

A cure for
toenail fungus? p.4



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Protect yourself against colon cancer

Colon cancer, more accurately called colorectal cancer, includes cancers of the rectum and colon. It usually begins with polyps, small benign growths in the inner wall of the colon or rectum. Some polyps (especially those known as adenomas) become malignant for reasons that are largely unknown. Age is a risk factor: most people who get colon cancer are over 50. Environmen-

tal factors—particularly smoking—also play a role. Ulcerative colitis or any other chronic inflammatory bowel disease puts you at higher risk. Family history of colon cancer is a risk factor, too.

But not all the old hunches have proved out. Dietary fiber, for instance, may not play a protective role. And red meat may not be as clear a risk as once was thought.

The good news: It is possible to detect polyps before they become cancerous, or at an early stage before the cancer has spread. *By far the most important way to prevent colon cancer is to get screened.* The next most important step is not to smoke.

As for other things that may reduce the risk of colon cancer, here's the latest thinking:

What you eat

■ **A diet rich in fruits, whole grains, and vegetables** appears to lower the risk of many cancers, including colon cancer. Vegetables most likely to help prevent colon cancer are broccoli, cabbage, cauliflower, kale, and other members of the cruciferous family (see *Wellness Letter*, April 2009).

■ **Fiber, however, is no longer deemed important in preventing colon cancer.** True, a high-fiber diet helps prevent constipation, and the theory was that this might reduce exposure of the intestinal wall to carcinogens. But several large studies have failed to find a protective effect for fiber. And there's no known link between constipation and colon cancer. The Women's Health Initiative (one of the largest recent studies) did not find that a high fiber intake reduced colon cancer risk. Still, another large study did find that a very high intake of fiber was protective. Fiber is hard to study—it isn't just one compound but many.

■ **A high-fat diet, particularly one high in animal fats and red meats,** has been blamed for increasing colon cancer risk, but the jury is still out. Dietary fat, in itself, is no longer regarded as a factor in colon cancer. If red meats do increase the risk—and some evidence suggests they do—it may be because they are often cooked at high temperatures, so that potential cancer-promoting chemicals are formed. In any event, there are other reasons, such as heart health, to avoid a diet high in animal fats.

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Wellness facts

■ **Older people with optimal blood levels of vitamin D have lower death rates than those with low levels,** according to two recent studies. One, in *Nutrition Research*, looked at 3,400 Americans over 65 during a seven-year period; the other, in the *Journal of the American Geriatrics Society*, focused on 714 women in their seventies over six years. Both found that those with low blood levels of D were 2.5 times more likely to die during that period than those with high levels. Accumulating research has linked vitamin D with a reduced risk of everything from osteoporosis, cancer, and heart disease to multiple sclerosis and age-related muscle weakness. The National Academy of Sciences is considering raising the official recommended intakes of vitamin D. We advise 800 to 1,000 IU a day, especially for people over 60.

■ **Does a vegetarian diet benefit or harm bone health?** There are theories as to why it can be both good and bad for bones, and so far the evidence has been conflicting. A recent analysis in the *American Journal of Clinical Nutrition*, which looked at nine studies totaling 2,750 people, suggests that vegetarian diets, especially strict ones (vegan), reduce bone mineral density, but the effect is so modest that it's unlikely to increase the risk of fracture.

■ **Prostate cancer is one of the few cancers that has not been linked to smoking—until now.** In the *American Journal of Public Health* in September, an analysis of 24 studies involving more than 21,000 cases of prostate cancer found that smoking does increase the risk by 10% to 30%, depending on how long and how heavily the men smoked.

■ **The dietary supplement quercetin does not enhance athletic performance, boost energy, or reduce fatigue, despite the marketing claims.** This was seen in a recent well-designed study from the University of Georgia, in which 30 young men did cycling tests before and after taking quercetin or a placebo for up to 16 days. The results were similar in the two groups. Quercetin is an antioxidant found in many fruits and vegetables; it is the main ingredient in FRS, a widely advertised energy drink promoted by Lance Armstrong.

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■ **Calcium and vitamin D** may reduce the risk of colon cancer, whether you get them from food or supplements. A Harvard study in 2002, for instance, found that consuming at least 700 milligrams of dietary calcium daily was associated with a reduced risk of certain types of colon cancer. A review article last year in *Nutrition Research Reviews* found that a high intake of dairy products, especially milk, was also associated with a reduced risk of colon cancer, perhaps because of their calcium, vitamin D, and other nutrients.

■ **Omega-3 fats from fish** may reduce the risk of colon cancer, though the evidence is preliminary.

■ **Folate**, a B vitamin, may also reduce the risk of colon cancer. A diet rich in fruits and vegetables may be beneficial, in part,

The aspirin question

Aspirin and other NSAIDs—nonsteroidal anti-inflammatory drugs, which include ibuprofen and naproxen but not acetaminophen—look promising as a means to prevent colon cancer. A study from Harvard showed that long-term aspirin use (10 years or more) reduced the risk of colon cancer, and those who took at least 14 standard 325-milligram aspirin tablets a week benefited most.

When intestinal polyps are discovered and removed, some NSAIDs help keep them from growing back. The FDA has approved Celebrex (a prescription NSAID) to treat people with an inherited tendency to develop intestinal polyps.

Recently another important study from Harvard found that after a colon cancer diagnosis, aspirin reduces the risk of dying from a certain type of colon cancer—the type that produces high levels of the COX-2 enzyme that aspirin inhibits. Most colon cancers fall into this category; people with other kinds were not helped.

But aspirin and its relatives can have adverse side effects. Talk to your doctor before you decide to take aspirin or a related drug on a daily basis. It's too early to recommend such drug therapy to prevent colon cancer for most people.

because these foods tend to be high in folate. But not all research has supported this idea, and as we reported in September, in people prone to precancerous polyps, high doses (1,000 micrograms daily of folic acid, the form of folate used in supplements) encouraged polyp growth. This was surprising, since the supplement was expected to reduce recurrence. Thus, we advise people (except women of childbearing age) to limit their intake of folic acid from supplements and fortified food to not much more than 400 micrograms a day (the Daily Value). You don't need to worry about folate that occurs naturally in foods, which has never been shown to promote cancer.

What to do

- ✓ **Don't smoke.** Tobacco is a known risk factor for colon cancer.
- ✓ **If you drink, keep your intake moderate**—no more than two drinks a day for men, one for women. There may be a link between high alcohol intake and colon cancer.
- ✓ **Exercise regularly, and lose weight if you're overweight.** Even in moderate amounts, exercise appears to be protective.
- ✓ **Get screened.** See page 5.

Aromatherapy: does it work even if it doesn't?

Perfumes were a very early invention. Egyptian bas-reliefs depict perfume making. The lovers' bedchamber in the *Song of Solomon* is filled with perfumes and seductive smells—myrrh, camphor, cinnamon. Perfume and unguent containers from ancient times have been unearthed on every continent, along with incense burners (another way of diffusing aromas). Good smells enhance sex appeal and cover up bad smells. Personal hygiene (daily baths, shampoos, and clean clothes) is largely a modern innovation. But the arts of fragrance have always had other purposes besides pleasure. Aromatherapy, the use of essential oils from plants and flowers to soothe and presumably to heal, has been practiced for thousands of years. The oils are called essential because they contain the essence of the plants, their unique aromas.

Citrus oil, lavender, neroli (from orange blossoms), bergamot,

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nutmeg, peppermint, lily of the valley, valerian, and many other essential oils are used in aromatherapy, and to each is attributed a wide variety of psychological and physical effects. These oils are highly volatile (they evaporate easily) and aromatic. They are seldom meant for internal consumption, but believers may sprinkle household linens with them, apply them to light bulbs, and add them to bath water. Nurses and massage therapists sometimes use essential oils for massages. If you like one aroma or another and believe that it soothes you, who is to say it doesn't work?

Studying aroma

On the other hand, there's nothing to back up the more extravagant claims: that the right smells can put you to sleep, wake you up, make your hair grow, boost immunity, alleviate chronic pain, or cure herpes infections. You can find ardent testimonials for all this, but they have not been confirmed by research.

And this is not for lack of scientific study. A review in the *International Journal of Neuroscience* in 2009 looked at 18 studies of aromachology. This is a fairly new term for the scientific study of "olfactory effects on mood, physiology, and behavior." (Aromatherapy, the study pointed out, is simply a folkloric tradition, which aromachology attempts to transform into a rigorous scientific endeavor.) But while the study found that such factors as "culture, gender, and personality" might alter the way aromas are perceived, no conclusions could be drawn. Studies have been poorly designed. Reactions to smells vary from person to person and thus are, understandably, difficult to study.

Another study, from researchers at Ohio State University and

elsewhere in 2008, concluded that while lavender and lemon oil might have some effect on mood, no change in immune function could be detected. It's impossible to discount the placebo effect: if you believe a scent will have a certain effect, you're more likely to get the expected result. Other studies and reviews have reached pretty much the same conclusion.

Bottom line

■ For some people, certain smells may ease anxiety or improve mood. Much depends on your preferences and beliefs. But smells will not cure disease.

■ Some people dislike essential oils, are allergic to strong fragrances, or get headaches when exposed to certain scents. The trend in cosmetics (and laundry products) these days is "fragrance free." Strong fragrances may annoy people around you or make them feel ill.

■ If you do want to experiment with essential oils, be careful not to get them in your eyes or swallow them. Some, like peppermint, are very strong and may irritate the skin if applied directly. Don't apply them to broken or abraded skin. Keep them out of the reach of small children. Never use them on an infant.

■ Think twice before burning scented candles and incense, and avoid air fresheners, particularly the plug-in types—all well-known pollutants of indoor air. They produce harmful organic compounds (such as benzene and toluene), sulfur dioxide, and particulate matter. Long-term use of incense, in particular, has been linked to increased cancer risk—see page 8. Occasional use may be okay, though not if somebody in your household has asthma or is in frail health.



Speaking of Wellness

Microbes and imagination

If you are over 50, the words *Microbe Hunters* might call up the name of Paul de Kruif, author of this hugely successful scientific popularization. Published in 1926 and still in print, *Microbe Hunters* was recommended reading in American schools for decades. It was translated into a score of languages. There is no way of knowing how many young imaginations it captured. Here were 12 real-life heroes in pursuit of various pathogens, such as Walter Reed and yellow fever, Louis Pasteur and rabies (not his only quarry), David Bruce and sleeping sickness in Africa. These epic tales featured dynamic characters, dramatic conversations in lab and field, and eventual triumph. De Kruif loved the muscular metaphor—the conquest, the pursuit, the hunt. It may be thanks to him that we still speak of the war on cancer and the battle against disease.

The book was turned into two movies and a Broadway play. De Kruif, born in 1890, was a trained microbiologist, and his output on scientific subjects for popular magazines was prodigious. In an epoch less scientifically savvy than our own, he believed deeply in the power of research to improve human health and in the nobility of the scientist. His work taught several generations to look to scientific medicine for dramatic breakthroughs and the conquest of disease.

Scientists today tend to be less flamboyant than de Kruif's stalwart pioneers. And yet microbe hunting is still a dangerous

pursuit, even in the best-run lab. Many microbiologists work at the scene of outbreaks, tracking the mysteries of deadly viruses like Ebola or Warburg. Others distribute and administer vaccines. The nurse who gives you your flu shot is, in a way, a microbe hunter.

There are still plenty of microbes in need of tracking. HIV may one day follow smallpox into oblivion. Still, when we've cornered some pathogen and have a vaccine for it, it's not always the end of the story. Because of cultural resistance and unfounded fears of vaccination in parts of Africa, for example, children still needlessly contract polio. Even in the U.S., operating on the mistaken idea that vaccines cause autism or are harmful in other ways, some parents refuse to vaccinate their infants and young children against such dangerous diseases as measles, chickenpox, diphtheria, whooping cough, and tetanus. Far fewer Americans get the flu vaccine than should. The same is true for the pneumonia vaccine for those over 65 and the shingles vaccine for those over 60.

We now have an effective vaccine against the newest flu virus, the 2009 H1N1 strain, also known as the swine flu virus. The "hunt" continues. I hope some book in the school curriculum is catching young imaginations in the manner of *Microbe Hunters*.

John Swartzberg, M.D., Chair, Editorial Board

Nailing toenail fungus

Toenail fungus (onychomycosis) is rarely more than a minor source of discomfort, but it can be unsightly. The nail, often on the big toe, thickens and discolors. It may become so thick and brittle that you can't cut it. In severe cases, it may detach from the nail bed and fall off. The fungus thrives in dark, moist, warm environments, such as sweaty shoes. But aging (up to 30% of people over 60 have it), smoking, past nail trauma, and some medical conditions (such as diabetes and immune disorders) increase the risk of infection; genes may play a role, too.

Unfortunately, there's no easy cure—or perhaps no cure at all in some cases. You may spend a lot of money on prescription medicines and not see much improvement. Home remedies are unproven or ineffective. And even if the fungus seems to go away, it often comes back. In extreme cases, the nail may have to be removed. So when podiatrists recently started promoting a new laser treatment, many readers asked us if it really works. Here's the real deal on it—and an update on conventional treatments.

Beam me down

The maker of the new medical device, the PinPointe Footlaser, claims it has a high (over 88%) success rate against toenail fungus, and that all it usually takes is one 20- to 30-minute session (costing \$1,000 or more) during which the light beam harmlessly passes through the nail to supposedly kill the fungus. But while the device has been cleared by the FDA for some medical uses, it is not specifically cleared to treat toenail fungus—and cannot legally be marketed for that purpose. There are no published clinical trials on its effectiveness. If you want to be one of the first to try it, says Dr. Jim Christina, at the American Podiatric Medical Association, your podiatrist should inform you that its use is “off-label” and that insurance won't cover it. But Dr. Christina's advice—and ours too—is to wait for evidence that it works.

The tried but not-always-so-true

■ **Oral medications** include terbinafine (Lamisil) and itraconazole (Sporanox). Terbinafine appears to be most effective. Fluconazole (Diflucan) is rarely used today. Typically, the pills are taken for several months to fully kill the fungus. Generic versions are much cheaper than the brand names, which can cost \$1,000 or more for the full treatment. Possible side effects include stomach upset, rash, and headaches. Liver damage is rare, but blood tests to monitor your liver function are recommended. The medications may interact with other drugs and/or have other adverse medical consequences; itraconazole should not be taken with certain statins. Some doctors combine oral and topical therapies (see below), but whether this is more effective than oral drugs alone is unclear.

■ **Topical medicines** include ciclopirox (Penlac), a clear prescription nail lacquer that you paint on your toes for several months. It has few side effects, but is far less effective than oral drugs, especially if your nail is so thick that the medicine cannot penetrate. And over the long run it can be even more costly than oral drugs. It may be worth a try for mild cases, though, or if you can't take oral medication. For best results, a health-care professional should regularly debride the top surface of the nail. A 2007 review in *Dermatologic Therapy* notes other topical remedies that have even less success: miconazole (an anti-fungal drug used to treat vaginal infections), ketoconazole (another anti-fungal drug), vitamin E, and oil of bitter orange.

General footnotes

✓ If your toenail is painful or if you're just bothered by its

appearance, see your physician or a podiatrist for an accurate diagnosis. It may look like fungus but be something else, such as psoriasis or nail trauma. Anyone with diabetes, circulation problems, or an immune disorder who develops *any* type of foot infection should get immediate medical advice.

✓ If you choose to treat toenail fungus, be patient—the nail has to grow out before you can see if the treatment is working, and that takes months. And even if you are initially cured, recurrence is common.

✓ To prevent toenail fungus, keep your feet clean, cool, and dry. After bathing, thoroughly dry between your toes; wear absorbent socks and well-ventilated shoes or sandals.

✓ Good nail care is also key. Cut toenails straight across and keep them short. Gently remove debris from under the nail with a manicure stick. Never share pedicure tools unless they are disinfected. It's okay to wear nail polish over a discolored nail.

✓ Don't count on store-bought salves or popular home remedies. Lamisil cream, for example, contains the same anti-fungal ingredient as the tablets, though it's unlikely to do much (it's marketed only for fungal skin infections, like athlete's foot). Tea tree oil, toothpaste, olive oil, Listerine, and Vicks VapoRub are unproven or ineffective. There's no evidence that soaking your toes in rum or saltwater works—and dipping them in bleach can be harmful. If you do try something on your own, avoid anything abrasive, flammable, or highly toxic. This can make matters worse, since the fungus can flourish in damaged skin.

The missing enzyme

Lactose intolerance—the reduced ability to digest milk sugar (lactose)—is common, but maybe not as common or as hard to cope with as many people think.

Lactose can be digested only with the aid of lactase, an intestinal enzyme that virtually all human infants produce. That's how babies digest breast milk. Many people, usually those whose ancestors came from northern Europe, around the Mediterranean, and some parts of Africa, manufacture sufficient lactase all their lives. Generally they are the descendants of herders, for whom milk and milk products were staples of the diet.

But the majority of other people gradually lose the ability to make lactase starting at about age two. This is called “lactase non-persistence” and can lead to lactose intolerance, which is characterized by gas, cramps, bloating, and diarrhea after consuming dairy products. It's estimated that 15% of white Americans, 70% of black Americans, 90% of Asian Americans, and almost all Native Americans have trouble digesting lactose. People may begin noticing symptoms early or late in life; there is no way to predict when and how much lactase production will be reduced.

If dairy products seem to give you gas, should you give them up? Not necessarily. Dairy products are good sources of calcium, vitamin D, and other nutrients important for health, especially bone health and blood pressure. A real downside to lactose intolerance is that if you quit eating all dairy, you will need to make up for shortfalls of these nutrients.

Keep these points in mind:

■ Persistent digestive symptoms may indicate something more serious than lactose intolerance. A few people have an allergy to milk, which is different from lactose intolerance. It is worth getting a diagnosis. There are at least two fairly simple tests for lactose intolerance, one a blood test, the other a breath

test, both of which can indicate whether lactose is being digested. You may have read about a new genetic test, but genetic testing is not needed for a diagnosis.

■ If you are lactose intolerant, you may still be able to consume some dairy. Studies have shown that most lactose “mal-digesters” can drink a cup or two of milk daily without symptoms, particularly if they drink a small amount at a time and drink it with meals. They can also eat ice cream, cheese, and other dairy products in small amounts with other foods. It’s a myth, by the way, that goat’s milk is lactose-free.

■ Yogurt, rich in calcium, usually causes no symptoms. Buy brands with live cultures, since the bacteria help digest lactose.

■ Severe lactose intolerance is rare, but people with severe symptoms may need to watch for small amounts of lactose hidden in many foods. Check labels for words like whey, curds, and dry milk solids. A few prescription drugs, including some birth control pills and heartburn drugs, contain tiny amounts of lactose.

■ The marketers of lactose-reduced milk have convinced a lot of people that they need these products, which can be expensive. Generic lactase drops, which you add to milk in advance, and lactase pills, taken just before eating dairy, cost less.

■ Those who consume no dairy (and even those who do) may need to take calcium supplements. Children and teens who drink no milk will need advice about supplements and other dietary sources of calcium.

Agave: the news is not all sweet

Derived from the same cactus-like Mexican plant as tequila, agave (uh-GAH-vay) syrup is being added to an increasing number of foods and beverages as a “natural” sugar alternative. You can also buy it as a tabletop sweetener in different grades, from light (neutral in taste) to dark (vanilla or caramel-like in flavor). And it’s the latest craze in trendy cocktails. But is agave “nectar,” as marketers call it, really healthier than regular refined sugar?

A fructose sweetener

Agave syrup has only a few more calories than table sugar (20 versus 16 per teaspoon). But while table sugar (sucrose) is half fructose and half glucose, agave syrup contains up to 90% fructose, depending on how it’s processed. That’s substantially more fructose than what’s in widely used high-fructose corn syrup. In fact, agave syrup is often called a “fructose sweetener.”

Fructose doesn’t cause the spikes in blood sugar that glucose does, and so agave is marketed as “diabetic friendly.” But there are no studies to support this. In fact, some studies suggest that large amounts of fructose can promote insulin resistance (and thus *increase* diabetes risk), boost triglycerides (fats in the blood), lower HDL (“good”) cholesterol, and have other harmful effects on the heart, and possibly the liver, too. Consuming agave syrup just adds to your fructose load. Fruit is also high in fructose, but unlike agave syrup it contains fiber, vitamins, and minerals, and is filling.

Other claims debunked

Agave syrup isn’t even as “natural” or raw as marketers want you to think. To turn the plant’s juice into the sweet syrup, it typically undergoes processing similar to that used to make high-fructose corn syrup from starch; some agave products may also be diluted with corn syrup. If there are any nutrient differences, they are minuscule—no sugar is a good source of nutrients. Don’t expect to reap significant antioxidant benefits, either. According to

one recent study, agave syrup contains “minimal antioxidant activity”—on par with refined sugar and corn syrup.

Bottom line: You can add a little agave syrup to yogurt and cereal, if you like, or use it in coffee or tea and in baking. Because it’s sweeter than sugar, you need less, and it dissolves well. But don’t be swayed by the health claims. Agave syrup is simply another form of processed (and concentrated) sugar.

Tests to take for colon cancer

On page 1 we discuss steps you can take to reduce the risk of colon cancer. Most important, everybody over 50 should be screened at regular intervals, with those at higher risk—such as blacks and people with a family history—starting earlier. This can save your life, since the tests can detect polyps while they are still benign, or can detect cancer at an early, curable stage. Talk with your doctor about screening. *By far the best test is colonoscopy, but any test is better than none.* The tests include:

■ **Digital rectal exam.** Part of a routine physical exam, this is quick and easy. But it can find only tumors within reach, so it is not enough.

■ **Fecal occult blood test (FOBT)** detects hidden (“occult”) blood in a stool sample. The doctor gives you a kit to take home; you then send a smear to a lab. If blood shows up, it may have come from something besides cancer—that is, the result may be a false-positive. FOBT may also miss cancers. You’ll be referred for further testing if blood is detected. A newer version, the immunological fecal occult blood test, has a reduced risk of false-positives. Another option is the flushable reagent pad, available without a prescription and requiring no lab test. You must do FOBT every year.

■ **Flexible sigmoidoscopy.** Done by many primary-care doctors, this exam of the lower half of the colon with a flexible lighted tube is accurate and safe. Small polyps can be removed and biopsied if necessary. If anything suspicious is found, you’ll need a colonoscopy to check the upper colon. To prepare, you need an enema the day of the exam. The test should be done every five years. And you will also need an annual FOBT—see above.

■ **X-ray with barium enema** requires fasting and strong laxatives. A chalky solution is pumped into the rectum, followed by air to expand the colon, which is then X-rayed. This test should be repeated every five years. It may miss small polyps. If an abnormality is seen, you will need a colonoscopy.

■ **Colonoscopy** is an examination of the entire colon via a flexible scope monitored on a video screen. If polyps are found, they can be removed right then for further testing. This test requires a specialist, as well as someone to administer sedation and assist with recovery. Expensive but highly accurate and valuable, it requires a clear-liquid diet and strong laxatives the day before. Testing every 10 years is sufficient if no polyps are found. Otherwise, your physician may recommend retesting in three to five years. If you have a colonoscopy, you need no other tests.

■ **Virtual colonoscopy** is similar to conventional colonoscopy, except that the colon is visualized by a CT scan after the colon is inflated with air. No sedation is needed, and the test is less invasive than a regular colonoscopy. As with the regular exam, you have to go on a clear-liquid diet and take a laxative the day before. Recent studies have shown this method to be promising—but if polyps are found, a regular colonoscopy will have to be done. Like any CT scan, it exposes you to some radiation.

The calorie race

Do you burn more calories if you run a mile or if you briskly walk it? Many people claim you'd use the same number of calories, since you're transporting the same amount of weight over the same distance. It's a law of physics, they say, and if you run, you just burn the calories faster.

This belief is widespread, according to our search on the Internet. But it is not true. It's not just that it takes more energy to move your body at higher speed, but running also requires more strenuous arm, leg, and upper-body movement, and it raises your heart rate more, all of which burn extra calories. And to achieve the longer stride of running, you have to repeatedly lift your body weight off the ground so that both feet are in the air at the same time. When you walk, at least one foot is always on the ground. Race-walking, with its hip-

swiveling, arm-pumping motion, also burns more calories per mile than regular walking.

A standard reference guide to energy expenditures shows that for a 132-pound person, walking 3 miles per hour burns, on average, 70 calories per mile (in 20 minutes), but running 6 miles per hour burns 100 calories per mile (in 10 minutes). And in a 2004 study, researchers from Syracuse University measured energy expenditures in 24 people and found that running a mile on a track or treadmill takes 30% more calories than walking it at half the speed.

Brisk walking is still a great way to burn calories, and many people prefer it to running, in part because it is easier on the body. But if you want to burn as many calories as you would running, you have to walk farther.

Goji, the go-to berry?

Goji berries (from the *Lycium barbarum* plant) are finding their way into juices, energy bars, snack mixes, and teas, with marketers claiming them to be the greatest of all “superfoods,” even better for you than other widely promoted exotic fruits like açai, noni, and mangosteen. Goji is actually a generic term given to various berries in the *Lycium* family that grow in Asia, where they've been consumed for centuries to supposedly promote good eyesight, agility, and longevity, among other benefits. Wolfberry is another common name for these small, red, tangy berries.

Like many fruits, goji berries are a source of vitamin C, carotenoids, and other potentially healthful plant substances. They are especially rich in zeaxanthin, a carotenoid that plays a role in eye health, but there is no evidence to support the claim that they prevent macular degeneration and cataracts. Other claims—that they ward off everything from cancer and liver disease to impotence and obesity—are also unproven. (Did you hear about the man who ate goji berries every day and lived to age 252?—a legend that one website says has been verified by modern scholars.) Nearly as inflated as the health claims is the price of goji juice (\$20 to \$35 for 32 ounces), which is often sold through multi-level marketing programs. The dried berries are about \$1.50 an ounce; fresh berries are rarely available here.

Where's the proof?

In animal and lab studies, goji berry preparations have been shown to have antioxidant, immune-enhancing, antitumor, neuroprotective (that is, protects brain cells), and other effects. There are only a few published studies in people, however, and they are small and/or of poor quality. Most reports in people are anecdotal and subjective—they think their eyesight has improved when they consume goji, for instance. According to the Natural Medicines Comprehensive Database, there is insufficient evidence to determine the effectiveness of goji berries for any medical condition. Moreover, goji may interact with blood thinners (such as warfarin) and other medications. And as with some other food imports from China, the FDA has issued import alerts on goji berries for having illegal pesticide residues.

Berry thoughtful

There's nothing magical about goji berries—or “Tibetan” goji berries, in particular. They are healthful, but not the “healthiest

food source on the planet.” All berries, including blueberries, are nutritious and high in antioxidants. Go for goji if you like it and can afford it, not in hopes that it will prevent or cure any disease. There's no evidence to support the use of goji capsules.

What to do about dry mouth

You can have dry mouth without realizing it. You will surely be aware of it if it causes trouble swallowing or wakes you at night. It's normal for saliva production to decline (by as much as 40%) as you grow older. The troubles caused by a lack of saliva are many: difficulty speaking, having to sip liquids to swallow dry foods, persistent bad breath, pain from cracked tongue or lips, hoarseness, and perhaps worst of all, cavities, gingivitis, and other dental problems. A plentiful supply of saliva is required for healthy teeth and gums. Saliva lubricates the mouth and also contains minerals that tooth enamel absorbs.

If you have symptoms of dry mouth, tell your dentist. There are ways to measure your saliva production and evaluate your problem. Be sure to bring a list of medications you take—dry mouth is a common side effect of many types of drugs. (Your dentist, like your physician, should have a list of all medications you take.) If dryness occurs only at night, you may have some nasal obstruction that causes you to breathe through your mouth. You may need to have a medical check-up as well, since dry mouth is a symptom of some auto-immune disorders. If underlying illness is causing your dry mouth, you will need treatment.

Tips for dealing with dry mouth

- ✓ First, protect your teeth and gums. Eat a healthy diet and, in particular, avoid added sugar. Brush and floss regularly. Clean along your gum line—ask your dentist which tool to use. Your dentist may recommend a topical fluoride treatment as well as a sealant. Get regular check-ups.
- ✓ Avoid regular use of mouthwashes containing alcohol, which is drying.
- ✓ Chew sugarless gum or suck on sugarless candy to promote saliva flow.
- ✓ Drink fluids with meals and at other times, and avoid dry salty foods such as crackers and pretzels.
- ✓ Keep a glass of water at your bedside and take a sip if you

wake up with a dry mouth. If your bedroom is very warm and dry, lowering the temperature and increasing humidity can help with dry mouth.

✓ Try nonprescription saliva substitutes. These come as sprays, liquids, gels, and lozenges. Some mouthwashes and toothpastes,

such as Biotene, Orajel, Salivart, and Oasis, contain ingredients that stimulate saliva production. They won't cure dry mouth, but they can reduce its symptoms. If these don't help, talk to your dentist or doctor about prescription products, though these often have side effects.

ASK THE EXPERTS

Q *Should I wipe my kitchen counters and bathroom surfaces with bleach? I've seen ads saying I should, especially to combat flu viruses.*

R.M., VIA THE INTERNET

A Bleach is an effective sanitizer—that is, it kills germs (bacteria and viruses). But for most people, plain soap or detergent and water will get rid of dirt on kitchen counters, utensils, and floors. This won't kill most germs, but they won't survive long if surfaces are clean and dry. A clean kitchen or bathroom does not need to be disinfected.

You may have read about research, some sponsored by Clorox, suggesting that bleach should be used for everything in the kitchen and elsewhere. Bleach does kill a wider range of microorganisms than ammonia, vinegar, and detergents. And it does not contain any free chlorine, so properly diluted bleach is not corrosive and does not cause environmental harm.

Undiluted bleach, however, should be handled with care. The fumes are unpleasant and can irritate your eyes and skin. If you do use bleach, one teaspoon in a quart of warm water is plenty. Don't mix it with ammonia-containing compounds, toilet bowl cleaners, or similar products—that can produce chloramine gas, which can be harmful.

The #1 infection fighters: The best way to prevent the spread of most germs is to wash your hands well with plain soap and water, especially before and after preparing food. When water is not available, use alcohol hand gel. Use common sense in the kitchen—clean up well after handling raw poultry, for instance, and keep sponges and dishcloths clean. For the flu virus, the key preventive is to avoid close contact with a person who is coughing or sneezing.

Q *What do you know about Amberen, a supplement that claims to treat hot flashes and other menopausal symptoms? Supposedly it restores the natural estrogen cycle but is not a hormone itself.*

H.Y., VIA THE INTERNET

A The claims on the manufacturer's website are carefully designed to sound highly scientific, but they are deceptive, and we advise you not to take this supplement. Amberen, it's claimed, consists mainly of succinate, a chemical the body produces as

part of the complex cycle of energy production. This is called the Krebs cycle, and it takes place inside certain cellular structures called mitochondria. The website says that succinate plays a role in resetting the body's hormonal system, stimulating the production of estrogen so that hot flashes go away. Changes in estrogen levels (a normal part of menopause) cause hot flashes, but there is no evidence that Amberen restores the estrogen cycle. Even if it did, we now know that this could have a downside—an increased risk for breast cancer.

Advocates of Amberen often point to studies on rats, which have supposedly been rejuvenated by succinate, and some Russian researchers have come up with some highly debatable theories about this. But according to Dr. Nanette Santoro, Director of the Division of Reproductive Endocrinology at Albert Einstein College of Medicine in New York City, there is no evidence for these claims. Addressing the claims that Amberen can reverse menopause and cure hot flashes, Dr. Kathryn Martin of Massachusetts General Hospital adds that the reproductive system and hormonal cycle of rats are different from those of humans, so even if succinate helps rats, it would not help women. There is no known way to reactivate menopausal ovaries so that they produce more estrogen.

Given the lack of evidence for benefit and the potential for harm, as well as the high price, we think you should stay away from Amberen.

Q *If someone swallows poison, should I induce vomiting?* C.P., VIA THE INTERNET

A Call the national Poison Control Center—800-222-1222—which will connect you to a center near you. Most calls to poison centers can be managed over the phone.

Do not induce vomiting (by using syrup of ipecac, for instance) unless you are instructed to do so. If the substance swallowed is caustic (such as drain opener, bleach, or detergent), vomiting can further damage the esophagus and throat. If it is a petroleum product (kerosene, gasoline, furniture polish, or paint thinner), vomiting can make the person inhale the substances and cause a serious lung problem. Never induce vomiting if the person is unconscious or has convulsions, or if you don't know what was swallowed.

Q *What is trichomoniasis? Can it be spread by a toilet seat?* M.A., VIA THE INTERNET

A It is one of the most common sexually transmitted diseases, with an estimated 7 million new cases annually in the U.S., most often among sexually active women. The cause is a protozoan, *Trichomonas vaginalis*, which infects the vagina and sometimes the urethra and is transmitted during unprotected sex. It is not spread by toilet seats, since the organism can't live long on objects.

Most people who have trichomoniasis do not know it. As many as half of infected women have no symptoms. Common symptoms in women are vaginal itching, irritation, smelly greenish/yellowish vaginal discharge, and pain and itching during intercourse or urination—which can be mistaken for symptoms of other vaginal or cervical infections. The great majority of infected men have no symptoms; the most common symptom in men is a burning sensation when urinating.

The most serious risks of trichomoniasis are complications during pregnancy, reduced fertility, and increased risk for women becoming infected if exposed to HIV.

If you have symptoms of a vaginal infection for the first time, or notice any abnormal vaginal discharge, consult your doctor. And if you're taking medication for a yeast infection and there's no improvement in three days, get medical advice.

There are one-dose prescription drugs that can cure trichomoniasis. Your sexual partner also has to be treated in order to prevent re-infection. For more information, go to www.cdc.gov/STD/trichomonas.

If you have a question you would like to see answered in the *Wellness Letter*, write to Ask the Experts, PMB 157, 2018 Shattuck Avenue, Berkeley, CA 94704 (or go to www.WellnessLetter.com/contact). We regret that we are unable to publish answers to all questions or respond to letters personally.

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Patching it up

If you've tried to quit smoking and failed, using a nicotine patch *before* you actually stop may increase your chance of success, suggests a recent study of 400 smokers in *Nicotine and Tobacco Research*. Half were given nicotine patches two weeks before their quit date; the other half got placebo patches. Both groups then received standard patch therapy for 10 weeks.

Smokers in the pre-cessation patch group were twice as likely to quit—and still be off cigarettes after 10 months—as the placebo group. The patch may help you reduce the number of cigarettes you smoke because it satisfies the need for nicotine and thus makes smoking less enjoyable; it also decreases withdrawal symptoms.

Labeling instructions tell smokers to quit first and then use the patch so as to avoid nicotine overload. But researchers have not found adverse effects in people who double up. Still, to be on the safe side, if you use the patch before you quit, switch to “light” (low-nicotine) cigarettes.

One way not to quit

Since we reported on e-cigarettes in August, an analysis by the FDA of two brands found that they contain a variety of carcinogens and toxins, including nitrosamines and a chemical found in antifreeze. These battery-operated devices, which deliver a nicotine vapor but contain no tobacco, have been touted as a healthy way to quit smoking. But in light of these findings, we do not recommend them for anyone.

At WellnessLetter.com

Visit our website. The **Subscriber's Corner** provides additional articles about vitamin D, quercetin, folic acid, fructose, açai, PSA testing, excessive perspiration, and other topics in this issue.

Recipe of the Month is Holiday Turkey Salad.

Subscribers have online access to past issues from the three-year Index.

Plus, you can order our **Wellness Reports** on *Men's Health*, *Women's Health*, *Supplements*, *Cholesterol*, and *Eating for Optimal Health*.

THIS MONTH'S PASSWORD: ZINC

The original digital dining

What is the simplest, most popular hand tool ever invented? Chopsticks, used by about 1.5 billion people daily. A brilliant adaptation of the lever principle, they're wonderfully useful for cuisines in Asia, where foods are usually cut in small pieces. Some other facts:

- Studies have found that 9-inch chopsticks are optimal for adults, 7-inch ones for kids. Squarish sticks are easier to use than round ones.
- Millions of trees are destroyed each year to make disposable chopsticks; the Chinese government now taxes the sticks to help preserve forests. Reusable chopsticks are preferable.
- Some diet books recommend chopsticks because they can make you eat more slowly and pick up less sauce (often high in calories, fat, and sodium).
- Long-term use slightly increases the risk of arthritis in the hand, especially the thumb joint, according to a study of older people in Beijing a few years ago. However, diners who do not use chopsticks constantly for decades have nothing to worry about.

Wellness made easy

✓ **Another reason to get the flu shot this year: By preventing the flu, it may help prevent a heart attack**, especially if you already have cardiovascular disease. Heart attack rates rise during flu season, and the flu shot appears to reduce the risk, concluded a recent British review of 39 studies. The flu may trigger a heart attack by causing a generalized inflammatory response in the body, which can precipitate a blockage of a coronary artery, according to the researchers.

✓ **Get emergency help if you have symptoms of a stroke, even if they last only a few minutes.** Symptoms lasting less than 24 hours usually indicate that a person has had a mini-stroke, also called a transient ischemic attack, or TIA. About one in eight strokes is preceded by a TIA, according to a recent Canadian study in *Neurology*. Other studies have found that most strokes occurring after a TIA can be prevented by drug treatment. The main stroke or TIA symptoms are sudden numbness or weakness of the face, one arm, or one leg; sudden confusion or trouble speaking or understanding speech; sudden trouble seeing in one or both eyes; sudden trouble walking, dizziness, or loss of coordination; sudden severe headache with no known cause.

✓ **Ignore claims about diets based on your blood type, body type, or personality type:** They have no scientific evidence to back them up. Like most diets, these may help you lose weight in the short term because they tell you to eliminate groups of foods from your diet and thus trick you into eating fewer calories—for a while. There has been legitimate preliminary research into how genetic factors interact with diet in influencing the risk of disease, but so far this hasn't yielded any practical dietary advice.

✓ **Before having a PSA test for prostate cancer, discuss the pros and cons of testing with your doctor.** A recent survey in the *Archives of Internal Medicine* found that only 70% of men who had been tested said their doctors had actually talked to them about the test, and of those only one-third said they had been told about the downsides. PSA screening remains controversial because there's no convincing evidence that it saves lives, and it often leads to unnecessary biopsies and treatment, which can have serious complications. For more information about PSA testing, go to the Subscriber's Corner of WellnessLetter.com.

✓ **If you perspire heavily, try a “clinical strength” antiperspirant, and apply it at night.** Brands include Certain Dri, Secret, and Degree, and they're sold over the counter. Using it at night, when you perspire less, allows more of the active ingredient to be absorbed into sweat glands, and the effect persists after bathing. Regular-strength antiperspirants may also work better when applied at bedtime.

✓ **Avoid smoke from incense.** It contains potent pollutants, notably benzene, toluene, and formaldehyde—known carcinogens also found in tobacco smoke. A study in the journal *Cancer* last year linked long-term incense use with a significant increase in cancers of the upper respiratory tract (nose, tongue, mouth, and larynx, for instance), but not lung cancer. Incense also pollutes the air with fine particles that can be inhaled and can contribute to cardio-respiratory disease.

✓ **Don't count spinach pasta in your 9-servings-a-day quota for fruits and vegetables.** It contains little spinach—the equivalent of less than a tablespoon per cup of cooked pasta. Similarly, pasta made with other vegetable purées contains only enough for visual appeal and a hint of flavor.