen) in the body.

One role of our body tissue is to store hydrogen reserves.

**This is the hydrogen we need to protect us from free radical damage.**

**BUT**

*Our natural ageing process dehydrates these storage areas, leaving tissue exposed to free radicals, which leads to the tissue damage we observe as ageing.*

**Studies suggest we can top up our H<sub>2</sub> reserves - lost because we are slowly 'drying up' - ageing.**

# ACCESSING MOLECULAR HYDROGEN

Hydrogen gas (H<sub>2</sub>) is used as a therapy by a few different methods – some are easy, some are explosively difficult!

*(H<sub>2</sub> has to mix with oxygen to become explosive. Pure H<sub>2</sub> in water won't explode.)*

Methods include straightforward inhalation, bathing in hydrogen-saturated water, drinking hydrogen dissolved in water and injection with hydrogen-saturated saline.

**By far the easiest, most popular and effective is H<sub>2</sub> in water.**

“

*I didn't really think much about results. I work hard and on the weekend I work hard on our 1 acre garden. Firstly, I realised I was coming home with more energy. It seemed to sustain all day. Secondly, I realised that I had become far more flexible. At 68, doing NO stretches or yoga, that's simply amazing.” Ian, Byron Bay*

*..I was feeling really achy from back pain and PMS over a period of days. Pretty much as soon as I drank a glass of water I started to feel much better. I have been taking it each morning now and have been feeling ache free and bouncy since. Who needs coffee when you can have H<sub>2</sub>? ~Joanna, Ballina*

# 'Hydrogen rich water'

Water has two forms: hydrogen poor and hydrogen rich.

Natural water (*99.9 % of water found on the earth*) is hydrogen-poor water because of the hydrogen bond energy connecting hydrogen with oxygen to make H<sub>2</sub>O. Natural hydrogen poor water is too stable to reduce or scavenge active oxygen species.

The simple solution to getting Hydrogen:

You *can* infuse natural water with hydrogen gas. It can be from a hydrogen gas cylinder or other means, and it can reach up to a value of 1.6 parts per million. That's what we call hydrogen saturated water.

There are a number of findings of therapeutic properties that have emerged from studies that apply to hydrogen rich water. We can't yet claim these properties because we haven't seen double blind studies on a thousand humans yet.

Frankly, we doubt that we will because the sort of study required for claiming a new health benefit costs millions and are therefore only available to giant corporations. Scientific studies are readily available via the website on the back cover, but the major benefits appear to be as a selective antioxidant, anti inflammation, anti apoptosis, and anti allergenic.

Molecular hydrogen's health benefits may never be fully researched. It's so unlike any other health supplement. It's the smallest molecule on earth and passes through our body like a spaceship in deep space.

It appears from up to date research that best effects come when the concentration of H<sub>2</sub> in the water is greater.

**Why? We have no idea!**

Japanese scientists have been studying it for over a decade and THEY have no idea.

# Getting Hydrogen-rich water.

Luckily, it's not as hard as ordering a cylinder of  $H_2$  and sticking a hose up your nose. The Japanese have devised simple ways we can all access Hydrogen.

But before we discuss it I'm going to show you a graph. (see below) It shows the maximum  $H_2$  concentration in a glass of water at the atmospheric pressure at ground level. (One Bar) Then we can compare various methods to see whether we get high concentration of  $H_2$ .

## 1. Hydrogen from a Gas Tank

- You can rent a gas tank of  $H_2$ .
- You'll need a regulator specifically for  $H_2$  and a hose also specific to  $H_2$ .
- You can bubble it into a glass, but it will leave the water quickly.
- You *can* inhale it – but we know that  $H_2$  in water is more effective in reaching all parts of the body.
- The big danger of bottled  $H_2$  is its explosive potential. If you open the gas tank indoors, the  $H_2$  will mix with air to create a VERY explosive mix.

The graph below shows maximum concentration of  $H_2$  when bubbled into water. Because this is done in the open air, the  $H_2$  will almost immediately begin to leave the water.



## 2. Natural Water Ionizers.

Use a magnesium-based media. When water passes through the media, it reacts with the water to create  $H_2$ .

Advantages are simplicity, filter life, prefiltration, efficiency, and high  $H_2$  concentration.

In a test performed by AquaSciences LLC USA, the AlkaWay UltraStream gave 1.1ppm of  $H_2$  at 1 litre per minute.

A system like this one, (*designed in Australia, made in the USA*) has superb filtration including chlorine, chloramines, fluoride and heavy metals plus hundreds of other chemicals.





### 3. Tablets: Oral or Dissolvable

These come in two simple-to-use forms. Many first time users begin on these to experience the benefits of molecular hydrogen and then invest in a water system.

#### 1. Oral tablets.

These are in a patented form of magnesium that react with stomach acid. We have experienced great results from these when the right dosage is reached (usually 3 tabs 3 times a day). It is difficult to simulate a stomach environment for test purposes but our experience so far tells us that each tablet creates a concentration of around 0.5 ppm.

#### 2. Dissolvable tablets

These are dropped into a full bottle of water which is immediately capped. This traps all generated H<sub>2</sub> as the magnesium in the tablet reacts to the water in the bottle. By using this method it is possible to increase the H<sub>2</sub> concentration quite dramatically beyond normal limits.

Our tests of these tablets have seen up to 2.6ppm.

*"I have had knee discomfort since 2005 and I've had three knee surgeries. I began on ..... and about the third day I started to really notice the difference in the discomfort relief and I continued taking them. Now I run about 5 miles a day with no discomfort whatsoever." ~ Carlie B.*





ultrastream  
PURE

FRESH TO REMOVE CHLORINE



Molecular Hydrogen is absolutely unlike any other health supplement.

Being the smallest molecule in the universe it passes easily from the body.

There is NO residual buildup of  $H_2$

$H_2$  supports the body's natural functions.  
It is not a disruptor.

There are no known side effects of  $H_2$ .

Taking a 'course' of  $H_2$  is not required.

$H_2$  has no known contra-indications.

It is impossible to overdose with  $H_2$

$H_2$  is a gas.

It is not a herb, a root, a flower, or a compilation of different chemicals.

$H_2$  is 100% pure and 100% natural.

# WHAT'S RIGHT FOR YOU?

## NATURAL WATER IONIZER

You'll need space either on your kitchen bench or undersink. Advanced filter included.

Initial Cost: \$599

Annual Cost: Filter replacements \$199

Ongoing Support: Approx. \$0

Cost per day: \$0.55c No waste water.

## ORAL TABLETS

Cost per 60 tablets \$60

Effective dose; 3 x 3 per day

Cost per day: \$9

## DISSOLVABLE TABLETS

Cost per 60 tabs \$60

Dosage per day 1-2 tablets

Cost per day \$1-2

## WHAT GIVES THE MOST H<sub>2</sub>?

### A SIMPLE SUMMARY

*(All figures expressed as parts per million)*

#### NATURAL WATER IONIZER

up to 1.1ppm

#### ORAL TABLETS

Approx. 0.5ppm

#### EFFERVESCENT TABLETS

Up to 2.6ppm

Thank you for  
spending the  
time to absorb  
this  
  
‘new  
science’.

Times change faster than ever, and breakthroughs in Molecular Hydrogen knowledge are happening almost weekly. If you'd like to keep updated, you'll find a web address at the bottom of this page where you can sign on to our regular HealthMail.

Ask the person who gave you this little Book of Hydrogen for their recommendations and help.