



TrainSmarter

Coffee May Tame the Redness of Rosacea

Researchers studied the effect of coffee drinking on the risk for rosacea, a chronic skin disease that causes facial redness in about 5% of the population. The scientists used data on 82,737 women participating in a large health study between 1991 and 2005. The study collected information on coffee consumption every four years and documented 4,945 cases of clinician-diagnosed rosacea over the period. The analysis found that **compared with women in the lowest one-fifth for caffeinated coffee consumption, those in the highest one-fifth were 24 percent less likely to have rosacea. Women who drank four or more cups a day had a 23% lower risk of the skin disorder than those who drank less than a cup a month. Decaffeinated coffee was not associated with a decreased risk for rosacea.** The senior author said that **the study focused on the risk of developing rosacea, but that people with the disorder might also benefit from drinking coffee.** “We would positively anticipate that caffeine intake and caffeinated coffee consumption may be beneficial for lessening rosacea severity as well,” he said, “but this would require further clinical investigation.

New McDonald’s Burger Has More Than 1,000 Calories

“A hearty double burger made with unexpected flavor combinations, including crispy Applewood smoked bacon, smoky bacon-onion sauce, two slices of real white cheddar, mild sweet mustard sauce and in-house fried onion strings.” And elevate, it does. **Each Double Bacon Smokehouse has 1,130 calories plus 27 grams of saturated fat, 64 grams of carbs (thanks largely to its white-flour “artisan” roll), and 1,920 milligrams of sodium. It’s like eating two McDonald’s Quarter Pounders with Cheese.** And that’s without fries or a drink. And if the Smokehouse also elevates your weight, cholesterol, blood pressure, and blood sugar, good luck with that. “The move to fresh beef quarter-pound burgers is the latest step in McDonald’s food journey to build a better McDonald’s,” says the company. What about building healthier McDonald’s customers? Guess that’s not part of the journey.

Another reason to replace refined grains with whole grains

In a recent study, **a diet high in refined grains led to higher LDL cholesterol levels than a whole-grain diet. People who eat more refined grains have a higher risk of heart disease in some studies. Could white bread, rice, and pasta raise LDL (“bad”) cholesterol?** Researchers fed 11 older adults diets that were high in refined grains, whole grains, or added sugars for 4½ weeks each. **LDL cholesterol levels were 10% higher after the volunteers ate the refined-grain diet than after they ate the whole-grain diet. LDL was slightly, but not significantly, higher after they ate the diet rich in added sugars than after they ate the whole-grain diet. It’s one more reason to replace refined grains with whole grains. And cut back on added sugars. Other studies suggest that they raise the risk of heart disease, type 2 diabetes, and weight gain.**

What can alkaline water do?

If you’ve meandered down the bottled water aisle during the last few years, you’ve likely noticed the surge in alkaline water. Even Smartwater has hopped on the bandwagon. What can you expect from sipping on this pH-enhanced beverage? What it is: Water with a pH above 7. (On the 0 to 14 pH scale, 7 is neutral.) Claim: “Alkaline water can help neutralize acid in the bloodstream,” says PhURE. Evidence: **No studies have tested whether alkaline water can change the pH of the blood but it’s unlikely. “Our bodies are really good at regulating and maintaining our blood’s pH within a very narrow range,”** says Samuel Cheuvront, a physiologist at the U.S. Army Research Institute of Environmental Medicine. **Drinking alkaline water is unlikely to move the needle, even temporarily. “The average person has roughly 30-50 liters of water in their body,”** explains Colleen Muñoz, assistant professor of health sciences at the University of Hartford. **“Drinking a liter of alkaline water is basically a drop in the bucket.” Nor is alkaline water better for hydration or good for treating acid reflux. Your body is perfectly capable of regulating your blood’s pH without alkaline water.**

Why You Should Add Loaded-Carry Exercises to Your Strength Routine

In the world of lifting heavy things, you can't do much better than a carry.

Carries—which simply involve lifting a weight and walking around with it—are among the best exercises for training virtually every muscle at once, Sarah Walls, C.S.C.S., owner of SAPT Strength & Performance Training in Virginia, tells SELF. “With carries, you’re working on everything from top to bottom,” she says. “Carries train the lower and upper back, legs, and shoulders, while also hitting the deep stabilizing muscles of the core. And, depending on the variation you’re using, you also work your biceps or triceps.” Basically, you can think of a carry like a deadlift with a row, shoulder press, and plank mixed in.

One thing that really sets carries apart from other “bang for your buck” compound exercises is their ability to improve your performance in every other exercise in the gym.

Because carries challenge a wide range of muscles and, specifically, require a ton of core engagement, they help improve the body’s ability to generate and maintain head-to-toe tension—a prerequisite for performance in everything from running and climbing to maintaining healthy posture sitting at a desk, kinesiologist and exercise physiologist Gavin McHale, C.E.P., tells SELF.

Carries are also great for improving a major weak spot for most people: grip strength.

It's something you may never even think twice about until you start lifting heavy (or try to open a jar of pickles), and grip strength is admittedly not very sexy. But research shows grip strength is a good predictor of overall strength, which in turn serves as a good predictor for overall health, with one recent study even finding an association between grip strength and lower mortality. One thing that's for sure, though: When you have a strong grip, you're able to do more in the gym. Walls explains that grip strength is critical to performing pull-ups, deadlifts, and any exercise that requires that you not let go of the weight. Think about it: How many times have your hands given out before the muscle you're actually trying to fatigue?

Many carry variations strengthen the grip, because they require you to hold the weight stable in the same position for an extended period of time. When your grip is stronger, you can perform more pull-ups and heavier deadlifts, and hold onto weights long enough in other lifts for your body’s powerhouse muscles, like your glutes and traps, to actually fatigue, she says. That means better overall workout results.

The best way to mix carries into your workout routine depends on exactly what you want to get out of them, McHale says.

“I will often program lighter load carries earlier in a training session to activate the core and shoulder musculature,” she says. “However, if we're going with heavier variations, I'll program those at the end so as not to take away from the main lift's need for grip strength or core stability.”

Walls agrees, explaining that she loves programming carries into her clients’ (and her own!) workouts as finishers. Because they aren’t very technical, and their risk of injury is so low, they can be fun, challenging ways to use up the last bit of your strength at the end of a workout, she says.

It doesn't have to be complicated: Pick up a weight that feels significantly heavy but that you're able to lift and hold with good posture, and walk with it as far as you can. “Set it down when you have to, and then once you can, keep going,” Walls says. “See how far you can make it, and how much farther you can get from week to week. When things get easy, pick up a heavier weight.”

Options include Farmer’s Carry, Suitcase Carry, Kettlebell Racked Carry, Bottom-Up Kettlebell Waiter Carry, Waiter Carry, Overhead Carry, Overhead Bottom Up Carry, Overhead Carry, Double Overhead Carry and Kettlebell Cross-Body Carry. *Self*

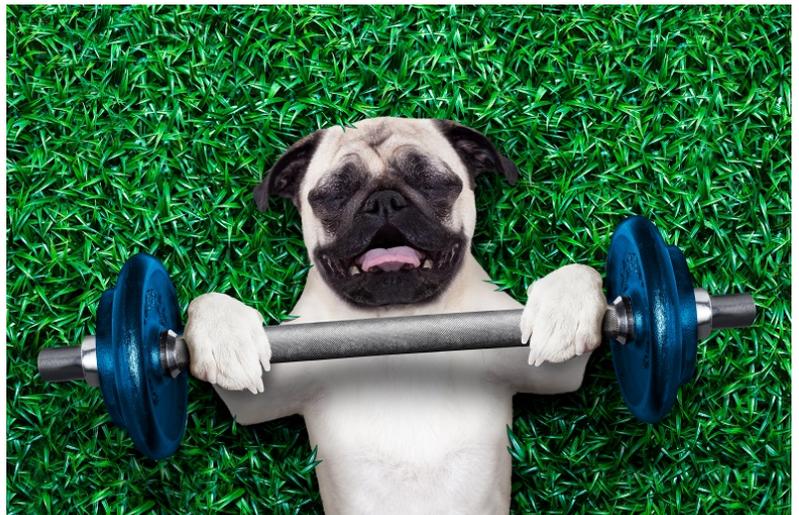


Why Weight Training Is Ridiculously Good For You

For many, weight training calls to mind bodybuilders pumping iron in pursuit of beefy biceps and bulging pecs. But experts say it's well past time to discard those antiquated notions of what resistance training can do for your physique and health. **Modern exercise science shows that working with weights—whether that weight is a dumbbell or your own body—may be the best exercise for lifelong physical function and fitness.** “To me, resistance training is the most important form of training for overall health and wellness,” says Brad Schoenfeld, an assistant professor of exercise science at New York City’s Lehman College. During the past decade, Schoenfeld has published more than 30 academic papers on every aspect of resistance training—from the biomechanics of the push-up to the body’s nutrient needs following a hard lift. Many people think of weight training as exercise that augments muscle size and strength, which is certainly true. But Schoenfeld says **the “load” that this form of training puts on bones and their supporting muscles, tendons and ligaments is probably a bigger deal when it comes to health and physical function.** “We talk about bone resorption, which is a decrease in bone tissue over time,” When you’re young, bone resorption is balanced and in some cases exceeded by new bone tissue generation. But later in life, bone tissue losses accelerate and outpace the creation of new bone. That acceleration is especially pronounced among people who are sedentary and women who have reached or passed menopause. This loss of bone tissue leads to the weakness and postural problems that plague many older adults. **“Resistance training counteracts all those bone losses and postural deficits.”** Through a process known as bone remodeling, strength training stimulates the development of bone osteoblasts: cells that build bones back up. While you can achieve some of these bone benefits through aerobic exercise, especially in your lower body, resistance training is really the best way to maintain and enhance total-body bone strength.

More research links resistance training with improved insulin sensitivity among people with diabetes and prediabetes. One study published in the journal *Diabetes Care* found that **twice-weekly training sessions helped control insulin swings (and body weight) among older men with type-2 diabetes.** “Muscle is very metabolically active, and it uses glucose, or blood sugar, for energy,” says Mark Peterson, an assistant professor of physical medicine at the University of Michigan. During a bout of resistance training, your muscles are rapidly using glucose, and this energy consumption continues even after you’ve finished exercising. **For anyone at risk for metabolic conditions—type-2 diabetes, but also high blood pressure, unhealthy cholesterol levels and other symptoms of metabolic syndrome—strength training is among the most-effective remedies.** Strength training also seems to be a potent antidote to inflammation, a major risk factor for heart disease and other conditions. A 2010 study from the University of Connecticut linked **regular resistance training with inflammation-quelling shifts in the body’s levels of cytokines, a type of immune system protein.** Another study from Mayo Clinic found that when overweight women did twice-weekly resistance training sessions, they had significant drops in several markers of inflammation. More research has linked strength training to improved focus and cognitive function, better balance, less anxiety and greater well-being.

Schoenfeld says lifting “almost to failure”—or until your muscles are near the point of giving out—is the real key, regardless of how much weight you’re using. “This is a huge boon to adherence, because many older adults or those with injuries or joint issues may not be able to lift heavy loads.” If all that isn’t convincing enough to turn you onto weights, perhaps this is: **maintaining strength later in life “seems to be one of the best predictors of survival,”** says Peterson. “When we add strength...almost every health outcome improves. It used to be we thought of strength training as something for athletes,” he adds, “but now we recognize it as a seminal part of general health and well-being at all ages.” *Time*



No Such Thing as Too Much Exercise, Study Finds

Too much of a good thing can be definitely bad for us. But a new study published in JAMA Network Open suggests that exercise is a clear exception. It found that **any level of cardiovascular fitness—including the kind you'd see from elite athletes—is linked to staying alive longer.** In recent years, there's actually been evidence that elite athletes and other heavy exercisers might paradoxically be at greater risk of some heart conditions than the average person, such as an irregular heartbeat, clogged arteries, and thickened heart valves. And these conditions might then raise an athlete's risk of sudden cardiac death or other heart problems. Some researchers have theorized that the negative effects of exercise follow a U-curve, where too little and too much can damage the heart and shorten our lives. Much of this earlier research has relied on self-reported data or only looked at short-term health outcomes. So for their research, they decided to analyze long-term data from their own medical center, the Cleveland Clinic. They looked at more than 120,000 patients (average age 53) who had taken an exercise treadmill test at the clinic sometime between 1994 to 2014. The test results gave the researchers an objective measure of someone's overall fitness. Then, using social security and medical records, they tracked if and when the patients died. By the end of 2017, about 13,500 people had died. And **across the board, the more fit a person was, the less likely they were to be sent to an early grave. And while the life-saving effects of exercise did start to taper off, with elite athletes only being slightly more death-proof than merely highly active people, there was "no observed upper limit of benefit."** "These findings emphasize the importance of aerobic fitness in overall health." Elite athletes did certainly seem to live longer than everyone else, on average. When compared to people with the lowest fitness, elite fitness was associated with an 80% reduction in mortality risk. And the effects of elite exercise were especially profound in older people and those with high blood pressure. But that isn't to say that exercise is only for people who are hoping to run a marathon. Other research has found that any amount of regular exercise will help you out in the long run, not just in prolonging your life but improving the quality of those last days. Even people with below average levels of fitness were much less likely to die than those with the worst fitness. Overall, the authors estimated that **poor fitness raised the risk of dying by the same degree or greater as other major risk factors, like cardiovascular disease or smoking.** So the more exercise you can get, the better. But don't get down on yourself for just doing as much power walking or stair climbing as you're capable of. *Gizmodo*

Health and Wellness Are Booming, But We're Fatter Than Ever

Between Soul Cycle, Fitbit, Whole30 diets and social media health gurus, **the health and wellness industry is booming — but Americans are more likely to be obese today than ever before.** The problem: **Despite promises made by gyms and fitness programs, physical activity does little to help people lose weight,** says Ashkan Afshin from the Institute for Health Metrics and Evaluation at the University of Washington. **And Americans' diets are still terrible.** The prevalence of diseases most attributed to obesity — high blood pressure, diabetes and high cholesterol — has held steady or even fallen over the past few years, according to data from the Centers for Disease Control and Prevention. But that's mostly due to increased treatment for those conditions, health experts say. Meanwhile, **obesity has created a thriving industry in the U.S., even though many programs have little medical or scientific backing.** The U.S. fitness industry is the most lucrative in the world, bringing in \$30 billion worth of revenue in 2017. Since 2008, the number of gym members has increased by more than 33% in the U.S.. The commercial weight loss program market was worth \$2.77 billion in 2016 and was expected to grow 9.4% to \$3.03 billion in 2017, according to Marketdata. Fitbit's consumers have grown from 500,000 to more than 25 million in just 5 years, according to data collected by Statista. Fitness apps and wearables overall are projected to be used by 16.4% of people in the market by 2023, up from 15.7% in 2016. **But food is the key problem when it comes to obesity.** "Data shows there is increased availability, affordability and accessibility of high energy-dense foods," Afshin said. And many Americans are eating more than their bodies need. More than a third of Americans eat fast food every day — an industry notorious for high caloric, low nutrition meals — and only 1 in 10 eat the recommended amount of fruits and vegetables. **Eat better, not less: Stanford argues that eating less isn't always the solution either. Some dietitians argue that the quality of the food matters more than the number of calories.** Three other key contributors to obesity that often get overlooked: **Stress has been shown to induce weight gain even without any changes to diet or exercise, as the human body turns to survival mode and begins storing up energy. Lack of sleep, especially high-quality sleep, also causes weight gain. Medications often cause weight gain as well, and patients are not always aware of the side effect.** The bottom line: **"Our bodies are now supportive of an environment that really supports obesity,"** Stanford said. Meanwhile, the medical community and insurance regulations are slow to help obese patients until they've been diagnosed with other serious health issues associated with the disease. *Axios*



The Food Supplement That Ruined My Liver'

It should have been one of the happiest days of his life. But Jim McCants looks back on his youngest son's high school graduation with mixed emotions. As he sat down next to his wife Cathleen in the university auditorium, just outside Dallas, Texas, she turned to look at him. "She said 'Do you feel OK?'" Jim recalls. "I said, 'Yeah I feel fine, why?' 'Your face is yellow, your eyes are yellow, you look terrible.' When I looked in the mirror it was shocking." It was shocking partly because Jim, then 50, had been working on improving his lifestyle and losing weight, focusing on eating more healthily and taking regular exercise. "My dad had a heart attack at aged 59 and he did not make it. There's a lot that he missed out on with us and I was determined to do what I can to take care of myself as best I can, so that I don't miss out." But soon after his son's graduation, Jim was admitted to hospital with a suspected liver injury. Trying to identify the cause of Jim's liver injury, those treating him ruled out alcohol. "For the last 30 years I drank maybe a six-pack of beer a year, no wine. So alcohol was not a big part of my life," Jim says. They also ruled out prescription drugs - he wasn't taking any at the time - and smoking, something he had never done. "Then my hepatologist drilled in to, 'What about any over-the-counter supplements?'" As part of his mid-life health kick, **Jim had started taking a green tea supplement because he had heard it might have cardiac benefits. These supplements have grown in popularity in recent years, often breathlessly promoted online for their antioxidant benefits, and their supposed ability to aid weight loss and prevent cancer.** "I felt fine then. I was walking or running 30-to-60 minutes, five or six days a week." He was working as a finance manager but hoped to retrain as a physician assistant. "I was taking two or three classes at a time at nights and at weekends." He had been taking the green tea supplement for two to three months when he became ill. According to Jim's medical record this is the presumed cause of his liver injury. "It was shocking because I'd only heard about the benefits, I'd not heard about any problems." After his admission to hospital, Jim went into a "holding pattern", waiting for the results of a series of blood tests to establish the seriousness of his liver injury. Then, about three weeks after his wife had first noticed he looked ill, one of his liver doctors delivered the news he had been fearing: **"She said you need a liver transplant. This has to happen fast. You have days - you don't have a week."** Jim was stunned. "I was thinking this looks very bleak for me. It really crystallises what's important in life. I wasn't there thinking about projects at work. I was thinking of different people that were important to me,

What is it about green tea supplements that might cause harm at certain doses to some people? Scientists do not know for certain. **Because green tea has been drunk for thousands of years, supplements consisting of its concentrated form are regulated in the US and Europe as foods, not medicines. That means that specific safety testing has not been required, so the scientific picture of how green tea supplements might affect our health is incomplete. "If you are drinking modest amounts of green tea you're very safe,"** says Prof Herbert Bonkovsky, director of liver services at Wake Forest University School of Medicine, who has been tracking injuries linked to green tea supplements for nearly 20 years. **"The greater risk comes in people who are taking these more concentrated extracts."** Concern has focused on a potentially toxic ingredient called Epigallocatechin-3-gallate or EGCG, the most abundant of the naturally occurring compounds with antioxidant properties in green tea, called catechins. There are likely to be a number of factors that might make an individual susceptible to harm from EGCG including genetics, and the way supplements are used. **"Usually people are taking these green tea extracts trying to lose weight, so they're often not eating. We know from animal studies that fasted animals absorb a much higher percentage of the catechins than do fat animals. There may well be other factors of other drugs, other chemicals, use of alcohol that are also important as modifying factors."**

Antioxidants are a group of vitamins and other compounds that for many have taken on miraculous properties, helping to drive the global market for supplements of all kinds, now worth more than £100bn per year. Antioxidants ward off "free radicals", molecules produced in our cells as they turn oxygen and food into energy. Just as oxygen and water corrode iron, too many free radicals can damage our cells. In the 1950s, Prof Denham Harman theorised that free radicals drove the process by which the body ages and could lead to disease. But some scientists now believe that free radicals at certain levels may be beneficial for human health, and argue that the orthodox view of the last half century that antioxidants are an unalloyed good is outdated. While millions of people take green tea supplements safely, at least 80 cases of liver injury linked to green tea supplements have been reported around the world, ranging from lassitude and jaundice to cases requiring liver transplants. A recent investigation by the European Food Safety Authority into the safety of green tea concluded that catechins from green tea drinks are "generally safe", but when taken as supplement catechin doses at or above 800mg per day "may pose health concerns".



'The Food Supplement That Ruined My Liver' (cont'd)

The day after Jim was told he needed a liver transplant, amazingly he was told a suitable liver had been found. "I was elated. The phone call that there was a match gave me hope that there would be something positive on the other side of this for me." **The liver transplant saved Jim's life. But four years later he still has serious health problems including kidney disease that may require dialysis and a transplant in the future. He sees his liver and kidney doctors twice a year, and lives with chronic abdominal pain. "My life before was pretty active. And now it's much more sedentary and I struggle with fatigue.** It's a "tremendous blessing", as he puts it, that his managers allow him to work from home. Jim is pursuing a lawsuit against the American firm Vitacost, which sold the green tea supplement he took. Four years on, Jim reflects on how his life and that of his family changed after he took a green tea supplement. "I expected that I might waste my money, I may take these and they don't do a bit of good. But the risk that it could cause my liver to fail, that's a risk that's too high for somebody to take." *BBC*

Huge Global Studies Find Low-Carb or Keto Diets Could Lead to Shorter Lifespan

Research published by The Lancet studied the eating patterns of more than 15,400 adults in the U.S. and another 432,000 people around the world. Researchers found that **restricted carbohydrate levels replaced or supplemented by animal-based protein and fat sources could lead to a higher risk of premature death.** "Mortality increased when carbohydrates were exchanged for animal-derived fat or protein and decreased when the substitutions were plant-based ... Low carbohydrate dietary patterns favoring animal-derived protein and fat sources, from sources such as lamb, beef, pork, and chicken, were associated with higher mortality, whereas those that favored plant-derived protein and fat intake, from sources such as vegetables, nuts, peanut butter, and whole-grain breads, were associated with lower mortality, suggesting that the source of food notably modifies the association between carbohydrate intake and mortality." Dr Sara Seidelmann, study author, cardiologist, and Clinical and Research Fellow in Cardiovascular Medicine from Brigham and Women's Hospital, said: "We need to look really carefully at what are the healthy compounds in diets that provide protection. **Low-carb diets that replace carbohydrates with protein or fat are gaining widespread popularity as a health and weight loss strategy. However, animal-based low carbohydrate diets might be associated with shorter overall life span and should be discouraged.** Another new study at the European Society of Cardiology backs up this research: "Low carbohydrate diets are unsafe and should be avoided." Study author, Professor Maciej Banach, stated: "We found that **people who consumed a low carbohydrate diet were at greater risk of premature death. Risks were also increased for individual causes of death including coronary heart disease, stroke, and cancer. These diets should be avoided.**" This study examined the relationship between low-carbohydrate diets, all-cause death, deaths from coronary heart disease, and cancer in 24,825 people. Compared to those in the highest carbohydrate group, **those who ate the lowest carbohydrates had a 32% higher risk of all-cause death over 6 years. Risks of death from heart disease and cancer were increased by 51% and 35%, respectively. Professor Banach said: "Low carbohydrate diets might be useful in the short term to lose weight, lower blood pressure, and improve blood glucose control, but our study suggests that in the long-term they are linked with an increased risk of death from any cause, and deaths due to cardiovascular disease, cerebrovascular disease, and cancer. The reduced intake of fiber and fruits and increased intake of animal protein, cholesterol, and saturated fat with these diets may play a role."** Walter Willett of the Harvard T. H. Chan School of Public Health and co-author of the study published in The Lancet, said "These findings bring together several strands that have been controversial. **Too much and too little carbohydrate can be harmful but what counts most is the type of fat, protein, and carbohydrate.**" Strict low-carb diets often restrict carbs to less than 50 grams a day. The ketogenic, Paleo, Atkins, and Whole 30 diets sometimes fall into this category, depending on how strictly they are followed. **Low-carb diets like the ketogenic diet advertise rapid weight loss. Experts say you can lose weight on low-carb diets like the keto diet, but that it's an unhealthy long-term solution. Keto dieters drastically reduce their sugar intake — which most nutritionists agree is healthy — but they eliminate healthy carbs too. Research shows that those that live the longest and healthiest lives eat more plant-based foods, including fiber-rich carbohydrate foods. We know from our research in Blue Zones longevity hotspots that the longest-lived people in the world eat a whole food, plant-slant diet that is highlighted with whole grains, beans, nuts, and leafy greens. Their diet is 90-95% plant-based and oftentimes about 50-65% of their daily caloric intake comes from carbohydrates. These are not highly processed carbohydrates like white bread or sugary drinks, but whole foods like sweet potatoes, beans, whole grains, and fruits and vegetables.** *bluezones.com*



Stress Can Give You an Autoimmune Disease

We know the debilitating effects that stress can have on the mind and body in terms of anxiety and fatigue and even heart attack. But now we've learned that **stress can also cause a very specific, serious and lifelong health condition—an autoimmune disease. The connection is understandable when you think about it. Stress throws your body out of balance and sends your immune system into high gear—too high.** To learn just how deeply stress can affect the immune system, researchers in Sweden and Iceland followed more than 100,000 patients diagnosed with a stress-related disorder, such as PTSD or acute stress reaction (which results from witnessing a traumatic event), for an average of 10 years to see how many developed autoimmune diseases, compared with other people who didn't have stress disorders.

What they found was alarming. **People with stress disorders had, on average, a 36% higher risk of developing an autoimmune disease—a huge added risk. For people with PTSD, the risk was 46%, and they were more likely to develop multiple autoimmune diseases than people with other stress disorders.**

The autoimmune diseases people developed included rheumatoid arthritis, psoriasis, diabetes, lupus, ulcerative colitis and multiple sclerosis and more than 30 others, all diseases that can be caused by an immune system on constant high alert.

Angelos Halaris, MD, PhD, a psychiatrist and professor at the Loyola University Chicago Stritch School of Medicine, whose groundbreaking work in the new field of psychoneuroimmunology explores the association between autoimmune diseases and stress-related disorders. describes stress as the psychological equivalent to an invasion of the body by bacteria, a virus or parasite. He explains that **stress activates substances in the body called cytokines—think of them as the firefighters for the immune system. Under extreme stress, cytokines invade the blood, spinal fluid and brain tissues, and while trying to restore balance, they can create collateral damage...such as an autoimmune disease. And once that happens, you can never be rid of the disease, because it permanently affects your body—you can manage it but never actually cure it.**

RECOGNIZING AND REDUCING YOUR STRESS LEVEL

Chronic stress is, simply put, toxic, said Dr. Halaris. And like many toxins, it causes both physical and psychological warning signs. Important: Even if you haven't been diagnosed with a stress-related disorder, to reduce your risk for an autoimmune disease, Halaris says to look out for signs that your body and mind are suffering from high stress, then take action to reduce it. These are all indicators that your stress level is too high...

- Physical signs such as a pounding heart, headache, sweating or flushing
- Changes in sleep, especially insomnia and waking too early in the morning
- Overeating and food cravings
- Mood swings
- Irritability
- Sudden outbursts of anger
- Dependence on caffeine, alcohol or drugs

Dr. Halaris said the following stress-reduction tips have been the most helpful for his patients...

To improve sleep, avoid stimulating your brain in the evening. Don't eat late at night or work late into the night. Allow yourself at least 30 minutes of down time every day, and whenever possible, use it to take a walk, a great stress reducer. Practice more formal stress-reduction techniques and get the wellness benefits of social interaction by joining a stress-reduction group or taking a yoga class.

Don't use food, alcohol, drugs or smoking to reduce stress—that's just substituting one negative lifestyle habit for another.

What about medication to help deal with stress? The stress and autoimmune disease study found that **antidepressants greatly reduced the risk for autoimmune disease in people with PTSD, though not in people with other stress disorders.** Dr. Halaris said that the antidepressant Zoloft can be very effective for PTSD, but before taking any drug, be sure to be evaluated by a mental health professional—not only by your primary care doctor—to help determine the best course of action for you.

Source: Angelos Halaris, MD, PhD, professor of psychiatry and behavioral neurosciences and medical director of adult psychiatry and researcher in psychoneuroimmunology at Loyola University Chicago Stritch School of Medicine. The study "Association of Stress-Related Disorders With Subsequent Autoimmune Disease" by researchers in Sweden and Iceland and published in JAMA. Date: October 10, 2018 Publication: Bottom Line Health



Should You Worry About Herbicides in Your Food?

Yvette d'Entremont holds a B.S. in chemistry, B.A. in theatre, and a master's degree in forensic science with a concentration in biological criminalistics. She worked for eight years as an analytical chemist before her blog focused on debunking bad science, scibabe.com, turned into a full-time job in science communications. I have followed her for a while and trust her perspective.

If you've read the news lately, you've probably wondered if you should worry about herbicides in your food. We all want to know that what we're eating is safe. And by now we can be pretty confident that when we go to the store or sit down at a restaurant that whatever we put in our mouths won't be bad for our health or kill us (save the rare outbreak of norovirus in your burrito bowl that merely makes one pray for death). So it's understandably shocking to hear that those of us who think breakfast is the most important meal of the day may be slowly poisoning our bodies with a weedkiller present at high levels in our cereal.

Wait, what? Let's back up a bit.

Chances are you've heard of Roundup, the herbicide popular with both farmers and homeowners and owned by Monsanto, the now dissolved (and acquired by Bayer) agricultural company. The active ingredient in this weedkiller is an herbicide known as glyphosate. Recently the Environmental Working Group (EWG), an advocacy group that has been accused of having a bias against conventional farming, released a report warning consumers about the "hefty dose" of glyphosate in popular breakfast foods like cereal, oatmeal, and granola bars. **The findings seem, at face value, very worrisome: of the 61 products tested, 31 had levels of glyphosate above the EWG's acceptable threshold. All of the seemingly high-glyphosate-containing products were conventional, not organic. But what the EWG's report didn't mention is that the levels were calculated to be 100 times lower than even the lowest proposed state governmental standard (California wants to place limits on glyphosate that are lower than even the current EPA standard).** Although the FDA is currently doing additional testing on herbicide residues in foods before it officially releases its findings, the agency's current established tolerance for glyphosate in foods is between 0.1 and 310 parts per million (ppm). According to the EWG, **the highest amounts of glyphosate found were .53ppm in Cheerios and 1.3ppm in Quaker Old Fashioned Oats. Both amounts are well within the acceptable range of what the EPA considers the acceptable limit. The report also didn't clarify that levels of Roundup found in cereal were about as trace as any other herbicide (organic or conventional) you'd find in your food.** This is important because, **as any scientist will tell you, dose matters. There's no reason to believe that ingesting glyphosate at well under established EPA levels is unsafe. By all measures, glyphosate, the active ingredient in the herbicide Roundup, according to the EPA, has low toxicity for humans. Poisons are both species- and dose-specific. A well known example of species specificity is theobromine in chocolate, which is toxic to dogs but not at all for humans (thank god). Antibiotics in the appropriate dosage kill bacteria, but not you. Just because herbicides kill plants very well, we can't assume that means they kill humans just as well, or at all. Roundup is pretty bad for weeds because it's targeted to inhibit a specific enzyme that's necessary to synthesize protein, and this pathway just doesn't exist in humans.**

But we're talking about long term, chronic toxicity, not an acute poisoning. I get that the question isn't if eating one bowl of cereal will kill you. Though most people don't contest the relatively low toxicity of an acute exposure to Roundup, the concern about Roundup's effects is more regarding long-term carcinogenicity—that is, if eating a bowl of your favorite Roundup-tinged cereal every day will eventually give you cancer. You feel fine now, but the question lurks if it causes you to be sick years from now. Let's look at the evidence here. Glyphosate fear was recently in the news again when a jury ordered Monsanto pay \$289 million to a groundskeeper who had developed cancer. The plaintiff, Dewayne Johnson, was a California groundskeeper who regularly used Roundup. He has a kind of cancer called non-Hodgkin's lymphoma, and according to reporting by the Guardian, has months to live. The jury found that Johnson's use of Roundup, which his attorneys estimated happened at a rate of 20-30 times per year, led to his terminal cancer. The American Cancer Society, however, has stated that the causes of most cases of non-Hodgkin lymphoma are unknown. Unlike diseases where you can test for presence of toxins or microbes that cause the illness, you can't remove a tumor or examine someone's blood and find a smoking gun. In this case, Johnson had to prove that he wouldn't have gotten cancer without his exposure to Roundup. Johnson's attorney, Timothy Litzenburg, maintained that glyphosate on its own is not carcinogenic per se, but that it became so when mixed with the other ingredients in Roundup. Monsanto has said that it will appeal the case, saying that **at this point, with over 800 studies on it, no study has shown the components in Roundup to cause cancer.**



Should You Worry About Herbicides in Your Food? (cont'd)

If no studies have found a causal link between glyphosate and cancer, where is the idea that glyphosate is unsafe coming from? You may have heard news reports that the International Agency for Research on Cancer (IARC) classified Roundup as a probable carcinogen. The IARC is part of the World Health Organization (WHO), so its findings seem pretty legit. But let's unpack this a bit. When the IARC report came out defining glyphosate as a probable carcinogen, it didn't just raise the ire of giant agricultural firms. A large swath of scientists, journalists, and both American and European environmental organizations voiced their disagreement with the IARC. WHO, of which the IARC is a subsidiary, disagreed with their analysis, finding in their own joint analysis done with the United Nations Food and Agriculture Organization, that glyphosate was "unlikely to pose a carcinogenic risk to humans from exposure through the diet." Though the IARC's report was on overall exposure and not just through diet, one of the largest epidemiological studies on Roundup toxicity somewhat rectifies this by studying about 52,000 people who apply glyphosate regularly, including farmers, found that "no association was apparent between glyphosate and any solid tumors or lymphoid malignancies overall, including NHL and its subtypes." Additionally at this point, there haven't been major credible studies showing a causal link between Roundup and cancer.

So...is it OK for me to stop worrying about Roundup in my food?

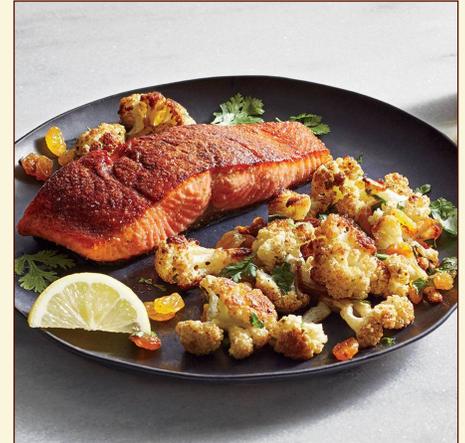
Roundup was not the first herbicide to grace our amber waves of grain, and it seems to be less toxic to humans than its predecessors. As the popular science blogger Credible Hulk explains using data from the U.S. Geological Survey, as Roundup's popularity has increased, use of older, more toxic agricultural chemicals has decreased. Furthermore, only about a half a pound of glyphosate is sprayed on an average acre of crop. Whether or not you think that any amount of glyphosate in food sounds unsafe, I'd take a look at the evidence that informs every major environmental and health organization in the world. When used correctly, the trace amount detectable in food is, by all measures, harmless. Should you drink it? No, but you also shouldn't drink other things that you're exposed to regularly (personally, I will pass on drinking my body wash, but I don't know your life). *Self*

Why You Stress Eat

Almost 40% of adults report overeating or consuming junk food in response to stress during the prior month. And of those people, about half said they did so weekly. What is it about food — particularly junk food — that calls to so many of us during stressful times? People look for comfort in food for both physiological and psychological reasons. The hormone cortisol rises with chronic stress and can lead to increased appetite, says registered dietitian Allison Knott. "It can be true hunger if you have extended stress that is promoting this cortisol production to the point of impacting your appetite," she says. But just as often, food is used as a "numbing strategy," says Amanda Baten, a nutritional psychologist. "It's a distraction strategy in the same way that people might use alcohol or drugs or sex or TV as ways to create a buffer between themselves and whatever difficult feelings they might be experiencing." Eating can even spark some of the same neurological reactions that drugs do, albeit to a lesser extent. Brain imaging research has shown that when people binge on carbohydrates and sugars, "it can actually activate the pleasure centers of the brain," Baten says. Research has shown that sugar, like heroin or cocaine, can cause the feel-good chemical dopamine to flood the nucleus accumbens, the part of the brain responsible for pleasure and reward. Sugar can also release endogenous opioids, the body's natural painkillers, which creates a pleasant effect. But just like drugs and alcohol, emotional eating is a bandage for stress, rather than a cure. A healthier response, Baten says, is recognizing that stress and negative emotions happen, and that we have to find sustainable ways to cope with them. "We are raised in a culture that tells us we should not have negative feelings — we shouldn't be sad, we shouldn't be angry," Baten says. "There's a distinction to be made between what's an appropriate and healthy negative emotion that actually guides us to problem-solve by tolerating that feeling, versus what becomes the unhealthy negative emotional reaction or feeling." While some people purposely and consciously dive into a pint of ice cream after a trying day, others may stress eat without even knowing it, Knott says. "People get on autopilot. It becomes part of our lives, and we don't necessarily recognize what is happening." To avoid mindless eating, it's important to understand the difference between emotional and physical hunger. Before you tear open a bag of chips, take stock of how you're feeling physically and mentally. Hunger feels different for everybody, but it's often accompanied by physical symptoms like a growling or empty stomach, low energy and headache. If you're craving snacks without any of these physical signs, you may simply be looking for comfort or a distraction. Knott says. *Time*

Spice-Roasted Salmon with Roasted Cauliflower

1 tablespoon olive oil
 1 teaspoon ground cumin, divided
 3/4 teaspoon kosher salt, divided
 1/8 teaspoon freshly ground black pepper
 4 cups cauliflower florets
 1/4 cup chopped fresh cilantro
 1/4 cup golden raisins
 1 tablespoon fresh lemon juice
 1/2 teaspoon ground coriander
 1/8 teaspoon ground allspice
 4 (4 1/2-oz.) skin-on salmon fillets (about 1 in. thick)
 Cooking spray
 4 lemon wedges



Preheat oven to 450°F.

Combine olive oil, 1/2 teaspoon ground cumin, 1/4 teaspoon salt, and black pepper in a large bowl. Add cauliflower florets; toss well to coat. Arrange cauliflower in a single layer on a rimmed baking sheet; bake at 450°F for 18 to 20 minutes or until cauliflower is browned and tender. Combine the cauliflower mixture, cilantro, raisins, and lemon juice in a bowl; toss gently to combine. Reduce oven temperature to 400°F.

Combine remaining 1/2 teaspoon cumin, remaining 1/2 teaspoon salt, coriander, and allspice in a small bowl. Rub spice mixture evenly over fillets. Arrange fillets, skin side down, on a foil-lined baking sheet coated with cooking spray; bake at 400°F for 10 minutes or until done. Serve with cauliflower mixture and lemon wedges. Calories 270 **Cooking Light**

Diet Soda Could Be Wrecking Your Gut Health

Soda drinkers may feel like they're making a better choice when they reach for diet products—after all, diet soda has a stamp of approval from organizations like the American Diabetes Association—but **mounting research points to a slew of health risks associated with artificial sweeteners. The latest research suggests that artificial sweeteners, including aspartame, saccharin, and sucralose, could be toxic to the healthy bacteria living in your gut.**

A new study published in the journal *Molecules* analyzed the toxicity of sweeteners found within ten different sports supplements available to consumers. The study itself was conducted in part by teams of researchers scattered across departments at the University of North Carolina at Chapel Hill, the University of Georgia, and North Carolina State University. It found that **six common artificial sweeteners can inadvertently harm your gut health, which has been linked to many aspects of holistic health, including obesity and bowel cancer.**

In a lab trial involving mice, **the researchers added fluorescent compounds to each subject's gut, which glow when natural toxins are detected. The bacteria found in microbiomes lit up immediately when exposed to concentrations of six different common sweeteners, meaning they had become toxic—even with just small amounts of sweetener.** “This is further evidence that consumption of artificial sweeteners adversely affects gut microbial activity. Which can cause a wide range of health issues.”

This isn't the first time that adverse effects of artificial sweeteners on gut health have been studied, either. In 2014, **NPR highlighted research published in *Nature* that suggested artificial sweeteners increased risk of type-2 diabetes thanks to alterations in the microbiome. And in 2015, many in the gastroenterology field were looking into the role that aspartame and other artificial sweeteners played in holistic health,** *Scientific American* reports.

But the latest research shows that artificial sweeteners aren't limited to diet sodas—you can find newly approved sweeteners like neotame in many food products that promise lower amounts of sugar. As always, *Cooking Light* recommends eating natural foods in reasonable amounts instead of substituting with artificial ingredients, which aren't always healthy for you.

Artificial sweeteners have also been linked to substantial weight gain, as well as increasing risk of strokes, dementia, and diabetes. *Cooking Light*