



FINANCIAL PREPAREDNESS

"One of life's most painful moments comes when we must admit that we didn't do our homework, that we are not prepared." ~ Merlin Olsen

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Hydration

Every morning I weigh myself on a scale that measures my body composition (including water, fat and muscle mass) and then sends that data to an app where I can view graphs of each item over time. I've noticed that my hydration level is positively correlated with muscle mass and negatively correlated with fat. As I've written about before, [hydration](#) (and [sleep](#); the two actually work together) is the foundation of your health. I can trace every major health problem in my life to chronic dehydration.

In recent months, I noticed that my hydration level had been crashing (though nowhere near the level it was when I was on the Standard American Diet). I wanted to find out why, so I read [Quench: Beat Fatigue, Drop Weight, and Heal Your Body Through the New Science of Optimum Hydration](#) by Dana Cohen M.D. and Gina Bria (published in 2018, 4.5 stars).

The authors argue that the standard advice to drink eight glasses of water per day is inadequate. In addition to water intake, you also need water absorption. For maximum absorption, they recommend: (1) drink eight to 16 ounces of water when you wake up, with sea salt (I use LMNT) and lemon juice, (2) drink at least one green smoothie daily, (3) drink six to eight ounces of water before every meal, and (4) move.

The authors write that water helps a body fend off a number of chronic diseases and conditions: "...water is quantitatively the most important nutrient to consider when looking at the origins of chronic issues." Total body water also decreases with age and obesity. Additionally, most drugs "used to treat cardiovascular disease block the very ability of the cells to hydrate....High blood pressure levels have been associated with brain [water] volume decreases."

The authors document the discovery of a fourth state of water (H_3O_2) that has vitally important differences from liquid water. This gel-like water (called Exclusion Zone or structured water) has a negative charge that allows it to produce and store energy inside us. This denser water is better at conducting our electrical functions. The authors argue that it "amplifies water's life-giving properties....accelerating our cells' ability to repair, regenerate and...provide more vitality."

The authors explain how sun and water turn us into batteries: "Hydration happens when sunlight hits the water molecules, even through our skin," turning water into an energizing battery. "...sunlight is the most natural, most accessible way to help our cells function." Exposure to light helps to "literally grow gel water inside the body." A recent study showed how "the chlorophyll molecule inside the body works with light to produce ATP, which...stores our cells' energy." So by eating green plants, mammals can derive energy from sunlight.

The authors argue that consuming salt is key to hydration and recommend Sea, Celtic, Rock or Himalayan (which I use in my nutrition shakes) salt. They also say that sodium isn't linked to high blood pressure but *is* linked to a longer life.

The authors highlight the importance of microbes and seasonality to our health and hydration: "...microbes, too, have seasonal patterns. Each season of fresh food brings its own kind of microbes, and the closer we eat to the seasons around us," the healthier we'll be. "Microbacteria also function on circadian rhythms...they sleep too! They need us to be outdoors so they know whether it is night or day." Even deep inside us, they can sense the light waves to tell the time of day and season.

The authors detail the recent discoveries about fascia (miles of thin, gauzy tissue that surrounds every organ and vessel, even nerves), including the fact that it is one of the body's major irrigation systems. And *any* motion activates this water delivery system. Movement "is quite literally the other half of hydration. Drinking starts the hydration process, but movement completes it....Fascia is an electrical system, run on and made of water....Fascia is also a sonic system, one that utilizes vibrational energy and sound energy....This vibrational sync or coherence creates more efficient function."

The authors argue that hydration and posture are linked to longevity: "When hunched over, you are constricting your tissues and your breathing, and so further restricting that flow of water in your body....Breathing is another unsung source of hydration. Breathing pulls vapor out of the air. Hunching over squeezes the intestinal tract, which...kinks digestive function and its flow [of water]." Surprisingly, "...you can have a greater impact on your health and well-being by doing frequent gentle stretches" than hardcore exercise.

The authors describe how fascia is also alert: "...fascia is populated with receptors and nerve endings...[that] fire when the tissue stretches [which] allow our brain and body to register where our body is in space....Dehydration...diminishes our space perception and balance, which is why properly hydrated fascia is key for...optimum sports performance [and] older people who want to avoid a nasty fall."

The authors recommend using a brush to dry brush your skin regularly, which enhances blood circulation and lymphatic drainage. It also stimulates your receptors and nerve endings, provides a superficial acupuncture treatment, and pushes fluid through the fascia. I've been using [this bronze bristle brush](#) made in Germany, and like the effect it has on my skin. It makes me feel like a racehorse that's brushing itself.

One of the biggest takeaways from the book is that *motion keeps you hydrated*: "Movement moves hydration down to the cellular level...the simplest and smallest motion can help get water to all parts of your body. Movement is the second half of the hydration formula. Without movement, hydration doesn't get all the way to our fascia and ultimately to our cells....You are your own engine, designed to ignite yourself through motion....Unless you are moving, your cells are not in high function. They are not hydrated or charged."

Another lesson is that "oils and fats make cellular hydration possible....You can drink all you want, but if water doesn't get past [your cell's] membrane, hydration isn't really happening....omega-3 fatty acids play especially key roles in keeping your cell membranes supple and your cells hydrated. [They] can also help increase the cell membrane surface area so that more water and nutrients can pass through."

The authors explain that your body burns good dietary fat (which comes from foods like avocados, olive oil, nuts, meat and dairy) as fuel. Additionally, "Fat also slows the rate at which your body digests the rest of your food, helping you feel satiated and avoid...blood sugar fluctuations...." Fat also comprises your cell membranes, so "If you consume too little fat, your tissues and organs don't function properly...."

The authors also reveal how skin is a major hydration organ: "...its foremost job is...tossing out unwanted materials through pores." Skin needs help to keep its pore function working, and the best help it can get is induced sweating. "Sweat transforms waste in the body...then flushes it out through the pores....sweating can increase removal of heavy metals...and some chemical toxicants...."

In 2013, scientists discovered "an entire drainage system [the glymphatic system] hidden in specialized brain cells. This system operates similarly to the lymph system, but drains waste products solely from the brain....it works at night, during sleep...[and] depends on adequate hydration levels."

The authors write that stress neurochemicals and hormones dehydrate us, so "Remembering to drop our stress and tension many times a day changes our biochemistry....Don't wait until you get home to unload but practice micro-meditations...to consciously dump stress" throughout the day.

The authors argue that “Hydration is the most potent intervention you can do for yourself because by molecular count, you are 99% water....You will feel better, sleep better, move better, even age better. Cognition and physical performance improve, as well as skin [and] digestion.”

Like me, the authors are big on smoothies: “If there is only one thing you do to change your hydration intake, add a smoothie to your diet every day....Smoothies offer the perfect combination of nutrition and hydration....chewing food releases only about 35% of the nutritional materials in that food...[but] blending our food makes those nutrients up to 90% bioavailable....”

Moreover, “Smoothies also provide fiber that efficiently slows down the passage of hydration and nutrition, allowing a longer transit time for nutrients and liquids to be truly absorbed.” Drinking a lot of bottled water without food fiber “can actually flush out the very important electrolytes and nutrients that...accomplish full hydration.” Absorption can also reduce the number of potty stops you need to make.

In conclusion, the authors write, “...the first question you should ask yourself when you are feeling off—whether it be fatigue, brain fog, or pain somewhere—is 'Am I hydrated enough?'”

I docked the book half a star because I'm currently reading the book [Toxic Superfoods](#) (which was published four years later) that reveals how some of the foods the authors recommend (such as chia seeds, hemp seeds, pomegranates, raspberries, goji berries, turmeric and cinnamon) are actually high in oxalates, a toxic chemical that can accumulate in your body over time. I'll write about that in a future issue.

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Before starting a new diet or exercise regimen, you should consult with a doctor, nutritionist, dietician, or personal trainer.