



we're talking Vater. agua.

And it does a lot more than quench your thirst. Scientists say it might just be the simplest, coolest way to boost energy, shed pounds, and even fight off cancer.

BY MICHAEL TENNESEN

We cannot live without water.

Fereydoon Batmanghelidj is on a deeply personal if not slightly bizarre crusade to make sure you never forget it.

This Virginia-based physician—known by friends as Dr. Batman—is serious about water. He frequently takes to the nation's airwaves to share his message of hope and hydration.

You may want a drink before you hear this message. For starters, the author of Your Body's Many Cries for Water declares that America is suffering from an epidemic of chronic dehydration. But that's not all. "Heartburn, headache, joint and back pain, and fatigue are not true diseases," says Dr. Batman. "They're dehydration-induced disorders. I tell people, 'You're not sick—you're thirsty.'"

Over lunch, Dr. Batman shares the odd story of how he became the nation's most visible champion of water. It all began after the fall of the Shah of Iran in 1979, when he was sent to jail as a political prisoner. There, an inmate with an excruciating ulcer came to him for relief. The Iranian-trained physician dispensed the only "medicine" he had: water. And he says it worked. Two glasses later, he swears, the man was cured. So Dr. Batman launched a prison-based study to explore the subject.

Here's where the story gets really weird. When his jailers offered him freedom, Dr. Batman declined. Instead, he spent four more months behind bars to complete his research.

The experience helped convince him that your kitchen sink is dispensing a regular wonder drug, one that can cure asthma, allergy, hypertension, and more. "The cholesterol buildup on blood vessel walls is the body's natural defense against water loss," says Dr. Batman.

Frankly, it all seems off-the-wall to me. And I'm not alone: When I run his theories by a few experts, the reactions range from ridicule to anger. Ann Bolger, a cardiologist with the University of California at San Francisco, laughs at Dr. Batman's rationale for lipid buildup. "Hmm," she says. "I know a guy who thinks we should eat more fat to keep the blood slippery."

But while the line between Dr. Batman's science and pure speculation may seem a bit slippery, there is evidence that he's on to something. Just ask Susan M. Kleiner. This is a woman you would never confuse with Fereydoon Batmanghelidj. The 42-year-old fitness fanatic is an affiliate assistant professor with the Nutritional Sciences Program at the University of Washington in Seattle and a nutrition consultant for pro basketball's Seattle SuperSonics. She does, however, share one thing with Dr. Batman—a fascination with the medical potential of water.

So she went hunting: at the library, on the Internet, hounding fellow scientists. Her goal was to chart the consequences of chronic mild dehydration, which she defines as 1 to 2 percent loss of body weight through fluid loss. In the end, she assembled and published the first-ever comprehensive survey of the medical literature on water.

Now Kleiner is convinced, too. "More than half of the nation is walking around chronically mildly dehydrated," she says. And, she believes, the consequences are real. Physicians have long recommended drinking lots of water to prevent some problems—kidney stones and constipation, for instance. But Kleiner says there's surprising evidence that a minor water shortage in your body can cause some major health problems.

So break out the glassware. Kleiner, for one, says the cure may be as simple as drinking eight to ten eight-ounce glasses of water a day. Here's a look at the science on water's healing powers.

A Cancer-Fighter on Tap?

It sounds too good to be true. And it's certainly too soon to tell. But several recent studies have suggested that water's cancer-fighting powers are for real.

Consider colon cancer. In a study conducted at the Fred Hutchinson Cancer Research Center in Seattle, researchers concluded that women who drank more than four glasses of water a day had nearly half the odds of getting the disease as women who imbibed two glasses or less. That risk reduction was almost comparable to the cancer-fighting benefits of eating five servings of fruits and vegetables a day. And though only a few participants filled up eight glasses or more a day, they enjoyed

an even greater protective effect. Other beverages just couldn't match this power: Subjects who drank lots of coffee, soda, or juice didn't budge their chances of trouble.

How could water work that magic? Ann Shattuck, an epidemiologist who coauthored the study, thinks water can turn your intestinal tract into an express train in which trouble-makers have no chance to stop and loiter. Water makes waste move through the system more quickly, which, she says, means carcinogens have less time to come in contact with colon walls.

A similar effect may keep cancer from taking hold in the urinary tract—home to your bladder, kidney, ureter, and other friends. One study at the Cancer Research Center of Hawaii, for example, found that women who reported drinking the most tap water every day were a whopping 80 percent less likely to develop bladder cancer than those who drank the least. A few earlier studies have not reported such a dramatic result, perhaps because they were conducted in areas where tap water is chlorinated more than the average. But epidemiologist Lynne Wilkens, who led the trial, says the data showed the power of naturally purified water. "It was clear," says Wilkens. "The more they drank, the higher the reduction of risk."

There's even evidence that more trips to the tap might fight off breast cancer. In a case study, British researchers reported that women who defined themselves as water-drinkers ran a much smaller risk of getting the disease than women who didn't. How much? In premenopausal participants, the odds were cut by a third, while postmenopausal women enjoyed an even greater benefit. The authors concluded that the findings were impressive enough to warrant further study.

Control Your Weight

Got the munchies? You may want to pour yourself a glass of water to fight the urge. And don't laugh—it might work.

You may just be hungry for the wet stuff. "We have a poor thirst mechanism," says Kleiner. "Sometimes we don't recognize the difference between thirst and hunger."

But there's more to water's weight-control powers than that. Multiple studies have shown that people who up their fluid intake over the long haul drop the pounds. In one case study, an obese woman lost 42 pounds in 18 months by following a program that stressed a big increase in water consumption.

The explanation may be simple: Water can take the edge off hunger. "If you drink water with your meal, you are more likely to feel full," says Kelly Brownell, a professor of psychology at Yale and the developer of a weight-loss program called LEARN.

Not everyone thinks it's so simple. Barbara Rolls, a professor of nutrition at Pennsylvania State University and the author of the dier book Volumetrics, believes our hunger mechanism is crafty enough to figure out water isn't food. To really fool the brain, she says, you need to cook water into your diet through foods like hot cereal, pasta, and soup. Researchers who explored this theory found that dieters instructed to eat soup four times a week consumed 100 fewer calories a day than those who dipped their spoons less often.

At least everyone can agree on one thing: Water quenches your thirst with nary a calorie. Alternatives like juice, iced tea,



SAFETY STANDARDS FOR tap water don't always prevent your faucet from being a source of bad taste or more serious problems. If you think there's trouble at home, take matters into your own hands with a water filter. These systems can improve the flavor and color of your water, pull out metals and other contaminants, even remove bacteria. But look before you leap. Filters come in all shapes and sizes, and some are more effective—and pricier—than others. Check out these options and recommendations from the experts.

Pour-through carafes

Talk about easy: Pour water into a pitcher, and let gravity do its thing. A carbon filter snags chlorine, lead, and other contaminants that give water a bad smell and taste. Carafes make the process simple, but they're not a great option for capturing bacteria. DOWNSIDE If you drink a lot of water, the cost of filter changes really adds up. And continually filling the pitcher can be a drag. EXPERT PICKS Brita and Pur PRICE \$15 to \$35; \$7.50 for an extra filter

Faucet mounts

Imagine a filtration system hooked right up to your sink. These filters come in three flavors: a below-the-sink system, a countertop model, and one that screws into the faucet. They're a step up in convenience from a carafe, but still poor bacteria and virus removers. DOWNSIDE You may need a little installation help. Also, if you don't change the filter on schedule, you'll end up drinking the enemy. EXPERT PICKS Amway, Pur, and Brita PRICE \$25 and up, not including installation

Reverse Osmosis

Turn your sink into a long and winding road to purity. Water travels through a series of membranes and a special faucet to pull out most contaminants. Unlike carbon filters, some units (stored either under the sink or in the basement) effectively remove viruses. DOWNSIDE A big water-waster. And unless you're a whiz with tools, be prepared to have a plumber take care of installation. EXPERT PICKS Aqua Systems, Atlantic Filter, and Culligan PRICE \$250 and up

Distillation

How about filling a glass with clean steam? This system boils water and collects the condensed vapor for drinking, leaving H₂O cleansed of *everything*—including tasty minerals and tooth-friendly fluoride. DOWNSIDE Excessive boiling can cause regular messes. Plus it takes some getting used to the lack of flavor.

EXPERT PICK Innowave PRICE \$2,000 and up - N.W.

and soda only add needless calories to your diet. In fact, Rolls says studies have proven that sugar-laden soft drinks will not decrease your daily food intake a bit.

Fight Off Fatigue

There's a long list of ailments—from sleep apnea to depression to a thyroid disorder—that can leave you exhausted. And hitting the water cooler won't help a lick for some of them.

But there seems to be an exception to that rule, a condition called mitral valve prolapse syndrome (MVPS). It's a heart abnormality caused by a snag in the nervous system. An estimated 2 to 10 percent of the population has it. The ailment arises when the mitral valve, which separates two chambers in the heart, doesn't close snugly. It can cause heart murmurs and, in some cases, a number of other symptoms, including constant fatigue.

But researchers think this tiring syndrome has some intriguing links to water consumption. Phillip Watkins, director of the Mitral Valve Prolapse Center in Birmingham, Alabama, says the symptoms are actually a sign of low blood volume. He asserts that women with MVPs generally have only 70 to 80 percent of the fluids they're supposed to sloshing through their arteries and veins, and that dehydration can cause or worsen the problem. A study out of the University of Arizona suggests he's right. Researchers there were able to induce symptoms of MVPs in healthy females simply by inducing mild dehydration.

Fortunately, Watkins says, many women find relief by drinking more water, upping sodium intake, and cutting out caffeine. (If these steps don't work, there are medicinal remedies.) But even these simple efforts can take a lot of vigilance. "People with MVPS don't get thirsty," says Watkins. "We almost have to beat them over the head to get them to drink fluids."

Heal Your Headaches

Have you ever spent a long morning rubbing your temples and otherwise cursing a nasty hangover? Then you're sobering proof that a little water shortage can cause a lot of discomfort. After all, morning-after misery is little more than alcohol-induced dehydration. And dehydration is a word you don't like to see in the same sentence as brain, an organ that's mostly water. Studies show that headaches are one of the most frequently reported symptoms of both mild and more severe dehydration.

Jerome Goldstein, director of the San Francisco Headache Clinic, has seen the evidence. He firmly believes that dehydration can send you running to the medicine cabinet—both because it upsets the balance of sodium and potassium in your noggin and because it may urge the brain to get stingy with its water supply, increasing pressure on the organ. The theories sound fancy, but the solution, says Goldstein, may be simple: Drink more water.

Other beverages are no substitute. Goldstein thinks some kinds of drinks can actually turn up the volume on pain. "Headache sufferers tend to drink beverages with lots of caffeine and artificial sweeteners," says Goldstein. "And unlike water, these seem to cause discomfort."

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one down, seven

DRINKING WATER may not be rocket science, but eight eight-ounce glasses is a challenge. Here are some tips from Susan Kleiner and other experts on how to get your fill.

HOW MUCH IS ENOUGH? The average woman needs about 2.3 quarts of water a day. Solid foods contribute a quart at best, so you have to drink the rest. But if you work out, you need to guzzle more. You should also pour it on when the mercury rises—an extra ounce of water for every degree over 64.

START THE DAY RIGHT Drink 16 ounces of water first thing, even before you pour a cup of coffee. Take your vitamins with a glass of water. Chase your toothbrushing with another. WORK OUT WITH WATER In order to avoid overheating or a sky-high heart rate, drink extra fluids during the 24 hours preceding exercise, and then down about 16 ounces of water a couple of hours before you start. TOSS THE SODA Beverages with caffeine and alcohol are diuretics—a term that means they draw extra fluids out of your body to produce more urine. A German study revealed that adults who drank six cups of coffee a day lost 2.7 percent of their total body water, enough to cause chronic mild dehydration.

STAY CLOSE TO WATER Keep a filled-up water bottle within reach all day.

DRINK WHILE YOU DRINK Throw back a glass of water for every cocktail, beer, or caffeinated beverage you consume.

BLOATED TRUTH Water retention is a part of hormonal fluctuations and a common symptom of PMs. But drinking water won't make it worse. In fact, the opposite is true, says Kleiner, "If the body perceives it isn't aettina enough fluid, it will hold onto the fluid it has." THIRSTY LIES You've got to drink before the word "parched" comes to mind. That's indicator of water needs, says Kleiner. In the German study above, most of the dehydrated java junkles never felt thirsty. —M.T.

