

# Nutrition Action

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CENTER FOR SCIENCE IN THE PUBLIC INTEREST

## BE KIND TO YOUR KIDNEYS

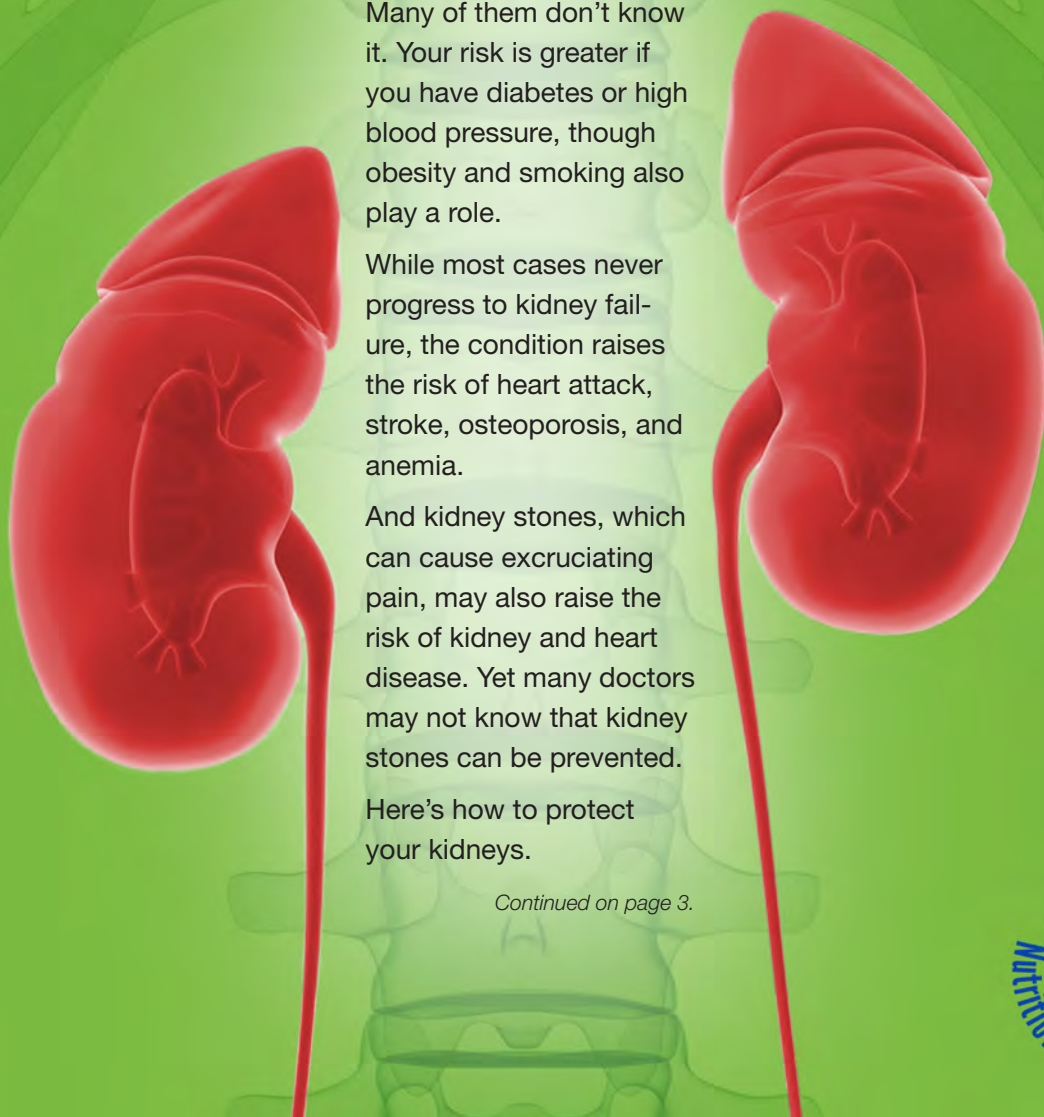
**A**n estimated one out of five adults in their 60s—and nearly half of those 70 or older—have chronic kidney disease. Many of them don't know it. Your risk is greater if you have diabetes or high blood pressure, though obesity and smoking also play a role.

While most cases never progress to kidney failure, the condition raises the risk of heart attack, stroke, osteoporosis, and anemia.

And kidney stones, which can cause excruciating pain, may also raise the risk of kidney and heart disease. Yet many doctors may not know that kidney stones can be prevented.

Here's how to protect your kidneys.

*Continued on page 3.*



# Building a Better Food Label



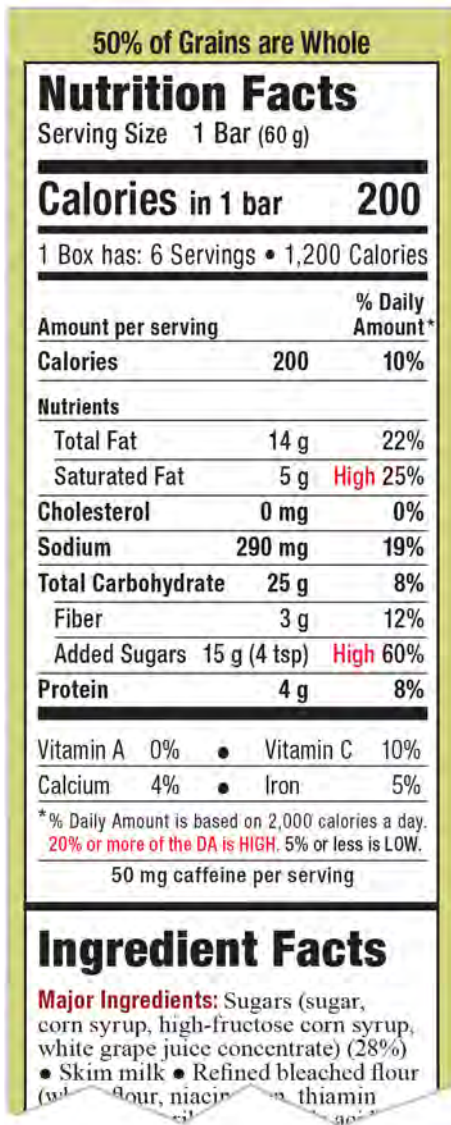
The Food and Drug Administration is about to carry out the first overhaul of the Nutrition Facts label

since it was introduced in 1993.

Odds are, the agency will propose new Daily Values for some nutrients and new serving sizes for some foods. (Let's hope we can finally say goodbye to cooking oil sprays that have "0 calories" only because they're allowed to use a minuscule serving size.)

Here's some of what we'd like to see:

- **Calories.** Show calories in larger print, and disclose what percentage of a day's calories are in each serving.
- **Added sugars.** Replace "Sugars" with "Added sugars" (including the naturally occurring sugars in fruit juice, which are no better for you than added sugar). And list them in teaspoons as well as grams. The Daily Value—it should be changed to Daily Amount—should be about 6 teaspoons (25 grams).
- **Trans fat.** Ban partially hydrogenated oil (the source of artificial trans fat), then drop the trans fat line.
- **Sodium.** Lower the Daily Amount for sodium from 2,400 milligrams to 1,500 mg, the level recommended for half of all adults.
- **High.** Use a color or word to highlight high levels of unhealthy nutrients.
- **Whole grains.** Disclose what percentage of a food's grains are whole.
- **Caffeine.** Disclose the caffeine content.



The FDA should also insure that ingredient lists are more readable. No more tiny, skinny, all upper-case, hard-to-read fonts. No more dark blue letters on a darker blue background.

The new label should use a clear font and small "bullets" between ingredients. All sugars should be grouped together, and the label should disclose the percentages of the food's major ingredients. (How much of that fruit-and-nut bar is fruit? How much is nuts?) Most importantly, the FDA should require front labels to carry a symbol representing the food's overall healthfulness

—a score from 0 to 100 or zero to four check marks, for example.

Want to weigh in? Join CSPI's Action Network at [cspinet.org/takeaction](http://cspinet.org/takeaction). We'll help you send comments to the FDA.

*Mike Jacobson*  
 Michael F. Jacobson, Ph.D.  
 Executive Director  
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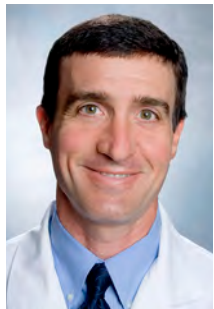
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# BE KIND TO YOUR KIDNEYS



**Gary Curhan** is a nephrologist and a professor of medicine at Harvard Medical School and professor of epidemiology at the Harvard School of Public Health. His research has focused on the causes of kidney stones. Curhan is currently editor-in-chief of the *Clinical Journal of the American Society of Nephrology*. He spoke to *NAH's* Bonnie Liebman by phone from Boston.

## CHRONIC KIDNEY DISEASE

### **Q: Is chronic kidney disease an under-recognized public health problem?**

**A:** Absolutely. It's much more common than people had appreciated. That's partly because the population is aging. We know that there is some naturally occurring decline in kidney function with age.

But that doesn't mean that chronic kidney disease is an inevitable part of normal aging. Recent reports from the Nurses' Health Study found that in many healthy people, kidney function didn't change meaningfully over five to ten years.

### **Q: So it's not just aging, but that people are more likely to have risk factors for kidney disease as they age?**

**A:** Yes. Two common conditions—high blood pressure and diabetes—increase the risk of developing kidney disease, and people are more likely to get both if they gain weight and as they age.

Some studies estimate that 10 percent of U.S. adults have chronic kidney disease, but it may occur in up to 40 percent of people with diabetes and 18 percent of people with prediabetes. And some studies find reduced kidney function in 28 percent of people with hypertension

and 17 percent of those with prehypertension.

### **Q: Those numbers are striking.**

**A:** Yes, though if you were recently diagnosed with hypertension or diabetes, you are not going to have kidney disease right away. It takes years, sometimes decades, for the disease to show up, and treating somebody for those conditions can make kidney disease much less likely.

### **Q: Why is kidney disease harmful?**

**A:** Chronic kidney disease can lead to end-stage kidney disease.

Your kidneys stop working, and you need either dialysis or a kidney transplant to survive.

Kidneys are important for maintaining optimal health. For example, as your kidney function deteriorates, you're at increased risk for fractures and anemia.

But kidney disease is also a risk factor for heart attack and stroke. In fact, that's what most people with kidney disease die of. And people with kidney disease are also more likely to develop hypertension.

### **Q: Kidney disease causes hypertension and hypertension causes kidney disease?**

**A:** Yes, it works both ways. If there is some damage to

the kidney, you're much more likely to develop high blood pressure. And high blood pressure can harm the kidney.

### **Q: How?**

**A:** High blood pressure damages the small blood vessels of the kidney, which then damages the glomerulus—the basic filtering unit of the kidney. Each kidney can have up to a million glomeruli.

Kidneys filter about 200 quarts of blood a day. So they are filled with blood vessels, and anything that impairs the blood flow through the kidney reduces the kidney's ability to clean the blood.

### **Q: Do the kidneys keep blood pressure from getting too low?**

**A:** Yes. If blood pressure starts to drop, the kidneys will try to raise it. In the short term, raising blood pressure is a good thing, because if it's too low, oxygen can't reach the brain. But in the

## What a Kidney Does

**WATER.** Ensures that there's not too much or too little water in the body.

**BLOOD PRESSURE.** Makes sure that pressure isn't too high or too low.

**WASTES.** Gets rid of urea, uric acid, toxins, and other wastes via urine.

**BONES.** Activates vitamin D, which helps the body absorb calcium.



**ACID-BASE BALANCE.** Makes sure that the body isn't too acidic or too alkaline.

**HEART.** Maintains a balance of electrolytes (like potassium, sodium, and calcium), which is critical for heart rhythm.

**BLOOD.** Releases erythropoietin, which tells bone marrow to make red blood cells.



long term, high pressure can damage the kidney's blood vessels.

**Q: Does diabetes harm the kidneys in the same way?**

**A:** Not exactly. Diabetes damages not only the small blood vessels in the glomerulus, but also something called the mesangium, which helps support the glomerulus.

**Q: How does kidney disease cause heart attacks and strokes?**

**A:** It's not completely known. It is likely due in part to higher blood pressure, since even small increases in blood pressure can have a dramatic impact on the risk of cardiovascular disease.

But there are other possibilities. One hypothesis is that with reduced kidney function there is an alteration in calcium and phosphorus metabolism, causing calcium deposits in blood vessels or in the heart muscle itself. And the calcification may lead to heart attacks, strokes, or heart failure.

**Q: Do kidneys do more than clean blood and control blood pressure?**

**A:** Yes. Kidneys maintain the internal environment. If you drank a lot of water and your kidneys didn't remove it from the blood, you would basically drown in fluid. And it's the kidneys' job to get rid of almost anything that you ingest that gets absorbed into the bloodstream and that the body doesn't need—say, extra salt, calcium, or phosphorus. Maintaining that balance is critical.

**Q: How do kidneys protect against anemia and bone fractures?**

**A:** The kidney produces a hormone—erythropoietin—that leads to the production of red blood cells. And the kidney has an enzyme that activates vitamin D.

When you consume vitamin D or it's made in the skin, it goes to the liver and then to the kidney, where it becomes the active form. The active form is important for absorbing calcium in the intestines, which helps to maintain bone health.

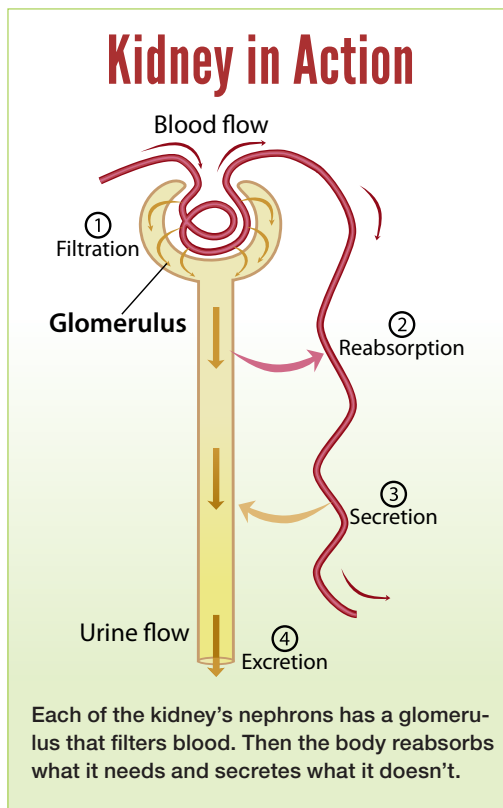
**Q: Why is obesity bad for kidneys?**

**A:** Obesity raises blood pressure and the risk of diabetes. Also, as people gain weight, the kidneys have to work harder.

You can imagine that the amount of waste products that need to get removed

is far greater for a 250-pound person than for a 150-pound person, especially after we eat a large meal.

So the kidney has to adapt. As people gain weight, the kidney can't make more glomeruli, so the existing ones may start to enlarge and the kidney may start to filter blood at a greater rate, which puts



an additional demand on the kidney.

That may lead to damage and the eventual loss of some glomeruli. So the remaining glomeruli have to work that much harder, which leads to more lost glomeruli. It's a vicious cycle.

**Q: Does excess salt harm kidneys?**

**A:** Yes. It can raise blood pressure, and it's possible that excess sodium itself may be harmful.

**Q: Is too much protein harmful?**

**A:** I wouldn't want someone who already has kidney disease on a diet that's very high in animal protein. But there's still disagreement about whether high-protein diets raise the risk of developing kidney disease. In moderate amounts, it's probably not harmful.

I'd rather that people stop smoking, do more exercise, lose weight, and eat a

healthy diet than worry only about how much protein they eat.

**Q: What else can harm kidneys?**

**A:** A number of toxins in the environment—lead, mercury, cadmium.

Excessive, long-term use of over-the-counter analgesics like acetaminophen and ibuprofen can also increase the risk of chronic kidney disease, possibly by raising blood pressure and/or by damaging the kidney directly. Studies about aspirin have been inconsistent.

If you take those analgesics on a regular basis, ask your healthcare provider about alternatives. Just because these drugs are available over the counter doesn't mean they're safe.

**Q: Is exercise good for kidneys?**

**A:** Exercise helps keep blood vessels healthy, lowers blood pressure, reduces the risk of diabetes, and helps people lose weight. So even without conclusive evidence, I would encourage people to be active to protect their kidneys.

**Q: Does early kidney disease have symptoms?**

**A:** Most of the time there are none. It's like high blood pressure. The best way to get people diagnosed is by screening people at higher risk for developing kidney disease—those with diabetes or hypertension. We do a blood test for creatinine and check urine for protein.

But there's not enough convincing data to demonstrate that we should screen everyone.

**Q: Can we protect our kidneys?**

**A:** Yes. Many of the conditions that affect the kidney are preventable. The message is quite similar to what you would do to protect your heart. Lowering your cardiovascular risk goes a long way toward protecting your kidneys.

And kidneys are another reason for people to try to control their blood pressure and blood sugar if they have high levels. The best thing would be to avoid developing high blood pressure and diabetes in the first place.

## KIDNEY STONES

**Q: What are kidney stones?**

**A:** Urine is water with a bunch of waste products dissolved in it. As long as they

## The Minor Leaks



Exercise like walking may help.

An estimated 30 to 40 percent of middle-aged and 50 percent of older women experience urinary leakage. (The problem is less common in men.) But it's a don't ask, don't tell issue.

"Even in our study of nurses, less than 50 percent of the women who had incontinence reported it to their doctors," says Mary Townsend, an epidemiologist at Brigham and Women's Hospital in Boston.

Leaks are more common in women who are older, heavier, or smokers, and in those who have had more children, diabetes, or a hysterectomy.<sup>1</sup>

Caffeine may also play a role.

"We found a moderate increased risk of developing at least weekly incontinence, but only in women who consumed at least 450 milligrams of caffeine a day," says Townsend.<sup>2</sup> (You'd get 420 mg in one Starbucks venti coffee and 520 mg in two tall coffees.)

"Caffeine was only related to urgency incontinence—leaks that occur with a sudden need to go to the bathroom—not with stress incontinence," she notes. That's a leak that typically occurs with coughing or exercise.

How might caffeine cause trouble?

It may be a diuretic. "And in animal studies, caffeine increases the force of muscle contractions in the bladder," says Townsend. "So the combination may lead to urgency."<sup>3</sup>

Other leads have come up empty. "It's a common belief that acidic fruit and tomatoes are bladder irritants," says Townsend.<sup>3</sup> "But we didn't see any association with incontinence."

What may help? Training women to contract their pelvic-floor muscles—using Kegel exercises—makes a difference.<sup>4</sup> So does losing excess weight.<sup>5</sup>

And walking or other moderate exercise may lower the risk, especially of stress incontinence, says Townsend, "in part by maintaining a healthy weight and possibly also by strengthening the pelvic-floor muscles."

<sup>1</sup> *Am. J. Obstet. Gynecol.* 194: 339, 2006.

<sup>2</sup> *J. Urol.* 185: 1775, 2011.

<sup>3</sup> *Int. Urogynecol. J.* 24: 605, 2013.

<sup>4</sup> *Cochrane Database Syst. Rev.*: CD005654, 2010.

<sup>5</sup> *N. Engl. J. Med.* 360: 481, 2009.

stay dissolved, it's not a problem. But sometimes crystals form in the kidney and grow into a stone.

The lifetime risk of kidney stones in U.S. men is now about 20 percent. In women it's about 10 percent. The risk has increased substantially over time.

### Q: Why?

**A:** Obesity, a higher salt intake, higher sugar and high-fructose corn syrup intake, and maybe higher animal protein intake are associated with a greater risk of forming stones.

In contrast, a diet that's rich in calcium, potassium, fruits, and vegetables is protective. Also, the more you drink, the higher the urine volume and the less concentrated your urine is, so the lower your risk of a stone.

### Q: More calcium is good?

**A:** Yes. Even though the vast majority of stones are made of calcium oxalate, we found out 20 years ago that higher calcium intakes from food are associated with a lower risk. However, individuals who take calcium supplements seem to have a higher risk of stones.

### Q: Why are supplements different?

**A:** When you eat food, some of its calcium will stick to some of its oxalate, and that will keep the oxalate from getting absorbed into the blood and eventually getting into the urine. The calcium and oxalate form a crystal in the intestine and are excreted in the stool, so they don't hurt.

Calcium supplements probably would do the same thing as calcium from foods if people took the supplements with

meals, but many people don't. So the calcium gets absorbed into the bloodstream.

If any excess calcium is absorbed, the kidneys remove it from the blood and excrete it in the urine. So you have more calcium in the urine and that would

increase the calcium oxalate in the urine, which increases the risk of a stone.

### Q: Where do we get oxalate?

**A:** Oxalate comes from some foods we eat, and the body also produces oxalate.

Spinach has a huge amount. We advise people who have formed calcium oxalate stones not to eat spinach.

Potatoes are probably the least appreciated source of oxalate. They're important because Americans eat a lot of potatoes.

Wheat bran and some nuts are also high in oxalate, though the amount differs by type (see "Oxalate on Your Plate," p. 6). But nuts and bran have health benefits, so I tell my patients to eat them in moderation unless they have a very high urine oxalate.

### Q: Are other greens high in oxalate?

**A:** No. There is so much misinformation about the oxalate content of foods. People think, "Spinach is a leafy green so I shouldn't eat anything that is leafy or green." But that's not the case.

### Q: Why does obesity lead to stones?

**A:** People who are overweight or obese have a higher risk of forming uric acid stones. It's not clear why, but larger people generally produce more uric acid, and obesity makes urine more acidic, which is a major driver for forming uric acid stones.

Being overweight may also increase the risk of calcium oxalate stones, but the reason is not clear.

### Q: What harm do stones cause?

**A:** Passing a stone can cause excruciating pain. And in a recent study in Alberta, Canada, researchers found that people who had kidney stones were at higher risk for subsequently developing chronic kidney disease. It seems that in some

individuals, crystals get deposited in the kidney and that leads to inflammation and some damage. But it's still very early in that story.





## Oxalate on Your Plate

Never had a calcium oxalate stone? Enjoy your spinach. If you *have* had one, try other leafy greens instead. And go easy on high-oxalate foods like these.

Food	Oxalate (mg)
Spinach (½ cup, cooked)	755
Spinach (1 cup, raw)	656
Rhubarb (½ cup, cooked)	541
Almonds (1 oz., 23 nuts)	122
Miso soup (1 cup)	111
Baked potato with skin (1)	97
Beets (½ cup, cooked)	76
Navy beans (½ cup, cooked)	76
Dates (3)	72
Okra (½ cup, cooked)	57
Post Wheat'n Bran Shredded Wheat Spoon Size (1¼ cups)	53
French fries (4 oz., 1½ cups)	51
Cashews (1 oz., 18 nuts)	49
Wheat berries (½ cup, cooked)	49
Kellogg's Raisin Bran (1 cup)	46
Post Original Shredded Wheat Spoon Size (1 cup)	45
Bulgur (½ cup, cooked)	43
Lentil soup (1 cup)	39
Chocolate syrup (2 Tbs.)	38
Snickers bar (1 bar, 1.86 oz.)	38
Post Bran Flakes (¾ cup)	36
Kellogg's All-Bran Complete Wheat Flakes (¾ cup)	34
Walnuts (1 oz., 14 halves)	31
Orange (1)	29
Kellogg's Original Frosted Mini-Wheats Bite Size (1 cup)	28
Peanuts (1 oz., 32 nuts)	27
Kellogg's All-Bran Original (½ cup)	26
Peanut butter (2 Tbs.)	26
Raspberries (½ cup)	24
Potato chips (1 oz.)	21
Kellogg's Müeslix (⅔ cup)	17
Tomato sauce (½ cup)	17
Red kidney beans (½ cup, cooked)	15
Pistachios (1 oz., 49 nuts)	14
Brown rice (½ cup, cooked)	12
Pecans (1 oz., 19 halves)	10

Adapted from Oxalate Content of Foods.xls (regepi.bwh.harvard.edu/health/Oxalate/files).



### Q: Do people with stones have a higher risk of heart disease?

**A:** Yes, but the reasons are still being explored. People who form stones and those who have heart attacks or strokes may share risk factors like differences in calcium metabolism. A significant portion of people with kidney stones have high urine calcium that we can't explain.

And whatever is causing that underlying abnormality may also put those people at higher risk for, say, calcification in the blood vessels. But stone disease itself may cause inflammation. Perhaps that's what increases the risk of heart disease.

### Q: Can stones be prevented?

**A:** Yes. That's important for patients and physicians to recognize. My practice is limited to people who have kidney stones. I see people who have had 20, 50, or even more stones, and nobody had ever told them that stones could be prevented.

They were told, "It just happens" or "It's in your genes." Genes do contribute to stone disease, but the vast majority of stones can be prevented.

### Q: How?

**A:** It depends on the type of stone. We ask patients to collect their urine for 24 hours to measure what's in there, and then we make recommendations.

For the most common type, calcium oxalate, avoiding spinach is beneficial. If people have too much calcium in their urine, eating less salt might help, because if your salt intake is very high, that can lead to high calcium in the urine. And eating more fruits and vegetables can help prevent calcium oxalate stones.

### Q: And uric acid stones?

**A:** I recommend eating less meat, poultry, and fish. They contain purines that are metabolized by the body into uric acid, which is then excreted in the urine. And those foods also result in the generation of acid. Acidic urine is a strong risk factor for uric acid stones.

### Q: Are liquids critical?

**A:** It's very important for anyone who's had any kind of stone to drink enough fluid to produce at least two liters of urine a day. Drinking eight cups of liquid a day may be enough, but many patients need more. And some people also need medication.

### Q: Will any liquids do?

**A:** Some are better than others. In general, the more you drink, the higher your urine volume, but sugar-sweetened beverages are actually associated with a higher risk of stones. People shouldn't drink them anyhow, because they're linked to a higher risk of weight gain and diabetes. I recommend fluids without calories.

Some of my patients have been told to avoid alcoholic beverages. While I don't prescribe them, they may help prevent stone formation. And people are often told, "Don't drink coffee or tea because they will dehydrate you." But both decaf and caffeinated coffee and tea are associated with a lower risk of stones. ☕

## The Bottom Line

### To lower your risk of kidney disease:

- Lose (or don't gain) excess weight.
- Minimize sodium and sugar (sucrose and fructose).
- Fill half your plate with vegetables or fruit.
- Exercise for 30 to 60 minutes a day.
- If necessary, take medicine to lower your blood pressure and blood sugar.
- Eat a diet based on the OmniHeart and DASH studies (see *Nutrition Action*, Oct. 2009, cover story). Some features of a 2,000-calorie diet:
  - 2 servings of low-fat dairy (milk, yogurt, or cheese)
  - 2 servings of beans, tofu, or nuts
  - 1 small serving of fish, poultry, or lean meat

### If you've had a kidney stone, also:

- Drink at least 8 cups of water or other (not sugar-sweetened) beverages a day.
- If you take a calcium supplement, take it with food.
- Limit high-oxalate foods (see "Oxalate on Your Plate").



## B-12 & Stomach Acid

Millions of Americans take drugs to reduce their stomach acid, but that may increase their risk of a vitamin B-12 deficiency.

Researchers compared nearly 26,000 Kaiser Permanente health plan members in Northern California who were diagnosed with a vitamin B-12 deficiency to roughly 185,000 members without a deficiency. Those who took proton-pump inhibitors (PPIs) like Prilosec, Prevacid, Protonix, or Nexium for at least two years had a 65 percent higher risk of B-12 deficiency than those who didn't take PPIs. Those who took at least 1½ PPI pills a day had nearly double the risk of a deficiency. People who took histamine 2 receptor antagonists (H2RAs) like Tagamet, Zantac, Pepcid, and Axid for at least two years had a 25 percent higher risk of B-12 deficiency than those who didn't take H2RAs.

**What to do:** If you take drugs every day that suppress stomach acid, talk to your healthcare provider about getting your B-12 blood level tested. But don't panic. Only 12 percent of people who took PPIs—and 4 percent who took H2RAs—had a deficiency.

What's more, if you get vitamin B-12 in a supplement or a fortified food like some breakfast cereals, you're less likely to be deficient. (You need stomach acid to separate the natural B-12 that's bound to the protein in meat, poultry, fish, and dairy foods. That's not necessary when you get your B-12 from pills or fortified foods.)

Just keep in mind that a B-12 deficiency can cause irreversible nerve damage, and symptoms like confusion and memory loss can be confused with dementia. Other symptoms include tingling or numbness in the hands or feet, dizziness, and difficulty walking.

PPIs also raise bone fracture risk, mostly in people who take them for at least a year.

*JAMA* 310: 2435, 2013.

## Weight Loss, Nordic Style

The New Nordic Diet is a variation of the Mediterranean and DASH diets. It was developed by chefs from Noma, the Copenhagen restaurant that was named "Best Restaurant in the World" by *Restaurant* magazine in 2010, 2011, and 2012. The diet may help people lose weight...at least compared to a typical Danish diet.

Researchers assigned 181 men and women with a large waist (at least 31 inches for the women and 37 inches for the men) to the New Nordic Diet or to an average Danish diet. The New Nordic Diet was rich in seasonal, sustainable food—fruit (especially berries), vegetables (especially cabbage and root vegetables), whole grains, beans, fish, and nuts. The average Danish diet was rich in refined

grains, sweets, high-fat meats (beef, pork, and veal), high-fat cheese, and low-fiber vegetables (like lettuce, cucumber, and tomatoes). No one was told to cut calories.

Among the 147 people who completed the study, the Nordic dieters lost 10 pounds and 1½ inches of waist after six months, versus 3 pounds and ½ inch for the Danish dieters.

What's more, blood pressure dropped by 5 over 3 points more in the Nordic dieters, in part because they lost more weight.

**What to do:** Whether you prefer Nordic or Mediterranean cuisine, eat more vegetables, fruits, beans, fish, and nuts and less refined grains, sweets, and fatty meats.

*Am. J. Clin. Nutr.* 99: 35, 2014.

## Calcium & Cured Meats

Taking calcium carbonate or eating calcium-rich foods may make processed meats (like ham, sausage, bacon, and hot dogs) less likely to raise the risk of colorectal cancer.

Scientists told 18 men (aged 40 to 75) not to eat meat for a week. Then, twice a day the men were given either two slices of cooked ham (1.6 oz. each) plus a placebo or two slices of ham plus a 500-milligram calcium carbonate pill.

After four days, levels of N-nitroso compounds (which cause cancer in laboratory animals) in the men's stool were higher when they ate the ham plus the placebo than when they ate no meat. However, N-nitroso levels were no higher when the men got ham plus calcium carbonate.

**What to do:** To play it safe, eat processed meats rarely, if at all. It's too early to know if taking calcium carbonate or eating calcium-rich foods can eliminate the cancer risk. (See "Six Reasons to Eat Less Red Meat," *Nutrition Action*, June 2013, cover story.)

*Am. J. Clin. Nutr.* 98: 1255, 2013.

## Nuts & Pregnancy

If you're not allergic to nuts or peanuts, eating them while you're pregnant may lower your baby's risk of having those allergies.

Researchers studied roughly 8,200 children born between 1990 and 1994. Among mothers who were not allergic to nuts, those who reported consuming nuts the most often (at least five times a week) during—or shortly before or after—their pregnancies had a 70 percent lower risk of having a child who was later diagnosed with a nut or peanut allergy than those who consumed nuts the least often (less than once a month).

**What to do:** Don't avoid nuts or peanuts while you're pregnant in order to lower your child's risk of an allergy. Exposure to nuts *in utero* may protect against allergies. 🌱



*JAMA Pediatr.* 2013. doi:10.1001/jamapediatrics.2013.4139.



# SURVIVING THE SUPERMARKET

**F**irst things first: most food is safe to eat most of the time. There's no need to panic that your next bite of lettuce or ground beef is going to give you food poisoning.

Still, one out of six Americans will get sick from eating tainted food this year. And while most people recover fully, food poisoning can have long-term—and in some cases deadly—consequences, especially if your immune system has been weakened by illness or pregnancy.

Here are some supermarket tips to help keep you from getting sick. They're adapted from our upcoming food-safety guide, "From Supermarket to Leftovers."

BY SARAH KLEIN

## Seafood

Before buying, examine the fish for freshness clues. The moister, the fresher. As time goes on, fish starts to look dull or opaque. Next it starts to look dry, and later it can develop dark spots and uneven color. If the flesh has gaps, the fish is old.

Our strategy: ask "What's the freshest fish today?" not "What came in to the store today?" Some fish stay on the boat for days or weeks before making it to market.

Make the seafood counter your last stop before checkout, and get your fish into the refrigerator or freezer as soon as you get home.

## Loyalty Cards

If your supermarket chain offers a loyalty card, get one. Some stores use them to contact shoppers who have bought a food that is recalled for contamination.

## Meat

**Ground beef.** It's the most dangerous meat in the market because it may contain bits from many animals, any one of which could be harboring harmful bacteria. Also, grinding can spread *E. coli* that's on the surface to the interior. (That's why asking the butcher to grind a steak is no guarantee of safety.) If you eat ground beef, cook it thoroughly.

**Steak.** These meats pose a higher risk:

■ **Mechanically (or needle) tenderized steaks** have been poked by tiny blades or needles to make them more tender. Any bugs on the surface can get pushed inside, where they can survive if the steak is cooked only until rare or medium-rare. Labels don't have to say that the steak was tenderized, and tenderized cuts look the same as others. Ask the butcher.

■ **Marinade-injected meat** has been infused with glorified saltwater, often with added seasonings. The process can also push bugs inside the meat. Most labels use some euphemism like "flavored" or "enhanced."

Another danger: meat from animals that were fed antibiotics may harbor antibiotic-resistant microbes. To avoid them, look for "USDA Certified Organic" on the label, or a claim like "No antibiotics administered" that's next to a "USDA process verified" logo.





## Poultry

**Whole.** Chickens and chicken parts, even “100% natural” ones, can be injected with a flavored saltwater solution. Not only do you get more salt, you pay chicken prices for water. Your clue: the word “enhanced” on the label.

**Ground.** As much as 15 or 20 percent of ground turkey or chicken could be skin and fat. And the skin, with its pores and folds, is likely to be the most contaminated part of the bird. Look for “chicken *meat*” or “turkey *meat*” in the ingredients. Just “chicken” or “turkey” could mean added skin.

To avoid meat from chickens that were fed antibiotics, look for “USDA Certified Organic” on the label, or a claim like “No antibiotics administered” that’s next to a “USDA process verified” logo.

## Deli Meats

The bug to worry about in deli meat, *Listeria monocytogenes*, may originally come from meat, but it can also live—and thrive—on plastic, on metal, and in water. And once it has taken up residence in a slicer or a meat or deli case, it can be almost impossible to clean out.

*Listeria* is especially dangerous if your immune system has been weakened—by, say, diabetes or chemotherapy. And it can cause miscarriage or stillbirth in pregnant women. To protect yourself:

- **Gloves.** Make sure that the deli clerk snaps on a new pair after handling each chunk of meat or cheese.
- **Machinery.** Make sure that sliced meat is placed on a fresh sheet of paper, and that the meat and paper are transferred to the scale. Buy cheese only from deli departments that use separate slicers for meat and cheese.
- **Packaging.** Try prepackaged sliced meats, which are less likely to be contaminated.
- **Time.** Don’t keep fresh-sliced deli meat for more than three days. Ditto for prepackaged deli meats once you open them.

## Milk & Eggs

Want to avoid residues of synthetic growth hormones? Buy organic milk. To protect yourself against nasty bacteria like *Salmonella* and *E. coli*, never drink unpasteurized (raw) milk, even if you know the farmer.

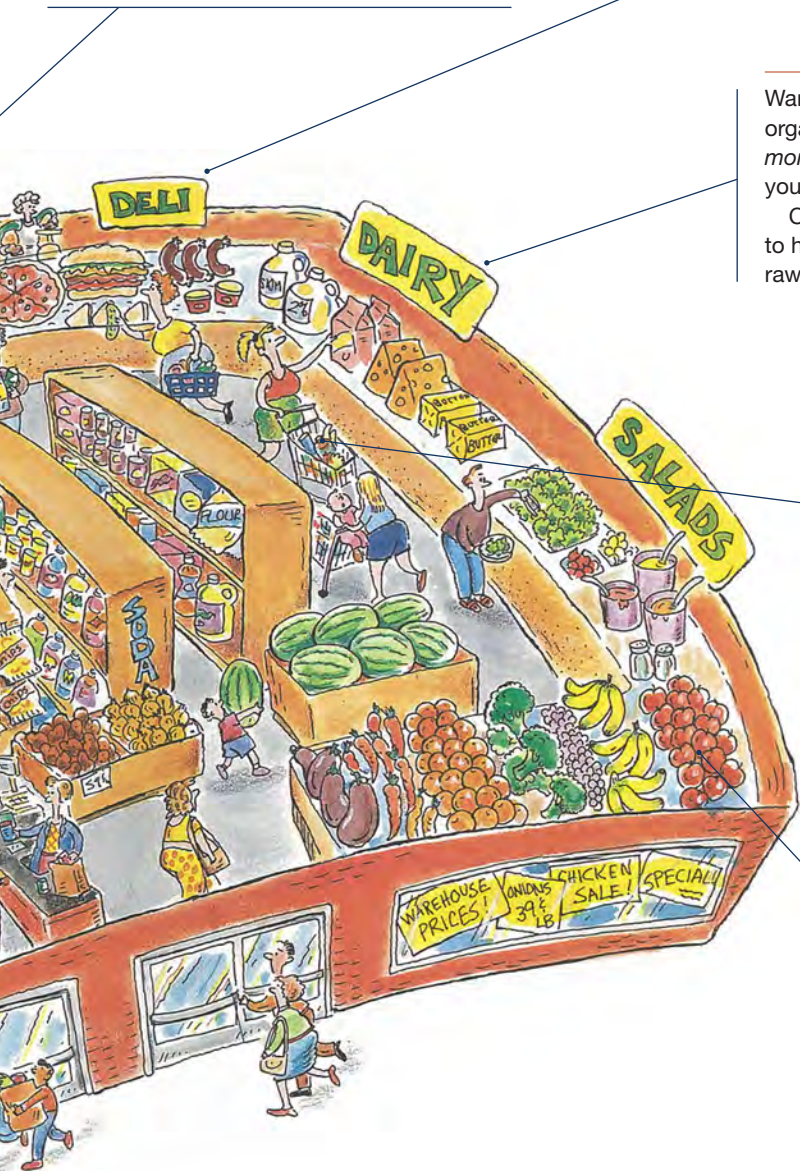
Cage-free and organic eggs are no less likely than other eggs to harbor *Salmonella* or other bugs. Never eat undercooked or raw eggs or cookie batter made with raw eggs.

## Handling

Grab some plastic bags. When you get to the meat, poultry, and seafood, use each bag like a glove to pick up and wrap packages. Keep raw meat and seafood at the bottom of your shopping cart, separate from the produce. At the checkout counter, use a paper bag for meats and seafood (recycle it when you get home) and a washable, reusable cloth bag for other groceries.

## Produce

- **“Certified Organic.”** There are plenty of reasons to buy organic produce, but it’s just as likely to be contaminated as any other produce, domestic or imported. So are locally grown fruits and vegetables.
- **Bagged salads.** A single head of contaminated lettuce can contribute leaves to dozens of bags of salad mix or contaminate the water that’s used to clean all the salads that are bagged in a day. If you have a weakened immune system or just want to play it safe, go for intact heads or hearts.  
If you buy bagged greens that come washed, don’t rewash them; you may expose them to potentially harmful bacteria that could be lurking in your sink. 🍷





# No Idle Roast

BY KATE SHERWOOD

Roast veggies, make dressing, toss with salad greens, smack lips. It doesn't get much simpler. When we roast (or grill) vegetables, we throw on plenty of extras. That way, there's always some in the fridge to heat up and toss with pasta or bulgur...or to just munch on as is. 🍴

Got a question or suggestion? Write to Kate at [healthycook@cspinet.org](mailto:healthycook@cspinet.org).

## Roasted Carrot & Cauliflower Salad

Serves: 4 | Total Time: 30 minutes



- 3 cups chopped carrots
- 3 cups small cauliflower florets
- 1 Tbs. + 2 Tbs. extra-virgin olive oil
- 2 Tbs. 0% greek yogurt
- 2 tsp. red wine vinegar
- 1 clove garlic, finely minced
- ¼ tsp. kosher salt
- 6 cups salad greens
- ½ 15 oz. can no-salt-added chickpeas, drained

Add a handful of fresh herbs—try dill, mint, and cilantro—to your salad greens and watch the flavor blossom.

Preheat the oven to 450°F. • Toss the carrots and cauliflower with 1 Tbs. of the olive oil on a rimmed baking sheet. Roast until lightly browned in spots, 15-20 minutes. Remove and allow to cool. • In a large bowl, whisk the yogurt, vinegar, garlic, and up to ¼ tsp. of salt with the remaining 2 Tbs. of olive oil. • Toss the salad greens and chickpeas with the dressing. Top with the carrots and cauliflower.

Per Serving (3 cups): calories 230 | sodium 250 mg | total fat 11 g  
sat fat 1.5 g | carbs 28 g | protein 8 g | fiber 9 g

## Roasted Peppers & Scallions Salad

Serves: 4 | Total Time: 20 minutes



- 2 sweet bell peppers, chopped
- 2 bunches scallions, white and pale-green parts only, chopped
- 1 Tbs. + 1 Tbs. extra-virgin olive oil
- 1 Tbs. tahini
- 1 Tbs. fresh lemon juice
- 1 small clove garlic, finely minced
- 1 Tbs. reduced-sodium soy sauce
- 6 cups salad greens

The tahini (sesame paste) dressing makes a great topping for steamed vegetables.

Preheat the oven to 450°F. • Toss the peppers and scallions with 1 Tbs. of the olive oil on a rimmed baking sheet. Roast until lightly browned in spots, 12-15 minutes. Remove and allow to cool. • In a large bowl, whisk the tahini, lemon juice, garlic, and soy sauce with the remaining 1 Tbs. of olive oil. • Toss the salad greens with the dressing. Top with the peppers and scallions.

Per Serving (2 cups): calories 150 | sodium 170 mg | total fat 9 g  
sat fat 1.5 g | carbs 15 g | protein 5 g | fiber 6 g

## Roasted Broccoli & Butternut Salad

Serves: 4 | Total Time: 20 minutes



- 4 cups small broccoli florets
- 2 cups cubed butternut squash
- 1 Tbs. + 1 Tbs. canola oil
- 1 Tbs. reduced-sodium soy sauce
- 1 Tbs. balsamic vinegar
- 2 tsp. dark (toasted) sesame oil
- 1 tsp. peanut butter
- 1 tsp. grated ginger
- 6 cups salad greens

Cut the butternut squash into small cubes (less than ½"). They'll roast more quickly that way.

Preheat the oven to 450°F. • Toss the broccoli and butternut squash with 1 Tbs. of the canola oil on a rimmed baking sheet. Roast until lightly browned in spots, 12-15 minutes. Remove and allow to cool. • In a large bowl, whisk the soy sauce, vinegar, sesame oil, peanut butter, and ginger with the remaining 1 Tbs. of canola oil. • Toss the salad greens with the dressing. Top with the broccoli and butternut squash.

Per Serving (2 cups): calories 160 | sodium 180 mg | total fat 10 g  
sat fat 1 g | carbs 16 g | protein 5 g | fiber 6 g



# COLD FRONT

## Can you trust “immunity” claims?

BY DAVID SCHARDT

Celestial Seasonings teas do it. So do V8 V-Fusion fruit & vegetable juice, One A Day multivitamins, Ensure nutrition shakes, and hundreds of other products. They claim to “support” immunity or immune function. Does that make people who eat or take them less likely to get a cold or the flu or another infection? Hardly.



“Help fight free radicals and support your immune system,” says Celestial Seasonings about the added

vitamins A and C in its Antioxidant Green Tea.

Fuze juice has extra vitamins C and E—each a “powerful antioxidant” that “helps support the body’s immune system,” according to the label.

And Vitaminwater Defense, which is mostly sugar and water with vitamin C and zinc added, can “help support a healthy immune system.”

Yet in clinical trials, people who take vitamin C or zinc—or other vitamins or minerals—almost never get fewer infections like colds or the flu than those who take a placebo.

So why all the claims?

Blame it on the Food and Drug Administration. In 2000, the FDA declared that “supports,” “maintains,” and “enhances immunity” are claims that don’t promise to help “prevent or lessen disease,” so they don’t need to be backed by strong evidence.

Of course, preventing disease is exactly why someone would be attracted to a supplement that “supports your immune system.”

“Consumers interpret claims to support



immunity as providing better protection against colds and others diseases, whether it’s true or not,” says Simin Nikbin Meydani, director of the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University in Boston.



And thanks to the FDA’s decision, companies can make claims simply because a nutrient plays *some* role in immunity.

Yet “every nutrient is essential for the functioning of our

immune system,” notes Susan Percival of the University of Florida. And dozens of studies show that giving people vitamin or mineral supplements can raise or lower the levels of one or more of the many components of the immune system.

“But showing a change in one part of the immune system doesn’t tell us what the net effect on actual illness will be,” explains Maria Sundaram, who studies vitamin D and immunity at the Marshfield Clinic Research Foundation in Wisconsin.

“Whether these immune system changes translate into less illness is the million dollar question.”

And it’s one that researchers seldom tackle. When they do, the answer is usually no. Taking extra vitamins or minerals doesn’t seem to be any better than a placebo at protecting most people from getting sick.

Here’s what scientists have found about some of the key nutrients or foods that claim to “support” immunity.

## VITAMIN E

“Very promising.” That’s how the Council for Responsible Nutrition, the largest trade association of supplement makers, describes the impact of vitamin E on colds and other upper respiratory tract infections.



If you’re healthy, it’s not likely to help.

Really?

In three good studies, people who took 15 IU to 74 IU of vitamin E as part of a multivitamin every day for an average of 15 months were no less likely to get a cold or the flu than similar people who took a placebo.<sup>1-3</sup> (The Daily Value, or DV, for vitamin E is 30 IU.)

And much larger doses don’t seem to help older people living on their own. In a study of 652 people aged 60 or older, those who got 300 IU of vitamin E every day for 15 months had no fewer infections than those who received a placebo.<sup>3</sup>

However, in a study of 450 Boston-area nursing home residents (average age: 85), those who were given 200 IU a day of vitamin E for one year had 20 percent fewer colds than those who were given a placebo.<sup>4</sup>

While that’s only a modest benefit, “colds in older people are a more serious problem than in younger people,” notes lead author Simin Nikbin Meydani.

<sup>1</sup> *J. Am. Geriatr. Soc.* 55: 35, 2007.

<sup>2</sup> *BMJ* 331: 324, 2005.

<sup>3</sup> *JAMA* 288: 715, 2002.

<sup>4</sup> *JAMA* 292: 828, 2004.





Don't count on it to prevent colds.

## ZINC

Zinc is a “flu-fighter” that “keeps your immune system in working order,” AARP told its members last winter.

But taking zinc didn't prevent colds or other respiratory infections in five studies that gave 10 mg to 20 mg of zinc—alone or as part of a multivitamin—or a placebo to some 2,560 mostly older adults every day for seven months to two years.<sup>1-5</sup> (The

DV for zinc is 15 mg.)

In a sixth trial, though, the 24 adults at a senior center in Detroit who were given 45 mg of zinc every day for a year were 67 percent less likely to get sick than the 25 adults who got a placebo.<sup>6</sup>

Why the discrepancy? “Many of the elderly were zinc deficient,” says researcher Ananda Prasad of Wayne State University in Detroit. “We gave them more zinc and had them take it between meals to increase its absorption.” But Prasad's study has yet to be repeated.

Zinc lozenges are more likely to help. In some studies, sucking on at least 75 mg of zinc from lozenges every day at the first sign of a cold cut its duration—though not its severity—by up to two days.<sup>7</sup>

<sup>1</sup> *J. Am. Geriatr. Soc.* 55: 35, 2007.

<sup>2</sup> *BMJ* 331: 324, 2005.

<sup>3</sup> *JAMA* 288: 715, 2002.

<sup>4</sup> *Complement. Ther. Clin. Pract.* 15: 91, 2009.

<sup>5</sup> *Arch. Intern. Med.* 159: 748, 1999.

<sup>6</sup> *Am. J. Clin. Nutr.* 85: 837, 2007.

<sup>7</sup> *Cochrane Database Syst. Rev.* 6: CD001364, 2013.

## VITAMIN D

### Why this Vitamin is Better than ANY Vaccine and Improves Your Immune System by 3-5 Times

—mercola.com

“Optimizing your vitamin D levels is one crucial component” of a robust immune system, says Joseph Mercola on his popular Web site. Too bad people who take vitamin D are no less likely to get sick.

Since 2012, three trials in the United States and Western Europe have given 1,650 people either 1,000 IU to 6,800 IU of vitamin D or a placebo every day for up to 18 months.<sup>1-3</sup> (The DV is 400 IU.) In none of the studies did the vitamin D takers report any fewer respiratory infections. And in the two studies that looked, the vitamin takers' symptoms were no milder and their illnesses were no shorter after they *did* get sick.

In the most recent study, “vitamin D supplementation conferred no significant protection against upper respiratory infections, including during two winters,” says Judy Rees of the Dartmouth-Hitchcock Medical Center in Lebanon, New Hampshire.<sup>3</sup>

Two large trials are now testing vitamin D on colds and the flu (and other outcomes). But so far, the evidence is not convincing.

<sup>1</sup> *Scand. J. Infect. Dis.* 44: 126, 2012.

<sup>2</sup> *JAMA* 308: 1333, 2012.

<sup>3</sup> *Clin. Infect. Dis.* 57: 1384, 2013.

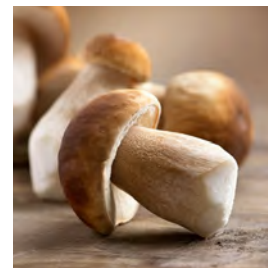
## MUSHROOMS

“One of the best foods for keeping your immunity up during this busy, colder time of year is the tasty mushroom,” writes Mao Shing Ni, one of the “Oz Experts” on [blog.doctoroz.com](http://blog.doctoroz.com).

“We think that eating mushrooms is beneficial for immunity, but that's based mostly on animal experiments,” notes Margherita Cantorna, professor of molecular immunology at Penn State.

“The few studies in humans have seen certain immune system proteins change a little bit after eating mushrooms,” she adds.<sup>1</sup> “But we don't know whether that protects against illness.”

<sup>1</sup> *J. Nutr.* 144: 98, 2014.



Sauté your way to better immunity?

## VITAMIN A

“Vitamin A supplementation has helped make measles vaccines more effective for children with vitamin A deficiencies in developing countries,” says nutritional immunologist Simin Nikbin Meydani.

“But vitamin A deficiency is not a problem for adults in the developed world.”

That might explain the results of three trials in which a total of roughly 2,150 men and women in Canada and Western Europe took a placebo or 1,333 IU to 2,000 IU of vitamin A as part of a multivitamin every day. (The DV is 5,000 IU.) Over the next 12 to 18 months, the people in both groups were equally likely to get sick.<sup>1-3</sup> The multi in two of the studies also contained 2,000 IU to 26,000 IU of vitamin A from beta-carotene.

In a fourth trial, when researchers gave 180 elderly French nursing home residents a placebo or 10,000 IU of vitamin A as beta-carotene every day for two years, the vitamin takers got just as many respiratory or urogenital infections as the placebo takers.<sup>4</sup>

<sup>1</sup> *J. Am. Geriatr. Soc.* 55: 35, 2007.

<sup>2</sup> *BMJ* 331: 324, 2005.

<sup>3</sup> *JAMA* 288: 715, 2002.

<sup>4</sup> *Arch. Intern. Med.* 159: 748, 1999.

“Vitamin A: Helps to keep eyes and skin healthy and helps to protect against infections”

—V-Fusion Web site



“Protect against infections” is an illegal claim.



## What Works

Here are your best bets for warding off infections.

■ **Keep your hands clean.** It's "one of the most important steps we can take to avoid getting sick and spreading germs to others," says the Centers for Disease Control and Prevention (CDC). Wash with soap under running water (warm or cold) for at least 20 seconds, long enough to hum the "Happy Birthday" song from beginning to end twice.

If soap and water aren't available, use a hand sanitizer that contains at least 60 percent alcohol. And skip the antibacterial soaps and detergents that contain triclosan. The Food and Drug Administration says that it "does not have evidence" that they "provide any benefit over washing with regular soap and water."

What's more, says the FDA, in animal studies triclosan can disrupt normal development of the reproductive system, and it may be making bacteria resistant to antibiotics. That's why the agency has announced plans to remove triclosan from soaps and detergents.

■ **Get a flu shot.** You'll reduce your risk of the flu by about 60 percent. The CDC recommends that adults 65 and older also get the pneumonia vaccine, which can cut the chances of getting pneumonia by 50 to 85 percent.

■ **Get enough sleep.** Men and women who slept less than seven hours a night were three times more likely to catch a cold than those who slept at least eight hours a night.<sup>1</sup>

■ **Try to stay upbeat.** Men and women who reported feeling happy and cheerful were one-third less likely to get sick after researchers exposed them to a cold virus than those who reported feeling sad or angry.<sup>2</sup> They also had milder symptoms when they did get ill.

■ **Do what you can to minimize long-term stress.** People who had been dealing with marital problems, conflicts with friends, or difficulties at work for at least three months were roughly three times more likely to get sick after researchers exposed them to a cold virus than those who weren't experiencing those stresses.<sup>3</sup>

<sup>1</sup> *Arch. Intern. Med.* 169: 62, 2009.

<sup>2</sup> *Psychosom. Med.* 68: 809, 2006.

<sup>3</sup> *Health Psychol.* 17: 214, 1998.

## VITAMIN C



**Taking C before you get sick may shorten a cold.**

Just because companies make immunity claims more often about vitamin C than about any other vitamin doesn't make what they say more likely to be true.

Take the 2,150 people who got either a placebo or 60 mg (the DV) to 80 mg a day of vitamin C as part of a multivitamin. After an average of 15 months, those who were taking

the multi got no fewer colds or respiratory infections.<sup>1-3</sup>

What about megadoses? "Large amounts of vitamin C do not prevent colds," says the University of Florida's Susan Percival, "but they can shorten the duration if they're taken every day before getting one."

In 24 trials on nearly 11,000 adults, those who took about 1,000 mg of vitamin C every day for an average of three months had no fewer colds than those who took a placebo. But when the C takers got a cold, it was 8 percent shorter—about 12 hours less for a week-long illness.<sup>4</sup>

The catch: you have to be taking vitamin C *before* the first sniffle. In seven studies, taking roughly 3,000 mg a day *at the first sign* of a cold didn't stop it, shorten it, or lessen its severity.

The one group that may get fewer colds from megadoses of C: people undergoing brief periods of severe physical exertion. In studies of South African ultramarathoners, Canadian military recruits on sub-Arctic winter exercise, and children attending ski school in the Alps, those who took an average of 670 mg of vitamin C every day were half as likely to later catch a cold as those who got a placebo.<sup>4</sup>

<sup>1</sup> *J. Am. Geriatr. Soc.* 55: 35, 2007.

<sup>2</sup> *BMJ* 331: 324, 2005.

<sup>3</sup> *JAMA* 288: 715, 2002.

<sup>4</sup> *Cochrane Database Syst. Rev.* 1: CD000980, 2013.

## MULTIVITAMINS



**A multi won't keep you from getting sick.**

The vitamins and selenium in One A Day multivitamins "support" immunity, says Bayer, while the antioxidant vitamins in Centrum Silver "help support the immune system," says Pfizer.

Has Bayer or Pfizer tested its multivitamins to see if all that support keeps customers from getting sick?

Nope. Perhaps that's because the companies are familiar with the results of three good studies conducted since

2002 in Canada, the Netherlands, and Scotland on a total of roughly 2,150 middle-aged and older men and women.<sup>1-3</sup>

Those who were given a standard daily multivitamin—one that supplied the Daily Value (DV) for most vitamins and minerals—for at least a year got sick just as often as those who were given a placebo. And in the two studies that looked, the multi takers were as likely to get just as sick, and to remain sick for just as long, as the placebo takers.<sup>2,3</sup>

"It's possible that any benefit of taking a multivitamin would be dwarfed by other factors that influence whether or not someone gets sick, such as age, general health, or use of medications," says researcher Maria Sundaram. 🍌

<sup>1</sup> *J. Am. Geriatr. Soc.* 55: 35, 2007.

<sup>2</sup> *BMJ* 331: 324, 2005.

<sup>3</sup> *JAMA* 288: 715, 2002.

# GOOD SNACK BAD SNACK

## Treat...or trick?

BY JAYNE HURLEY &amp; BONNIE LIEBMAN

Looking for a snack? Healthwise, nothing beats a crisp bite of apple, a juicy mouthful of orange, a crunchy baby carrot, or any other fresh fruit or vegetable. Nothing.

But sometimes you're in the mood for a new treat. Here are some healthy recent arrivals (p. 14)...and some not-so-healthy ones (p. 15).

The information for this article was compiled by Paige Einstein and Lindsay Moyer.



### Bean Good

"One serving has as much protein as 23 almonds, as much fiber as 2 cups of broccoli and they're 100% free of nuts, soy & gluten," boasts **The Good Bean All Natural Chickpea Snacks** bag.

What a concept! The seven flavors include Cracked Pepper, Smoky Chili & Lime, and Mesquite BBQ. A 1 oz. serving (roughly ¼ cup) clocks in at 120 calories and 190 milligrams of sodium. Exception: the Chocolate and the Sweet Cinnamon have 100 mg of sodium (and about a teaspoon of sugar). All deliver 5 grams of protein, 5 grams of fiber, and 8 percent of a day's iron. Best of all, you're eating nothing but flavored roasted chickpeas.

**Saffron Road Crunchy Chickpeas** are equally delish, but have a bit more sodium (190 to 280 mg).

### Double Dip

Some people don't snack on veggies because it's not enough to tide them over to the next meal.

Enter **Sabra Classic Hummus**, which comes in a four-pack of handy 2 oz. cups. Each mini-cup has 150 calories and 260 milligrams of sodium, plus 4 grams of fiber, 4 grams of protein, and 6 percent of a day's iron. The rich, flavorful dip is largely made from ground chickpeas blended with tahini (sesame paste), soybean oil, and garlic. Grab a bag of baby carrots and you're good to go.

Then there's **Wholly Guacamole Minis**. Unlike filler-heavy guacamoles, the 100-calorie cups are mostly seasoned mashed avocado. Each (2 oz.) Classic or Spicy mini-cup has 170 mg of sodium (the Avocado Ranch hits 290 mg) and just 1 gram of protein. But the 3 grams of fiber give them (along with hummus) an edge over most other dips or dressings for veggies.

To skip the sodium entirely, see if you can find the company's **Wholly Avocado Minis**. Their only ingredient: avocado.



### Edayummy

Soybeans are special. When it comes to protein, they trounce all other beans. That's what makes **Seapoint Farms Dry Roasted Edamame** (green soybeans) an excellent snack to munch on or sprinkle on your salad.

One serving (¼ cup) has 14 grams of protein, along with 7 or 8 grams of fiber and 10 percent of a day's iron, all for just 130 calories and around 150 milligrams of sodium.

You won't find many vegetarian snacks with 14 grams of protein. (A quarter cup of nuts typically has 5 to 7 grams.) Choose from Lightly Salted or—if you live dangerously—Spicy Wasabi.

**Cruncha Ma-Me** freeze-dried edamame delivers more sodium—160 to 280 mg—in its smaller (0.7 oz.) bag. True to its name, **Cruncha Ma-Me's Naked** flavor is sodium-free.



### Holy Kale

**Brad's Raw Crunchy Kale** starts out as fresh organic kale leaves. "We then batter it up with flavorful, natural ingredients including raw cashews, sunflower seeds, & spices to give the kale that extra punch of flavor," says Brad's Web site.

"The product is then dehydrated below 115 degrees (retaining active enzymes) to transform it into a light, crunchy and delectable snack food."

Kale's nutrients are legend. It's loaded with vitamins A, C, and K and calcium, as well as lutein (which may reduce the risk of cataracts).

Unlike fresh kale, though, **Crunchy Kale** isn't essentially calorie-free. Each 1 oz. serving has around 120 calories (and 60 to 150 milligrams of sodium). Then again, it is kale. So if you can afford the price, enjoy!







## Popcon

“PopCorners are the delicious new snack with the snap of a chip and the same wholesome goodness as popcorn,” says the bag. Not really.

A 1 oz. serving of popcorn has 4 grams of fiber.

An ounce of PopCorners has less than 1 gram. That’s

because PopCorners chips (“the new shape of popcorn”) are mostly ground not-whole-grain yellow corn plus sunflower oil.

And don’t expect anything resembling popcorn from Kellogg’s Special K Popcorn Chips either. Not when they’re made from mostly ground corn and oil.

## Coconot

“Our toasted coconut chips are a delicious snack that provides loads of energy,” says the Dang Toasted Coconut Chips Web site.

Don’t get too excited. “Energy” on a food label just means “calories.” And if you down the whole 1.4 oz. bag (just three-quarters of a cup) of the regular or Caramel Sea Salt variety, you’ll get around 230 of them, plus 14 grams of saturated fat (three-quarters of a day’s worth), 3 teaspoons of added sugar, and 230 milligrams of sodium. (The label lists half a bag as a serving. Pretty sneaky.)

Why snack on coconut chips when almonds, peanuts, sunflower seeds, and other nuts typically have more vitamin E, zinc, magnesium, copper, protein, and the unsaturated fats that protect the heart? And nuts taste great (especially toasted), with no need for added salt or sugar.



## Gimme None

“Candy Unjunked,” say the Unreal bags. Yes, Unreal’s M&M’s clones (The Gimme Ones) are colored with purple cabbage juice, beetroot juice, and annatto and turmeric extracts instead of food dyes.

That trumps M&M’s. But it’s still candy (plus highly processed fiber). A 1½ oz. serving has 190 calories and 6 grams of saturated fat plus 4½ teaspoons of sugar. That’s 1½ teaspoons less than M&M’s, but it doesn’t make Unreal good for you.

Ditto for The Smooth One (think Milky Way), The Loaded One (Snickers), The

Nutty Ones (Peanut M&M’s), and The Double One (Reese’s Peanut Butter Cups). They’re lower in sugar but still candy.

Then there’s Justin’s All-Natural Peanut bar (milk chocolate, peanuts, caramel, and nougat).

“When hunger strikes, the last thing I want to do is read through a list of unpronounceable ingredients,” says the label. “That’s why I’ve created a candy bar you can feel good about eating.” Sorry, Justin. There’s nothing good about a snack with 270 calories, 6 grams of sat



fat, and 5 teaspoons of sugar.

The trickiest: thinkThin bars. The Divine German Chocolate Coconut squeezes 170 calories into maybe ten bites. How do 6 grams of protein, 8 grams of (highly processed) fiber, 7 grams of sat fat, and 2½ tea-

poons of sugar melt away pounds? And the Chunky Peanut Butter High Protein Bar replaces sugar with sugar alcohols, but still packs 240 calories into not much food. Maybe the bars just help you think of yourself as thin.

## Giant Gimmick

“Made with Real Vegetables,” says the Green Giant Garden Ranch Roasted Veggie Tortilla Chips bag. “The deliciousness of garden vegetables and ranch flavor are paired to create a truly flavorful snacking experience.”

Since when does a snack that’s made mostly of corn (even if it’s whole grain) and oil deserve to talk about “garden vegetables”? Turns out the chips have more ground corn, sunflower oil, and buttermilk powder than dried bell peppers, and more evaporated cane syrup (sugar) and salt than dried broccoli, tomatoes, or carrots.

Not to be outdone, Good Health Natural Foods Veggie Chips have more potato flour and oil than tomato and spinach purée—their main (non-potato) veggies.



## Salt Jerky

Beef jerky’s had a makeover. Brands like Krave have dumped the nitrites (that *could be* better, if their celery juice has less natural nitrites). They’ve also switched from sugar to evaporated cane syrup (that’s *no* better).

Jerky’s are high in protein since they’re mostly beef, turkey, or pork. But they’re also high in sodium—250 to 550 milligrams in 1 oz. (about a third of a bag) of Krave, for example. Oberto All Natural Jerkys pack 390 to 600 mg of sodium per ounce.

Ruby Bay King Salmon Jerky, with 810 to 960 mg of sodium—half a day’s max—in a 1.25 oz. bag, is even worse. Even Primal Strips vegan jerkys—with their seitan, shiitake mushrooms, or isolated soy protein—squeeze about 350 mg into each strip.

Want salmon? Try Trader Joe’s Wild Salmon Jerky (290 mg of sodium per ounce). Otherwise, pick up Whole Foods 365 Organic or Trader Joe’s Turkey Jerky (270 mg per ounce). 🍌



## RIGHT STUFF

### GOLD STARBUCKS



"This is one substantial (and quite satisfying) serving of tossed roasted butternut squash, beets, kale, red cabbage, steamed broccoli florets and garden peas with lemon tahini dressing."

The **Starbucks** Web site is being modest in describing its **Hearty Veggie & Brown Rice Salad Bowl**.

It's not just substantial (it's a main dish, not a side). It's not just satisfying. It's scrumptious...and it's got numbers most fast-food salads can only dream about.

Before your nonfat cappuccino gets cold, you'll have downed 8 grams of fiber and 10 grams of protein, plus almost two days' worth of vitamin A, more than a day's vitamin C, a quarter of a day's iron, and 15 percent of a day's calcium.

You'll also get 430 calories and 640 milligrams of sodium. But if you use half the dressing—which is plenty—the sodium drops to 400 mg (and the calories to 340).

Want more protein? The **Zesty Chicken & Black Bean Salad Bowl** packs 19 grams. Keeping the chicken, beans, and spring greens company are roasted corn, quinoa, tomato, jicama, and feta cheese. Use half the mild chile vinaigrette and you'll end up with 300 calories and 610 mg of sodium (the full monty has an excessive 850 mg).

If you're a caesar salad fan, the kale in the **Chicken & Greens Caesar Salad Bowl** makes it better than most, though even with half the dressing, it's got 660 mg of sodium (and a way-too-high 910 mg with the full packet).

Great work on the salads, Starbucks. Now just please lighten up on the salt.

[starbucks.com](http://starbucks.com) — (800) 782-7282

## FOOD PORN

### GO FOR LESSA

"Sometimes even I don't have time to make dinner," says Ina Garten, host of the "Barefoot Contessa" cooking show, in the TV commercial. "So I've created **Barefoot Contessa sauté dinners for two.**" How considerate!

Take the **Pasta Carbonara with Pancetta**. It takes only 14 minutes to whip up the "linguine pasta in a creamy Parmesan sauce with spicy pancetta and sweet peas."

Add 15 minutes to eat, and voilà! In just half an hour, you've cooked, chewed, and swallowed 720 calories, largely from a cream-based sauce and a pile of white-flour pasta. It'll take a tad longer than that to work it all off.

And when your arteries will finish coping with more than a day's saturated fat (24 grams) and half a day's sodium (1,280 milligrams) is anyone's guess. That's if you eat only half the bag and ignore Ina's advice to pair it with "tiramisu for dessert."

"Nothing tastes better than a freshly cooked dinner made with great ingredients," says the package. Great ingredients like the sodium nitrate and sodium nitrite in the pancetta? Or the carrageenan, mono- and diglycerides, polysorbate 80, modified corn starch, and disodium phosphate in the sauce?

The Contessa's **Penne Pasta with Five Cheeses** ("grown-up Mac & Cheese") is in the same ballpark—660 calories and 23 grams of sat fat, with 1,000 mg of sodium.

It's so kind of Ina to worry that we won't have time to make dinner. But we'll manage just fine, thanks.

[barefoot.contessa.com](http://barefoot.contessa.com) — (888) 832-8000



## dish OF THE MONTH



### White Bean Bruschetta

Whisk together 2 Tbs. lemon juice, 1 clove minced garlic, 3 Tbs. extra-virgin olive oil, and ¼ tsp. kosher salt. Toss with ¼ cup chopped flat-leaf parsley and 1 drained and rinsed 15 oz. can no-salt-added black-eyed peas. Season with black pepper and more lemon juice to taste. Spoon onto toasted whole-grain baguette slices.

## quick tip

Worried by reports of high levels of arsenic in rice? Cook it like pasta—boiled in plenty of extra water. When the rice is done to your liking (keep tasting it), drain and serve. Out with the water goes roughly half the arsenic.