

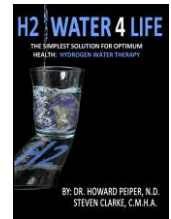
H2 WATER 4 LIFE MAY HELP BRAIN & MENTAL DISORDERS

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MENTAL ILLNESS IS CONSIDERED A “HIDDEN EPIDEMIC” OF OUR MODERN WORLD.

It includes brain and mental disorders such as or from Dementia, Alzheimer’s Disease (AD), Parkinson’s Disease (PD), traumatic brain injury (TBI), concussions, memory loss, cerebral hemorrhage, ischemia, epilepsy, brain edema, stroke, Neurodegenerative Disease, Multiple Sclerosis (MS), ASD, ADD, ADHD, OCD, PTSD, SAD, Schizophrenia, Bi-polar Disorder, depression and other conditions.



With **OVER 3,000 SCIENTIFIC H₂ STUDIES**, hydrogen-rich, alkaline water combined with diet adjustments, supplements and **non-GMO, organic electrolyte powders** * (macro & trace minerals) has the attention of Doctors, Researchers, Athletes and others who suffer with or want to avoid mental health problems. A 2020 study for **traumatic-brain-injury** victims confirmed **H₂ IMPROVES NEUROPLASTICITY** (forming new connections & pathways) by enhancing production of BDNF protein. **

In 2017, according to www.nimh.nih.gov, nearly **1** in **5 American adults** experienced **one** or **more mental health disorders**. As of 2020, John Hopkins Medicine estimated that it **JUMPED** to **26%** of **American adults** – **1 in 4 adults**. Statistics for children and teenagers are even more alarming. As of 2021, The American Psychological Association states there are 14 suicides per 100,000 Americans. In the **U.S.**, www.afsp.org reports **134 SUICIDES** occur **EVERY DAY**. **Globally**, the World Health Organization estimates one person commits suicide **EVERY 40 SECONDS**. So, in 2022, the WHO declared: “*Mental health is critically important to **everyone, everywhere** ... **mental health needs are high** but responses are insufficient and inadequate.*” – Are you in a crisis and/or thinking about suicide? In the U.S., please **Call** or **Text 988** immediately.



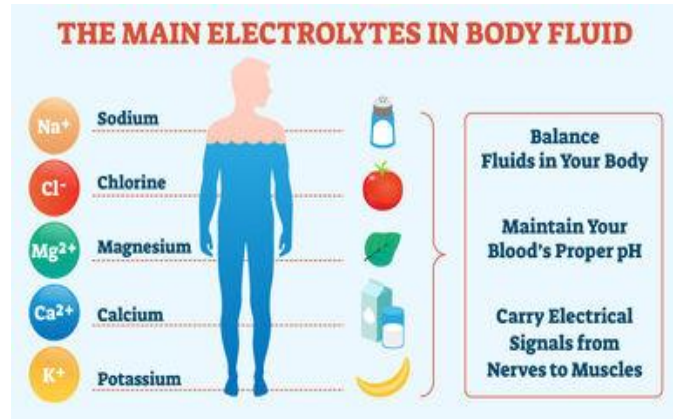
WHY HAVE BRAIN DISEASES AND MENTAL DISORDERS BECOME A WORLDWIDE CRISIS?

To offer an over-simplified answer would be irresponsible. **FIRST**, we must acknowledge what modern science and medicine have concluded via extensive scientific studies ... there is a **vast array of factors** contributing to this dilemma. In 2024, Mayo Clinic reported that mental illnesses are “*caused by a variety of genetic and environmental factors:*”

- **Inherited traits.** Mental illness is more common in people whose blood relatives also have a mental illness. Certain genes may **INCREASE YOUR RISK** of developing a mental illness, and your life situation may trigger it.
- **Environmental exposures before birth.** Exposure to environmental stressors, inflammatory conditions, toxins, alcohol or drugs, **WHILE IN THE WOMB**, can sometimes be linked to **MENTAL ILLNESS**.
- **Brain chemistry.** Neurotransmitters are naturally occurring brain chemicals that carry signals to other parts of your brain and body. When the neural networks involving these chemicals are impaired, the function of nerve receptors and nerve systems change, leading to **DEPRESSION** and other **EMOTIONAL DISORDERS.**”



SECOND, vital research that links electrolyte deficiencies and/or imbalances to mental health issues has **existed for decades**. A 1981 groundbreaking study was made at University of Tennessee Center for the Health Services. It stated: *“Electrolyte and fluid imbalance, seen frequently in medically ill patients, may cause symptoms ranging from confusion to depression to suicidal ideation. Similarly, patients in apparently good medical health who manifest psychiatric symptoms such as depression or personality changes are sometimes found to have an underlying electrolyte problem. Indeed, neuropsychiatric symptoms may be the first clue to an ELECTROLYTE ABNORMALITY.”*



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* Please read Steven's comprehensive 18-page 2025 science paper *“To Understand Electrolytes – Learn About Minerals”*

** *“Neuroprotective Effects of Molecular Hydrogen: A Critical Review”* Wei Chen, et al., 2020 Oct 20;37(3):389-404. *Neuroscience Bulletin*

In 2017, M. Daringer wrote *“Neurological manifestations of major electrolyte abnormalities”* in the Handbook of Clinical Neurology. It said: *“The brain operates in an extraordinarily intricate environment which demands PRECISE REGULATION of electrolytes.”* Disturbances often lead to brain **swelling, shrinkage, muscle spasms, weakness** and **seizures** which can set up conditions for a gradual or rapid onset of mental health issues.

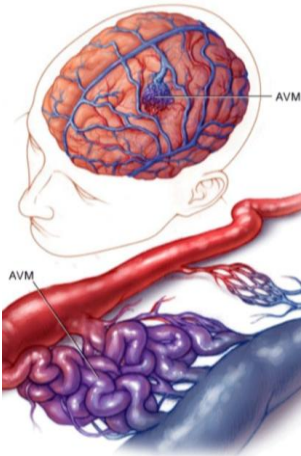
As Mayo Clinic stated, mental illnesses are *“caused by a variety of [factors]”* including *“brain chemistry”* and neurotransmitters. *“When the neural networks involving these chemicals [which can include constituents such as electrolytes] are impaired, the function of nerve receptors and nerve systems change, leading to depression and other emotional disorders.”* So, **chronic electrolyte deficiency** and/or **imbalance** can **lead to scores of mental dysfunctions**.



THIRD, since unhealthy brain chemistry is a major cause, it stands to reason that **brain tissues** and **nerves continuously filled** with and **submerged** in **acidic saturated fluids** may hasten the onset and accelerate the progression (worsening) of brain disorders. **Did you know** that a healthy newborn baby is exposed to alkaline amniotic fluid during pregnancy? An unhealthy baby's exposure is often acidic.

In 2018, the U.S. NIH National Library of Medicine posted *“Dietary Acid Load and Mental Health Outcomes in Children and Adolescents: Results from the GINIplus and LISA Birth Control Cohort Studies.”* These two studies included 5,991 and 3,094 healthy newborns from Germany. Assessments were made at ages 10 and 15 years. This exhaustive research revealed the **“potential relationships**

between dietary acid load [DAL] and mental problems ... These should further examine the effects of extreme stages (i.e., acidosis) on mental health ... An increase intake of base-forming [alkaline] foods ... and decreased intakes of acid-forming foods ... might represent one promising component of a global intervention strategy for the prevention of mental problems.” In essence, a direct link was established between **DIETARY ACID LOAD / ACIDITY / ACIDOSIS** and mental disorders. Plus, an observation was made that an **increased daily intake** of more **alkaline foods** and **alkaline beverages** may be an effective strategy for prevention.



ACIDOSIS IRRITATES and **INFLAMES TISSUES**. **Excess acids** damage the inside and outside of brain cell membranes and nerves. This may result in nerve pain, neuralgia, neuritis, sciatica, headache, earache and other nerve ailments. Even worse, they could lead to a harmful event from an existing **Arteriovenous Malformation (AVM)**. **Left image** shows an unhealthy AVM versus a healthy artery/vein next to it. **Acidic brain tissues** can result in brain inflammation which in turn may gradually cause or exacerbate scores of preexisting conditions along with mental illness symptoms and disorders. Simply put, an acidic brain often leads to **serious cognitive dysfunctions**.

Some studies show that **AS BRAIN ACIDOSIS RISES**, the brain’s circulatory system is severely impeded. Blood flow is reduced and can even be blocked from reaching certain intracranial regions. As a result, oxygen delivery is greatly decreased. All this increases risk of **atherosclerosis**, **microscopic lesions**, **small tears** and **blood clots** which can lead to **aneurysms**, **strokes** and **comas**. Therefore, this reduction of blood flow and oxygen delivery can produce **early signs** of mental illnesses, diseases or disorders. Will we recognize the signs?

Further research confirms these concerns. In 2021, another scientific study published in Nephrology Dialysis Transplantation wrote: “Acid–base [acid-alkaline] status also directly impacts synaptic activity, which is the largest sink of energy equivalents in the brain. As a rule of thumb, **ACIDOSIS** tends to **reduce neuronal excitability** [activity] and **ALKALOSIS** to **increase** it [activity] ... **ACIDIC pH** is associated with **lower synaptic activity**.” Thus, inherited traits, environmental exposures, electrolyte imbalances, dietary acid loads and acidic saturated brain fluids can all contribute to brain diseases, disorders and dysfunctions.



But there is hope. **H2 Water** may help many people who suffer with **Brain** and **Mental Disorders**. Below are just a few of the **numerous Testimonials** and **Studies** that suggest hydrogen-rich, alkaline **H2 Water 4 Life** has strong therapeutic potential.

➤ **TESTIMONIALS**

Alzheimer's Symptoms Gone – **Mark.** “When I started drinking alkaline antioxidant [H₂] water, I had **ALZHEIMER'S DISEASE** ... **slowly and steadily** the water began to clear out the awful symptoms of AD. **My memory, my mind, and my clarity** were restored to me. After **six months** to a **year**, I could remember phone numbers again. At **79 years old** I finally feel normal again.” (Health News Volume 21, #3)

Dementia, Depression and Positive Attitude – **Larry E.** “I was **78** and Rondi was **74**. She was showing signs of **DEMENTIA**, had **DEPRESSION** [and] **BARELY COMMUNICATED** ... We progressed to level 3 alkaline with more hydrogen by week 9. She drank a minimum of 6 glasses a day; most days at least 8 glasses. **Four months later, my wife was a new person.** I called [Steven] to joyfully report that her dementia was greatly improved (memories returning), she was no longer depressed, her **positive attitude returned**, she was like a ‘**chatter-box**’ compared to before, we were **having conversations** ... and she had **more energy.**” (H₂ WATER 4 LIFE Book, Chapter 22)

Memories at 94-Years-Old – **Christina M. P. C.** “They rushed my Dad to E.R. [in 2018]. He was diagnosed with **SEVERE DEHYDRATION**. I found out Dad was only drinking 3 cups of alkaline [H₂] water daily. I explained to my family that Dad ... must drink at least 8 glasses a day. A key to get Dad to drink more was offering him **FLAVORED ELECTROLYTES** ... **3 months later** my Dad was back to his 2016 [self] ... **memories came [back]**, telling me stories about his **childhood, teenage years, time in the Navy**, all with specific details! [He] also wanted to know about his credit card and bank account balances to **make decisions** like he did [at] 92 years old.” (H₂ WATER 4 LIFE Book, Chapter 22)

➤ CLINICAL STUDIES & SCIENCE REVIEWS



Iketani, M and Ohsawa, I., Tokyo, Japan (2017) **Molecular Hydrogen as a Neuroprotective Agent** [for diseases such as **Parkinson's disease (PD)**, **Alzheimer's disease (AD)**, **Multiple Sclerosis (MS)** and **Huntington's disease**]. *Curr Neuropharmacol* Feb; 15 (2): 324-331

Dohi, Kenji, et al., (2014) **Molecular Hydrogen in drinking water protects against neurodegenerative changes induced by traumatic brain injury [TBI]**. *PLoS One* Sept 24;9(9):e108034
– Dr. William A. Banks, M.D., Co-Author **

HUO, T. T., et al., (2014) **Hydrogen-rich saline IMPROVES SURVIVAL and NEUROLOGICAL OUTCOME after CARDIAC ARREST and CARDIOPULMONARY RESUSCITATION** by reducing oxidative stress and inflammation. **THREE-FOURTHS (3/4) of CARDIAC ARREST PATIENTS DIE BEFORE HOSPITAL DISCHARGE or EXPERIENCE SIGNIFICANT NEUROLOGICAL DAMAGE.** *Anesthesia and Analgesia*. 119(2): p. 368-80

QIN, Z. X., et al., (2012) **Hydrogen-rich saline prevents neointima (SCAR TISSUE in BLOOD VESSELS) formation.** *Atherosclerosis* 220(2): p. 343-350

“Mental health is critically important to **everyone, everywhere** ... **mental health needs are high** but responses are insufficient.” – WHO, 2022



**** Dr. William A. Banks, M.D., Ph.D.,**

SENIOR ADVISOR, MHF/MHI -

“These studies provide proof of principle that mHW [**Molecular Hydrogen Water**] can potentially **reverse, block, or attenuate**

... many of the effects of CCI [Controlled Cortical Impact] ... These include effects on edema formation, tau pathology, regulators of fluid and BBB functions, neuroinflammation, and gene expression ... Because of its **nontoxicity and ease of administration**, mHW could be readily adapted for clinical, emergency, and even first responder use.” – 2014

According to **Tokyo Metropolitan Institute of Gerontology**, “Although many **neurological disorders** are currently incurable, **numerous studies suggest the clinical potential of H₂ administration** for the **prevention, treatment, and mitigation of these disorders**. No adverse effects of H₂ have been reported, and H₂ is relatively easy to use, inexpensive, and effective in daily medical practice.”



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