

# The Scientific Journey Behind Your Water Ionizer

What you are about to drink has been the subject of scientific investigation for **over seven decades**. Two Nobel Prize winners. Nine leading researchers. More than 1,000 peer-reviewed studies since 2007. This is the science behind the machine in front of you today.



## THE STORY AT A GLANCE



### 01

#### The Foundation

1931–1965

Nobel science + first ionizer +  
govt approval

### 02

#### Clinical Era

1965–1997

Doctors validate it in real  
patients worldwide

### 03

#### The Big Shift

1997–2006

Active hydrogen — the real  
mechanism discovered

### 04

#### H2 Revolution

2007–today

1,000+ peer-reviewed studies  
confirm the science

## Chapter 1 · The Foundation

1931–1965 · From Nobel Prize research to government medical device approval in Japan

### 1931

NOBEL 1931

#### Dr. Otto Warburg

Nobel Laureate in Physiology or Medicine · Germany

Won the 1931 Nobel Prize proving that healthy cells use oxygen for energy production, while diseased cells switch to fermentation — creating an **acidic micro-environment**. Although his research predated water ionizers, it answered the fundamental question at the heart of the industry: why does the pH of water matter to the human body?

### 1952

#### Dr. Machisue Suwa

Medical Researcher & Engineer · Japan

Built the world's first water ionizer in 1952 after studying the "miracle spring" waters of Lourdes, France and Nordenau, Germany. Discovered that passing an electrical current through water across a membrane could recreate those restorative properties. Named his discovery "Synnohl Liquid" — what we now call Electrolyzed Reduced Water (ERW).

### 1965

#### Japanese Ministry of Health

Ministry of Health and Welfare · Government of Japan

After clinical trials demonstrating effectiveness on abnormal intestinal fermentation and chronic diarrhea, Japan officially classified water ionizers as **approved medical devices** in 1965. Japan was the first government in the world to grant this recognition — a legal classification that remains in effect in Japan today.

#### KEY INSIGHT:

Water ionizer technology has been government-approved as a medical device in Japan since 1965 — over 60 years ago.

▼ CHAPTER 2 BEGINS ▼

## Chapter 2 · Clinical Validation

1965–1997 · Doctors worldwide prescribe, observe, and validate ionized water in clinical practice

### 1970s

#### Dr. Keiichi Morishita

Director · International Natural Medicine Association · Japan

Linked blood quality directly to intestinal pH. Argued that chronic diseases arise from blood "over-acidification" due to poor diet and water. Recommended ionized water to restore the blood's natural alkaline balance — decades before modern gut-health research confirmed the same link.

### 1980s

#### Dr. Hiromi Shinya

Chief of Endoscopy · Beth Israel Medical Center, New York

Performed over **370,000 colonoscopies** over 50 years. Directly observed the link between diet, gut health, and ionized water. Prescribed alkaline ionized water to every single patient as a core part of his "Shinya Biozyme" health protocol.

### 1990s

#### Dr. Sherry Rogers M.D.

Fellow · American College of Allergy, Asthma & Nutrition · USA

First Western MD to highlight ORP (Oxidation-Reduction Potential). Showed ionized water acts as an "electron donor" — neutralising free radicals that cause cellular damage and inflammation. Her book *Detoxify or Die* bridged Japanese ionized water research to Western clinical medicine.

#### KEY INSIGHT:

By the late 1990s, three independent clinicians — across Japan and the USA — had separately validated the same findings.

## Chapter 3 · The Big Shift

1997–2006 · Science pivots: the real mechanism is molecular hydrogen — not simply alkaline pH

### 1997

★ LANDMARK 1997

#### Dr. Sanetaka Shirahata

Professor of Cellular Regulation Technology · Kyushu University, Japan

**Landmark paper** published in Biochemical and Biophysical Research Communications. Proved that the primary benefit of ionized water is "Active Hydrogen" — not simply alkalinity. Demonstrated that Electrolyzed Reduced Water (ERW) scavenges reactive oxygen species (ROS) and protects DNA from oxidative damage. This paper redirected global water ionizer research toward molecular hydrogen.

### 2003

NOBEL 2003

#### Dr. Peter Agre

Bloomberg Distinguished Professor · Johns Hopkins University · USA

Awarded the **Nobel Prize in Chemistry** for discovering Aquaporins — the specialised protein channels embedded in cell membranes that regulate exactly how and how fast water molecules enter our cells. His discovery provides the molecular framework for understanding why the cluster size of ionized water may affect cellular hydration speed and efficiency.

### 2004

#### Dr. Mu Shik Jhon

Chemist & Author · Nearly 300 Peer-Reviewed Research Papers

Dedicated over 40 years to understanding the molecular structure of water and its impact on human health. Proved that water molecules organise into hexagonal clusters, and that healthy cells are consistently surrounded by structured hexagonal water while diseased cells have disorganized clusters. The electrolysis process in ionizers creates precisely these smaller, more organised clusters.

#### KEY INSIGHT:

By 2006 the science answered all three core questions: WHY alkalinity matters (Warburg) · WHAT the active agent is (Shirahata) · HOW it enters cells (Agre).

▼ CHAPTER 4 · BEGINS ▼

## Chapter 4 · The Hydrogen Revolution

2007–today · Nature Medicine publishes 1,000+ peer-reviewed studies worldwide follow.

### 2007

★ NATURE MEDICINE

#### Dr. Ikuroh Ohsawa

Researcher · Nippon Medical School · Tokyo, Japan

Published in **Nature Medicine** — one of the world's top journals. Proved  $H_2$  is a **selective antioxidant**: it targets only the most harmful free radicals while leaving beneficial reactive oxygen species intact. This paper triggered over 1,000 peer-reviewed follow-up studies worldwide.

### 2010s

#### Dr. Hidemitsu Hayashi

Molecular Hydrogen Pioneer and Researcher · Japan

Argued  $H_2$  is the primary therapeutic agent in ionized water — not merely a property of it. Established that ORP must be significantly negative (below -250 mV) for clinical relevance. Directly influenced modern high-performance ionizer design standards worldwide.

### 2024

#### Global Research Community

Over 1,000 Peer-Reviewed Studies · Published Across Multiple Countries

Research covers: oxidative stress, exercise recovery, metabolic health, inflammatory response, and neurological function. Scientific consensus: molecular hydrogen is a legitimate, rapidly growing field — not fringe science. Large-scale human clinical trials are actively underway.

#### KEY INSIGHT:

The 2007 Nature Medicine paper converted a clinical observation into mainstream science. The number of  $H_2$  studies grows every year.

# What 70 Years of Science Delivers Into Your Glass Today

Three measurable properties · verified live · in front of you

## ALKALINE pH

Dr. Warburg (Nobel 1931) · Dr. Morishita · Dr. Shinya

**8.5 – 10.91**

pH Range Achieved

### WHY IT MATTERS

Warburg proved that diseased cells thrive in acidic micro-environments. An alkaline pH supports the cellular environment your body works to maintain. Ionized water delivers a measurably higher pH than tap or bottled water — verified on the spot.

### TAP WATER vs PRIME WATER

**Tap water pH: 7.5 – 8.0**

9-plate Level 3: pH 10.31 Level 4: pH 10.70

13-plate Level 3: pH 10.67 Level 4: pH 10.91

**Verify this live — right now.**

We bring the meter to your home.

## NEGATIVE ORP

Dr. Shirahata (1997) · Dr. Rogers · Dr. Hayashi

**–610 to –825 mV**

Antioxidant Potential

### WHY IT MATTERS

Negative ORP means the water is a reducing agent — it donates electrons to neutralise oxidising free radicals before they damage cells. Shirahata identified this as the true mechanism in 1997. Your tap water has a positive (oxidising) ORP.

### TAP WATER vs PRIME WATER

**Tap water ORP: +200 to +400 mV (oxidising)**

9-plate: –610 to –728 mV

13-plate: up to –825 mV

**Verify this live — right now.**

We bring the meter to your home.

## MOLECULAR H<sub>2</sub>

Dr. Ohsawa (Nature Medicine, 2007) · Dr. Hayashi · 1,000+ studies

**1.11 – 1.64 ppm**

Dissolved Hydrogen Measured

### WHY IT MATTERS

H<sub>2</sub> is the smallest molecule in existence — it crosses cell membranes and the blood-brain barrier with ease. As a selective antioxidant, it targets only the most harmful free radicals while leaving beneficial reactive oxygen species intact.

### TAP WATER vs PRIME WATER

**Tap water dissolved H<sub>2</sub>: 0 ppm**

9-plate Level 3: 1.11 ppm Level 4: 1.34 ppm

13-plate Level 3: 1.60 ppm Level 4: 1.64 ppm

**Verify this live — right now.**

We bring the meter to your home.

**Ask us to measure all three numbers in your home — before you decide anything.**

We bring a professional dissolved hydrogen meter to every demo. The science is real. The numbers are yours to verify.