SEEINC THROUGH THE NEWS



Does cooking make your oil **DANGEROUS?**

Sitting & Belly Fat

The hunt for a good night's sleep

MEMO

Tracking Trans



t's no secret why the Lenter for Science in the Public Interest, Nutrition Action's publisher, has spent the last 20 years fighting to get trans fat out of the food supply.

Partially hydrogenated oil—the source of arti-

ficial trans fat—has been around for more than a century. But it wasn't until the early 1990s that studies produced unequivocal evidence linking it to heart disease in humans.

Not only does just a small amount of trans fat raise LDL ("bad") cholesterol,

it also lowers HDL ("good") cholesterol.

In 1994, we formally urged the Food and Drug Administration to list trans fat on Nutrition Facts labels, and a decade later. we asked the FDA to ban partially hydrogenated oil entirely.



Good riddance. Cutting trans saved lives.

Meanwhile, we used lab tests and lawsuits to push restaurants to switch to trans-free cooking oils.

Our work has borne fruit. In 2006, trans fat was added to Nutrition Facts labels, and in 2015, the FDA finalized a ban on partially hydrogenated oil that goes into effect this June. As a result, most artificial trans fat is already out of the food supply.

All well and good. But has getting rid of trans fat made people healthier? By all accounts, yes:

■ Denmark. In 2004, Denmark became the first country to virtually eliminate artificial trans fat. During the first three years following the ban, researchers estimated, heart disease deaths dropped by 4.3 percent more than they would have with no ban.

(Had the researchers waited longer, they might have seen an even greater benefit. But in 2007, Denmark enacted anti-smoking laws. Since smoking raises heart disease risk, it would have become much harder to tease out the trans ban's impact on death rates after the smoking restrictions were in place.)

A 4.3 percent reduction might sound modest, but it meant that roughly 770 fewer Danes died of heart disease per year. That's more than the number of Danes killed in traffic accidents each year.

■ New York City. In 2007, New York became the first major U.S. city to ban more than trivial amounts of artificial trans fat in restaurants. Some, but not all, counties in New York State soon followed suit.

Within three years, according to a 2017

study, hospital admissions for heart attacks and strokes had dropped by 6.2 percent more in counties with bans than in counties without bans.

That would have translated into some 87,500 fewer heart attacks and strokes nationwide over those

three years...just from getting trans out of restaurants.

An earlier study credited the New York trans bans with a 4.5 percent reduction in deaths from heart disease, which could translate into roughly 40,200 fewer deaths nationwide per year.

Despite the caveats—the studies weren't designed to show cause and effect, something other than the trans bans could have explained the differences between New York counties, and what happens in New York State may not reflect what would happen in, say, Iowa—it looks like getting rid of trans has been a rousing public health success.

It seems pretty clear that Americans will reap the benefits for years to come.

Peter G. Lurie, MD, MPH, President Center for Science in the Public Interest

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SEEINC THROUGH THE NEWS

BY BONNIE LIEBMAN

Another day, another study. The media can't resist reporting the latest diet and health news, no matter how preliminary. Many reporters only read a press release about a study. They can't tell how solid it is or if better studies disagree. If it's click-worthy, it's news.



//T f you're not taking vitamin B12, forget about having energy," Lathe *Atlantic* article facetiously explained. And "if you want to 'supercharge your metabolism and energy levels,' Amazon can deliver you a tall bottle of B12 supplements by the end of the day." Kudos to The Atlantic for skewering the baseless "energy" and

"metabolism" claims used to sell B vitamins.

But the study that led *The Atlantic* to declare that B vitamins "appear to cause cancer in men" doesn't hold a candle to far better evidence that B vitamins, even at high doses, don't cause cancer.

The new study found that men (but not women) who reported taking vitamins B-6 and B-12 (at doses higher than typically found in a multi) had a higher risk of lung cancer. But a single study of that kind can't prove cause and effect, since something else about the vitamin takers could explain their higher risk.

In contrast, randomized controlled trials can prove cause and effect. And in 2010, researchers examined eight trials that gave large doses of B vitamins to more than 37,000 people at risk for heart attack and stroke, typically for five years.² (All eight trials tested folic acid, seven also tested B-12, and six tested B-6.)

The difference in overall cancer rates between B vitamin and placebo takers? Zip.

In 2013, researchers looked at 13 trials—including 10 that tested B-12 or B-6—on nearly 50,000 people. Again, they saw no difference in cancers of the lung, breast, prostate, colon, or other organs.³

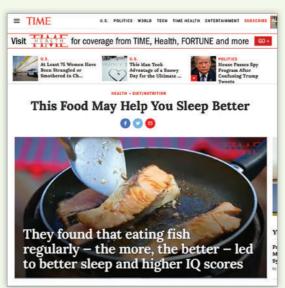
Bottom Line: Don't expect B vitamins to boost your energy, your metabolism...or your risk of cancer.

 ${}^{\prime\prime}\Gamma$ orget warm milk. A new study from the University of Pennsylvania says that fish may be the key to a good night's sleep," reported Time in December.

And it's not just sleep. "Eating fish just a few times a month may improve your brain functioning," one of the study's authors told Time.

What's the source of those rather extravagant promises?

"The researchers asked 541 schoolchildren in China between ages 9 and 11 to describe their eating habits, including how often they ate fish," explained Time. The parents answered questions about their kids' sleep.1



The study "found links between eating fish regularly—the more, the better—and both improved sleep and higher IQ scores," reported Time.

Hello? Could something else about the kids or parents have explained the higher IQs or (according to the parents) better sleep? The study took some things into account, but didn't even look at what else the children ate beyond fish.

Bottom Line: Preliminary studies like these only make headlines because we all want to sleep well and stay sharp.

¹ Sci. Rep. 7: 17961, 2017.



¹ <u>J. Clin. Oncol. 35: 3440, 2017</u>.

² Arch. Intern. Med. 170: 1622, 2010.

³ Lancet 381: 1029, 2013.

lobal dietary guidelines should Jpossibly be changed to allow people to consume somewhat more fats, to cut back on carbohydrates and in some cases to slightly scale back on fruits and vegetables, a large study suggests," Reuters reported in August. Really?

The study sounded impressive. "The new data are drawn from the Prospective Urban Rural Epidemiology (PURE) study, which recruited people ages 35 to 70 in 18 countries," said Reuters. That's 135,335 people, who were followed for seven years.

One problem: most of the 18 countries were low-income (like Bangladesh, India, and Zimbabwe) or middle-income (like China, Malaysia, and Turkey). With only three highincome countries (Canada, Sweden, and the United Arab Emirates), you have to wonder: Does that mean we should eat more fats and fewer carbs?

The PURE participants who got 77 percent of their calories from carbs were more likely to die during the study than those who got 45 percent. But Americans average 48 percent, which puts us roughly in PURE's less-likely-to-die group.



Likewise, the PURE participants who got 11 percent of their calories from fat were more likely to die than those who got 35 percent. Americans average 34 percent of calories from fat, so again, we're hitting PURE's lower-risk spot.

The bigger question is: Who were the PURE participants who got 77 percent of their calories from carbs and only 11 percent from fat? Were they subsisting largely on white rice? Were they unable to afford other foods?

If so, what do the PURE results have to do with Americans, who are at risk not from impoverished rice diets but from meat-lover's-pizza, bacon-cheeseburger, loaded-fries diets?

(The authors don't say what the high-carb, low-fat eaters were more likely to die of, other than that it was not cardiovascular disease, the leading killer of Americans.)

And who knows what the curious results on fruits and vegetables mean.2

"Our findings show the lowest risk of death was among people who ate three to four servings with little additional benefit beyond that range," a study author told Reuters.

However, she added, "We don't want to tell people who are eating more than the recommendation to eat less." Glad to hear it.

Bottom Line: Ignore studies about people whose diets are vastly different than ours.

¹ Lancet 390: 2050, 2017.

² Lancet 390: 2037, 2017.



7 itamin D and calcium supplements are widely used for the prevention of bone fractures in older adults, but a large analysis confirms earlier reports they do not work," declared the online edition of the New York Times in December.

Whoa. In one terse, nine-sentence article with hardly a caveat,

the *Times* reported on a meta-analysis—a compilation of earlier trials, not a large new one—as if it were an end-of-discussion, nail-in-the-coffin finding.1

The *LA Times* and some others were more cautious. "Calcium and vitamin D supplements may not protect against bone fractures," reported the Washington Post. (Even the print edition of the New York Times had a more nuanced headline.)

In fact, the results of a meta-analysis aren't as cut-and-dry as they may seem. A key question: Which studies to include?

For example, did it make sense for the new meta-analysis to exclude a large trial on nursing home residents? (Calcium plus vitamin D lowered the risk of fractures in that trial.)

What about a trial in which nearly half of the women in the placebo group were taking calcium and vitamin D on their own? Or a trial in which more than a third of the participants stopped taking their calcium and vitamin D after two years? (Both stayed in.)

Doing a meta-analysis is easy. Translating the often imperfect body of evidence into advice for the public is hard.

So far, the best advice—from the National Osteoporosis Foundation and others—is to take a calcium and vitamin D supplement only if you get too little.

Bottom Line: Take a supplement only if you get considerably less than the Recommended Daily Allowance for calcium or vitamin D (see Jul./Aug. 2017, p. 3).

¹ JAMA 318: 2466, 2017.

ushrooms, like the kind your local pizza delivery lays beneath gooey, drool-worthy layers of cheese, contain high concentrations of rare anti-aging compounds," reported a Daily Meal article in the LA Times in November, Porcini mushrooms, noted the article, helps "stave off aging the best."

Newsweek also bit. "Why mushrooms may be the best food to help fight aging," ran its headline.

At least Newsweek included a "may." But it also implied that ergothioneine and glutathione, the "anti-aging" antioxidants in mushrooms, could do more than prevent wrinkles.

"It's preliminary, but you can see that countries that have more ergothioneine in their diets, countries like France and Italy, also have lower incidences of neurodegenerative diseases, while people in countries



like the United States, which has low amounts of ergothioneine in the diet, have a higher probability of diseases like Parkinson's Disease and Alzheimer's," explained study author Robert Beelman, professor emeritus of food science and director of the Penn State Center for Plant and Mushroom Products for Health.

And damage from the free radicals that antioxidants quell is linked to cancer and heart disease, he added.

But it's a big leap from finding antioxidants in a food to showing that eating the food prevents, well, anything. And the researchers tested only one sample of porcini mushrooms. Talk about preliminary.

Bottom Line: Enjoy mushrooms, but beware of media reports about the latest superfood.

¹ Food Chemistry 233: 429, 2017.

Forbes / Pharma & Healthcare / #LiveLong

DEC 6, 2017 @ 10:57 AM

Is Cheese Really Good For The Heart Now?



Cheese may be the latest food to be transferred from the "bad" to the "good" list in recent years.

A new study published in the European Journal of Nutrition finds that a little cheese isn't linked to heart disease or stroke -in fact, it may even be linked to a risk reduction for both. But don't get too excited just yet: the levels at which cheese seemed to have a heart healthy effect were fairly low, and the benefit tended to fall off, and even reverse, at higher "doses." That said, there may still be reasons to be optimistic that a little cheese might be good for us.



heese may be the latest food to be transferred from the 'bad' to the 'good' list in recent years," opined the article in Forbes.

What prompted that

A team of researchers "from China and The Netherlands looked back over data from 15 earlier studies, which together included over 200,000 participants," explained Forbes.

Sounds impressive. But like any meta-analysis, what comes out is only as good as what goes in.

Some of the 15 studies were under-adjusted-that is, they ignored smoking, weight, exercise, history of heart disease, diet, drugs, and other factors that could affect risk.

Others were over-adjusted-for example, some essentially compared people with the same blood cholesterol levels, which would wipe away any impact of cheese on risk.

Nevertheless, the studies all got thrown into the same pot.1

The results of the meta-analysis: "...a little cheese isn't linked to heart disease or stroke—in fact, it may even be linked to a risk reduction for both," reported Forbes.

That must have pleased the three study co-authors who work for Yili, a giant Chinese dairy company. (Last year, Yili toyed with the idea of buying Stonyfield.) Forbes forgot to mention that link. So did *Time* and Cooking Light.

Nor did Forbes mention that many of the other studies it cited—all with good news about cheese—were funded by the dairy industry. Oops.

To its credit, Forbes did note several caveats about the meta-analysis.

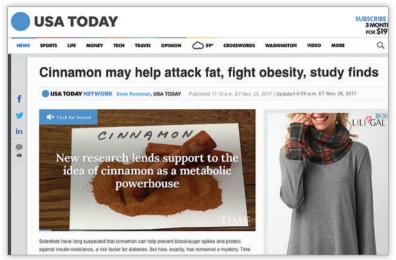
But *Forbes*'s bottom line should please Yili: "Cheese, in modest amounts, may join the likes of butter, coffee, (dark) chocolate, and eggs in losing their 'unhealthy' status."

That's just what readers—and the dairy industry—want to hear.

Bottom Line: Replace some cheese and other foods that are rich in saturated fat with soy, fish, nuts, and other foods that are rich in unsaturated fats.



¹ Eur. J. Nutr. 56: 2565, 2017.



Tniversity of Michigan research finds an essential oil in cinnamon attacks fat cells and could be used as a treatment to fight obesity," reported USA Today in November.

Attacks fat cells? That's a rather creative way to describe what

happened when the researchers added the cinnamon's oil to test tubes that were holding fat cells.1

"The research found the oil cinnamaldehyde boosts metabolic health by prodding fat cells to start burning energy—a process called thermogenesis," explained USA

The fat cells started burning energy? Not quite.

"The results found an 'increased expression' of genes and enzymes that boost metabolism while increasing proteins beneficial to thermogenesis," said the newspaper.

In fact, the researchers were trying to find out how cinnamaldehyde might boost fat burning. Whether—and if so, how much—that happens in people is still unclear.

Bottom Line: Cinnamon oil—not the sprinkle of cinnamon on your cappuccino—could someday turn out to boost fat burning. But it's a long way from test-tube research to a magic bullet to fight obesity. And despite other media reports, cinnamon doesn't lower blood sugar in well-controlled studies (see Jun., p. 7).

¹ Metabolism 77: 58, 2017.

mostly vegetarian diet Amay provide relief similar to widely used medications for people with acid reflux, a new study suggests," reported a HealthDay article in the Chicago Tribune in September.

The study looked at people with laryngopharyngeal reflux.1

"It's a condition where stomach acids habitually back up into the throat, and it's distinct from the much better-known gastroesophageal reflux disease (GERD) or what most people call heartburn," explained the Tribune.

Instead of heartburn, patients "have symptoms like hoarseness, chronic sore throat, persistent coughing, excessive throat clearing and a feeling of a lump in the throat."

Did the researchers randomly assign reflux patients to either a mostly vegetarian diet or to the PPIs (proton-pump inhibitors) that are widely used to treat GERD?¹ Not exactly.



Instead, they simply looked back at the medical records of 184 patients treated by the

lead author, otolaryngologist Craig Zalvan. He had prescribed PPIs to roughly half of those patients (between 2010 and 2012), and a mostly vegan diet—with only two or three servings of meat or dairy per week—to the other half (between 2013 and 2015).

"After six weeks, 63 percent of patients on the diet were showing at least a 6-point drop on a scale called the reflux symptom index," reported the Tribune. "That compared with 54 percent of PPI patients."

The Tribune neglected to mention that the difference wasn't statistically significant.

And who knows what to make of the results? Would patients say they felt better with any diet recommended by their doc?

Bottom Line: If you have laryngopharyngeal reflux, it can't hurt to try a mostly vegetarian diet, but this study doesn't offer much evidence.

¹ JAMA Otolaryngol. Head Neck Surg. 143: 1023, 2017.



Does cooking make your oil dangerous?

BY CAITLIN DOW

"Olive oil, due to its chemical structure, is susceptible to oxidative damage when heated," says thekitchenskinny.com. "When it comes to high heat cooking, coconut oil is your best choice," says healthline.com.

Befuddled about which oil to use? Here's how one expert clears up the confusion.

oconut oil is the best oil you can use for cooking because it can resist heat-induced damage, so you can avoid ingesting oxidized fats," says mercola.com.

Oxidative stress—that is, an excess of free radicals caused by oxidation-may damage DNA and raise the risk of cancer, heart disease, and other illnesses.

But your oil is unlikely to become oxidized in the frying pan or wok.

"For the amount of time you're going to cook, and the temperatures you're going to get to, your oil is not going to undergo oxidation," explains Eric Decker, an oil expert and chair of the department of food sciences at the University of Massachusetts Amherst.

What's more, adds Decker, "every oil naturally contains vitamin E, which is an antioxidant."

Extra-virgin olive oil has another plus. "It isn't refined, so it has a lot of naturally occurring antioxidants."

Decker's take-home message: don't worry about oxidizing oils on your stovetop. "If you're just pan-frying, no oxidation probably occurs. Even with deep-fat frying at home, oxidation is minimal."

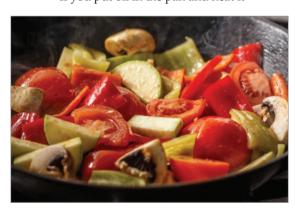
So fear of frying is no reason to stop using monounsaturated oils (olive,

peanut, canola) or polyunsaturated oils (soy, corn, sunflower), which lower LDL ("bad") cholesterol, and switch to coconut oil, which raises LDL.

Smoke Point

Some oils do hold up better at high temperatures, though. Any oil starts to degrade once it reaches its smoke point, which varies from oil to oil.

"If you put oil in the pan and heat it



Almost any oil, including extra-virgin olive, is fine.

too much or let it go too long, the oil starts smoking," Decker says.

And then you could be in trouble. "The smoke point is followed by the flash point," notes Decker. "That's when your oil catches on fire."

If you accidentally let your oil smoke, get rid of it and start over.

Refining an oil raises its smoke point by removing impurities, which is why refined oils—like most canola, soy, and peanut, as well as "light" or "pure" olive oil—work well for high-temperature cooking.

Rancidity

Do oils ever become oxidized? Yes, but it's easy to tell when that happens.

"When oxidation occurs, the fatty acids break into small molecules, which have a smell," says Decker. "That's what we call rancidity."

But a high temperature isn't the biggest cause of oxidation, says Decker.

It's time.

"I just cringe when I see people buying five-gallon containers of soybean oil, because there's no way—unless they're deep frying every day—they're going to use it up before it goes rancid."

While all oils can become oxidized, "the more unsaturated the fat is, the more susceptible it is," adds Decker.

What to do?

"Buy smaller bottles and store them in the refrigerator," says Decker. "That's what I do at home. And if your oil smells bad, don't use it."

There's no need to keep olive oil cold, though. "It will harden in the refrigerator," says Decker. "Plus, it's more stable than polyunsaturated fats. So you can keep it at room temperature."

The bottom line: For home cooking, almost any oil should be fine. Coconut oil? For your heart's sake, leave it on the shelf.

Quick Studies

A snapshot of the latest research on diet and exercise



Brain Training?

oung or old, intense exercise may help keep your brain in good working order.

Researchers assigned 27 sedentary people to high-intensity interval training (HIIT) or a sedentary control group. Roughly half were age 18 to 30 and half were age 65 to 80.

For three days a week, the HIIT group rode a stationary bike for four four-minute intervals at high intensity (90 percent of their peak aerobic capacity),

separated by three-minute rest periods. On two other days each week, they walked on a treadmill for 45 minutes (at 70 percent of their peak).

After 12 weeks, glucose uptake in the brain increased more in the HIIT group. (Glucose is the brain's primary fuel.) The increase occurred in brain regions where uptake declines in people with Alzheimer's disease. (Of course, it's not clear that a boost in uptake would prevent Alzheimer's.)

What to do: Get moving. Although this study tested HIIT, any exercise may help. And try bumping up your effort for a minute or two as you walk, bike, or whatever. That should make your muscles, if not your mind, more fit.

J. Clin. Endocrinol. Metab. 103: 221, 2018.

Beyond Arm's Length



I ant to snack less? Keep them out of reach.

Researchers randomly assigned 246 adults to sit at a large coffee table with a glass bowl of M&M's

either 8 inches or 21/3 feet away during a 10-minute "relaxation break" between two cognitive tests.

Roughly 70 percent of those near the bowl—but only 58 percent of those farther from the bowl—took some M&M's.

What to do: When it comes to unhealthy snacks, distance is your friend.

Appetite 121: 337, 2018.

Go Greens

reen leafy vegetables may keep you sharp as you age.

Researchers tracked 960 people aged 58 to 99 for an average of five years. Those who reported eating the most leafy greens (typically 11/3 servings a day) did better on



cognitive tests than those who ate the least (typically three servings a month).

One serving was a

cup of salad greens or a half cup of cooked spinach, kale, collards, etc.

What to do: It's worth loading up on leafy greens, even though a single study of this kind can't prove cause and effect.

(The researchers took education, smoking, exercise, cognitive activities, alcohol, depression, and other factors into account, but something else about people who eat—or don't eat—greens may explain the results.)

Nevertheless, leafy greens are packed with vitamins, minerals, and lutein and other phytochemicals that may protect your health. And they're delish.

Neurology 2018. doi:10.1212/WNL.000000000004815.

Sitting & Belly Fat

he time you spend in a chair, on the sofa, or in a car may affect the size of your belly. Scientists did MRI scans of 124 people at risk for type 2 diabetes. Each wore an accelerometer for a week.

Among those who were inactive (they averaged 13 minutes a day of at least moderate-intensity exercise), each hour of sedentary time per day was linked to an extra 1.9 quarts of abdominal fat. Sedentary time wasn't linked to belly fat in people who were active (they averaged 40 minutes a day).

> What to do: Although this type of study, on its own, can't prove that sitting on the couch boosts belly fat, it's one more reason to get out of your seat.

Obesity 26: 29, 2018.



I ho couldn't use a little more sleep? Or at least a little more good-quality sleep? Here's what can help...and what's a waste of money.



Michael V. Vitiello is professor of psychiatry and behavioral sciences at the University of Washington. With more

than 30 years of research, he is an expert on the causes, consequences, and treatment of age-related sleep disorders. Vitiello spoke with Nutrition Action's Caitlin Dow.

Q: How many people suffer from inadequate sleep?

Sleep Sufferers

A: It depends on who you ask and how you ask the question. In some surveys, as much as 40 to 50 percent of the population report sleep complaints.

Q: But they may not have insomnia?

A: Right. People with insomnia have chronic trouble falling asleep, staying asleep, or waking up too early. That means the problems last for months or

They also have trouble functioning during the day, which they attribute to their sleep difficulties. And they have

these sleep issues despite having adequate opportunity to sleep.

Q: So it's not just an occasional sleep problem?

A: Right. And if somebody comes to me and says "I'm having trouble sleeping," but they're working three jobs and only allowing themselves to sleep for three or four hours a night, I wouldn't diagnose them with insomnia.

Q: How many people have insomnia?

A: It probably hovers between 6 and 10 percent of adults. It's a very sizable number of people.

Q: Does sleep change as people get

A: Yes. Most studies report that people get less deep sleep, less REM sleepthat's the rapid eye movement sleep stage when we dream-more awakenings, more light sleep, and more fragmented sleep.

But most of those changes occur earlier than we once thought. The vast majority occur between post-adolescence and 50 to 60 years old.



Got Jet Lag?

You can't get rid of jet lag altogether. It typically takes one day per time zone travelled for your internal clock to adjust. But these tips may help ease the transition.

- During the flight, drink lots of water and avoid alcohol and caffeine. Try to eat in-flight meals in line with your destination time.
- Upon arrival, take a 30 minute nap if you feel tired. Eat meals in line with local time.
- For **EASTWARD** travel:
 - Each night for three nights before your flight, go to bed an hour earlier than normal.



- At your destination, try to get early morning light. Take melatonin (0.5 to 5 mg) 30 minutes before local bedtime until you have adjusted.
- For WESTWARD travel:
 - Each night for three nights before your flight, go to bed an hour later than normal.
 - At your destination, try to get late afternoon light. Take melatonin (0.5 to 5 mg) 30 minutes before local bedtime until you have adjusted.

Pills for 7777's?

■ L-Theanine. "L-theanine is clinically shown to increase the alpha wave activity in the brain to help relax the mind," claims Nature Made.

The amino acid, which is found in tea leaves, increases alpha wave activity in some studies, but not others. 1,2 But people don't consistently report feeling more relaxed or calm after taking L-theanine.3

■ Herbs. In the only controlled study, chamomile was no better than a placebo in helping people with insomnia.4 And people who drank passion flower tea slept for no longer and woke up no

less frequently than placebo tea drinkers. (The study was in people without sleep complaints.) No controlled studies have tested lemon balm.

That said, the herbs are unlikely to be harmful.

■ Magnesium. Some animal studies suggest that magnesium deficiency hampers sleep. But that doesn't mean that you should take magnesium if you're a poor sleeper.

In two small studies, older adults who were given 240 to



Don't count on sleep-aid pills to help.

730 milligrams of magnesium a day for three to eight weeks had several more minutes of deep sleep every night or reported falling asleep faster and sleeping longer than similar adults who were given a placebo.6,7

But in the largest study, 100 older adults with sleep problems who took 320 mg of magnesium a day for seven weeks reported no better sleep than those who took a placebo.8

Bottom line: It's not clear if taking magnesium will help you sleep. But even if it does, more than 350 mg a

day from a supplement can cause diarrhea or nausea.

—Caitlin Dow

Q: So your sleep might not get worse beyond your 60s?

A: If people stay healthy as they age, their sleep doesn't change much when they go from, say, age 60 to 100.

Store-Bought Sleep

Q: What active ingredients are in over-the-counter sleep aids like zzzQuil and Tylenol PM?

A: There are really only two. Most contain diphenhydramine, and a few contain doxylamine. They're both antihistamines.

Q: Do they work?

A: They may work for occasional sleeplessness, but not for treating insomnia. There is no evidence that they are helpful for everyday use, and the labels even say not to use them chronically.

There's very little data that they improve sleep at all. And most of that data come from just a few trials.

Q: Are there risks in taking them?

A: Yes. The big side effects—cognitive clouding and grogginess—are a particular problem for older adults. The American Geriatric Society lists these compounds as drugs that older adults should not take. Then there are the other side effects like dry mouth, constipation, and incomplete bladder emptying.

Q: Anything more serious?

A: In 2015, a colleague of mine here at the University of Washington published a paper that found an increased risk of dementia and Alzheimer's in people who take OTC sleep meds over the long term.

That kind of study can't prove that OTC sleep meds cause Alzheimer's. But to play it safe, people should be cautious about using them.

Q: Does melatonin help with sleep?

A: While people who take it in studies report few side effects, as a sleep aid-and I emphasize sleep aid—it is not effective. However, it may work if you have a

circadian rhythm disorder, like jet lag. The circadian rhythm is the body's internal biological clock. If it's out of alignment, your sleep-wake cycle can be off.

Q: How could taking melatonin help?

A: There's a track of nerves that runs from the eyes directly to the pineal gland. Light keeps the gland from secreting melatonin, and darkness triggers it.

Melatonin doesn't put you to sleep, but it preps your body for sleep. If you take it at the right time, it may help re-align your circadian rhythm if it's out of whack.

But you may not be getting what you paid for. A number of years ago, researchers found that quality control for over-the-counter brands of melatonin was ghastly. So just because it said 2 mg on the bottle, for example, it didn't mean there was 2 mg in the pill.

Q: Does valerian work as a sleep aid?

A: Does it work reliably and consistently in the broad population? No. We've published data showing that people who

¹ Asia Pac. J. Clin. Nutr. 17: 167, 2008.

²Neuropharmacology 62: 2320, 2012.

³ Biol. Psych. 77: 113, 2008.

⁴BMC Complement. Altern. Med. 2011. doi:10.1186/1472-6882-11-78.

⁵ Phytother. Res. 25: 1153, 2011.

⁶ Pharmacopsychiatry 35: 135, 2002.

⁷ J. Res. Med. Sci. 17: 1161, 2012.

⁸ Magnes. Res. 23: 158, 2010.

take valerian do no better than those who take a placebo.

That said, they don't report more side effects than placebo takers, and valerian has probably been used for so long because some people believe it works.

Also, the placebo effect is a wonderful thing when it comes to sleep. If people feel like valerian helps them, I'd recommend it. That's also true for melatonin or any other safe sleep supplement.

Treating Insomnia

Q: What's the best way to treat insomnia?

A: Cognitive behavioral therapy is the gold standard. Unlike many behavioral programs for, say, weight loss or alcohol reduction, CBT capitalizes on your body's inherent drive for sleep and your circadian timing of sleep. It teaches you behaviors that maximize those biological drives. That's probably why it's so powerful.

Q: How does CBT work?

A: One of its two biggest components is stimulus control. It's about having the bedroom environment predict sleep and reassociate the bed with sleep—like going to bed only when sleepy, getting out of bed when unable to sleep, and not watching the clock.

The second is time-in-bed restriction. People with insomnia often try to get more sleep by spending more time in bed. That doesn't work. In order to be the most efficient and effective sleeper, you need to be in bed only as long as you're asleep.

Q: What else is involved?

A: Therapists also usually review sleep hygiene. And sometimes they add relaxation techniques. Patients might also work on beliefs about sleep or how to deal with anxiety.

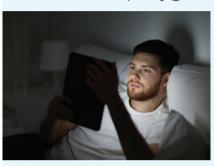
Q: What kind of anxiety?

A: Some people are worriers. They use the bed as a time to go over everything that was terrible today and anticipate everything that will be terrible tomorrow. There are techniques that can help them stop doing that, which lets them fall asleep.

distracted, you don't worry about that. You just go back to your breathing.

And deep breathing produces a physiological response, where your nervous system switches into a relaxed state. There's nothing mystical about it. You can do it pre-sleep, if you wake up during the night, or even at your desk at work.

Sleep Hygiene 101



- Avoid caffeine. It can take eight hours to wear off.
- Limit alcohol at night. You may fall asleep faster, but alcohol cuts the time you spend dreaming and in deep sleep.
- Unplug. Avoid bright lights, the phone, the computer or tablet, and the TV for an hour before bed.
- Set bedroom boundaries. No eating, reading, TV viewing, etc.
- Reduce noise. Avoid falling asleep to music or the TV. If necessary, use a white noise machine or a fan for soothing sounds.
- Stick to a schedule. Aim for a regular bedtime and rising time. Avoid naps after 3 p.m.
- Adopt a routine. A regular pre-bedtime routine helps the brain recognize that it's time to go to sleep.
- Avoid big meals late at night. They may cause indiaestion.
- Try a hot bath before bed. Afterwards, your body temperature drops. That may trigger sleep.
- Keep the bedroom cool.
- Check your meds. Some medicines for coughs, colds, or allergies can keep you up.

Q: What relaxation techniques does

A: One example is a deep breathing exercise called the Benson Relaxation Response. You can look it up online. It doesn't require anything other than lying there quietly with your eyes closed, concentrating on your breathing in a rhythmic, mindful way.

If you have a busy brain, it gives you something to focus on. If you get

Q: How long does CBT training take?

A: About six weeks. Some people start benefiting within a couple of weeks.

Q: What kind of benefits?

A: The most powerful is the absence of fragmented sleep. One of the things that's most annoying is if you go to bed and your eyes stay open and vour little brain stays active and it's 45 minutes before you fall asleep.

And then your eyes pop open in the middle of the night, and you spend an hour maybe once or twice being unable to get back to sleep. Most insomnia complaints have to do with difficulty returning to sleep.

Q: Do online CBT programs work?

A: The data are limited, but they show that online programs seem to be as effective as in-person approaches. And they're available everywhere, which makes it a heck of a lot easier to participate.

Q: What else may work for insomnia?

A: There is some data showing that meditative movement like tai chi and yoga might help. But the evidence isn't as strong as it is for CBT.

Q: What's your bottom line?

A: There are many ways to sleep wrong and many factors that contribute to poor sleep. But there are many ways to fight your way back. The tools are there. People just have to be aware of them and be willing to use them.

The Healthy Cook

Playing Chicken



BY KATE SHERWOOD

Use thinly sliced or pounded chicken that's about 1/4" thick. Blotting the chicken dry before sautéing helps it brown.

Got a question or suggestion? Write to Kate at healthycook@cspinet.org.

Sautéed Chicken with Tomato Basil Sauce

- 1/4 cup oil-packed sundried tomatoes
- cup chopped cherry tomatoes
- clove garlic
- ½ tsp. kosher salt
- 10 basil leaves
- Tbs. extra-virgin olive oil
- lb. chicken breast cutlets
- 1. Combine the tomatoes, garlic, salt, basil, and ¼ cup water in a

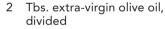
- food processor. Process until uniformly minced.
- 2. Heat the oil in a large pan over medium heat until shimmering hot. Sauté the chicken until lightly browned, 3-4 minutes. Turn and sauté until cooked through, 1-2 minutes. Transfer to a warm serving plate.
- 3. Pour the tomato mixture into the pan and bring to a simmer. Spoon over the chicken.



PER SERVING (3 oz. cooked chicken with sauce): calories 220 | total fat 11 q | sat fat 1.5 q carbs 3 g | fiber 1 g | total sugar 1 g | added sugar 0 g | protein 26 g | sodium 310 mg

Creamy Mushroom & Leek Chicken SERVES 4





- lb. chicken breast cutlets
- leek, white and palest green part only, thinly sliced
- lb. white mushrooms, sliced
- tsp. fresh thyme leaves
- ½ cup no-salt-added chicken broth
- ¼ tsp. kosher salt
- ½ tsp. worcestershire sauce
- cup low-fat sour cream
- Tbs. whole-grain mustard
- 1. Heat 1 Tbs. of the oil in a large pan over medium heat until

- shimmering hot. Sauté the chicken until lightly browned, 3-4 minutes. Turn and sauté until cooked through, 1-2 minutes. Transfer to a warm serving plate.
- 2. Add the remaining 1 Tbs. of oil to the pan. Add the leeks, mushrooms, and thyme. Cook, stirring often, until the vegetables are tender, 2-3 minutes.
- 3. Add the broth and simmer until reduced by half, 1-2 minutes.
- 4. Remove from the heat. Stir in the remaining ingredients. Spoon over the chicken.



PER SERVING (3 oz. cooked chicken with sauce): calories 250 | total fat 12 g | sat fat 2 g carbs 7 g | fiber 1 g | total sugar 3 g | added sugar 0 g | protein 28 g | sodium 310 mg



Don't fall for tricky meat & poultry claims

BY LINDSAY MOYER & JENNIFER URBAN

It's no secret that Americans need to cut back on meat. While we now eat more chicken than beef, we still eat too much red meat, especially beef. That's bad news for our health and for the planet. People who eat more red meat—especially processed meat—have a higher risk of colon cancer, heart disease, and stroke.

And it doesn't help that misleading information about meat or poultry can trick even the most careful shoppers. Here's what to watch out for.

Missing labels?



Didn't know there were Nutrition Facts posters for meat? This may be why.

L ooking for the Nutrition Facts for fresh meat and poultry?

Unless you're shopping for ground meat or looking at cuts that companies have labeled

voluntarily, you're stuck with a brochure or poster that the U.S. Department of Agriculture allows instead of labels on packages.

Can't find the poster? Is it missing the cut of meat you want? You're out of luck.

What's more, the numbers you do find are for 4 oz. of raw meat, which cooks down to a petite 3 oz.

Most restaurant steaks weigh in at 6 to 16 oz. raw. If you eat more than 3 oz., you'll have to get out your calculator. (Our chart on p. 15 uses 4 oz. cooked servings.)

White meat?

A ccording to scientists, red meat means beef, lamb, veal, and yes, pork...despite decades of ads plugging "The Other White Meat." (Veal is the meat of young cows that have been made virtually anemic, which gives their flesh a lighter color.)

You're better off replacing red meats with chicken, turkey, or seafood.

Lean?

Where do the brochures, posters, and voluntary labels for meat get their numbers? In most cases, from the USDA's database. And where does the USDA gets its numbers? Mostly from, or



0" trim? Fat chance.

with funding from, the beef and pork industries. Hmm...

The USDA's database has numbers for beef that has had the fat around its edges trimmed down to just ½" or 0". (The pork industry never even says how much *its* cuts were trimmed.)

The USDA also has numbers for what's called "separable lean." That's after scalpel-wielding technicians trim off the "separable fat"—every bit of fat except marbling within the muscle.

All that trimming (where do you keep *your* scalpel?) helps explain how the beef industry's website can end up touting 38 cuts of "lean" beef. The list even includes fatty cuts like New York strip steak and brisket.

Apparently, if you're footing the bill, you get to make the rules.



80% lean beef still has half a day's sat fat.

70 percent lean?

round beef that's labeled "70% lean" might sound low in fat. But with 30 percent fat, it's the fattiest ground beef you can buy.

Why don't

ground beef labels list *only* their percent fat? Because also listing percent lean makes the meat sound, well, lean.

And don't confuse "lean" with "low-fat." "Lean" meat has no more than 4½ grams of saturated fat per 4 oz. (raw) serving. It's no skinless chicken breast. Only "extra lean" meat (2 grams of sat fat, max) is in skinless chicken or turkey territory.

With fish, the more fat, the merrier. Fatty fish, like salmon, are rich in unsaturated (heart-healthy) fat.



No antibiotics?

sing antibiotics to make animals grow faster and prevent disease helps the industry's bottom line. But, over time, it may make those antibiotics useless when people need them to fight off deadly bacteria.



Look for "No antibiotics ever" claims that are "verified" by the USDA.

So look for "raised without antibiotics" or "no antibiotics ever" on the label.

Both are stronger than "no growth-promoting antibiotics." The FDA has banned that use, yet the claim appears on turkey sold by Shady Brook Farms and Honeysuckle White. (Both companies still use antibiotics to treat or prevent illness.)

Not all antibiotics claims are independently verified, so look for a USDA Process Verified seal next to the claim ...or buy organic.



The claim is nothing special. Growthpromoting antibiotics are illegal.

Ground chicken or turkey?

round chicken" or J"ground turkey" could mean you're getting meat plus fatty skin and who-knowshow-much of the fattier wings or thighs.

Want less fat? Stick with "ground chicken breast" or "ground turkey breast."

Organic?

"USDA Organic" seal means that the animals were given no antibiotics, no hormones, only organic feed (grown without pesticides and not genetically modified), and that they had at least some access to the outdoors. (It doesn't guarantee the strongest animal welfare standards, though.)

Humanely raised?

laims like "humane" or "humanely raised" may mean that farms don't trim the beaks of poultry and cut the tails of cows and pigs...



The "Certified Humane" seal is a good bet.

or they may not. The farms may ensure that animals can go outdoors or that chickens can dust bathe and pigs can root...or they may not. The USDA doesn't inspect farms to check.

To be sure you get humanely raised meat, look for "Certified Humane" or another certified seal. "Animal Welfare Approved"

has the strongest standards,

so you're more likely to find it at a natural food store or farmers mar-

ket. Both are stronger than "American Humane Certified," which allows caged hens and crates that don't let nursing pigs turn around, for example.

On Whole Foods' and some other meats, you'll see Global Animal Partnership labels, which rate animal welfare practices from Step 1 (slightly better than conventional) to Step 5+ (best).



"American Humane Certified" isn't the strongest seal.

Grass-fed?

verified (independently certified) seal Alike "American Grassfed" or "Certified Grassfed by AGW" means that the animal had no grain ever and spent its life on pasture. But meat with those seals isn't always easy to find.

With unverified grass-fed claims, there are no guarantees. The cattle may have spent their days grazing in the sunshine...or they may have munched on grass only when they were young. Or dried grass (typically hay) could have been fed to cooped-up animals.

Grass-fed beef typically has (slightly) less fat than grain-fed beef, but that only applies to comparable whole cuts. When meat is ground, whoever is doing the grinding decides how much fat to blend in.

A regular beef patty and a grass-fed beef patty at Chili's, for example, each has roughly three-quarters of a day's saturated fat.

All-natural?

Tt sounds good but means little. "Natural" meat or poultry has no artificial ingredients or added colors and is no more than "minimally processed."

But "natural" tells you nothing about how the animal was raised, for example, or whether it got antibiotics.

The Meat Counter

Best Bites (✓✓) have no more than 2 grams of saturated fat per serving (4 oz. cooked). We disqualified red meat. Numbers for meat include separable lean and fat, with a 1/8" trim when available. Within each section, cuts are ranked from least to most saturated fat, then least to most calories.

	Poultry (4 oz. cooked)	Ĩ	Say
VV	Turkey breast (whole or ground), no skin	150	0.5
V	Chicken breast (whole or ground), no skin	190	1
V	Chicken drumstick, no skin	180	1.5
V	Turkey wing, no skin	190	1.5
//	Turkey breast, with skin	190	2
	Chicken thigh, no skin	200	2.5
	Ground chicken, 8% fat	200	2.5
	Chicken breast, with skin	220	2.5
	Chicken wing, no skin	230	2.5
	Chicken drumstick, with skin	220	3
	Chicken thigh, with skin	260	4.5
	Chicken wing, with skin	290	5.5
	Beef (4 oz. cooked, 1/8" trim unless noted)		
	Top round roast, choice, 0" trim	180	2
	Eye of round steak, choice, 0" trim	190	2
	Ground beef, 7% fat	220	4
	Flank steak, choice, 0" trim	230	4.5
	Eye of round roast, choice	240	4.5
	Top round steak (London broil), choice	250	4.5
	Ground beef, 10% fat	250	5
	Bottom round roast, choice	250	5.5
	Flat iron steak, choice, 0" trim	260	6
	Ground beef, 15% fat	280	6.5
	Top sirloin steak, choice	290	7
	Ground beef, 20% fat	310	7.5
	Filet mignon (Tenderloin steak), choice	310	8
	New York strip steak, choice	310	8
	Ground beef, 30% fat	310	8.5
	Porterhouse steak, choice	320	9
	Chuck arm pot roast, choice	350	9
	Brisket (flat half or first cut), choice	340	9.5

	_	
T-bone steak, choice	330	10
Tenderloin roast, choice	370	11.5
Ribeye steak (bone-in), choice	350	12
Prime rib, choice	410	13.5
Veal (4 oz. cooked, no trim specified)		
Cutlet	170	1
Loin chop	220	4
Rib roast	260	6
Pork (4 oz. cooked, no trim specified)		
Tenderloin	170	1.5
Top loin roast, boneless	220	3
Top loin chop, boneless	220	3.5
Loin chop, with bone	240	4
Pork chop (Loin rib chop), with bone	250	5
Ground pork	340	8.5
Spareribs	450	12.5
Lamb (4 oz. cooked, 1/8" trim)		
Shank, domestic	250	5
Loin chop, Australian	250	6.5
Leg, domestic	270	6.5
Shank, Australian	260	7
Leg, Australian	280	8
Shoulder blade chop, domestic	300	8.5
Loin chop, domestic	330	10.5
Shoulder arm chop, domestic	380	10.5
Shoulder arm chop, Australian	350	11
Shoulder blade chop, Australian	330	12
Rib roast, domestic	390	13
For comparison (4 oz. cooked)		
Tofu, extra-firm	110	1
[*] Tilapia	150	1
'Wild Coho salmon	160	1
✓✓ Best Bite.		

Daily Saturated Fat Limit (for a 2,000-calorie diet): 20 grams.

Source: U.S. Department of Agriculture National Nutrient Database for Standard Reference. The use of information from this article for commercial purposes is strictly prohibited without written permission from CSPI.

Sustainably raised?

"S ustainably raised" sounds good, but the claim has no official definition.

In fact, beef is a threat to the environment, no matter how it's raised. Producing each serving generates roughly five times more greenhouse gases than producing a serving of poultry and 20 times more than a serving of beans.

What's more, it takes about 1,850 gallons of water to produce each pound of beef—far more than pork (720 gallons per pound) or chicken (520 gallons) or pretty much any other food.

No hormones?

on't be impressed by "no added hormones" claims on chicken, turkey, and pork. Growers can never treat those animals with hormones. The claim only means something on beef.



All chicken has "no added hormones."



RIGHT STUFF

Sweet Secret



It's the most famous mango you've never heard of.

Honey mangos

are small golden oblongs about half the size of tradi-

tional mangos—with smooth, velvety flesh and a couple of secrets.

Secret No. 1: They're typically sweeter and more succulent than other mango varieties.

Secret No. 2: You can remove their delicate skin with a vegetable peeler. And slicing off pieces around the thin oval pit is easier than removing the sometimes-fibrous flesh around an ordinary mango pit.

If you don't see honey mangoes—they're also called **Champagne**, **Manila**, or **Ataulfo**—at your local market, try a grocer like Whole Foods.

Can't find honeys? No worries.

All mango varieties are delish. And just one cup

chopped delivers around 65 percent of a day's vitamin C, 20 percent of a day's folate, 10 percent of a day's vitamin A, 5 percent of a day's potassium, and 3 grams of fiber, all for 100 calories.

That's a pretty sweet deal.

You'll know your honey mango is ripe when the skin turns deep golden yellow and starts to wrinkle just slightly. It will yield to a gentle squeeze, and the sweet aroma from the stem end may be the best thing you'll smell all day.

Buy a few—or a case—to save yourself the hassle of running back to the store after you taste your first one.

Peak season is March to June.

What? You're still home?

mango.org (National Mango Board)

FOOD PORN



CheetOh No!

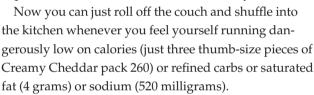
June 2016: Burger King and Frito-Lay unleash Mac n' Cheetos—portable bites of mac and cheese in a Cheeto-flavored crust. The limited-timeonly item sells out in weeks.

October 2017: Frozen boxes of **Mac**

n' Cheetos—Creamy

Cheddar or Flamin' Hot—hit

supermarket freezer cases across the country.



Mac n' Cheetos may look like mini mozzarella sticks,

but ounce for ounce they have no more protein than Cheetos. That's because they contain more water, white flour, and oil than cheese.

But don't worry. They've got enough artificial flavors, food dyes (Yellow 5 and 6), starches (potato, corn), gums (acacia, cellulose, xanthan), acids (citric, lactic, sorbic), phosphates, and MSG to make Cheetos fans feel right at home.

"With the release of Mac n' Cheetos for at-home consumption, fans now have the ability to up their snacking game with this crowd-pleasing favorite," crowed Frito-Lay's senior director of marketing innovation in a press release.

Some game.

fritolay.com—(800) 352-4477



Tossed Sesame Salad

Whisk together 1 Tbs. reduced-sodium soy sauce, 1 Tbs. grapeseed oil, 1 Tbs. rice vinegar, 1 tsp. toasted sesame oil, 1 tsp. honey, and ¼ tsp. kosher salt. Toss with 4 cups salad greens and 3 cups shredded veggies (like cabbage, carrots, and radishes).



To keep your bananas from ripening too fast, wrap the stem end of the bunch tightly in plastic wrap. Even better: separate the bunch and wrap each stem individually.

