



TrainSmarter

Some Oral Antibiotics May Increase The Risk of Kidney Stones

A study published Thursday in the *Journal of the American Society of Nephrology* found that taking any of five types of oral antibiotics was associated with a significantly higher risk of developing kidney stones — mineral and salt deposits that form in the kidneys and must be passed through the urinary tract. **Kidney stones have grown much more common over the past few decades without a clear explanation as to why. The condition is, however, associated with bacterial changes in the intestines and urinary tract, leading investigators to study the relationship between antibiotics and kidney stones.** Researchers examined the electronic health records of more than 13 million people who sought care in the United Kingdom between 1994 and 2015. They narrowed the sample to nearly 26,000 patients diagnosed with kidney stones, and a control group of almost 260,000 people without kidney stones. After adjusting for mitigating factors such as other medication use and being diagnosed with a urinary tract infection, diabetes or gout, they found that **sulfas, cephalosporins, fluoroquinolones, nitrofurantoin/methenamine and broad-spectrum penicillins were all associated with a heightened risk of kidney stones, when taken three to 12 months before diagnosis. Sulfas, which are often used to treat urinary tract infections and burns, were associated with the greatest uptick in risk: a 2.3-fold increase, compared to people who had not taken the medication. Risk did seem to decrease as time passed after taking these antibiotics, but it remained elevated for up to five years. Young people also seemed to be most susceptible to developing kidney stones after taking these medications.** *Time*

Do Calories Matter?

“The Key to Weight Loss Is Diet Quality, Not Quantity, a New Study Finds,” reported the *New York Times* online last year. Here’s what the study actually found. **You can cut carbs or fat for weight loss. The key: load up on veggies and limiting added sugars and white flour.** The study, called DietFits, was designed to see if people lose more weight on a healthy low-fat diet or a healthy low-carb diet. “Healthy” meant minimally processed whole foods, not junk. “We told everyone in both groups to eat as little white flour and sugar and as many higher-fiber vegetables as possible,” says lead investigator Christopher Gardner, professor of medicine at Stanford University. The year-long trial, involving 609 people, was funded by the National Institutes of Health and the Nutrition Science Initiative. The low-fat group was advised to eat high-quality carbs like lentils, low-fat yogurt, steel-cut oats, quinoa, fresh fruit, and beans. The low-carb group was told to eat high-quality fats like salmon, avocados, nuts, seeds, hard cheeses, and olive oil. And no one told the participants to cut calories. “If you prescribe calorie restriction, people feel deprived,” says Gardner. “So we just said, ‘Eat as low as you can on fat or carbs and don’t be hungry.’” The results— **Whether they cut fat or carbs, “each group reported a 500-calorie reduction,” says Gardner. And after a year, the people in each group had lost an average of about 12 pounds. In other words, when it comes to weight loss, it doesn’t matter if you cut carbs or fat.** Although the study participants weren’t told to count calories, calories still mattered. What’s more, the study couldn’t show that “The Key to Weight Loss is Diet Quality, Not Quantity,” because it didn’t compare diet quality to quantity. (To do that, Gardner would have had to tell a third group of dieters to count calories.) “We assumed that insulin-resistant people would do better on a low-carb diet—as they did in some earlier studies—but they didn’t,” says Gardner. Maybe that’s because both groups were told to eat healthy foods, he suggests. “In some older studies, when researchers told people to eat less fat, they weren’t particular about which low-fat foods. Coke and white flour and sugar are low-fat.” Gardner also noted that—as in earlier studies—the results varied dramatically. “Someone lost 60 pounds, someone gained 20 pounds, and we saw everything in between. The range, which was similar in both diet groups, was stunning.” You can lose as much weight on a healthy low-fat diet as a healthy low-carb diet. If you find it cumbersome to count calories, **eat as little white flour and added sugar and as many fiber-rich vegetables as possible. You’ll likely end up cutting calories without thinking about it, but that doesn’t mean that calories don’t matter.** *Nutrition Action*

How Workout Buddies Can Help Stave Off Loneliness

When Brad Koenig divorced and moved from Toledo to Ormond Beach, Fla., in 2017, two of the first things he did were sign up for a yoga class and join a running club. “The only people I knew in the area were my brother and sister-in-law,” says the 50-year-old former truck driver, who is now a full-time student. “Finding people to work out with was essential to getting my life back on track.” Koenig did with purpose what many men have discovered more incidentally: Exercise can be a great way to form the types of friendships that combat loneliness. The therapists and exercisers I interviewed for this article say that group workouts tend to build stronger bonds than, for example, adjoining cubicles, while enriching men’s lives by introducing them to a wider range of potential acquaintances.

Although loneliness is a condition that can’t be defined and tracked as precisely as diseases are, it appears to be a significant problem in the United States. A survey by the health service company Cigna of more than 20,000 Americans released last spring found that 46% of respondents, who were 18 years and older, said they sometimes or always feel alone, and 27% said they rarely or never felt understood by others. An AARP study released in September concluded that **1 in 3 adults 45 or older is lonely.**

Research has also found that **loneliness is dangerous.** “**Depression, anxiety, substance abuse — these are often related to loneliness,**” says Laura Fredendall, a clinical psychologist in Terre Haute, Ind. And it can have a physical impact: Research on nearly half a million British people found that **those who reported more loneliness had a higher rate of heart attacks and death** in the seven-year study period. **There is a distinction between being alone and lonely,** according to Fredendall. **Loneliness is marked by persistent isolation.** “**It’s feeling like you have no one to relate to, no friendships where you can confide in others,**” she says. “**You can be in a romantic relationship and have ‘work friends’ but still be quite lonely.**” Men might be especially susceptible, says Mitchell Greene, a clinical and sport psychologist in Haverford, Pa. In addition to the social-media-induced isolation that can affect everyone, Greene says, “**men tend to have fewer friendships than women, and are less likely than women to make social invitations. Men’s relationships tend to be more activity-based.**”

Enter exercise. Or more precisely, exercising with others.

“I have several male clients who I’ve encouraged to go to group workouts,” Greene says. “It’s not that I’m telling them how to make friends. I’m steering them toward environments in which healthy social ties are more possible.” Or, as Fredendall advises some of her lonely clients, “You need exercise anyway. Join a group or class instead of going to bars.”

As a middle-aged man who works from home and has a history of depression, I know firsthand the wisdom of this advice. Fifteen years ago, when I moved to Maine from Maryland, I began to purposefully seek out running companions. I wasn’t as fast a runner as in my youth, but that led to a great benefit: a much larger pool of training partners, most of whom I wouldn’t have met otherwise. In the past year, I’ve run with teens and 70-somethings, and all ages between. I run with men and women, with a variety of marital and family situations. Our backgrounds and professions are similarly diverse. Some are people I see only occasionally for a few friendly miles, while others have become confidantes. All enrich my life. At a time when my sedentary contemporaries are more likely to see their worlds shrink, I’ve never had a larger, more eclectic social circle. I’ve long believed that a few runs with someone builds bonds more quickly than the same amount of time spent over coffee or lunch. Kevin Mejia, a 26-year-old public relations professional from Queens, has also noticed this phenomenon. “**There’s something special about working out together,**” he says. “**Your guard is down. You talk about all sorts of things.**”

Greene says that this aspect of shared effort can significantly lower feelings of loneliness, even if the relationship never moves outside the gym. “Just finding other people with similar stories and struggles can have a huge effect,” he says.

How can you convert comrades in sweat into bosom buddies? After all, announcing “I’m here to make friends!” might not go over well in a yoga class in which people are accustomed to a soft “namaste.” Some activities have a built-in mechanism for connecting with others. On group runs, for example, I find that conversation flows with an ease I struggle to attain in my sedentary hours. Running clubs and cycling and ski shops can point you to informal, welcoming gatherings of like-minded people. Mejia has found new and, in one case, old friends at his local YMCA. “One of my gym buddies is someone I knew from a while back,” he says. “We reconnected when it turned out we were often there working out at the same time.” Mejia has also formed friendships through his Y’s running club. He acknowledges that indoor gym culture can present barriers to getting to know others. “A lot of people are listening to music, or there are groups of three to four that seem a little cliquy,” he says. “I don’t talk to everyone. But **after a while, you start to see the same faces, you say hi, maybe you connect on social media. I’m a big fan of group classes for this reason.**” *Washington Post*

Is Not Sleeping the New Smoking?

A Gallup poll in 2013 found that **Americans sleep, on average, 6.8 hours a night, with 40% getting less than the recommended minimum of seven hours.** According to Nationwide Children's Hospital in Ohio, teenagers get a little more than seven hours of sleep a night, while actually needing at least nine. Yet society continues to function ... if only like a frail, untuned clock. According to the sleep neuroscientist Matthew Walker at the University of California at Berkeley: **'The number of people who can survive on six hours of sleep or less without measurable impairment, rounded to a whole number and expressed as a percent, is zero.'** In fact, most adults need between seven and nine hours of sleep per night to be healthy.

Not convinced? **To really appreciate human sensitivity to sleep, consider daylight savings time (DST).** Each year, millions of people lose an hour of sleep when clocks 'spring forward' on the first Sunday of DST. Like a cruel experiment, we watch the health consequences of this spring forward: heart attacks and even suicides spike the following week as bodies are put under stress by the sudden change.

Though it might feel like we aren't doing anything when we sleep, nothing could be further from the truth. During sleep, **the fluid-filled ventricles of the brain open so that deadly toxins – including the amyloid plaques that cause Alzheimer's disease – can drain.**

Volunteers who were kept awake for 31 hours straight showed huge spikes in the Alzheimer's causing molecule compared with well-rested participants. The implications are clear – pulling an all-nighter is hardly harmless.

Beyond staving off Alzheimer's, sleep generally strengthens the immune system and protects us against cancer. Because our daily sleep cycle, or circadian rhythm, appears to regulate many biological functions, a night of light sleep throws a wrench into the gears of health and rejuvenation.

Moreover, we often fail to take sleep deprivation as seriously as alcohol intoxication, even though both immediately impair our behavior and cognition. According to Walker: 'After 20 hours of being awake, you are as impaired cognitively as you would be if you were legally drunk.' Driving after being awake for 24 hours straight gives similar levels of impairment as driving with a blood alcohol concentration of 0.1, higher than what is considered over the legal limit in many jurisdictions.

Walker, the author of the book *Why We Sleep: Unlocking the Power of Sleep and Dreams* (2017), also points to what is perhaps the most appalling irony of all: that doctors – the very people who are supposed to be caring for our health – are often complicit in creating today's sleep-deprived culture. New medical residents serve 30-hour shifts, and this sleep deprivation affects not only them but also their patients. Indeed, Walker states that: **'Residents working a 30-hour shift are 460 per cent more likely to make diagnostic errors in the intensive care unit relative to when they're working 16 hours.'** Doctors' lack of sleep might literally be killing patients.

We have a cultural problem in the West. From bosses to self-help gurus to school administrators, responsible and otherwise intelligent people who should know better advocate that we sleep less and accomplish more.

Even when we're not explicitly told to sleep less, advice that often passes for wisdom leaves little space for eight hours of sleep a night. Consider the retired US Navy SEAL, author and podcaster Jocko Willink, who relentlessly encourages his followers to wake up before the crack of dawn. Sure, waking up at 4:30am and hitting the gym can be a healthy habit – if you're in bed by 9:30pm. Willink himself goes to sleep around 11pm or midnight, but admits that more sleep is healthier.

'We are with sleep where we were with smoking 50 years ago,' Walker said on a recent podcast. 'We had all of the evidence about the ... disease issues, but the public had not been aware, no one had adequately communicated the science of, you know, smoking to the public. The same I think is true for sleep right now.'

As we plough recklessly through the night, coffee cup in one hand and smartphone in the other, we curse sleep while slumbering in a deeper, mental sense. As we update our values based on empirical evidence, it might be only a matter of time before society appreciates the true wisdom of the sloth. *The Blue Zones*



Could Probiotics Do More Harm Than Good?

Ever been told that you should load up on probiotics after a round of antibiotics? You're not alone.

In one survey of doctors and other healthcare providers, nearly 50% had recently recommended probiotics for patients who were taking antibiotics. Yet "the evidence for taking probiotics after antibiotics is highly debated," says Eran Elinav, a professor of immunology at the Weizmann Institute of Science in Israel.

In a recent study, Elinav gave antibiotics to 21 healthy adults for a week and then randomly assigned them to:

- get no additional treatment (the control group);
- get a fecal transplant, which was made from their own microbiome before they took the antibiotics; or
- take a probiotic for four weeks.

"We chose a multi-strain probiotic containing 11 of the most commonly used bacteria in the probiotics market," says Elinav.

The results

The microbiomes of the control group returned to their initial composition after four weeks. But among those who got the fecal transplant, "the microbiome was no different from its original composition just one day after transplantation," says Elinav. (That's impressive, but fecal transplants aren't something you can do at home.) **Most surprising were the probiotic takers. Their microbiomes didn't return to normal.** "They also had microbiome characteristics that were suggestive of pathological states, such as low bacterial diversity and sustained microbiome imbalance. And those effects lasted for as long as we sampled, which was six months after the antibiotics course." It's not clear what those changes mean for your health, but they're not likely to improve it. "Contrary to the current dogma, which says that probiotics are harmless and benefit everyone, our results point out that consumption of probiotics following antibiotics can delay the restoration of a person's microbiome," says Elinav. "If our intent is to restore the microbiome to its initial state, probiotics are clearly not the preferred means to achieve it. We need high-quality studies to further assess this potentially alarming adverse effect of probiotics after antibiotic use." *Nutrition Action*

Vitamin D And Fish Oil Supplements Mostly Disappoint In Research Results

Many people routinely take nutritional supplements such as vitamin D and fish oil in the hopes of staving off major killers like cancer and heart disease. But the evidence about the possible benefits of the supplements has been mixed. Now, **long-awaited government-funded research has produced some of the clearest evidence yet about the usefulness of taking the supplements. And the results — published in two papers — are mostly disappointing.** "Both trials were negative," says Dr. Lawrence Fine, chief of the clinical application and prevention branch of the National Heart, Lung, and Blood Institute, a part of the NIH, which funded the studies. "Overall, they showed that **neither fish oil nor vitamin D actually lowered the incidence of heart disease or cancer.**" One paper focused on vitamin D supplementation, and the other focused on fish oil. The trials involved nearly 26,000 healthy adults age 50 and older with no history of cancer or heart disease who took part in the VITAL research project. Twenty percent of the participants were African-American. Some of the participants took either 1 gram of fish oil — which contains omega-3 fatty acids — plus 2,000 international units of vitamin D daily. Others consumed the same dose of vitamin D plus a placebo, while others ingested the same dose of fish oil plus a placebo. The last group took two placebos. **After more than five years, researchers were unable to find any overall benefit. While the overall results were disappointing, there appeared to be a beneficial effect when it came to one aspect of heart disease and fish oil: heart attacks. A secondary analysis showed taking fish oil lowered the risk of heart attack by about 28%, which is a "statistically significant" finding,** says Dr. JoAnn Manson, who is chief of the division of preventive medicine at the Brigham and Women's Hospital in Boston. She led the research. **Those who appeared to benefit the most were people who didn't ordinarily eat much fish in their day-to-day diet, as well as African-Americans. African-Americans in the study experienced a 77% lower risk of heart attack compared with taking a placebo, which is a "dramatic reduction."** Further research is needed to confirm these findings, but, "in the meantime, it would be reasonable for African-Americans to talk with their health care providers about whether they may be candidates for taking fish oil supplements." In an editorial also published in the *New England Journal of Medicine*, authors Dr. John F. Keaney and Dr. Clifford J. Rosen **take issue with some of the analysis in the study and write that the positive findings about heart attacks and African-Americans and individuals who don't eat much fish need to be interpreted with caution. Fine and Manson stressed that vitamin D and the omega-3 fatty acids found in fish oil are important nutrients, but that the best way to get them is as part of a well-balanced diet.** *NPR*



Processed Meats and Cancer: It's Not Just Nitrates

According to the World Health Organization (WHO), **about 34,000 cancer deaths per year worldwide are attributable to diets high in processed meats. While that number pales in comparison to the one million or so global cancer deaths related to smoking, it is significant enough to warrant a hard look at processed meats in our diets, especially because they are also associated with cardiovascular disease and other health conditions.**

Processed Meat: “Generally speaking, a processed meat is one that has been salted, cured, smoked, fermented or undergone other processes to enhance flavor or improve preservation,” says Joel B. Mason, MD, professor of medicine and nutrition at Tufts and director of the HNRCA Vitamins and Carcinogenesis Laboratory. **Examples of processed meats include hot dogs (frankfurters), ham, sausage, corned beef, deli meats, and jerky.** “The evidence linking processed meat with most chronic diseases is largely epidemiological,” says Mason. “In other words, **there is an association between consumption of processed meats and diseases such as hypertension, heart disease, and chronic obstructive lung disease, but it remains unclear whether the processed meat consumption is actually contributing to the risk of these diseases. In contrast, there is now convincing evidence that a diet habitually high in processed meats does increase the risk of developing colorectal cancer.**”

The Cancer Connection: In 2015, based on a review of hundreds of studies, the WHO officially classified processed meat as a carcinogen—something that causes cancer in humans. The researchers concluded that **consuming 50 grams of processed meat a day—equivalent to just one hot dog—would raise the risk of getting colorectal cancer by 18% over a lifetime. Eating larger quantities raises cancer risk even more.** A new study published in the journal *Breast Cancer Research and Treatment* combined previous research with new data from over 262,000 British women and found that **postmenopausal women who ate the most processed meat (an average of more than nine grams a day or the equivalent of about 1 and a quarter hot dogs a week) had a 21% higher risk of breast cancer than those who ate no processed meat.** “It is not clear what component or components of processed meat are responsible for the association with cancer,” says Mason. Likely candidates include salt and known or suspected carcinogenic chemicals formed during processing and cooking.

Sodium: According to the American Cancer Society, **there is good evidence that consuming large quantities of foods preserved by salting is associated with increased risk of stomach, nasopharyngeal, and throat cancers.** “The link between excessive table salt (sodium chloride) and cancer risk (especially stomach cancer) is compelling,” says Mason. “People should try to limit their average intake of sodium to less than 2,300 milligrams per day.” **Deli meats (like pre-packaged turkey and ham slices) are one of the main sources of sodium in the American diet. In fact, six thin slices (two ounces) of deli meat can contain as much as half of the daily recommended sodium intake. Even if all of this sodium does not raise cancer risk, it raises the risk of high blood pressure and heart disease in most people and should be limited none-the-less.**

Nitrates: Sodium nitrite and sodium nitrate (which naturally converts to sodium nitrite) are used as preservatives in processed meats because they prevent bacterial growth. Nitrates are also found naturally in a number of foods, including celery, beets, arugula, and other vegetables. “**It is common nowadays to find the statement ‘no added nitrates’ on processed meat products,**” says Mason. “**In most instances, these products are manufactured using celery juice or other natural sources of nitrates. To my knowledge, there is no evidence that the nitrates in celery juice act any differently in the body than nitrates added as food-grade chemicals. In fact, unlike food-grade sodium nitrate or nitrite, there is no federal regulation that limits how much celery juice can be added to a processed meat, so it is feasible to actually be consuming more nitrates with a processed meat that says, ‘no added nitrates’.**” When consumed in vegetables, nitrates are safe, and may even have protective health effects such as improving blood flow. But in meats, nitrites can react during processing, cooking, and storage to form compounds called nitrosamines, which are classified as carcinogens. “**Keep in mind, however, that the link between sodium nitrate and cancer risk is still unclear,**” says Mason.

Cooking: There is not enough data to prove that the way meat is cooked affects cancer risk, but it is known that **cooking meat (processed or unprocessed) at high temperatures or in direct contact with heat (such as grilling or pan-frying) produces more carcinogenic chemicals than lower-heat, indirect methods like roasting or stewing. While the exact culprit behind the association between processed meats and cancer is unclear, the association itself is convincing, especially for colorectal cancer, and the added sodium in these products has other clear negative health impacts. Cutting back on these foods, even if they say, “no added nitrates,” is a smart move for health.** *Tufts University Health Letter*

In Defense of Whole Grains

There are several popular diets these days that prohibit eating any grains. In particular, The Paleo Diet, The Ketogenic Diet, and Whole30 Diet are three of the hottest diets right now, and none of them allow for any grains. It is true that **cutting out grains will help with weight loss in the short term, but eliminating whole grains is detrimental to long-term health. The evidence clearly shows that whole grains promote health and should be a part of any effective eating plan. Specifically, eating just 2–3 portions of whole grains per day has been shown to reduce the risk of getting a heart attack or prematurely dying of heart disease by 30%, and lower the risk of all forms of cardiovascular disease (heart attack, stroke, or the need for a procedure to bypass or open a clogged artery) by 21%.**

Those numbers mean that **eating enough whole grains daily is as powerful as high blood pressure medications in alleviating hypertension. Considering 75 million American adults have high blood pressure—one in every three American adults—we would be smart to consume more whole grains, not less. But whole grains do much more than just lower blood pressure. Eating at least 70 grams of whole grains daily has been shown to lower the risk of total mortality by 22% and reduce the risk of cancer mortality by 20%. Whole grain consumption has also been shown to lower cholesterol and protect against inflammation in the body. It should come as no surprise that people are encouraged to load up on whole grains on the Mediterranean Diet, which was just named the #1 healthiest diet by a panel of the nation’s foremost nutrition experts. Whole grains also play a key role in centenarians’ diets in every Blue Zones region in the world. That means the longest-lived people in the world eat whole grains daily.**

Grains in general get a bad rap because of all the processed refined grains that exist in our food system today.

Refined grains (like white bread and white rice) are stripped of valuable nutrients in the refining process, including the removal of the germ and bran. That is a problem because **bran is filled with fiber and other nutrients that help regulate blood sugar, prevent blood clots, and lower cholesterol. And the germ is packed with healthy fats, vitamin E, B vitamins, phytochemicals, and antioxidants. Once the bran and germ are removed, the only part of the grain that is left is the soft, chewy, easy-to-digest endosperm. That’s why white flour is fluffy and tastes so good, but it is missing most of the nutrition (and food manufacturers add lots of other junk to refined grains these days). Whole grains offer a “complete package” of health benefits, but all three parts of the whole grain—the bran, germ, and endosperm—need to be intact to reap those benefits. Whereas refined grains are associated with a range of negative health outcomes, from obesity to diabetes to heart disease. It is therefore critical to select and eat actual whole grains, instead of the processed and refined stuff.**

By now, hopefully you are convinced of the importance of whole grains, but it can still be confusing to buy truly nutritious whole grain products. That is because **words like multigrain, whole grain, and whole wheat show up on nearly every package of food these days, and it is very misleading. To help simplify the process, your best bet is to choose an unprocessed whole grain in its natural form (which means just one ingredient). Popular, easy-to-find unprocessed whole grains include brown rice, barley, corn, quinoa, oats, rye, wheat berries, and wild rice.**

If you do opt for whole grain bread or pasta with more than one ingredient, you need to look on the back of the label and perform some basic math to ensure you are really getting whole grains without the unhealthy additives. Specifically, **look at the label and make sure the serving size ratio of carbs to fiber is equal to or less than 5-to-1 (for example, if you divided 15 grams of carbs by 3 grams of fiber like in the Ezekiel 4:9 sprouted whole grain bread, that would equal 5 and would pass the test). Following the 5-to-1 rule is the way to buy healthy whole grain products, according to Dr. Michael Greger, author of the groundbreaking book How Not To Die.**

Whole grains should make up roughly 1/4 of your overall diet, according to the Harvard Healthy Eating Plate, the official dietary advice from Harvard doctors and medical professors (fruits and vegetables should account for at least half your plate, and the remaining 1/4 should be healthy protein). In general, you want to aim for at least three servings of whole grains per day (one serving is equal to half cup of cooked brown rice, one slice of whole grain bread, or a cup of whole grain cereal). I typically eat two slices of whole grain toast in the morning (topped with olive oil or peanut butter) to cover off on two of the servings, and then I try to add in some brown rice, quinoa, corn, or whole grain pasta for lunch or dinner. **Oatmeal is another easy option to start your day with whole grains. And popcorn (unflavored and without added salt) is an incredibly simple whole grain snack. It doesn’t matter which whole grains you eat, as long as you eat enough of them overall. Select the whole grains you like best. Don’t be confused by trendy diets that eliminate all grains. You might lose some weight in the short term, but it’s not worth sacrificing your long-term health. Medium**

Was Gluten Framed?

What if everything you knew about gluten was wrong?

For a decade now, the anti-gluten surge has been unmistakable. Like a rising tide, gluten-free products fill our stores, “GFs” cover our menus, and wheat-less diet books creep onto our shelves. So many people report problems with gluten that it’s no wonder it’s demonized, feared, and chased out by a mob. But what if we’re afraid of the wrong thing? **What if there’s something else that could explain why so many people get stomach upsets after eating? What if gluten was framed? Gluten is a protein found in wheat, rye, and barley. People with celiac disease have to avoid these grains because their body mounts a powerful immune response against gluten, leading to debilitating gastrointestinal problems. There’s no disputing that part—celiac disease is real. Luckily, while it may be increasing, it’s still pretty rare. But then there are a growing number of people who claim to have a condition called “non-celiac gluten sensitivity” (NCGS). These people don’t suffer from celiac disease, but still report unpleasant (less extreme) symptoms after eating gluten. And while actual celiac disease remains rare, the prevalence of people without celiac disease who follow gluten-free diets has more than tripled since 2009 . In fact, one survey from 2013 found that almost 30% of adults in the U.S. were trying to avoid eating gluten, probably because they believed it was unhealthy. The public is more than preoccupied with the problem of gluten, and they want to get to the bottom of it. Now, these people are not crazy—they’re not delusional hypochondriacs, and we’re not going to dismiss their suffering. But there’s mounting evidence that gluten isn’t really the culprit.**

Science: The Scene of the Crime

The buzz surrounding NCGS really picked up in 2011 when a landmark study seemed to prove its existence. The investigation compared two groups of people who claimed to have symptoms of NCGS. During the study, one group ate gluten while the other followed a gluten-free diet. Over six weeks, the subjects who ate gluten reported significantly greater gastrointestinal symptoms than the gluten-free group. While we have to note that 40% of the gluten-free group still reported negative symptoms, this study suggested that, scientifically, NCGS really exists.

Case closed? Not so fast.

No single study can really prove something in science—we have to replicate it, which means we have to see the same result from a different study. If we can’t replicate it, then the first results could have been just a fluke. In this case, one study isn’t enough to say (with our scientist hats on) that NCGS is real. So, in a really respectable move, the same lab attempted to replicate their findings in a follow-up study. This time, the researchers looked at how much gluten it took to make a difference in symptoms. (They also threw in another variable—FODMAPS—which we’ll talk about soon.) The results surprised them: **no amount of gluten—high, low, or zero—made a difference in the subjects’ gastrointestinal symptoms. But what did make a difference was eating a low-FODMAP diet, which, like gluten-free diets, involves avoiding a list of foods that may cause stomach upset and other symptoms ascribed to the evils of gluten... but that’s the next section. Let’s do a quick sum-up: At this point, NCGS is a vaguely-defined disease, has no clinically useful way of being detected, and may not be caused by the thing it’s named after (gluten). To muddy the waters even more, people who report having NCGS often don’t meet the criteria for “diagnosis”. So, we still have a lot of stuff to figure out.**

Are FODMAPs the Real Villains?

“FODMAP” stands for “fermentable oligo-, di-, mono-saccharides and polyols.” Basically, all that gibberish is a **group of carbohydrates that are hard for your body to digest and absorb. As a result, they make it all the way to the large intestine before fermenting and finally breaking down. If that follow-up study is right, then the “sensitivities” often blamed on gluten might not be caused by gluten at all, but FODMAPs. To strengthen this argument, another lab found that fructan, a type of FODMAP, caused gastrointestinal symptoms in 59 people who reported having NCGS. The other subjects ate either a diet with gluten or a placebo. The ones who ate fructan had significantly worse symptoms than those created by gluten or the placebo. So, there’s good news and bad news. Bad news number one: People with gluten sensitivity probably aren’t sensitive to gluten, which means they could have been treating their symptoms more effectively with a different diet all along. Bad news number two: It’s definitely easier to avoid gluten than FODMAPs, which are present in lots of different foods like vegetables, fruits, legumes, grains, and dairy. The good news (finally!) is that most people can probably just limit (without completely eliminating) FODMAPs from their diet to get relief. And if you think all this might apply to you, talk to a doctor, registered dietician, or other credentialed healthcare professional.**

Was Gluten Framed? (cont'd)

Up for Parole

Justice is being served, and gluten is up for parole. But we don't have all the facts yet. It's really important to note that everything we think we know is really new, and "new" in science is as good as saying "unclear." But **what we do know is that it makes more sense to try avoiding FODMAPs than blaming gluten.** And let's be clear about one thing: you don't need to eat gluten. It's not necessary for your body, and **if you want to avoid gluten, go for it. But keep in mind that you might be making your diet tougher, more expensive, less convenient, and lower in whole-grains... for no good reason.**

Court adjourned. Eric Trexler, *Medium*

Here's Why You Really Don't Need to Do a Juice Cleanse This Month—or Ever

It's that time of year again. The "new year, new you" pressures are mounting and it seems like every last person is hopping on the Dry January or Whole30 train. If you also feel like some back-to-basics eating is in order after a splurge-heavy holiday season, we get it. But do us (and yourself) a favor and **forget the "detox" plans of the juice or soup cleanse variety. Why? Because they don't actually work.** "A myriad of 'detoxification' regimens have now flooded the market based on the traditional but unproven concept that our body needs help getting rid of unwanted toxins," says Sharon Horesh Bergquist, MD, assistant professor of medicine at the Emory School of Medicine. **"Your body is a detoxification machine, fully built with its own elaborate way of ridding toxins and unwanted chemicals. Residing in your digestive system, respiratory tract, and skin, immune system mediators are ready and armed to catch invaders and turn them over to your liver. Your liver then filters and neutralizes toxins and hands them over to your intestines and urine to eliminate them from your body."** The best way to support these multifaceted mechanisms is by feeding our bodies the right way—with adequate calories, sufficient hydration, and foods that are high in fiber and healthy fats. **Soup and juice cleanses limit your caloric intake by design, but that doesn't make them healthy or even weight loss-promoting. Diets low in calories can leave you feeling weak and, if done for too long, may negatively affect your metabolism.** "Without adequate protein and calorie intake, your body may switch to breaking down muscle for energy," Dr. Bergquist says. "Over time, that can slow your metabolism." Also less-than-ideal: **"When we juice foods, we remove all of the fiber from the fruits and vegetables, leaving the sugar behind, which can in turn create blood sugar spikes and leave you 'hangry' with a headache,"** adds Amy Shapiro, RD, a New York City-based dietitian with Daily Harvest. **"People often say headaches are a sign of detoxing but they aren't, you're just hungry."** Cleanses meant to flush out the intestines are equally bad. **"While they intend to clear out retained stool, they may inadvertently clean out the healthy, good bacteria in the gut as well,"** says Dr. Bergquist. **"Without adequate fluid intake, the loose, watery bowel movements can leave you dehydrated and depleted of essential electrolytes."** Yikes. Perhaps the main problem with "detoxes," though, is the fact that they're meant to be quick fixes, which usually means they're unsustainable in the long term. **"Many cleanses don't provide support on how to eat after you finish the program,"** says Shapiro. Not only does this tend to result in feelings of failure post-detox, but it also means there's nothing stopping you from binging on all the foods you so diligently avoided for the last 72 hours, because why not? Many of us do need structure when it comes to getting back on track with our eating habits, and that's AOK. **Instead of choosing a liquid-only meal plan, experts suggest opting for a regimen that eliminates processed foods to help you cut back on salt, added sugars, and saturated fats. Instead of prescribing juice cleanses, Shapiro gives clients daily plans that include nutrient-dense meals like smoothies, loaded salads, roasted veggie bowls, and fruit and nuts as snacks. Tea and water are allowed all day long, while soda, coffee drinks (other than black coffee), and alcohol are off-limits.** Bergquist also encourages patients to eat simply when they want to reboot their diet. **"Reintroduce foods closest to their natural form. We know from an abundance of studies that the healthiest dietary patterns in the world are those that include whole or minimally processed, plant-based foods, such as fruits, vegetables, whole grains, legumes, nuts, seeds, and spices."** Finally, if the January cleanse craze is making you feel even worse about your holiday season diet slips, know this: **"What's done is done, remove the guilt, enjoy the experience, and then go back to healthy eating,"** Shapiro tells clients. **"Take a break from desserts every night or don't open a bottle of wine at home; only enjoy a drink when you're out. Make sure half your plate is filled with veggies at every meal and aim for three to four workouts a week. We get results from the choices we make most of the time; small blips or indulgences don't mean we have poisoned our bodies and need to detox them."** *Health*

Coconut Oil Stocks Drop by Half As Everyone Realizes How Unhealthy It Is

We've said it before and we'll say it again—coconut oil isn't healthy enough to earn the health halo it's been enjoying since the paleo diet started lauding it in 2011. First, the American Heart Association has found that saturated fats (which coconut oil is very high in) play a significant role in cardiovascular disease, and that most veggie-based oils were far superior for our heart health compared to butter or coconut oil. And then a year later, we saw sales slump (though clearly some readers still feel quite strongly about the health benefits of coconut oil). And so, as even more health experts continue to condemn coconut oil's cardiovascular blowback, it makes sense that wholesale prices have dropped by more than 50% as demand nosedived. It doesn't help that alternative vegetable-based oils have also become drastically cheaper, making coconut oil more costly.

The Wall Street Journal reports that the wholesale price of industrial coconut oil averaged a mere \$786 per metric ton in November 2018—which is down more than 58 percent compared to a record high of \$1,869 in June 2017, according to sales data sourced from the World Bank. Unsurprisingly, imports of coconut oil into the United States have also dropped by 4 percent in between September 2017 and 2018, the Wall Street Journal reports.

Furthermore, data sourced from the United States Department of Agriculture suggests that coconut oil isn't as widely used as it once was. Americans used 437,000 metric tons of coconut oil between 2017 and 2018, whereas 562,000 metric tons were used between 2014 and 2015. The Wall Street Journal notes that industrial use didn't change much over those periods, meaning the drop in usage is likely to be due to smaller individual consumption.

Cooking Light's nutrition director, Brierley Horton, has previously explained that concerns over coconut oil have to do with more than just its saturated fat content (which acts as 80 percent of its overall make up). The amount of low-density lipoproteins, also commonly referred to as LDL cholesterol (or as what many health professionals refer to as "bad" cholesterol), in coconut oil has previously been shown to raise overall levels in the body thanks to regular consumption. In addition, the American Heart Association has published guidelines recommending that saturated fat make up less than 10% of daily caloric intake.

Horton makes it clear that consuming coconut oil in moderation isn't the issue—in fact, Cooking Light has even published recipes featuring the rich, flavorful ingredient. But home cooks should be aware that heavy consumption could impact cardiovascular health, and that there are better alternatives to regularly cook with: namely, canola oil.

But home cooks may be abandoning coconut oil in the interest of new alternatives such as avocado oil, according to Dorab Mistry, a vegetable oil analyst at Godrej International. He told the Wall Street Journal that demand for oil "tends to move with whatever has captured the imagination of discerning consumers."

The good news? Lower coconut oil prices have served some companies well, including beauty manufacturers who use the staple to create everything from shampoo to skin care products. And while it's unclear if raw coconut oil has directly seen a price drop in grocery stores, this sales trend could help you adapt coconut oil into your beauty routine. **Cooking Light**



SRI LANKAN LENTIL MEAL IN MINUTES

1 tablespoon olive oil
 1 large onion, chopped
 1 large tomato, chopped
 1 teaspoon fresh parsley, chopped
 4 garlic cloves, minced
 2-inch piece of ginger, peeled and minced
 1 cup red lentils, dry
 3 cups water
 1 teaspoon each ground cinnamon, curry powder and chili pepper, more as desired
 1 cup coconut milk
 2 pounds raw spinach or kale, rinsed
 Salt and pepper to taste



Rinse the lentils and then add to a wide saucepan along with the oil, onion, tomato, parsley, garlic, ginger, water and spices. Cook for 5 to 10 minutes until the lentils are tender. Add the coconut milk and cook for another 5 to 7 minutes. Add in the fresh spinach or kale and cook until the greens are tender. Add salt and pepper to taste.

Cooking Light

- Replace ricotta cheese with cottage cheese
- Use spinach or Swiss chard instead of kale

22.0 g, Dietary Fiber 4.2 g, Sugars 15.2 g, Protein 27.7 g

Can You Stay For Dinner?

Can You Stay For Dinner?

lemon juice. Season to taste. Serve with pork and peppers.

This Appetizer Is Like Ordering Four Big Macs

Pork bellies are in. And The Cheesecake Factory never disappoints.

Thank heavens the chain stepped up to the plate with its Pork Belly Sliders—four mini-burgers with “slices of slow roasted smoked pork belly with barbecue sauce, cole slaw and fried pickles.”

Naturally, they’re on the appetizer menu. After all, **who wouldn’t want to start their meal with the equivalent of one, two, three, or four Big Macs?**

Yes, a single slider has 520 calories and 10 grams (half a day’s) saturated fat, plus 900 milligrams of sodium, all on a not-so-mini, white flour, Wonder Bread-like bun.

Split the plate with your date, and you’re talking 1,000+ calories each. What better way to get ready for one of the Factory’s 1,500-calorie entrées before you dig into a 1,200-calorie slice of cheesecake?

Or try the Roadhouse Sliders (each is equal to a McDonald’s Hamburger) or Southern Fried Chicken Sliders (each with the calories of a McDonald’s Cheeseburger). Heaven forbid you should leave the restaurant without at least one burger.

“Everybody loves sliders,” the chain’s chief culinary officer told Vegas Player Magazine in July. “These are more upscale.”

Leave it to The Cheesecake Factory to give new meaning to the word “upscale.”

