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# GUIDE TO HEALTHY LIVING

WELLNESS TIPS & EXPERT ADVICE TO KEEP YOU AND YOUR FAMILY ON TRACK

NUTRITION

WELL-BEING

MENTAL HEALTH



## FEATURING REPORTS FROM HARVARD HEALTH PUBLICATIONS

Harvard Health Publications is the media and publishing division of the Harvard Medical School of Harvard University. The goal of the publications is to bring people the most current health information that is authoritative, trustworthy and accessible. Harvard draws on the expertise of Harvard Medical School's 11,000-plus physicians, researchers and other faculty members. Working with partners in the media and publishing industry, Harvard Health Publications creates information about health and wellness through several forms of media.



# Here’s to a lifetime of good health

Messages about health are all around us and often can be overwhelming and confusing. The experts at Harvard Health Publications have put together a sound report with important basic health information for you and your family. The sections here on nutrition, general well-being and mental health are designed to arm you with simple facts that can help you eat better, keep your blood pressure at a healthy level, identify pain that requires medical intervention, exercise smarter and find ways to ease your stress and anxiety. - *Tribune Content Agency*



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# Here's to a lifetime of good health

Are you confused about nutrition? You're not alone

**N**ews headlines can make it seem as if views on good nutrition are changing all the time and are hotly contested. Diet books come up with one theory after another. Gimmicks abound, touting everything from raw food to cleanses. All the conflicting information can make it difficult to distinguish scientifically backed nutrition advice from fads and marketing.

In reality, though, as decades of research findings on nutrition have accumulated, there's been a growing consensus about what a good diet looks like. Although differing results from studies are

presented in the media as flip-flops, it's more accurate to see individual studies as puzzle pieces that are coming together to form a clearer picture.

What does that picture look like? Research shows that eating healthfully is not complicated. A good diet is rich in minimally processed fruits, vegetables and whole grains, paired with healthy sources of protein and fats.

It emphasizes plant-based foods — preferably a broad variety of them to provide a greater range of nutrients.

Protein should come primarily from legumes, nuts, fish and skinless poultry. Dairy products

should ideally be low-fat. Certain foods, like lean, fresh red meat, should be eaten sparingly, and processed or cured meats like ham, hot dogs and corned beef are not on the menu at all. Fat can be eaten in moderation, so long as it is mainly from vegetable oils.

Another part of a healthful diet is limiting calories you eat. Watching your portion sizes and exercising regularly can help you maintain a healthy weight. Studies also suggest that the context in which you eat matters — whether you're at home or at a restaurant, for instance, or whether you're stressed and hurried or relaxed and attentive.



# 7 practical steps to embrace healthful eating



## 1. Eat fewer processed foods

By doing so, you'll naturally consume foods that have the amounts and combinations of fiber and nutrients that nature intended. Many factory-made foods are stripped of natural fiber and nutrients and filled with added salt, sugar and fat. Even if vitamins and minerals are added back in, foods created in factories can't replicate the nutrient content of natural foods.



## 2. Go for novelty

You may assume good nutrition is boring, but to get a broader range of disease-fighting nutrients, try new grains, vegetables and fruits. Farro, bulgur and quinoa are good grain alternatives. When choosing produce, aim for a variety of colors, which will ensure you get a wide array of antioxidants and phytonutrients. Experiment with new recipes that make use of herbs and spices for flavor.



## 3. Cover all your bases

Every day, strive to eat three servings of fruit, three to four servings of vegetables, some lean protein, some whole grains, healthy oils, some nonfat or low-fat dairy, and a serving of nuts or legumes. At each meal, look at your plate: about one-half should be fruits and vegetables, one-quarter lean proteins (fish, poultry, beans or tofu), and one-quarter whole grains.



## 4. Stay hydrated

It can be helpful throughout the day to sip water or another no-calorie liquid as an alternative to snacking. As you increase your fiber intake with whole-grain foods, water helps ferry it smoothly through your digestive tract, protecting you from constipation. Drinking 4 to 6 cups of water (or low-calorie liquid) a day is a reasonable and healthful goal.



## 5. Keep protein portions modest

Most Americans consume more protein than they need. For proteins like meat, poultry and fish, 3 ounces for lunch and slightly more for dinner is a good goal. Keep in mind that 4 ounces of meat is about the size of a deck of cards. For beans, the serving size is about ½ cup of cooked beans, which is about half the size of a baseball.



## 6. Aim for at least two servings of fish each week

Fish — especially salmon, bluefish and mackerel — are good sources of omega-3 fats, which are good for your heart. Large, predatory deep-ocean fish (such as swordfish, shark, king mackerel and bluefin tuna) have a higher mercury content and should be eaten only on rare occasions, if at all.



## 7. Avoid impulse eating

When you grab an unplanned snack, you are more likely to choose tempting sweets and unhealthy processed foods that are packaged for convenience. Instead, plan healthy snacks ahead of time so you don't eat whatever is handy or in the vending machine. Avoid sugary drinks and their empty calories.

## THE HEALTHY EATING PLATE

Use healthy oils (like olive and canola oil) for cooking, on salad and at the table. Limit butter, avoid trans fat



The more veggies — and the greater the variety — the better. Potatoes and french fries don't count

Eat plenty of fruits of all colors



Drink water, tea or coffee (with little or no sugar). Limit milk / dairy (1-2 servings / day) and juice (1 small glass / day)

Avoid sugary drinks

Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta and brown rice). Limit refined grains (like white rice and white bread)

Choose fish, poultry, beans and nuts; limit red meat and cheese; avoid bacon, cold cuts and other processed meats



# To eat or not to eat

Bacon, soda and too few nuts tied to a big portion of U.S. deaths

BY LINDSEY TANNER  
Associated Press

Gorging on bacon, skimping on nuts? These are among food habits that new research links with deaths from heart disease, strokes and diabetes. Overeating or not eating enough of the 10 foods and nutrients contributes to nearly half of U.S. deaths from these causes, the study suggests.

“Good” foods that were under-eaten include: nuts and seeds, seafood rich in omega-3 fats including salmon and sardines; fruits and vegetables; and whole grains.

“Bad” foods or nutrients that were over-eaten include salt and salty foods; processed meats including bacon, bologna and hot dogs; red meat including steaks and hamburgers; and sugary drinks.

The research is based on U.S. government data showing there were about 700,000 deaths in 2012 from heart disease, strokes and diabetes and on an analysis of national health surveys that asked participants about their eating habits. Most didn’t eat the recommended amounts of the foods studied.

The 10 ingredients combined contributed to about 45 percent of those deaths, according to the study published earlier this year in the *Journal of the American Medical Association*.

Researchers said the foods and nutrients were singled out because of research linking them with the causes of death studied.

In the study, too much salt was the biggest problem, linked with nearly 10 percent of the deaths.

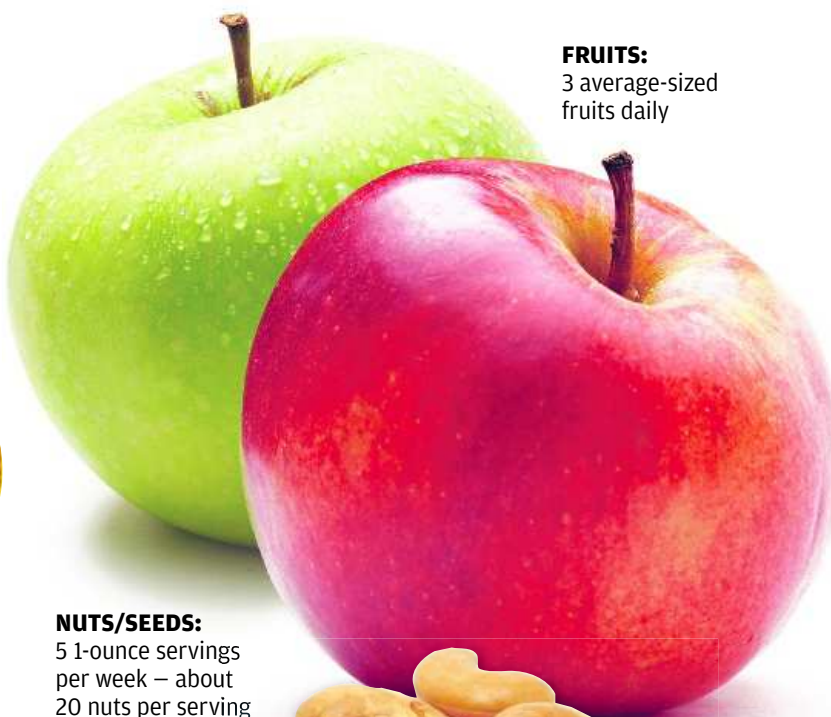
Overeating processed meats and under-eating nuts and seeds and seafood each were linked with about 8 percent of the deaths.

## ‘GOOD’ INGREDIENTS

The study’s recommended amounts, based on U.S. government guidelines, nutrition experts’ advice and amounts found to be beneficial or harmful:



**POLYUNSATURATED FATS:**  
11 percent of daily calories.  
Found in many vegetable oils



**FRUITS:**  
3 average-sized  
fruits daily



**VEGETABLES:** 2 cups  
cooked or 4 cups raw  
vegetables daily

**SEAFOOD:**  
about  
8 ounces  
weekly



**NUTS/SEEDS:**  
5 1-ounce servings  
per week – about  
20 nuts per serving



**WHOLE  
GRAINS:**  
2 ½ daily  
servings



## ‘BAD’ INGREDIENTS



**PROCESSED MEAT (SUCH AS BACON):**  
None recommended



**RED MEAT:** 1 serving weekly –  
1 medium steak or the equivalent



**SALT:** 2,000 milligrams daily –  
just under a teaspoon.



**SUGARY DRINKS:**  
None recommended





# Do I need an omega-3 supplement?



**O**mega-3s are healthy fats that are abundant in certain fatty fish and other seafood. They are also available in much smaller quantities from plant foods and oils, such as walnuts, flaxseed and canola oil.

The omega-3s have favorable effects on a range of risk factors for heart disease, including blood pressure, heart rate, cholesterol and inflammation, and they may also help maintain normal heart and blood vessel function.

In 1998, data from the Physicians' Health Study showed that men who ate fish once a week were half as likely to die suddenly from a heart attack compared with those who ate fish less than once a month. One year later, a report in *The Lancet* described a randomized controlled trial in which

about 12,000 men who had suffered a heart attack took either a fish oil supplement, 300 mg of vitamin E, both or neither.

Those who took the fish oil supplement had significantly lower rates of heart attack, stroke or death during the next 3½ years. Sudden death rates dropped by 45 percent.

People who use a cholesterol-lowering statin drug might further reduce their risk of heart problems by getting more omega-3s.

In a large randomized study, about 19,000 Japanese men and women with high cholesterol levels took a statin either alone or with an omega-3 supplement.

After 4½ years, those who took the combination had 19 percent fewer coronary events, in particular

unstable angina and non-fatal heart attacks, than those who took the statin alone.

But recent meta-analyses of previous observational studies and randomized clinical trials have muddied the waters, showing insufficient evidence that taking a fish oil supplement reduces the risk of heart attack, heart failure or stroke.

It seems the best advice for now is still to get your omega-3s from food rather than supplements. According to the U.S. Dietary Guidelines and the American Heart Association, everyone should try to eat fish, especially oily fish like salmon, sardines or herring, at least twice a week.

If you don't like fish and are concerned about your risk for heart disease or just want to play it safe, there is no risk to taking a daily fish oil supplement.

## Don't ignore the possibility that chest pain may mean a heart attack instead of heartburn.

Symptoms associated with GERD (gastroesophageal reflux disease) can mimic the pain of a myocardial infarction (heart attack) or angina (chest pain caused by diminished blood flow through the coronary arteries), especially when the sensation is constricting rather than burning in nature. It can be dangerous to assume that your chest pain is caused by reflux.

People with known reflux disease always should seek medical attention if they ex-

perience chest discomfort brought on by exercise, which may signal either angina or a heart attack. Paying attention to the severity and length of your chest pain is key. If it's a severe, pressing or squeezing discomfort, it may be a heart attack. Also, heart attack pain lasts a while. If it goes away in five to 10 minutes, it's probably not a heart attack. It could be angina, however, which does require a visit to the doctor — and treatment. It's important not to dismiss chest tightness, especially if it follows physical exercise.



# Make fast food healthier for your kids

## 10 tips and tricks for making a quick meal more nutritious

**LISA DRAYER**  
Columbia Missourian

If you're a busy parent, chances are you've been in the company of hungry children, desperate to find the nearest place to eat and refuel. Although fast food can make for a quick and appealing pit stop, meals can be high in calories, sugars and sodium. But that doesn't mean fast food can't have its place in a child's diet.

"When we look at fast food, it's one meal in the course of a child's day or week. Families need to find that place in the middle where they can fit fast food in reasonable and healthful ways so their children can learn how to fit it into their own lives down the road," said Jill Castle, a registered dietitian and childhood nutrition expert.

Here are tips, tricks and strategies for dining at fast food restaurants with your kids:

### Don't leave home without snacks

"If possible, stop at a grocery store or stock up on healthy snacks in advance, such as cut-up fruit, cheese sticks and yogurt, which will cost less than anything on a fast food menu and fill everyone up while they're waiting for their food to be served," said Victoria Stein Feltman, a registered dietitian and co-founder of Apple to Zucchini, a healthy eating resource for parents and families.

### Choose age-appropriate sizes

A kids meal is often a good choice, especially because portions are typically smaller. "Beyond opting out for any super-size options, the regular-sized portions at fast food restaurants tend to be large and too big for kids," said Nicole Silber, a New York-based registered dietitian and pediatric nutritionist.

### Encourage fruit over fries

"Adding fruits, vegetables and dairy foods help to round out the meal and make it balanced," said Castle, who is also the author of "Fearless Feeding: How to Raise Healthy Eaters from High Chair to High School."

In the United States, for example, McDonald's Happy Meals

now include either seasonal fruit (such as apple slices or an orange) or a low-fat dairy option. The Happy Meal still comes with a kid-size fries, but you can opt for a fruit or yogurt in its place. Other healthy side options found in fast food restaurants include side salads, and carrot and celery sticks.

### Share a meal with your child

This not only downsizes portions, it helps introduce fast foods to your child, such as a grilled chicken sandwich. Indulgences can be shared, too. "Parents might also consider sharing less-healthy sides (such as french fries or onion rings) and desserts (such as milkshakes and ice cream sundaes), and supplementing with fresh fruit and vegetables," Feltman said.

### Pass on the soda

Nutritionists agree that the healthiest beverage options include unflavored milk or water. Juice can be an option but should be limited. New juice guidelines for children: no more than 4 ounces per day for ages 1 to 3 years, 4 to 6 ounces for ages 4 through 6 and 8 ounces for ages 7 to 18.

### Relay expectations

If you don't want your child ordering fries or you want them to have fruit or vegetables, let them know ahead of

time. "A simple thing that parents can do to help their kids make healthy choices is to have a dialogue and ordering plan before going in. This can be done on the drive over to the restaurant. Managing a child's expectations can be half of the battle and can reduce a child's frustration and possible tantrum at the time of ordering," Silber said.

It's also important for parents to think though what can come up in terms of a request.

If parents have a problem with some of the options available, they may want to steer clear of the chain in the first place. "If you're taking your child to a fast food restaurant that serves hamburgers, it's likely your child will be excited to have a hamburger," Castle said. "You need to understand that you are entering into this zone — and if you are not comfortable with the options, you may need to reconsider going."

### Decide on dessert — in advance

"Have that decision (about dessert) made before you go so you're not trying to make it on the fly," Castle said. And if dessert is an option, don't police it. "If dessert is going to be part of the meal, let it be part of the meal — but don't place eating performance criteria on it ... like 'you have to eat

the whole hamburger before you can eat the ice cream.' "Doing this makes the ice cream a much more valuable part of the meal, according to Castle.

### Insist that they sit

"I encourage all families to have their children sit down and eat their meal together," Castle said. "Some of the fast food restaurants have jungle gyms, and kids may choose to run around instead of eating. ... They may grab a fry and go back and forth, but it's important that the parents carve out a rule to have children sit down to eat at a table, with the people who are there with them. They can sit before playing or play first, but at a certain point, they should sit down to eat."

### Teach teens healthy habits

It's true that a teenager can afford more calories than an adult, especially if they are in a growth spurt. Still, encouraging healthy choices among teens can be tricky, since they are often making food decisions on their own.

"Parents can make their teenagers aware of the options so they understand there are more options than a bacon double cheeseburger — like salads, chicken sandwiches, wraps and rice and grain bowls. But saying 'you should order this when you go' won't necessarily work for a teenager and may create a point of contention and rebellion. Inform them of all of the options and encourage the teen to choose foods that will make them feel energized and healthy."

### Be a good role model

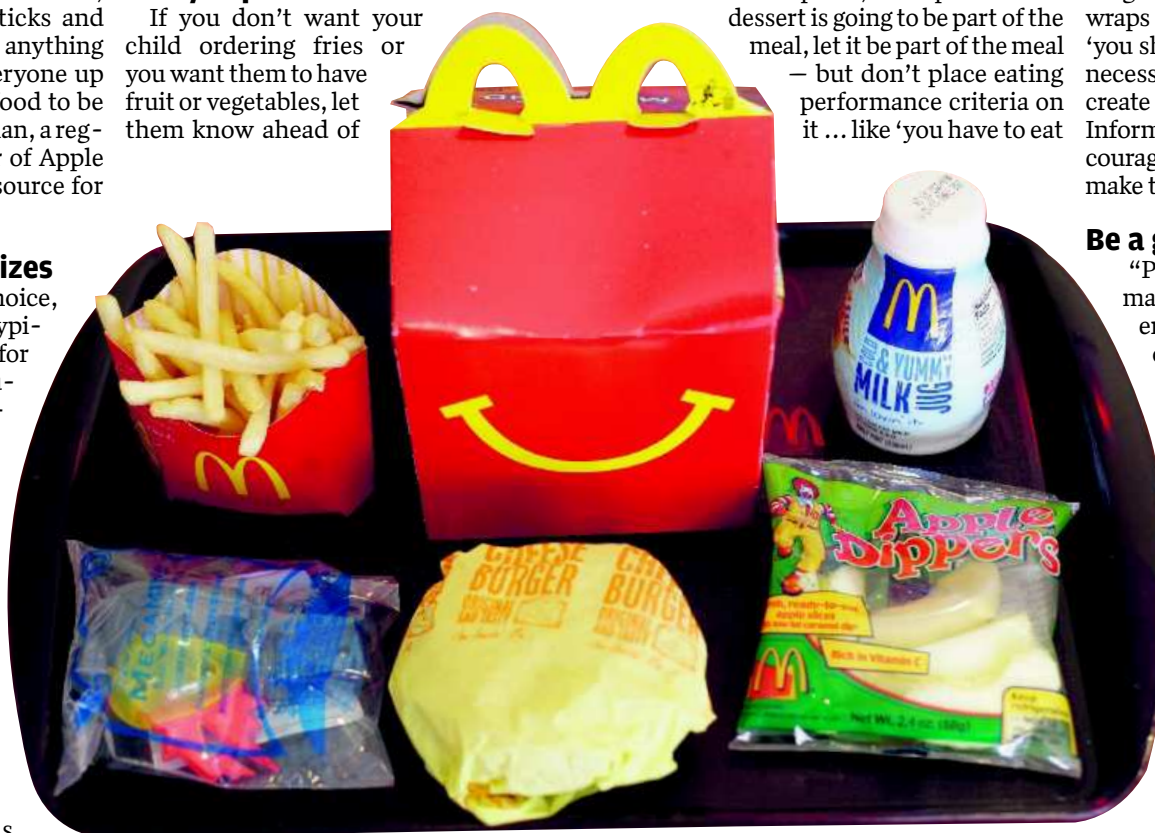
"Parents can influence their kids by making healthy choices themselves and encouraging everyone in the family to do the same, like choosing chicken that is grilled instead of fried and limiting high-calorie and high-sugar condiments such as mayonnaise and ketchup," Feltman said.

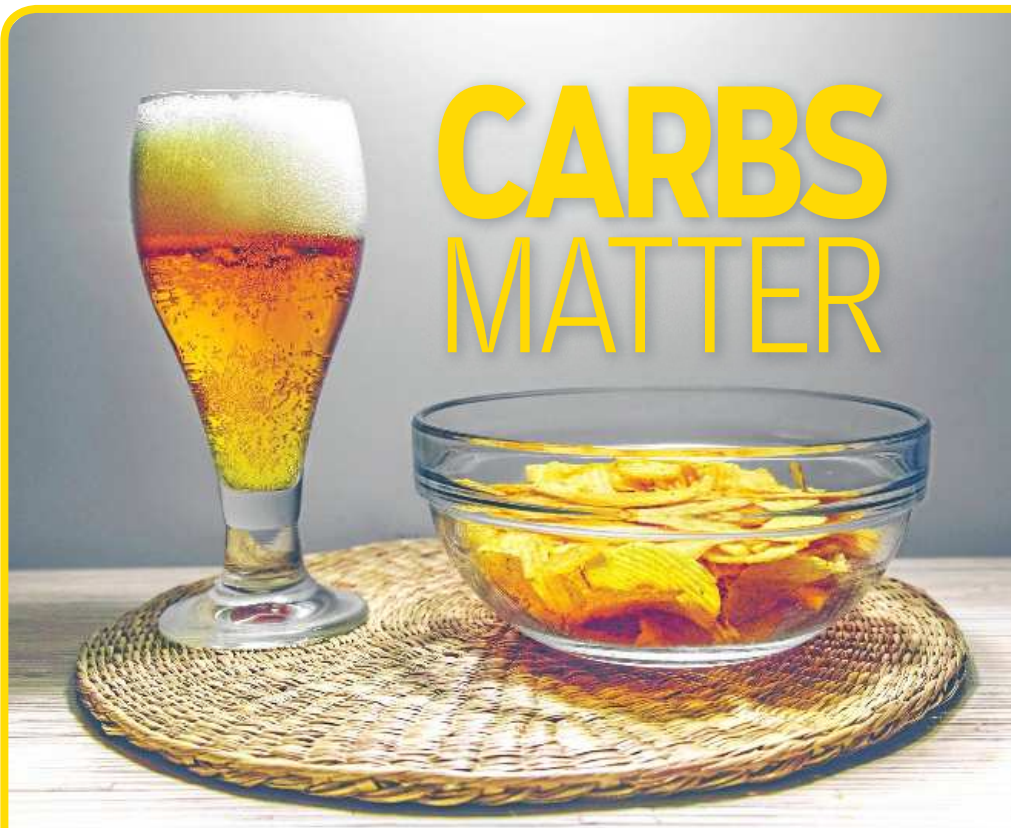
In other words, as with most other parenting advice, what you do almost always means more than what you say.

Lisa Drayer is a nutritionist, author and health journalist.

**LEFT:** This McDonald's Happy Meal features a cheeseburger, fries, milk and apple slices. The fries can be replaced with yogurt or fruit.

ASSOCIATED PRESS





**Carbohydrates contribute about half of all calories to a typical American diet. A worrisome half of these 'carbohydrate calories' come from eight sources, none of which even remotely qualifies as health food. Here are the rapidly digested carbohydrates to avoid.**

A meal or snack of slowly digested carbohydrates (like whole grains or beans) smooths out the blood sugar – insulin roller coaster. The digestive system takes longer to break down these carbohydrates into sugar molecules. That means blood sugar rises more slowly and hits a lower peak, as does insulin. This is good for health. It also means it takes longer to get hungry again.

Among people with diabetes, high levels of blood sugar and insulin contribute to many of the complications of this disease, such as nerve damage, loss of vision, kidney disease, sexual dysfunction and wounds that won't heal. Routine high blood sugar and insulin can also pose problems for seemingly healthy individuals. They can tip people toward developing diabetes. Research suggests they may also contribute to other chronic conditions, including breast cancer, colon cancer and polycystic ovary syndrome. While smoothing out your blood sugar and insulin levels may help you prevent these conditions, the proven benefits are preventing heart disease and diabetes and controlling weight.



**Soft drinks, sodas and fruit-flavored drinks**



**Pizza**



**Potato chips, corn chips and popcorn**



**Cake, sweet rolls, doughnuts and pastries**



**Rice**



**Bread, rolls, buns, English muffins and bagels**



**Beer**



**Frozen potatoes and french fries**





# Drop the doughnut

## Good nutrition starts with first meal of day

**M**orning routines are hard to break. If your idea of breakfast is grabbing coffee and a doughnut on your way to work, finding time to eat healthfully in the morning may seem daunting. With a little planning, however, it's easier than you think.

**Here are some healthful breakfast suggestions, which follow the basic formula of equal parts whole grains + lean protein + fruit:**

- One serving whole-grain cereal (at least 5 grams of fiber and less than 5 grams of sugar) + ½ cup milk (skim or 1 percent milk or unsweetened soy milk) + a small banana or ½ cup berries.
- One ½ cup cooked oatmeal with cinnamon + 2 tablespoons nuts + ½ cup berries.
- A slice of 100 percent whole-grain bread + 1 tablespoon natural peanut butter + a small banana.
- Breakfast sandwich: 100 percent whole-wheat English muffin or whole-grain mini bagel + an egg or a slice of low-fat cheese + an orange.
- Breakfast burrito: one small whole-wheat tortilla + a scrambled egg or a slice of low-fat cheese and salsa + a few slices of mango.
- Two slices of whole-grain toast or one whole-grain English muffin + ⅓ cup low-fat cottage cheese + ¾ cup pineapple.
- One whole-grain waffle + ½ cup low-fat milk + ½ cup berries.

### For a lighter breakfast

- One serving whole-grain crackers + 1 ounce low-fat cheese + ¾ cup grapes.
- ¼ cup nuts + one orange or small glass of low-sodium vegetable juice.
- One small apple or banana + 1 tablespoon peanut butter.
- One hard-boiled egg + ½ cup baby carrots + 2 tablespoons low-fat dip.

### About that coffee drink

**Your coffee** can be a source of hidden calories. Many people order large coffee drinks laden with milk and sugar, which can equal the caloric content of an entire meal. Even a modest tall (12-ounce) café latte made with skim milk adds 100 calories to your daily total. Today's specialty coffee drinks can up the ante much more, making it easy to load up on unhealthy fat, sugar and calories without eating a bite of food. And because liquid calories are less satiating than solid food, sweet drinks increase the chance that you will consume excess calories. Studies also show that consuming too many sugary foods and beverages can increase your risk of heart disease and diabetes. Moreover, research cites sugar-sweetened beverages

like coffee drinks as a major source of added sugar in the American diet and a major contributor to weight gain.

**Coffee by itself isn't a bad thing.** It contains caffeine, which boosts alertness. It also has been linked to a lower risk of type 2 diabetes, heart disease, Parkinson's disease and overall risk of death. The catch is that you need to avoid adding a lot of calories to it. Stick with black coffee or add only a little milk or sugar. Once you've had your coffee boost, switch to beverages that have no sugar. To get adequate hydration, anything watery counts, including water, tea, coffee, soup, oranges and watermelon. You're drinking enough if your urine is pale or clear.



# A guide to the wonders of walking

**T**echnically, you started walking when you were about a year old. And unless you have some type of disability or condition that prevents you from walking, you're still doing it — as you have practically every day of your life. But most Americans don't do enough walking in the course of their daily lives to reap the myriad health benefits it has to offer. In this report, we're going to focus on walking for health. This requires a more sustained effort, but it's totally doable — and the rewards are worth it.

Every year, more and more studies document the benefits of regular exercise. It can help prevent or alleviate numerous health conditions, and unlike prescription drugs, which always seem to have prohibitive lists of side effects, exercise has effects that are overwhelmingly positive, such as improved mood, better sleep and less stress. Some experts even claim that if exercise could be bottled, it would be the most prescribed medicine. Because you have decades of experience with walking, it's the perfect way to ensure that you get your daily dose of exercise. You can even socialize while doing it.

## Health benefits of walking

More than 2,400 years ago, Hippocrates said, "Walking is a man's best medicine." Today, there's a lot of research to back up his statement. The Harvard Nurses' Health Study, which has been tracking the health behaviors of more than 200,000 women for more than three decades, has shown that moderate walking for an average of 30 minutes a day can lower the risk of heart disease, stroke and diabetes by 30 to 40 percent and the risk of breast cancer by 20 to 30 percent. Here are some detailed reasons to head out the door.

**It protects your heart.** Cardiovascular disease is the leading cause of death in the United States, but in many cases, it is preventable. According to one study, a third of all heart attacks and deaths due to heart disease in middle-aged women could be avoided if the women simply walked for exercise.

Harvard researchers followed more than 70,000 women ages 40 to 65 for eight years and found that walkers were less likely to die from







heart disease. Those who logged three or more hours a week (or 25 minutes a day) reduced their risk of dying by 35 percent. Even those who were sedentary at the beginning of the study lowered their risk if they started walking during the study. So it's never too late. Walking is equally protective in men, too, according to an analysis that looked at the results of 18 studies involving a total of more than 450,000 men and women. And for both sexes, just 5½ miles a week (or three-quarters of a mile a day), even at a leisurely 2-mph pace (that means a mile in 30 minutes) offers protection. At that easy pace, you have to walk about 23 minutes a day to start reaping benefits. If you pick it up to a moderate 3 mph (a mile in 20 minutes), you can hit the goal with 15 minutes of walking a day. People who walked longer distances, walked at a faster pace, or did both enjoyed the greatest protection.

**It helps stave off diabetes.** Inactivity promotes type 2 diabetes. Working your muscles more often and making them work harder improves their ability to use insulin and absorb blood sugar (glucose). This puts less stress on your insulin-making cells. Findings from the Nurses' Health Study and the Health Professionals Follow-up Study suggest that walking briskly for a half-hour every day reduces the risk of developing type 2 diabetes by 30 percent. For those already at risk, doing shorter bursts of walking throughout the day may be even more effective. One study found that a 15-minute walk immediately after every meal provided better blood sugar regulation than a single daily 45-minute morning walk. If you already have diabetes, increasing activity throughout the day by 4,000 steps or more can improve levels of HbA1c, a highly sensitive marker of blood sugar, according to a study published in the journal *Health Education Research*. Those 4,000 steps are approximately equivalent to two miles of walking — an amount that also may be enough to offset the increased risk of dying from heart disease that people with diabetes have. Walking at least one mile per day has been shown to cut that risk in half, based on research from the University of California, San Diego.

**It helps lower blood pressure.** High blood pressure is a primary risk factor for heart disease and strokes, but walking is an effective way to lower blood pressure, according to a review of 27 studies. While most of the study participants did not have high blood pressure, the research showed reductions of 5 to 11 points in systolic blood pressure (the first number in a reading) and 3 to 8 points for diastolic pressure (the second number). If your blood pressure is between 120/80 and 140/90 — in the category considered “prehypertensive” — you might want to break up

your walking throughout the day. In a study from Arizona State University, 11 prehypertensive adults either walked briskly for 30 minutes every afternoon or did three 10-minute walks — one each in the morning, afternoon and evening — for a total of 30 minutes a day. While both regimens lowered blood pressure, multiple short walks resulted in a lower average blood pressure in a 24-hour span and reduced the number of spikes throughout the day, compared with taking one longer walk.

**It reduces falls and fractures.** As you age, falling and breaking a bone can be a serious problem. Among older adults, falls are the leading cause of both non-fatal and fatal injuries. One out of five people who suffer a hip fracture from a fall dies within a year. While the statistics are frightening, they are not a reason to hunker down on the sofa to avoid a fall.

## *A 45-minute morning walk may help you fall asleep faster when bedtime comes, according to research published in the journal Sleep.*

Staying active keeps your muscles strong and flexible so you'll be less likely to take a spill. And weight-bearing activities like walking will keep your bones stronger so you'll be less likely to break one if you do fall. The Nurses' Health Study found that women who walked at least four hours a week (35 minutes a day) had a 41 percent lower risk of sustaining a hip fracture compared with women who walked less than an hour a week.

**It counteracts the effects of weight-promoting genes.** Harvard researchers looked at 32 obesity-promoting genes in more than 12,000 men and women to determine how much these genes contribute to body weight. Then they examined the people's exercise habits and found that in men and women who walked briskly for about an hour a day, the genetic effect was cut in half.

**It reduces the risk of developing breast cancer.** More than 70 observational studies have found that physically active women have a lower risk for breast cancer.

In 2013, an American Cancer Society study of more than 70,000 women zeroed in on walking in particular. The results showed that women who walked seven or more hours a week had a 14 percent lower risk of developing breast cancer than those who walked three or fewer hours a week. And walking provided protection even if women were overweight, used supplemental hormones or had other risk factors.

If you've been diagnosed with breast cancer, walking has other benefits. It can help you to feel less anxious and fatigued, a common side effect of treatments.

**It helps tame a sweet tooth.** If you're a self-proclaimed chocoholic, start walking. A 15-minute walk has been shown to curb cravings for chocolate, according to a study from the University of Exeter in the United Kingdom. Another study from the same group found that walking for 15 minutes also can reduce the amount of chocolate you eat in stressful situations. People who sat quietly before performing a stressful task with a bowl of chocolates nearby ate almost twice as much candy as those who walked. And the latest research confirms that walking can reduce cravings and intake of a variety of sugary snacks.

**It improves sleep.** A 45-minute morning walk may help you fall asleep faster when bedtime comes, according to research published in the journal *Sleep*.

During the yearlong study, researchers found that post-menopausal women who took five or more morning walks a week fell asleep faster than those who took fewer morning walks or those who walked in the afternoon. However, if you have insomnia, it may take a while for your sleep to improve. In a small study from Northwestern University, researchers found that exercising during the day did not affect that night's sleep for women (average age of 61) with insomnia. But after 16 weeks of walking for 30 minutes three times a week, the women were sleeping an average of 46 minutes longer a night.

**It sharpens your thinking.** Walking five miles a week helps maintain brain volume and reduces memory problems in people who have mild cognitive impairment or Alzheimer's disease, according to a 10-year study from the University of Pittsburgh. (A decline in brain volume means that brain cells are dying.) Even healthy adults benefited if they walked six miles a week.

**It boosts your mood.** Anyone who's taken a walk when feeling blue knows that it's a great on-the-spot mood booster — and studies support this. But even for more serious depression, walking is a vi-



able remedy. In fact, it can be just as effective as drugs, according to a study published in the journal *Psychosomatic Medicine*.

When researchers prescribed either an antidepressant or 30 minutes of walking or jogging three times a week to a group of men and women diagnosed with major depression, they observed similar improvements in both groups. Walking can even help in tough-to-treat cases.

In a study of people whose depression appeared

resistant to medications, researchers in Portugal found that combining drug treatment with walking produced results. Participants walked 30 to 45 minutes five days a week. After 12 weeks, 26 percent no longer had symptoms, and an additional 21 percent of them showed improvement.

**It eases joint pain.** Walking lubricates joints and strengthens the surrounding muscles to keep them healthy. Studies have shown that walking five to six

miles a week may even protect you from developing osteoarthritis, a degenerative condition of the joints that causes joint pain, swelling, stiffness and weakness. Knees and hips are the most commonly affected joints. If you have osteoarthritis, getting up and moving around probably is the last thing that you want to do when your joints hurt. But research shows that walking can actually reduce pain. Walking also reduces the risk of becoming disabled if you have arthritis. Working up to 150 minutes of walking a week seems to offer the most benefit.

**It improves immune function.** Walking can boost your immunity and protect you during cold and flu season. During a 12-week study of 1,002 men and women, Appalachian State University researchers found that walkers stayed the healthiest.

Those who logged at least 20 minutes a day, five times a week, experienced 43 percent fewer sick days than those who exercised once a week or less. And if they did get sick, it was for a shorter duration, and symptoms were milder.

**It can lengthen your life.** How would you like to increase your life expectancy by 3½ years? All it takes is 30 minutes of walking five days a week, according to research that reviewed the findings of six studies that, together, involved more than 650,000 people. As little as 15 minutes a day resulted in almost two extra years. Work up to an hour a day, and you could live more than four years longer. And with all the other benefits of walking, those extra years are likely to be very good ones.

### Check with your doctor first

Definitely speak to a doctor if you have any injuries or a chronic or unstable health condition — for example, heart disease, a respiratory ailment, high blood pressure, joint or bone disease, a neurological illness or diabetes. Also consult your doctor if you suspect you may have an illness that would interfere with an exercise program or if you have been experiencing any symptoms such as chest pain, shortness of breath, or dizziness.

The Physical Activity Readiness Questionnaire, a tool developed by the Canadian Society for Exercise Physiology, can help you determine whether you should talk to your doctor before embarking on, or ramping up, any fitness program. You can find it at [www.health.harvard.edu/PAR-Q](http://www.health.harvard.edu/PAR-Q). The basic form covers people ages 15 to 69.

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# A way out of addiction

There are myriad options, tips for those who want to quit

**O**vercoming addiction can be a long, slow, painful and often complicated process. But contrary to popular belief, you don't necessarily need to go to a rehabilitation center or receive formal treatment to overcome addiction.

Many people recover from addiction on their own. Others do it with the help of peers, psychotherapy, medications, outpatient or inpatient treatment centers, self-help groups or a combination of these elements. **Whatever the case, the basic necessary steps to recovery are the same:**

■ First, find meaning in your life by replacing your addiction with alternative interests that engage and challenge you. Often that means reconnecting with something — a hobby, a career, a relationship — that was meaningful before your addiction emerged. Sometimes it means discovering a new interest that can take the place of the relationship with the addiction.

■ Second, start exercising, even if it's something as simple as walking. Exercise is a natural antidepressant: it relieves stress and helps you think more clearly. Exercise also prompts the body to release its own psychoactive substances — endorphins — that trigger the brain's reward pathway and promote a feeling of well-being.

Exercising sometimes ties in with finding or renewing meaning.

For example, walking, running or other outdoor activities can get you in touch with nature, which has a calming effect on many people.

Or the exercise might involve joining a team or taking a class, which requires discipline and persistence, and often provides a healthy social context. Regular exercise can help you adopt a routine that leads to positive change, providing an opportunity to learn ways to influence your life favorably.

Both of these essential recovery steps lead to a common and important outcome: You become reinvested in other people and your community.

To recover from addiction, you need to re-enter the social fold, where there is a support system that discourages use of the object of addiction.

The nice thing about the two essential elements of recovery is that they are within the grasp of anyone who decides to overcome addiction, whether or not he or she seeks formal treatment.



Although peer groups and clinicians can facilitate the recovery process, these people are not essential to recovery.

If you have addiction and you'd like to change your behavior, consider all the costs and benefits of the choices you could make.

Don't think only about the negative aspects of your object of addiction; think, too, about the benefits it offers.

One important step to recovery involves understanding what you get from your substance or activity of choice, and how you might achieve the same benefit through other, less harmful means.

## Steps for change

Research shows that the following steps can help you quit addiction, and that when taken together, these steps offer the greatest chance of success.

**1 Set a quit date.** It might be helpful to choose a meaningful date like a special event, birthday, or anniversary.

**2 Change your environment.** Remove any reminders of your addiction from your home and workplace. For example, separate from those who would encourage you to be involved with the object of your addiction (drug, alcohol or behavior). If you are trying to quit drinking, get rid of any alcohol, bottle openers, wine glasses and corkscrews. If you're trying to quit gambling, remove any reminders of your gambling and gambling venue, such as playing cards, scratch tickets or poker chips. Also, don't let other people use or bring reminders of the addiction-related substance or behavior into your home.

**3 Learn new skills and activities.** Instead of giving in to an urge to use, come up with alternative activities, such as going for a walk, to keep you busy until the urge passes. Be prepared to deal with things that trigger your cravings, such as being in an environment where others are using.

**4 Review your past attempts at quitting.** Think about what worked and what did not. Think of what might have contributed to relapse and change accordingly.

**5 Create a support network.** Talk to your family and friends, and ask for their encouragement and support. Let them know you are quitting. If they use your object of addiction, ask them not to do so in front of you. If you buy drugs, you should consider telling your dealer that you are quitting; ask your dealer not to call you and not to sell you drugs anymore. Also, you might want to consider talking to your health care provider about the method of quitting that is best for you. There may be medications that can ease the process for you, and increase your chances of success.

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# Can new technology help you get a better night's sleep?

**ANNE D'INNOCENZIO**  
Associated Press

**P**illows that track your snoozing patterns? A bed that adjusts based on how much you twist and turn? Companies are adding more technology into their products, hoping to lure customers craving a better night's sleep.

Some specialized businesses are making gadgets that promise to measure and improve the quality of slumber, while mass-market retailers like Best Buy are offering simpler ideas like the effect different lighting can have on falling sleep. But with ever-growing options, people may find items that are getting more sophisticated — but may still not be accurate.

The interest in sleep has intensified. The number of sleep centers accredited by the American Academy of Sleep Medicine nearly tripled from 2000 to 2015, the group says. People are more likely to brag about how much they spent for a mattress than on their clothes, says Marian Salzman, CEO of Havas PR North America.

"Sleep is the new status symbol," she says.

It's a big business. One of the more expensive products is Sleep Number's 360 Smart Bed, which runs from \$3,449 to \$4,999.

It makes adjustments based on how restless people are while they're sleeping. The Zeeq pillow,



Sleep Number store manager Lee Pulliam demonstrates the Sleep Number 360 Smart Bed, which tracks sleeping patterns and includes a foot-warming element, adjustable side comfort, head and foot raising capability and an analysis of how well a person slept.

**ROGELIO V. SOLIS,**  
ASSOCIATED PRESS

which sells for \$299 and is from bedding brand REM-Fit, monitors snoring and can gently vibrate to nudge someone into a different sleep position.

"I'm willing to spend more on sleep technology because it will hopefully help me fall asleep quicker, stay asleep longer and be more rested when I wake up," says Frank Ribitch, a self-described gadget junkie from Martinez, Calif., who tracks his sleep with apps connected to a Sleep Number bed and the Zeeq pillow.

Insufficient sleep is a public health concern, federal officials say, with more than one-third of American adults not getting enough on a regular basis. That can contribute to problems like obesity and diabetes. And a study published by the Rand Corp. put the financial loss to U.S. companies at up to \$411 billion a year. At the Stanford Sleep Medicine Center, neurologist and medical director Clete A. Kushida tests new therapies and medications. Over the past two years, the analysis has expanded to

wearable devices. The scientists assess how well the devices match the center's own overnight sleep studies, which use measures such as heart rate and brain wave activity to determine the length and the stages of sleep.

Kushida's conclusion? "Consumer wearable devices are not there in accurately detecting the stages of sleep," he said. The problem: They focus on motion, which can be deceptive since a person could be lying in bed awake.

In fact, San Francisco-based startup Hello, the maker of a product aimed at tracking sleep via a clip attached to a person's bedsheets, recently announced it was shutting down amid reports the device didn't correctly track sleep patterns. Still, Kushida believes the consumer products are getting better and will be able to accurately monitor and solve sleep issues in the next five to 10 years.

Separate from gadgets, some stores are highlighting sounds and smells they say can help people sleep better. Longtime insomniac favorite HSN Inc. offers a \$299 Nightingale Sleep System that masks indoor and outdoor noises. Best Buy has a Philips Lighting's system that works with devices like Nest and Amazon Alexa to let people choose the colors and brightness of lights and program them to turn off at certain times or respond to the sun.

And a company called Sensorwake is launching a product in the U.S. that releases smells like fresh linen it says can help you sleep better.



The Zeeq pillow, by REM-Fit, monitors snoring and can gently vibrate to nudge someone into a different sleep position. The pillow can also play your favorite music, audio books and more without disturbing anyone next to you.

**JO HENDERSON, COURTESY REM-FIT**





# Is sleep eluding you?

Practical tips for better shut-eye



Getting enough sleep is just as important as other vital elements of good health, such as eating a healthy diet, getting regular exercise and practicing good dental hygiene. In short, sleep is not a luxury but a basic component of a healthy lifestyle. But just like purchasing healthy foods, taking an after-dinner walk or flossing your teeth, getting adequate sleep requires time and discipline. Mentally block off certain hours for sleep and then follow through on your intention, avoid building up a sleep debt and take steps to set up an ideal sleep environment. Seek a doctor's help if conventional steps toward good sleep don't work.

This doesn't mean that you can't have any fun or that you need to get eight hours of sleep 365 days a year. Just as an occasional ice cream sundae won't make you fat, staying up a few extra hours for a party or to meet a deadline is perfectly acceptable — as long as you make plans to compensate the next day by taking a short afternoon nap or going to bed earlier.

But over the long haul, you need to make sure you consistently get enough sleep.

Following are some ways to improve your sleep. These good habits are known as “sleep hygiene,” because they represent scientific thinking about maintaining healthy sleep patterns.

## Create a sleep sanctuary

A sleep-friendly bedroom can make it easier to fall and stay asleep, so take time to address issues that affect what you hear, see and feel while in bed.

**Control noise.** A quiet bedroom is especially important for older adults, who spend less time in deep sleep. As a result, they can be more easily awakened.

### Here are some ways to reduce or disguise noises that can interfere with sleep:

- Use heavy curtains and rugs to absorb sound.
- Install double-paned windows.
- Use earplugs.
- Use a fan or a sleep machine, which provide “white noise,” or a recording of soothing sounds, such as falling rain, croaking frogs, or chirping crickets.
- Dim the lights. Bright light at night can suppress your body's production of melatonin and make it harder to sleep.

## Keep your pre-bedtime light intake down with these steps:

- Avoid watching television or using a computer after 9 p.m.
- Don't read from a backlit electronic device (such as an iPad) at night.
- Replace bright lights with lower-wattage bulbs, or install dimmer switches that allow you to keep the lights low at night.

Bright bathroom lights can be an issue, especially since most people use the bathroom right before retiring (and sometimes in the middle of the night). But you don't want to stumble if you can't see. As long as it's safe to do so, consider using night-lights to light the way to and in your bathroom.

**Keep comfortable.** A bedroom that's too hot or too cold may interfere with sleep. Most people sleep best in a slightly cool room (around 65° F). Replace your mattress and pillows if they're worn or uncomfortable. If aching joints are keeping you awake, ask your doctor about pain relievers. Some people say they are more comfortable sleeping on memory foam mattresses and pillows.



Try relaxation rituals

Worrying about a problem or a long to-do list can be a recipe for insomnia. Well before you turn in, try writing down your worries and make a list of tasks you want to remember. This “worry journal” may help move these distracting thoughts from your mind.

Closer to bedtime, try comforting rituals that may help lull you to sleep:

- Listen to soft, calming music.
- Take a warm bath.
- Do some easy stretches.
- Read a book or magazine by soft light.

Once you crawl between the sheets, relaxation techniques can help you calm your body and mind. Mindfulness meditation also has proven helpful for battling insomnia. This type of meditation involves focusing on your breathing and then bringing your mind’s attention to the present without drifting into concerns about the past or future. To learn more about mindfulness meditation, try one of the free guided recordings by Dr. Ronald Siegel, an assistant professor of psychology at Harvard Medical School and faculty editor of the Harvard Special Health Report Positive Psychology, at [mindfulness-solution.com](http://mindfulness-solution.com).

Stick to a schedule

A regular sleep schedule keeps the circadian sleep/wake cycle synchronized. People with the most regular sleep habits report the fewest problems with insomnia and the least depression. Experts advise getting up at about the same time every day, even after a late-night party or fitful sleep.

Limit the time you spend in bed. If you don’t fall asleep within 20 minutes or if you wake up and can’t fall back to sleep within that amount of time, get out of bed and do something relaxing until you feel sleepy again. Regardless of how well (or poorly) you slept, get out of bed at your regular time each morning to keep your circadian cycle synchronized.

Negotiate naps, if needed

If your goal is to sleep longer at night, napping is a bad idea. Your total daily sleep need stays constant, so naps take away from evening sleep. But if your goal is to be more alert during the day, a nap built into your daily schedule may be just the thing. If you have insomnia and feel anxious about getting enough sleep, then a scheduled nap may help you sleep better at night by alleviating that anxiety.

If possible, nap shortly after lunch. People who snooze later in the afternoon tend to fall into a deeper sleep, which causes greater disruption at night. An ideal nap lasts no longer than an hour, and even a 15- to 20-minute nap has significant alertness benefits. Shorten or eliminate naps that produce lingering grogginess.

Curb caffeine

Caffeine keeps you awake by blocking adenosine, a brain chemical that helps you fall asleep. For some people, a single cup of coffee in the morning means a sleepless night. Caffeine can also interrupt sleep by increasing your need to get up to urinate at night.

If you have insomnia, avoid caffeine as much as possible, since its effects can last for many hours. Because caffeine withdrawal can cause headaches, irritability, and extreme fatigue, some people find it easier to cut back gradually than to go cold turkey. Those who can’t or don’t want to give up caffeine should avoid it after 2 p.m. or noon if they are especially caffeine-sensitive.

Caffeine content in common drinks (in milligrams)

Drink	Serving size	Caffeine	Drink	Serving size	Caffeine
Starbucks coffee	12 ounces	260	Soda	12 ounces	35
5-hour Energy	1.9 ounces	208	Starbucks decaf	16 ounces	15 to 25
Monster Energy, Rockstar	16 ounces	160	Lipton decaffeinated tea, black or green	8 ounces	5
Lipton Iced Tea	18.5 ounces	60	7-Up or Sprite	12 ounces	0

Source: Center for Science in the Public Interest



Keep a sleep diary

A sleep diary may help you uncover clues about what’s disturbing your sleep. For example, you may realize that certain habits (like what you eat or drink or when you exercise) are affecting your slumber.

To keep a sleep diary, note what time you went to bed and woke up every day — preferably for two weeks to a month.

Include entries for any medications you took, time and quantity of caffeine or alcohol consumption, when and how long you exercised, and any stresses you encountered during the day. All of these can affect sleep. Also note how well you slept each night, whether you awakened during the night, and, if so, for how long.

Nix nightcaps

Alcohol depresses the nervous system, so an alcoholic drink can help some people fall asleep. But the sleep won’t necessarily be very good. Alcohol suppresses REM sleep, and the soporific effects disappear after a few hours.

Drinkers have frequent awakenings and sometimes frightening dreams.

Alcohol is responsible for up to 10 percent of chronic insomnia cases. Also, because alcohol

relaxes throat muscles and interferes with brain control mechanisms, it can worsen snoring and other nocturnal breathing problems, sometimes to a dangerous extent.

Drinking during one of the body’s intrinsic sleepy times — midafternoon or at night — will make a person more drowsy than imbibing at other times of the day. Even one drink can make a sleep-deprived person drowsy. If you’re driving a car, the combination significantly increases your chances of having an accident.

Quit tobacco

Nicotine is a potent stimulant that speeds your heart rate, raises blood pressure and stimulates fast brain-wave activity that keeps you awake. If you’re addicted to nicotine, a few hours without it is enough to induce withdrawal symptoms; the craving can even wake a smoker at night. People who kick the habit fall asleep more quickly and wake less often during the night.

Sleep disturbance and daytime fatigue may occur during the initial withdrawal from nicotine. But even during this period, many former users report improvements in sleep. If you continue to use tobacco, avoid smoking or chewing it for at least one to two hours before bedtime.





### Try some exercise

Walking, jogging, swimming or any type of exercise that gets your heart pumping faster provides three important sleep benefits: you fall asleep faster, you spend more time in deep sleep, and you awaken less often during the night. Exercise seems to be of particular benefit to older people. In one study, physically fit older men fell asleep in less than half the time it took for sedentary men, and they woke up less often during the night.

Studies also suggest that even gentle exercise, such as stretching and toning, can help people sleep better.

Consider trying yoga or tai chi, a stylized martial arts practice that features a series of slow, flowing motions and deep, slow breathing.

Exercise is the only known way for healthy adults to boost the amount of deep sleep they get. Research shows that older men and women who report sleeping normally can still increase the

amount of time they spend in deep sleep if they do some form of aerobic activity.

Exercising outdoors in the morning is ideal, because bright, natural daylight can help set your natural circadian rhythms. Try to avoid exercise within two hours of bedtime because exercise is stimulating and can make it harder to fall asleep.

### Watch what you eat and when

A grumbling stomach can be distracting enough to keep you awake, so if you're hungry right before bed, eat a small healthy snack, such as an apple with a slice of cheese or a few whole-wheat crackers, to satisfy you until breakfast.

But a full belly may be even more disrupting. Avoid eating a big meal within two to three hours of bedtime. And steer clear of foods that contribute to acid reflux (heartburn), as lying down can provoke or worsen the problem. Common culprits include coffee, chocolate, alcohol, peppermint and

fatty foods. If you're prone to acid reflux, elevate your upper body with an under-mattress wedge or blocks placed under the bedposts.

Over-the-counter and prescription drugs that suppress stomach acid secretion can also help. Finally, if you sleep on your right side, try to sleep on your left side instead, as several studies suggest that sleeping on your right side aggravates heartburn.

Even if you're careful to avoid caffeinated or alcoholic beverages, drinking too much of any fluid too close to bedtime may cause you to wake up to use the bathroom.

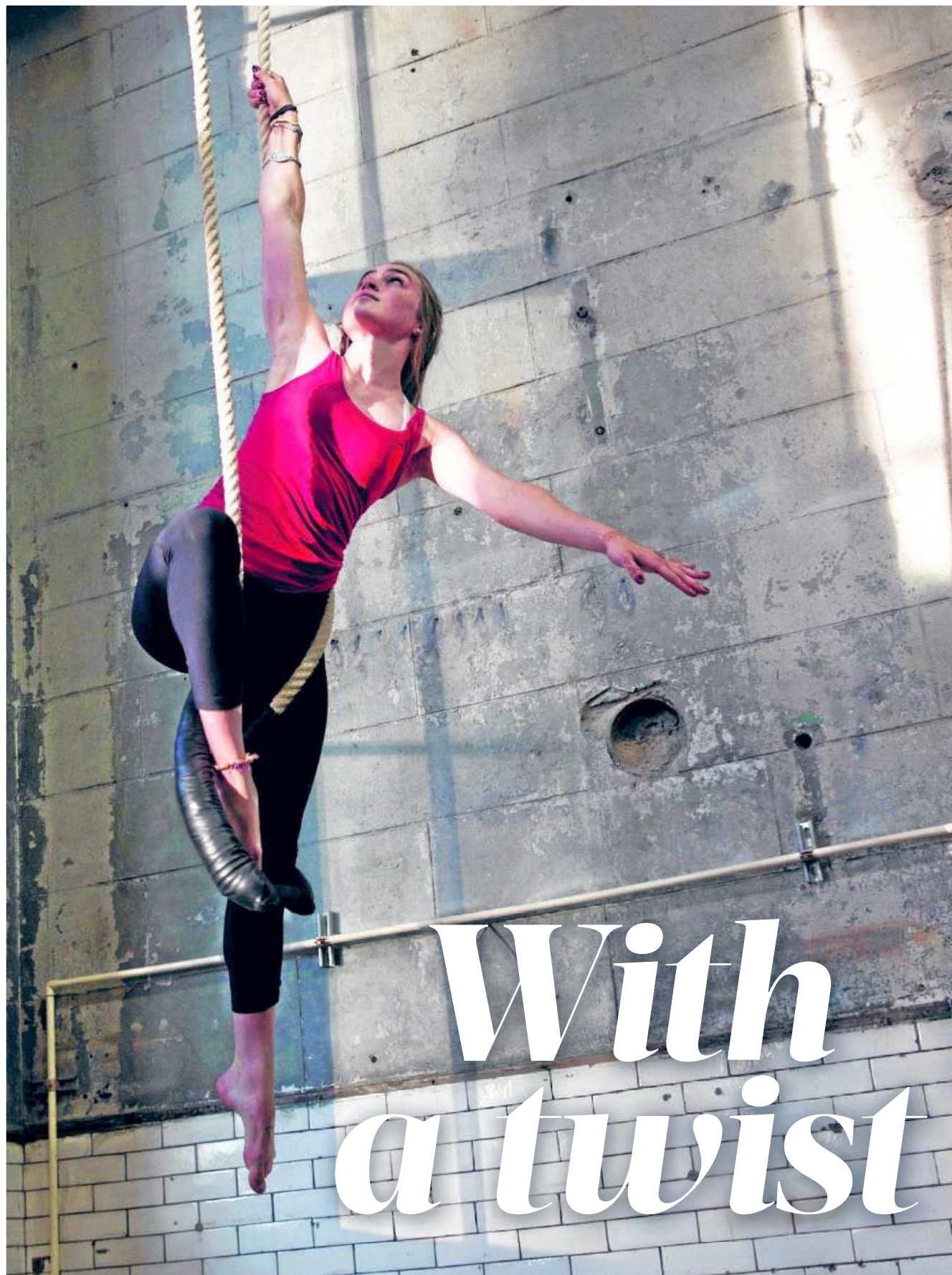
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**Walking, jogging, swimming or any type of exercise that gets your heart pumping faster provides three important sleep benefits.**





## Circus arts fitness is gaining in popularity

**ANYA SOSTEK**  
Pittsburgh Post-Gazette

**I**n May of this year, the Ringling Bros. and Barnum & Bailey Circus shut its doors after 146 years of operation. At the same time, the practice of circus arts as exercise — incorporating trapeze, the lyra hoop, rope or aerial silks — has never been more popular.

“Circus arts as an accessible form of workout probably didn’t start popping up until the last few years,” said Kelsey Keller, co-owner of Iron City Circus Arts, which opened in Pittsburgh last month, about two weeks after the Ringling Bros. circus closed. “It’s something that they’ve seen in the movies or on TV but didn’t realize it was available in their hometown.”

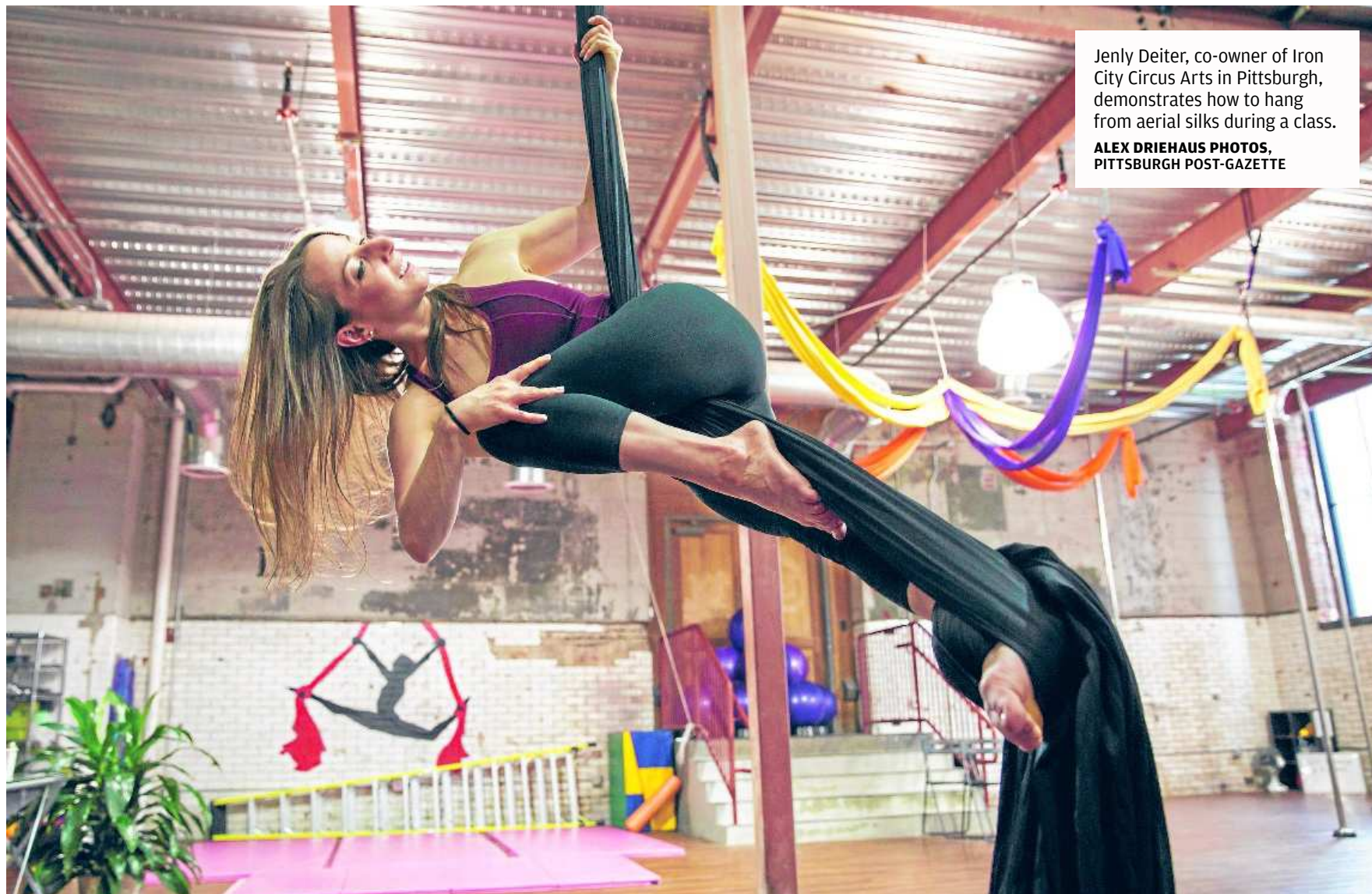
Keller and her co-owner, Jenly Deiter, had dance backgrounds as children but fell in love with aerial arts as adults. They had been instructors at Fullbody Fitness in Pittsburgh and bought the business when the owner was ready to sell. They eventually dropped some of that studio’s other offerings, such as Zumba, to focus on the circus classes, which had taken off in popularity.

They both quit their day jobs — Deiter as a social worker and Keller, who has a doctorate in biophysics, in a lab — to run the business, rebranding it as Iron City Circus Arts. They moved into the space, which has higher ceilings to allow for more dramatic plunges down ropes and aerial silks.



Bridget Re, left, hangs from a trapeze and Jenly Deiter, above, demonstrates a move on an aerial hoop at Iron City Circus Arts.





Jenly Deiter, co-owner of Iron City Circus Arts in Pittsburgh, demonstrates how to hang from aerial silks during a class.

**ALEX DRIEHAUS PHOTOS,  
PITTSBURGH POST-GAZETTE**

"A full-blown circus school has been a dream of ours and we're now living the dream," said Keller.

Several other schools and fitness studios in the Pittsburgh area offer circus and aerial classes as well, such as Pittsburgh Aerial Silks & Circus Arts, which has locations in Bloomfield, Green Tree and Coraopolis, and Verve 360 Downtown, which offers aerial yoga using the aerial silks.

Iron City Circus Arts offers everything from beginner Intro to Aerial Arts classes to advanced sessions for members of its performance troupe, Iron City Aerial, which has been hired to do jaw-dropping stunts at events ranging from an Earth Day celebration to a birthday party for Wiz Khalifa's mother.

A recent beginner class, which lasts 85 minutes and costs \$25, involved a thorough stretching warm-up, followed by time on the trapeze, aerial silks and rope. The studio also offers pole dancing, flexibility, handstand training, children's classes and birthday parties.

Within minutes in the beginner class, I surpassed anything I'd ever done on a backyard swingset growing up. Palms sweating, I was able to hang upside down and then pull myself to standing, and then learn tricks such as the side star, stag forward and bird's nest.

For me, at least, the aerial silks and ropes were trickier. It was tough to get the hang of essentially tying knots with my toes, holding myself up in the air at the same time.

It was doubly impressive, then, to watch the advanced aerial silks class that followed my beginner session. Half a dozen students climbed the silks as nimbly as spiders, then turned upside and plunged downward, doing acrobatics along the way.

One of those students, 13-year-old Abby Richert of Bethel Park, Pa., started learning aerial silks about a year ago after she tried it at a friend's birthday party at Fullbody Fitness. Circus classes "are my favorite thing to do," she said. "I think of it as just having fun, just flying."

She dreams of someday performing with Cirque du Soleil, the Canadian acrobatic circus, which, unlike the clowns and animal acts at circuses such as Ringling Bros., is the inspiration for many of the modern circus arts classes.

Not everyone needs to be an insanely flexible 13-year-old or a former dancer to enjoy circus arts classes — anyone at any fitness level can try it.

"We definitely have a lot of people in their 20s and 30s but also youth and teenagers and older adults," said Keller.

"The kind of people who come in are just people who are interested in trying something new." "That's what makes it really fun for us," added Dieter. "For most of our students, we're giving them their first aerial acrobatic experience."

As for the fitness benefits, circus classes enhance flexibility, but also build serious strength. "You are lifting your own weight around," said Keller. "It feels more like playing than working out, but you are getting a full body workout."





# Keeping your feet healthy



**L**eonardo da Vinci once called the foot a “masterpiece of engineering and a work of art.” Leonardo’s observation still holds true today under the harsher light of modern science — the human foot is an immensely practical, beautifully designed structure built to bear many times its weight thousands of times a day and bounce back ready for more. It has the sophisticated construction of a suspension bridge and the stability of a marble pedestal. Although it’s one of the smaller parts of your body, the foot contains 28 bones. Together, your feet contain more than a quarter of all the bones in your body.

Jammed in a hot shoe all day, taking the brunt of your daily travels, the foot is often overlooked when it comes to health and fitness. But once it starts to hurt, it will quickly remind you of your neglect. Women’s feet, in particular, suffer from the stress and abuse of tight, high-heeled shoes, with the result that women are more likely than

men to suffer from nearly all foot problems. Foot fitness can help you avoid disability later in life, keeping you active and engaged.

Many of the same things you do to maintain your overall health can also help your feet stay healthy. But two lifestyle factors stand out as particularly foot-healthy: maintaining a healthy weight and keeping your feet in good physical condition with stretching and exercise.

## Healthy weight

Your weight plays a major role in your risk for many health problems: cardiovascular disease, high blood pressure, high cholesterol, diabetes, several forms of cancer, arthritis, gallstones, adult-onset asthma, infertility, sleep apnea and even snoring. So it should come as no surprise that excess weight can also contribute to certain foot problems, by adding to the pounding your feet take every day, and increasing the risk for atherosclero-

sis, poor circulation and diabetes. Many foot care specialists today ask about your height and weight, as well as other aspects of your health before suggesting a therapy. If you are overweight or obese, you are likely to leave the doctor’s office not only with pain medication and instructions for stretching exercises, but also with some suggestions on how to take off some weight.

## Foot fitness

Exercising your feet on a regular basis not only improves overall foot health but may also reduce your risk for injury. Walking is the best overall foot exercise. When you walk, you put your foot through its full range of motion, from the time your heel hits the ground until you lift off with your toes. Moreover, walking is one of the best forms of exercise for your entire body. It improves your cardiovascular health and can help your circulation, muscle tone and mood.





### Basic steps to help prevent foot problems

- Buy shoes that fit well, with low heels and plenty of room for your toes.
- Maintain a healthy weight. Excess weight increases the load on your feet and the risk of foot problems.
- Keep your feet clean and dry.
- Trim toenails straight across to avoid ingrown nails.
- Wear sandals or shower shoes in locker rooms or public swimming pools.
- Exercise your feet regularly.
- Protect the skin of your feet from the sun's harmful ultraviolet rays.
- Inspect the skin of your feet routinely for changes.

Before walking or doing any other exercise, take a few minutes to march in place as a warm-up. Then try some quick exercises to stretch and strengthen the muscles in your feet.

Otherwise, your feet will suddenly bear the brunt of all that activity, especially with high-impact sports like tennis. Then hit the road — starting out slowly if it's the first time you've exercised in a while.

Aim for 20 minutes three times a week, walking at a comfortable pace. If that's too strenuous, try walking for 10 to 15 minutes.

Gradually, pick up the pace so that after five to 10 minutes you can still talk but are breathing more heavily than usual. At this point, you are achieving aerobic benefits.

### Here are some other hints to make your walk more pleasant and to protect your feet

- Make sure your shoes provide enough support but allow your feet to “breathe.”
- Walk with your head up and your back straight.
- Swing your arms freely.
- Start on level ground and work up to hills later.

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**James P. Ioli, DPM:** *Assistant Professor of Orthopedic Surgery, Harvard Medical School Chief of Podiatry, Brigham and Women's Hospital*

## When pain signals a medical emergency

Most pain can be managed without a trip to the doctor, but some kinds of pain indicate real danger. Here are some symptoms that require immediate attention from trained medical personnel.

### Chest pain

Call 911 immediately for chest pain. The worry is that you may be having a heart attack or other serious medical event such as a pulmonary embolism (a blockage of an artery in the lung). Typical heart attack symptoms include heavy pressure or tightness in the chest; crushing pain that goes to the neck, the jaw, the left arm or the back; and pain accompanied by shortness of breath, sweating, dizziness or nausea.

### Pelvic pain

If you are pregnant and develop pain in the pelvis, contact your obstetrician/gynecologist immediately or go to the emergency room. If you are not pregnant and develop pain in the pelvis, contact your doctor. If the pain is severe, go to the emergency room. New pelvic pain can be a sign of appendicitis, a ruptured ovarian cyst or an early ectopic pregnancy.

### Sudden severe headache

Get immediate care if you get a headache that is the worst you've ever experienced or if the pain is accompanied by fever, vomiting, stiffness, seizures, a rash, visual disturbances, trouble speaking or weakness. You could be having a stroke or have an infection of the brain such as meningitis. Also seek medical care after any head injury, which can cause a concussion or life-threatening swelling of the brain.

### Severe or persistent abdominal pain

Most stomach aches come and go relatively quickly, but if abdominal pain is very severe, persists or is accompanied by symptoms such as fever, abdominal tenderness or blood in the stool, you may have a serious medical problem such as appendicitis, diverticulitis, pancreatitis or inflammatory bowel disease (Crohn's disease or ulcerative colitis). These conditions require immediate medical care. Likewise, seek medical help if you received a blow to the abdomen and these symptoms develop.

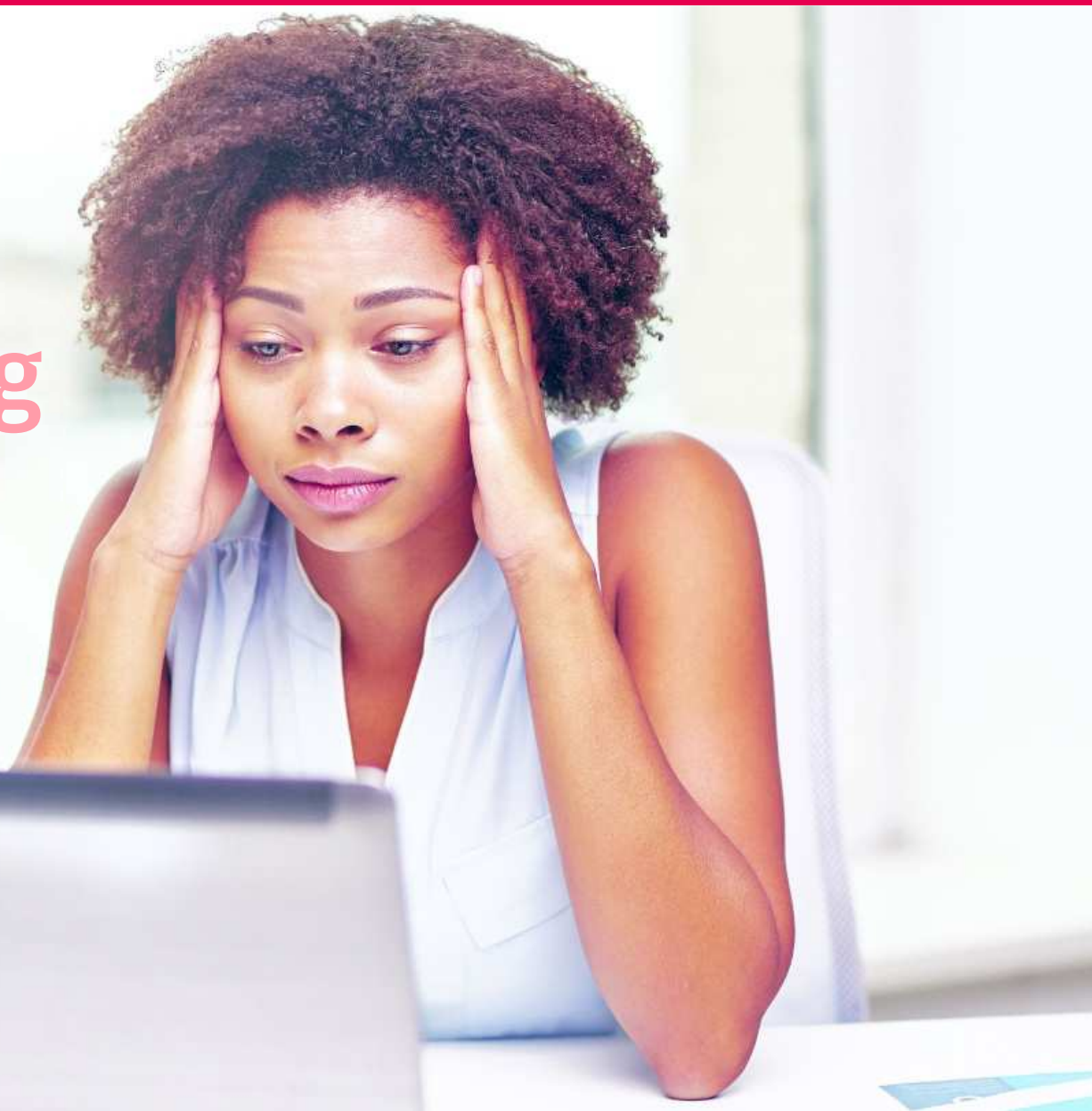


### Musculoskeletal pain

If you have sprained or otherwise injured a joint and you can't walk on it (in the case of an ankle or knee) or if you can't use it (for instance, your wrist hurts so much you can't grasp anything with your hand), contact your physician or go to an urgent care center. If you suffer a sprain and it initially appears to be healing, but pain persists beyond a few days, contact a physician. If you have an injury that causes severe back pain or if you have fever, weakness or loss of control of your urine or stool along with back pain, this can be a medical emergency because it may result from compressed nerves that might require immediate surgery. Likewise, severe or persistent generalized muscle pain requires a medical evaluation; it could indicate drug-related muscle inflammation or a medical problem like myositis (inflammation of the skeletal muscles).



## The headache: Diagnosing common pain



**T**he good news is that about 95 percent of headaches are caused by common conditions — stress, fatigue, lack of sleep, hunger, changes in estrogen levels, weather changes or caffeine withdrawal — rather than an underlying disease or structural abnormality. The three most common types of headaches are tension, sinus and migraine headaches.

Tension headaches cause mild to moderate pain that is steady rather than throbbing and generally lasts for several hours.

You may feel the pain throughout your head, but people commonly feel it across the forehead

or in the back of the head. Experts generally believe that tension headaches result from muscle tightness in the neck and shoulders. These headaches most often affect adults, though children can sometimes get them, too.

Sinus headaches produce mild to moderate pain that also is steady but which occurs in the sinuses — typically behind the eyes, at the bridge of the nose or in the cheeks.

You are most likely to have a sinus headache if you also have a cold or an active allergy that's causing nasal congestion and discharge. Sinus headaches affect people of all ages.

Migraines produce throbbing pain that is moderate to severe.

They often cause nausea and can make you feel very sensitive to light and sound so that you just want to lie in a dark and quiet room.

Rather than spreading across the head, the pain often is localized in one spot — in the temple, eye or back of the head, and frequently on just one side. In some people, visual disturbances precede the pain.

Chronic headaches occur more than 15 days a month and can be either chronic tension headaches or chronic migraines.





## About 50 percent of people experience headaches at least once a month, 15 percent at least once a week, and 5 percent every day.

Of the two types, chronic migraines are more severe, and they account for more visits to the doctor.

They are usually accompanied by other health problems, such as insomnia or fibromyalgia that must also be addressed during treatment.

Cluster headaches are rare but very painful. They often start in the middle of the night during sleep and produce sharp stabbing pains behind just one eye.

The pain can be excruciating, leading sufferers to pace the floor, and the headaches tend to recur at the same time. Most people have so-called episodic cluster headaches that strike a few times a day for several weeks and then disappear during remissions that can last from a few weeks to a few years.

### Do you scream after ice cream?

One minute you're enjoying a delicious ice cream cone; the next, you have "brain freeze." Generally, the headache is immediate and lasts for under a minute.

It's usually a very sharp, steady pain felt in the center of the forehead, but it also may occur on one side.

The cause of cold-stimulus headache, or "ice cream headache," remains largely a mystery. One theory is that the pain originates in the back of the throat, which is chilled by the ice cream, but is felt in the head — a phenomenon known as referred pain.

Any cold food or drink can induce this type of headache, but ice cream is the main culprit because it's very cold and often is swallowed quickly. This doesn't allow for the treat to be warmed slightly in the mouth before it contacts the back of the throat.

To the relief of ice cream lovers, doctors don't prescribe abstinence for headache prevention. Instead, they suggest taking smaller bites and eating slowly to give your mouth enough time to warm up the ice cream.

Pain relievers may help soothe your headaches, but some other medications actually can cause them.

Nitroglycerin, prescribed for a heart condition, and estrogen, prescribed for birth control or menopausal symptoms, are notorious causes of headaches. Ironically, headaches also can be caused by overuse of painkillers.

Other headaches actually are symptoms of another health problem — for example, sinus headaches that occur when you have a cold. Some less common but serious causes include bleeding, infection or even a tumor.

A headache also can be the only noticeable symptom of high blood pressure.

### When to see the doctor

About 50 percent of people experience headaches at least once a month, 15 percent at least once a week, and 5 percent every day. But only a small fraction of these people ever seek a doctor's attention since most headaches are relatively mild and disappear on their own or with the help of an over-the-counter pain reliever, rest or a good night's sleep. But what about headaches that are severe, occur often or are unresponsive to nonprescription pain relievers?

Although headaches rarely are harbingers of more ominous disease, it makes sense to see your doctor if you're having headaches weekly, if your headaches interfere with your ability to function, or if they change in any particular way. The peace of mind justifies the time and expense of a medical evaluation. Because the following symptoms could indicate a serious health problem, seek medical care promptly if you experience any of these:

- A sudden headache that feels like a blow to the head (with or without a stiff neck).
- A headache with fever.
- A headache with convulsions.
- A persistent headache following a blow to the head.
- A headache with confusion or loss of consciousness.
- A headache along with pain in the eye or ear.
- A relentless headache when you were previously headache-free.
- A headache that is incapacitating.

Note that you always should take children with recurring headaches to the doctor, especially when the pain occurs at night or is present when the child wakes in the morning. Under rare circumstances, this might indicate a brain tumor.

### The office visit

Your physician will try to determine the causes of your headaches and design a treatment plan. Expect some detailed questions about your headache and possibly some basic laboratory tests.

He or she will perform a physical exam, includ-

ing a blood pressure check and a careful look inside your eyes with an ophthalmoscope. Increased pressure in the head, which can be a sign of a brain tumor, can cause swelling of the optic nerve; the ophthalmoscope examination can reveal such swelling. In some people, tension and migraine headaches produce telltale signs such as spasms in the neck and shoulder muscles and tender areas — known as "trigger spots" — at the back of the head; your doctor may check for these. But in most people who have tension or migraine headaches, the physical examination doesn't turn up anything unusual — which is good.

### What your doctor will want to know

Because common headaches have few, if any, measurable effects on the body, tests aren't likely to turn up much in the way of helpful information. Instead, your doctor will rely on the information you provide about your pain. Before an appointment, you may find it useful to jot down the answers to these questions:

- When did your headaches begin?
- Does anything seem related to their onset?
- How often do they occur?
- How long do they last?
- When do they occur?
- Where is the pain located?
- How severe is it?
- What does it feel like?
- Do you notice any other symptoms before/during headaches?
- Does anything trigger or worsen the headaches?
- Does anything ease the pain?
- Does anyone in your family have a history of headaches?
- How is your family and work life?
- How have the headaches affected your life?

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# *The causes of stroke*

## and how to recognize when one is happening

**S**trokes have always been a much-feared medical emergency, and rightly so. Strokes are the fifth leading cause of death in the United States, and even more important, a major cause of disability. Someone in the United States has a stroke every 40 seconds, and someone dies of a stroke every four minutes, amounting to 795,000 strokes and

129,000 deaths annually.

Everyone should learn the following warning signs of stroke. If you experience any of these symptoms, immediately dial 911 or go to an emergency room:

- Weakness in an arm, hand or leg.
- Numbness on one side of the body.

- Sudden dimness or loss of vision, particularly in one eye.
- Sudden difficulty speaking.
- Inability to understand what someone is saying.
- Dizziness or loss of balance.
- Sudden, lasting, excruciating headache.





## Top 5 ways to prevent a stroke

For quick reference, here are the most important steps you can take:

- Lower your blood pressure (biggest stroke risk factor).
- Keep cholesterol and blood sugar in the healthy range.
- Don't smoke.
- Exercise regularly.
- Lose weight, if needed.

Note: Treatment with blood-thinning drugs, as directed by a physician on a case-by-case basis, may also be important for stroke prevention.

## Prepare in advance

If you are at risk of having a stroke, prepare for an emergency by displaying important phone numbers prominently next to the telephone, such as the numbers of your doctor and a relative or close friend who should be contacted in case of an emergency. It's also a good idea to keep on hand a current list of prescription medications (especially any blood thinners) and other drugs you use, as well as a brief medical history to take to the hospital in the event of a stroke.

## What to do if a stroke occurs

The importance of identifying and treating a stroke as soon as possible can't be stressed enough. Warning signs can begin anywhere from a few minutes to a few days before a stroke. Everyone, especially those who are at increased risk for strokes, should learn these warning signs and know what to do if they occur.

How can you tell if someone else is having a stroke? The American Stroke Association has devised a checklist called FAST. The information also is available as a smartphone app, which features a short video demonstrating the FAST symptoms, a search function that shows nearby award-winning hospitals, and a time-stamp function that records when symptoms begin, which can aid health care workers in their treatment.

Rapid, safe and effective diagnostic techniques can accurately identify the extent and location of a stroke and the nature of the blood vessel problem causing it. The goal of treatment is to restore blood circulation (or to stop the bleeding) before brain tissue dies. The time frame for reaching this goal is frighteningly slim. Currently available treatments to prevent brain cell death leading to disability begin losing their effectiveness within 60 minutes of the onset of symptoms, so every minute counts.



## Recognizing a stroke: FAST checklist

If the answer to any of the questions below is yes, there's a high probability a person is having a stroke.

### FACE

- Ask the person to smile.
- Does one side of the face droop?

### ARMS

- Ask the person to raise both arms.
- Does one arm drift downward?

### SPEECH

- Ask the person to repeat a simple sentence.
- Are the words slurred? Does he or she fail to repeat the sentence correctly?

### TIME

If the answer to any of these questions is yes, time is important. Call 911 or get to the hospital fast. Brain cells are dying.

One of the main clot-dissolving drugs, recombinant tissue-plasminogen activator must be given within three hours of the start of stroke symptoms (though in some cases, that window can be extended to 4½ hours), but earlier always is better. Ongoing research is focused on treatments that can buy time by protecting a person's brain until blood circulation is restored, which could improve the odds of survival and decrease the chance of disability.

## How strokes affect the brain

The human brain weighs only about 3 pounds, but it is one of the most complex systems known to science. It has roughly 100 billion interconnecting neurons (nerve cells) that communicate incessantly in languages both chemical and electrical. But the brain's complexity also makes it vulnerable. Though a strong skull helps protect it from the outside, strokes can quickly damage it from within.

Part of what makes the brain so vulnerable is its intense energy needs. Although it accounts for only

2 percent of a person's total body weight, the brain uses about a quarter of the body's oxygen and expends more than two-thirds of the body's chief source of energy, glucose. However, the brain cannot store oxygen or glucose, so it requires a constant flow of blood. When that blood supply is cut off by a stroke, damage occurs quickly in the region that is deprived of fuel.

Early in life, the brain is highly adaptable. Damage to a specific area can often be repaired because existing neurons can form new connections with other neurons. Despite several recent discoveries leading to a new appreciation of the regenerative potential of the adult brain, the fact remains that the brain has lost much of its reparative power by the end of childhood. While the adult brain can rewire itself to some degree, most of the neurons that die cannot be replaced. Unlike the heart, which can still support a marathon runner after losing 10 percent of its tissue, a 10 percent loss in the adult brain can result in devastating disability.

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# The energy jolt you get from exercise

**I**t may sound strange, but in order to get more energy, you have to do the very thing you don't feel you have enough energy to do: exercise. Regular exercise boosts your energy in multiple ways. When you understand how, you will never again think of it as a tedious routine that some health nag wants you to do, but rather as a surefire energy enhancer that you can tap into at will.

## How activity boosts energy

When you engage your muscles in any type of exercise, more energy-producing mitochondria form in your muscle cells. Mitochondria are the cellular powerhouses that convert glucose and fat into ATP, the molecule that cells use for energy. So while exercise burns energy, it also enables muscle cells to produce more energy.

But fueling your cells requires more than just glucose and fat. Oxygen also is essential to the process, and exercise increases your body's oxygen-carrying

capacity. Any type of regular exercise creates more capillaries, the tiny blood vessels that ferry oxygen to your cells. But aerobic exercise, by making you breathe the most deeply and increasing your heart rate the most, gets more oxygen circulating.

Exercise also affects levels of various hormones and chemical messengers. When you work out, your body releases epinephrine and norepinephrine. In large amounts, these stress hormones cause the energy-draining fight-or-flight response, but in the modest amounts induced by exercise, they make you feel energized. Exercise also boosts levels of compounds called endorphins, "feel-good" chemicals that lift your mood and often are credited for the "runner's high." An elevated mood in itself can be an energy booster.

Finally, regular aerobic exercise almost guarantees that you will sleep more soundly — a prerequisite for feeling refreshed. Exercise is the only proven way to increase the amount of time you spend in

deep sleep, the type that particularly restores your energy. The more deep sleep you get, the less likely you are to awaken in the middle of the night, and the more rested you'll feel the next day.

Exercise also increases the amount of time you spend in REM (rapid eye movement) sleep, the time during sleep when you dream most often and most vividly. More time in REM sleep also restores your sense of energy, though not as much as deep sleep. How exercise improves both REM and deep sleep is unknown, although scientists suspect that it leads to the production of chemicals that affect alertness.

In a 2013 poll conducted for the National Sleep Foundation, people who exercised vigorously on a regular basis reported sleeping better than more sedentary people, even though both groups got about seven hours of sleep on weekday nights. Non-exercisers reported the least energy and the most sleepiness.





## How lack of activity drains energy

Picture your energy level as a rechargeable battery. You can plug it in and charge it up with exercise or let it sit idle and watch the energy drain away.

When you're inactive, you lose muscle cells, and the cells that remain have fewer mitochondria. It's remarkable how little time it takes to see the effects. People who have a limb immobilized because of an injury or illness begin losing muscle cells within just six hours. With weaker muscles, everything you ask your muscles to do requires more effort, leaving less energy for other activities.

It's particularly important to keep exercising as you age because muscle mass tends to decline over the years. Sarcopenia, the gradual decrease in muscle tissue, starts earlier than you may realize — around age 30. The average 30-year-old can expect to lose about 25 percent of muscle mass and strength by age 70 and another 25 percent by age 90, with resulting effects not only on energy but a host of other diseases.

Lack of exercise also causes changes in your heart and lungs. They become less efficient at oxygenating your blood and pumping that blood (along with nutrients) to all parts of your body. That in turn affects your energy level, most noticeably during periods of physical exertion. Compared with an active person, a sedentary person experiences more fatigue when carrying out a physically demanding task and has both a higher heart rate and lower oxygen consumption.

Inactivity also has psychological effects. The less active you are, the less active you want to be. People who don't exercise have a greater perception of fatigue than people who do.

## The exercise prescription

Regular exercise can contribute to a feeling of vitality and energy, and it can also improve your sleep. But what type of exercise should you do? You don't have to spend a lot of time worrying about this. When it comes to exercise and energy, it's hard to go wrong.

Aerobic exercise is an obvious starting place, whether you prefer brisk walking, jogging, bicycling or swimming. In one study of 427 people ages 45 and older, those with greater cardiovascular (aerobic) fitness scored higher on a scale measuring vitality than those who were less fit.

Studies have demonstrated that aerobic exercise can reduce fatigue in people who have major health challenges, such as chronic autoimmune conditions or cancer. A review of 36 studies found that 30 to 60 minutes of aerobic exercise three times a week (for at least three months) significantly reduced fatigue in people with diseases such as multiple sclerosis, lupus, and rheumatoid arthritis.

A similar review of 19 studies involving people ages 65 and older found that physical activity eased cancer-related fatigue.

Most studies linking regular exercise to a greater

sense of energy have involved aerobic exercise rather than strength training, so it is difficult to say how strength training compares. However, many people report an increased sense of energy and alertness from either kind of regular exercise — a well-rounded exercise program should include both.

Fortunately, you don't have to run for miles or work out to the point of exhaustion to start reaping benefits. Even core exercises may help. One recent study of the core-strengthening program Pilates found that it improved sleep quality in 22 sedentary people and lessened daytime sleepiness.

But core work may help improve energy in other, more subtle ways beyond enhancing sleep.

Among other things, core exercises can help improve your posture whether you're sitting, standing, or moving. Good posture trims your silhouette and projects confidence — and psychologists say the boost to your psyche may give you mental energy.

In fact, the only types of exercise that don't appear to have significant effects on energy are stretching and balance exercises. That doesn't mean you should ignore them, however, because they have other health benefits.

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**It's particularly important to keep exercising as you age. The average 30-year-old can expect to lose about 25 percent of muscle mass and strength by age 70.**



# Keeping blood pressure in check



**Y**ou can't see your blood pressure or feel it, so you may wonder why this simple measure of health is so important. The answer is that your blood pressure gives your doctor a peek into the workings of your circulatory system. A high number means that your heart is working harder to pump blood through your body. This extra work can result in a weaker heart muscle and potential organ damage down the road. Your arteries also suffer when your blood pressure is high. The relentless pounding of the blood against the artery walls causes them to become hard and thick, reducing room inside them for blood to flow and potentially setting you up for stroke, kidney failure and cardiovascular disease.

Having your blood pressure measured is a familiar ritual at most visits to the doctor's office.

The examiner inflates a cuff around your upper arm, listens through a stethoscope, watches a gauge while deflating the cuff and then scribbles some numbers on your chart. Be sure to ask what the reading is each time because health care professionals don't always tell you.

When you find out, make sure to keep a record of this information. Readings can fluctuate, and the more of them you have, the truer picture you will get of how high your blood pressure actually is. But what do these numbers actually mean?

## Prehypertension

You have prehypertension if your systolic blood pressure reading is 120 to 139, your diastolic pressure is 80 to 89, or both. The risk of cardiovascular disease begins climbing at pressures as low as 115/75 mm Hg, and it doubles for every 20-point increase in systolic pressure and each 10-point increase in diastolic pressure.

If your blood pressure falls into the prehypertension category and you do not have any other risk factors, lifestyle changes are the recommended treatment at this stage.

If you have diabetes or chronic kidney disease, you should begin taking a blood pressure medication if your pressure is at or above 130/80 mm Hg.

## Stage 1 hypertension

You have stage 1 hypertension if your systolic blood pressure is 140 to 159, your diastolic pressure is 90 to 99, or both. If you don't have any accompanying conditions such as heart disease, diabetes, kidney disease or a history of stroke, you will usually start with lifestyle modifications and a single medication. Your doctor may let you try lifestyle modifications alone for two or three months to see if you may be able to avoid medication altogether, but many people find that they need to take some type of medication in order to reduce their blood pressure numbers to healthy levels. You may have to try several drugs to find one that works well.





The initial choice of drug may depend on whether you have other health problems — such as diabetes, migraine headaches or cardiac arrhythmias — in addition to hypertension.

The JNC 7 guidelines also recommend that African-Americans, who are at a higher-than-average risk for hypertension-related complications, start with a two-drug regimen if blood pressure readings top 145/90 mm Hg.

## Stage 2 hypertension

You have stage 2 hypertension if your systolic pressure is at least 160 mm Hg, your diastolic pressure is at least 100 mm Hg, or both. In addition to lifestyle modifications, you will probably need to take at least two medications.

If this course of action fails to bring your blood pressure down to your target level (below 140/90 for most individuals and below 130/80 for those with diabetes or chronic kidney disease), your doctor may add additional drugs to the mix.

## What puts you at risk for high blood pressure?

Essential hypertension has no clear cause. As a result, identifying risk factors can be difficult. Researchers have discovered certain patterns, however. Some factors are things you have no control over — for example, you can't alter your genes. But others, like smoking and heavy drinking, are habits you can change.

## Risk factors you can't control

Even though you can't control these risks, that doesn't mean you can forget about them. Awareness of your risk factors can help you put your overall cardiovascular risk profile into perspective and may provide you with extra incentive to adopt healthier habits.

**Family history:** Like many disorders, high blood pressure tends to run in families. In addition, a family history of heart attack, stroke, diabetes, kidney disease or high cholesterol increases a person's risk of developing high blood pressure.

This doesn't necessarily mean that genetics always plays a role. Some of the similarities observed in families may be the result of environmental influences. Children's eating patterns, coping skills and propensity toward healthy and unhealthy habits are shaped by their parents' behavior and the social climate in which they're raised.

Research indicates that about 25 percent of cases of essential hypertension that occur in families and up to 65 percent of cases in pairs of twins may have a genetic basis. In addition, at least 10 genes have been

found to influence blood pressure. So far, however, only a few studies have identified a link between particular genes and hypertension. For instance, a rare form of hypertension called Liddle's syndrome, which develops in childhood and often leads to an early death from cardiovascular disease, results from a defective gene that causes the kidneys to retain too much sodium and water.

**Age:** Although aging doesn't invariably lead to high blood pressure, hypertension becomes more common in later years. Diastolic pressure increases gradually over the years by about 10 mm Hg until age 55 in men and 60 in women, at which time it begins to decline. Between ages 30 and 65, systolic pressure increases an average of 20 mm Hg, and it continues to climb after 70. This age-associated increase largely explains isolated systolic hypertension.

**Gender:** Up to about age 55, women are less likely than men to develop high blood pressure. But women's blood pressures, especially the systolic readings, rise more sharply after that. Indeed, after age 55, women are at greater risk for high blood pressure. This pattern may be partly explained by hormonal differences between the sexes. Estrogen tends to protect women against hypertension, but as the production of estrogen drops with menopause, women lose its beneficial effects, and their blood pressures climb.

**Race:** African-Americans often develop high blood pressure earlier and to a greater degree than do people of other races. Although African-American adults are 40 percent more likely to have high blood pressure than their white counterparts, they are 10 percent less likely to have the condition under control. The high incidence of hypertension among African-Americans may have a genetic explanation. Some researchers suspect that people who lived in equatorial

Africa developed a genetic predisposition to being salt-sensitive, which means their bodies retain more sodium. This condition increases blood volume, which, in turn, raises blood pressure. Salt sensitivity can be beneficial in a hot, dry climate because it allows the body to conserve water. Generations later, however, the American descendants of these individuals remain disproportionately salt-sensitive.

## Controllable risk factors

Your health habits are key factors in determining your cardiovascular risk. In fact, you may be able to overcome the effects of other risk factors and bring your blood pressure readings into a safe range simply by making changes in your lifestyle, such as quitting smoking, reducing your salt intake and losing weight.

**Obesity:** Excess weight and hypertension often go hand in hand, because carrying even a few extra pounds forces your heart to work harder. Being overweight increases the risk of high blood pressure approximately threefold. The risk continues to rise as body mass index progresses into the obesity range. By contrast, systolic and diastolic blood pressures drop an average of 1 mm Hg for roughly every pound of weight lost.

**Sedentary lifestyle:** Compared with the physically active, sedentary people are significantly more likely to develop hypertension and suffer heart attacks. Like any muscle, your heart gets stronger with exercise. A stronger heart pumps more blood more efficiently, with less force, through your body. Other cardiovascular benefits of exercise include increasing levels of "good" HDL cholesterol and making stroke-causing clots less likely.

**Smoking:** Doctors have long known that smoking promotes heart disease, but for a long time smoking didn't appear to have a direct connection to hypertension. That is no longer the case. Doctors now know that the nicotine in tobacco stimulates the central nervous system. Whether you smoke a cigarette, chew tobacco, or absorb nicotine from a patch, your body responds by releasing a stress hormone called epinephrine (adrenaline), which increases your heart rate and blood pressure, both while you're smoking and for some time afterward.

**Excess salt:** Doctors first noticed a link between hypertension and sodium chloride — the most common form of dietary salt — in the early 1900s, when they found that restricting salt in people with kidney failure and severe hypertension brought their blood pressures down and improved their kidney function. When a massive effort began in the 1960s to educate the public about reducing the risk of heart disease, one recommendation was that all Americans decrease salt consumption to prevent hypertension. But the average amount of salt in the American diet has risen over the past 20 years, which likely reflects our growing reliance on salt-laden processed and prepared foods.

**Heavy drinking:** While moderate alcohol consumption (no more than one drink per day for women and two drinks a day for men) significantly lowers your risk of cardiovascular disease and has little effect on your blood pressure, heavier drinking has the opposite effect. Excessive drinking — having three or more drinks per day — is a factor in about 7 percent of hypertension cases. It can also interfere with antihypertensive medications you may be taking, increase your risk of stroke and lead to heart failure.

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Nicky Holender jumps during Livestrong.com's Stronger Challenge. These versatile Live Strong workouts especially are helpful if you want to use them while traveling or even at the gym.

AP PHOTOS

# Work it!

## A guide to the best free online workouts

**KELLI KENNEDY**

Associated Press

It's easy to get discouraged by the boutique fitness craze with \$25 per class fees and the weekly chore of sitting by your computer to reserve a spot in that popular spin class that always sells out. It's often tempting to just skip it, so we rounded up our favorite free online workouts that you can do in your living room, at the office, in a park or on vacation. That means no more excuses for not getting your fitness on. And bonus, most of the sites also include meal plans, recipes and other nutrition inspiration.

### LIVE STRONG

These versatile workouts are especially helpful if you want to use them while traveling or at the gym. They work well at home, too, since the workouts are photo slideshows that break down the moves with very specific written instructions. Not using videos means you don't have to worry about audio or the circle of death while your internet is recalibrating. There's something for all levels here, including convenient quickies like their 30-day ab challenge with some videos under 5 minutes. Advanced folks can try the Navy Seal workout, train with Mr. Universe or try the 41 hardest ab exercises routine. If you're not looking for an entirely new workout program, but maybe just a few new moves to add to your routine, there's plenty of inspiration. Check out 10 free weight moves you can try if you're looking to swap out machines or 15 burpee variations.

**Online:** [livestrong.com/cat/sports-and-fitness](http://livestrong.com/cat/sports-and-fitness)

### FITNESS BLENDER

One of the best online workouts around. Period. It rivals even the priciest apps and workout programs with tons of options that include everything from High Intensity Interval Training (HIIT) to Pilates, yoga and strength training. If you're short on time there are 10-minute ab workouts. If you're super advanced and want to be pushed, their 60 minute "insane cardio workout challenge" is killer and promises to burn roughly 1,000 calories. There are more than 500 free workouts on the site and the no-frills videos feature cute husband and wife team Kelli and Daniel Segars. The website is easily customized so you can pick workouts based on difficulty level, what body parts you want to target and whether you want to use weights or if you prefer a no-equipment option.

**Online:** [fitnessblender.com](http://fitnessblender.com)



**SWEATTY BETTY**

The UK brand has some of the most coveted workout clothes around, but they're also really committed to giving their tribe access to free, fun workouts even if they don't have a gym membership. Workouts in the #GetFit4Free campaign feature everything from HIIT to Pilates. We really like the 30-minute ultimate bum workout, beach body workout and ballet bootcamp encore.

**Online:** [sweatybetty.com/us/free-online-workout-videos](https://www.youtube.com/user/sweatybetty)

**BEFIT**

There are hundreds of videos to choose from on BeFit's YouTube channel. Pick from basics like strength training, ab routines, HIIT, Pilates, beach body or barre workouts. Or try something new like belly dance cardio, surfer girl workout, Krav Maga defense, Ballet Beautiful or channel your inner aerialist at Cirque School. There are tons of different options if you've only got 10 or 15 minutes or want a full-hour sweat session. BeFit also gives you access to big name trainers like Denise Austin, Jillian Michaels and yoga guru Kino MacGregor.

**Online:** [youtube.com/user/BeFit/videos](https://www.youtube.com/user/BeFit/videos)

**ZUZKA LIGHT**

Don't be fooled by this pint-sized blonde. Her workouts pack a serious punch. We love her convenient weekly workout schedules that show you the equipment you'll need and give you three videos to choose from: advanced, no equipment and beginner/low-impact. This is your best bet when you are short on time, since her 15 minute workouts will definitely get your heart pumping. You can pick a six to 12 week program. If you're advanced, you can follow Light's daily workout schedule, which she posts weekly.

**Online:** [zuzkalight.com](https://www.youtube.com/user/zuzkalight)

**JESSICA SMITH**

Jessica Smith's motto is exercise should be fun otherwise you won't stick with it. She's the queen of walk and talks — online workouts where she marches for a mile or two while you chit-chat. Her six-week Walk Strong program was so popular that she just released the 2.0 version. Smith's workouts are especially great for beginners, those who need extra motivation or want to feel like they're working out with a friend, not an unrelatable, six-pack ab guru.

Her YouTube channel has more than 250 free workouts, including Pilates, yoga, strength training and cardio plus workouts specifically targeted for beginners. And, since many of her workouts are filmed in her living room, there usually are a few fun shots that include her dog, Peanut, who likes to get in the way because, hey, that's life.

**Online:** [www.youtube.com/user/jessicasmithtv](https://www.youtube.com/user/jessicasmithtv)

Jessica Smith balances in a side plank. Smith's motto is exercise should be fun otherwise you won't stick with it.

# Staying fit on a budget

**BRIANNA MCGURRAN**  
NerdWallet

Committing to wellness doesn't have to be the pricey endeavor that leggings retailers and fancy salad shops want you to think it is.

If you're used to springing for fast food or ordering a lot of takeout, it'll take dedication to start planning meals and cooking for yourself. Working out cheaply or for free will also require researching options and discovering what you enjoy. But you'll feel stronger and more in control of your health — and budget — so give these strategies a try:

**Understand 'healthy'**

First, understand what counts as "healthy." Working within guidelines can help you realistically build exercise and a nutritious diet into your lifestyle. That will prevent you from overspending on boutique gyms and organic produce you don't need and can't afford.

The MyPlate Checklist Calculator from the U.S. Department of Agriculture offers personalized guidelines for the amount of fruit, vegetables, grains, protein and dairy to eat per day. Use the nonprofit Environmental Working Group's Shopper's Guide to Pesticides in Produce to decide what to splurge on. The "Clean Fifteen" lists foods least likely to contain pesticides, which means you can select their cheaper, non-organic versions.

Adults should do aerobic exercise (like walking, swimming, biking or running) at moderate intensity for a total of 150 minutes per week or at vigorous intensity for 75 minutes per week, according to the U.S. Department of Health and Human Services. Two or more days of muscle-strengthening activities, such as push-ups, crunches or yoga, are also recommended.

**Start small**

You probably won't develop a suitable, convenient and cheap eating and exercise regimen overnight, so start small. Look for ways to add fruits and vegetables to meals you already eat, says Jessica Matthews, senior adviser for health and fitness education at the American Council on Exercise.

If you eat eggs every morning, she says, throw in some chopped mushrooms or spinach.

To save money on groceries, start by planning two dishes for the week, says Erin Chase, founder of the

blog \$5 Dinners. She recommends looking at grocery store sales and building your meals around a protein — a meat or meat alternative — that's on sale that week.

Write a shopping list with your daily basics plus the ingredients for your two recipes, and minimize impulse buys.

**Craft your own workouts**

Gym memberships cost an average of \$54 a month in 2015, according to the most recent data from the International Health, Racquet & Sportsclub Association, a fitness club trade group.

But you may not have that much to spare, or maybe the gym isn't your thing. Opt for at-home or other do-it-yourself workouts using free resources.

The website for the American Council on Exercise has a library of step-by-step workout tutorials you can search by muscle group or experience level. If you enjoy fitness classes, you can find free online classes at sites like DoYogaWithMe.

If 30-minute workouts don't fit your schedule, try for three 10-minute bursts of exercise throughout the day, Matthews says. Whether you choose hiking or at-home Pilates videos, make it something you like, not what you think you're supposed to do, and stick with it.

"What is it that interests you most?" Matthews says. "The way that people see the best results is by doing something consistently."



# Recognizing and treating depression

**M**ajor depression, by definition, is depression in its classic form. You may feel as though work, school, relationships and other aspects of your life have been derailed or put on hold indefinitely. You feel constantly sad or burdened, or you lose interest in all activities, even those you previously enjoyed.

These symptoms are described in the “Diagnostic and Statistical Manual of Mental Disorders,” which formally classifies psychiatric disorders for clinicians and researchers. (The current, fifth edition of the book, commonly known as the DSM-V, was published in May 2013.) According to this manual, the defining symptoms of depression should be present nearly all day, on most days, and for at least two weeks, in order to qualify for a formal diagnosis. But don’t focus too much on the two-week criterion, as it may be hard to pinpoint exactly when your symptoms began. If you’re wondering if you’re depressed, call your doctor.

To meet the diagnostic criteria, you should experience at least five of the following nine symptoms (and at least one of them must be either the first or second symptom listed here):

- Depressed mood most of the day, nearly every day
- Loss of interest or pleasure in most or all activities
- Trouble sleeping or sleeping too much
- Change in appetite or weight

- Sluggish thinking and movement, or restlessness and agitation
- Low energy
- Poor concentration
- Thoughts of worthlessness or guilt
- Recurrent thoughts about death or suicide.

People with depression are also likely to have anxiety as well, so you may also feel worried or distressed more often than you used to. Other signs can include a loss of sexual desire, pessimistic or hopeless feelings and physical symptoms such as headaches, unexplained aches and pains or digestive problems.

Although these symptoms are hallmarks of depression, if you talk to any two depressed people about their experiences, you might think they were describing entirely different illnesses.

For example, one might not be able to muster the energy to leave the house, while the other might feel agitated and restless. One might feel deeply sad and break into tears easily. The other might snap irritably at the least provocation. One picks at food, while the other eats often. The two people might both say they feel sad, but the quality of their moods could be very different in depth and darkness. Also, symptoms may gather over a period of days, weeks, or months.







### Mild, moderate or severe?

Experts judge the severity of depression by assessing the number of symptoms and the degree to which they impair your life.

**Mild:** You have some symptoms and find it takes more effort than usual to accomplish what you need to do.

**Moderate:** You have many symptoms and find they often keep you from accomplishing what you need to do.

**Severe:** You have nearly all the symptoms and find they almost always keep you from accomplishing daily tasks.

### Depression in children and teens

Childhood is supposed to be a carefree time. But some children are shaken by developmental changes and events over which they have little or no control. And depression in its many forms can affect them.

■ While full-blown depression most often starts in adulthood, studies show that two out of every 100 children and eight in 100 adolescents have major depression.

■ Dysthymia, which refers to a low-level drone of depression, may also begin during childhood or the teenage years. Although an adult has to have depressive symptoms for at least two years before he or she is diagnosed with dysthymia, in children and teens a diagnosis is made after one year. When

dysthymia appears before age 21, major depressive episodes are more likely to emerge later in life.

■ While rare in early childhood, bipolar disorder occasionally appears in adolescence, especially in cases where a family history of depression exists. As many as 30 percent of teenagers who experience an episode of major depression develop bipolar disorder in their late teens or early 20s.

### Teenage depression and mania

If you are a parent of a teenager, a list of depressive symptoms may frighten you. Storminess, exhaustion, apathy, irritability and rapid-fire changes in appetite and sleep habits are common in adolescents.

You might find yourself wondering whether a sudden loss of interest in the clarinet signals depression or merely that your teen now thinks that playing in the school band is uncool. Staying up late and sleeping until noon or throwing over one interest in favor of others probably doesn't signal depression. But constant exhaustion and an unexplained withdrawal from friends and activities a child once enjoyed are reason for concern.

Because depression in children and teens often coexists with behavioral problems, anxiety or substance abuse, experts consider a wide range of potential indicators, such as these:

- Poor performance in school or frequent absences

- Efforts or threats to run away from home
- Bursts of unexplained irritability, shouting, or crying
- Markedly increasing hostility or anger
- Abuse of alcohol, drugs, or other dangerous substances
- Social isolation or loss of interest in friends
- Hypersensitivity to rejection or failure
- Reckless behavior

While the symptoms of depressive disorders in children, teenagers and adults generally are similar, there are a few things worth noting. Depressed children don't act sluggish as often as depressed adults do, and depressed children and teens are more likely to appear irritable than sad. Also, young children often express feelings of depression as vague physical ailments, such as persistent stomachaches, headaches and tiredness.

Discuss anything that concerns you with your child. If you're still concerned, speaking with your child's pediatrician or guidance counselor may help. Because depression in young children can appear so different from that of adults, a new depression category has been added to the DSM-V called "disruptive mood regulation disorder." This condition usually appears between the ages of 6 and 18 and is characterized by a persistently angry or irritable mood combined with regular temper outbursts.





If the child has a family history of bipolar disorder, be especially vigilant about watching for manic symptoms. The signs of manic behavior are similar in adults and children (see “Bipolar disorder”). However, teens who are in a manic episode may also:

- Talk very fast
- Be very easily distracted
- Get much less sleep than usual, but seem to have the same amount of energy or even more
- Have extreme mood changes — for example, shifting between irritability, anger, extreme silliness, or high spirits
- Indulge in, think about, or describe hypersexual behavior

If you notice these symptoms, your child’s pediatrician can help you decide whether to seek professional help.

### Seeking treatment for teens and children

Just like depressed adults, depressed children and teens need to get help, and the two main methods of treatment are psychotherapy and medication. But there are distinct differences between treating adults and children in most medical fields, and psychiatry is no exception.

Although many studies have shown antidepressant medications to be effective in teens and children, these drugs can also have some dangerous, unintended side effects in a small number of teens. A review by the FDA found that the average risk of suicidal thoughts in depressed teens and children

### Depressed children don’t act sluggish as often as depressed adults do, and depressed children and teens are more likely to appear irritable than sad.

who are taking an antidepressant was 4 percent, twice the placebo risk of 2 percent. But the number of completed suicides was not higher.

Still, the FDA responded to these concerns in 2004 by requiring that drug manufacturers place a warning about suicide risks on the package inserts that come with antidepressants. In the wake of this decision, doctors have been diagnosing depression less often and prescribing SSRIs less frequently to children and young adults. Rather than seeing teen suicides decrease, health officials noted a spike in the suicide rate among youths in 2004. Some experts contend that the two trends are linked and that the benefits of antidepressants outweigh the risks.

What does this mean for your depressed child or teen? Of course, treatment decisions should be made (with your input) with the advice of a qualified psychiatrist, preferably one who is trained to care for children. Many experts believe that antidepressants play an important role in treating depression in children and teens, but they must be used appropriately. They shouldn’t be viewed as harmless

pills to be prescribed carelessly. But they also are not unusually dangerous treatments. They may be helpful, and in some cases may be lifesaving.

If your child needs an antidepressant, the best way to prevent a dangerous outcome is to pay close attention to how he or she is thinking and feeling. Monitor him or her for suicidal thoughts or tendencies, especially in the first few months of treatment, when the risk is thought to be the greatest.

### Dealing with suicidal remarks

Children and teenagers are by nature more impulsive than adults, their emotions less tempered by experience. Research suggests that regions of the brain that govern judgment do not develop completely until later in life. All too often in this age group, suicidal thoughts translate into action. Never ignore or brush off comments about suicide or even such sweeping, dramatic statements as “I wish I were dead” or “I wish I’d never been born.” Discuss them with your child.

Perhaps these sentiments reflect nothing more than an angry outburst or hyperbole in the middle of an argument. But you can say, “Are you telling me about your frustration, or do you really feel like ending your life?” If the answers raise any concerns, if your child always refuses to engage in the conversation, or if he or she seems to exhibit signs of depression or mania, call his or her pediatrician for advice.

#### Medical Editor:

**Michael Craig Miller, MD:** Assistant Professor of Psychiatry, Harvard Medical School





# Kindness rocks

## Painted stones send positive vibes and healing sentiments

**MELISSA KOSSLER DUTTON**  
Associated Press

When Leslie Hall came across a rock painted with the words “Kind Soul,” she had just finished a chemotherapy treatment for breast cancer. The rock, which she found in a grocery store parking lot, offered some comfort. It was a random act of kindness that made her smile.

A few days later, when she found a second rock bearing the message, “You are loved,” it had an even bigger impact.

“It reminded me that I am loved and I am a good person and I will get through this,” said Hall, who lives in Cape Cod, Massachusetts. “It also helped me see all the kindness around me — all the good that my caregivers and doctors had shown me. It reminded me of the times when strangers who noticed my bald head or scarf gave me a hug.”

Hall was inspired. She decided to start painting rocks in hopes of spreading kindness to others. She found it therapeutic. She reached out to Megan Murphy, a fellow Cape Cod resident and founder of The Kindness Rocks Project.

For years, Murphy had walked the beach looking for heart-shaped rocks and pieces of beach glass. When she found them, she considered it a sign that her deceased parents were watching over her. A few years ago, she started writing messages on rocks and leaving them on the beach because she noticed other people who seemed to be searching for a message or sign. She wrote positive messages, inspirational quotes and song lyrics on the rocks.

“I thought about, what’s the message that I would want to find?” she said. “I used anything that would spark something.”

Later, she added hashtags on the rocks directing people to a website and Facebook page explaining that the rocks are intended to spread joy and goodwill. “It’s a simple way to put good out there. It builds community,” Murphy said. “People feel good when they’re doing it. It’s just this magical thing.”

She and her followers began organizing rock-painting parties, and leaving rocks in parks, on sidewalks and at parking lots. They have created “rock gardens” containing dozens of rocks that are there for the taking. Not every rock is painted with a saying. Some have drawings of flowers, happy faces or other feel-good images.



COURTESY LESLIE HALL

Leslie Hall holds a painted rock at her home in Cape Cod, Mass., that she found while fighting breast cancer. When she came across the rock bearing the message, “You are loved,” it had a big impact. “It reminded me that I am loved and I am a good person and I will get through this,” Hall said.



Murphy's efforts have inspired hundreds of people in other cities and states to paint rocks and create Facebook pages encouraging kindness. Similar efforts seem to have sprung up in other parts of the country as well.

Wendy Gallacher started Fayette Rocks after learning about painted rocks from relatives in Lakeland, Florida. Her community outside of Atlanta was quick to embrace the project. "It's basically community service, doing something good for other people," she said. "One rock can change the way your day is going."

Peachtree City public information officer Betsy Tyler worked with Gallacher to create a rock garden near a series of city trails. Locals routinely post about how finding the rocks brightened their day, she said.

"As negative as things have gotten nationally, it never hurts to have this spark of kindness," Tyler said.

Rock projects help people feel more connected, said Charity Blair, who started one in Jefferson City, Mo. Her Facebook following quickly jumped

from 200 to 13,000.

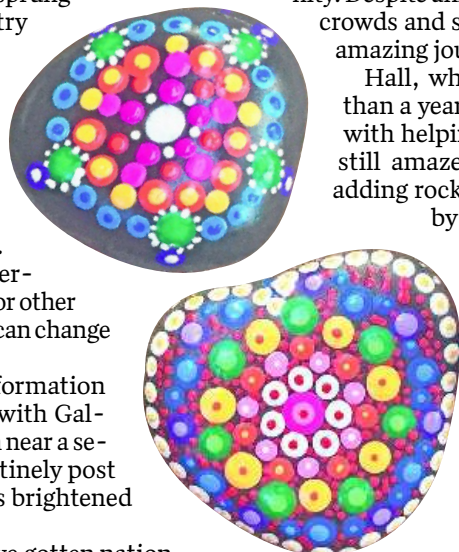
Spearheading the effort also has helped Blair become more confident and involved in the community. Despite anxiety issues, she routinely speaks to crowds and shares her story. "It's been a pretty amazing journey," she said.

Hall, who has been cancer-free for more than a year, credits the rock-painting project with helping her fight the disease, and she's still amazed by its impact. Recently, while adding rocks to a garden, she was approached by a woman who asked if she could take one because the wording on it spoke to her. "She said, 'My husband died two weeks ago and I feel like it's a message from him,'" Hall said.

Moments later, another woman came by and selected a rock. She told Hall the rock's message, "Stars can't shine without darkness," was something she wanted to share with a sick friend.

Time and again, the rocks seem to convey the right message to the right person, Blair said.

"Sometimes you find the perfect rock at the perfect time with the perfect message," Blair said. "It just lets you know everything is going to be OK."



PHOTOS COURTESY MEGAN MURPHY

Megan Murphy, founder of The Kindness Rocks Project holds a rock that bears the Paulo Coelho quote, "The world is changed by your example. Not by your opinion."



An inspiration garden of rocks at Sandy Neck Beach in Barnstable, Mass., is part of The Kindness Rocks Project.





# Finding a way through grief

Make healing choices  
and recognize  
that anger, guilt  
and denial  
are common

Grief affects the mind and the body, and it has wide-ranging physical and emotional consequences. Among other things, studies have shown that immune cell function falls and inflammatory responses rise in people suffering from bereavement. That may help explain why people often note a surge in ailments such as colds and why they tend to use more health care resources during bereavement.

After a loss, people also are at increased risk of cancer, hypertension, heart disease and hospitalization. They tend to suffer more sleep disorders; worsening of medical conditions such as heart failure; increased consumption of alcohol, tobacco and sedatives; memory impairment; and difficulty concentrating.

Overall, they report reduced quality of life over the ensuing one to two years. Indeed, bereavement increases the risk of death from a variety of causes, including suicide.

The emotional maelstrom that grief stirs up can affect behavior and judgment.

It's common, for example, to feel agitated or exhausted or to cry or withdraw from the world at times. Sometimes intrusive or upsetting memories surface, as can temporary sensations of things being unreal. Less commonly, grief can be associated with brief experiences of sensing the presence or hearing the voice of the deceased. Frequent thoughts of the person who died and feelings of self-reproach about aspects of the death are normal, too.

At first, your grief may permeate everything. You may find it hard to eat or sleep. It may be difficult to muster much interest in the life going on around you.

Symptoms similar to those the deceased had described may crop up in your own body — a frightening experience if he or she died from an illness. Some people, particularly children, may have other physical complaints, such as headaches, stomachaches, dizziness, or a racing heart. Restlessness, appetite fluctuations, and trouble sleeping are also common.

In light of the physiological changes that grief can bring, it's crucial to take care of yourself during these difficult times.





### How long does grief last?

Grief is not a mountain to be climbed and then descended with a map in hand. Its boundary lines differ greatly from one person to another and from one culture to the next. Americans often labor under cultural injunctions to attain closure within months or certainly by the time a year has passed. Popular culture also promotes the misconception that there is an orderly progression of emotions that will lead the bereaved person to this end. The truth, though, is that grief doesn't neatly conclude at the six-month or one-year mark — even if a person follows every prescription for healthy grieving — and there is no single way to grieve. Each person has a different experience. Depending on the strength of the bond that was broken, grief can be lifelong. Parents whose children die often say they never get over the loss. Usually, though, grief softens and changes over time.

The more integral someone was to your life, the more opportunities there are for happy and sad reminders that underscore the massive loss in your life. Indeed, the death of a spouse ranks at the top of the scale of life events that create stress and require social readjustment. Alongside warm or warring memories, you may always carry a hollow spot in your heart. Feelings of sadness, abandonment, loss and even anger are especially likely around birthdays, weddings, the anniversary of the death and holidays or other occasions you might have shared. A familiar scent, song or

likeness can trigger feelings of grief, too. All of this is entirely normal.

It's also normal for the raw, all-consuming shock of early grief to ebb slowly within weeks or months. Gradually, at their own pace, most people do find themselves adjusting to their loss and slipping back into the routines of daily life.

The legacy of grief is individual, multifaceted and varied. In the midst of loss, many people find opportunities for growth. In many cases, people emerge from the depths of their grief with greater confidence in their ability to manage life's sorrows and difficulties. People often redefine themselves in terms of their position in the family or their role in the world. A death of a spouse may require the remaining spouse to become more independent and assertive, while the death of a parent may spur an adult child to assume a leadership role in the family. For some, the experience leaves them more understanding of and empathetic to other people's hardships. Losing someone close may also deepen or renew spirituality and can leave individuals with a greater appreciation of family, friends, and the pleasures of life.

One goal of this report is to describe ways for you to comfort yourself that encourage gradual acceptance of the changes in your life. You can make healing choices. You can tap into strengths you may not have drawn on before. And you can honor the person who died and the importance of your relationship in many ways.

### How do you cope with painful situations?

Most people have experienced some difficulties in life, whether personal, professional or financial. Make use of what you learned from those experiences now, especially those from other losses, in your time of grieving. This can help you separate approaches that don't serve you well from those that are healthy and useful.

**Do some sleuthing.** A few simple questions can help you identify your coping strategies. What makes you feel better when you feel awful? What do you tend to do when you are distressed? Which of your coping strategies are helpful, and which might be hurtful?

**Think back.** How were deaths and losses handled in your family? Were they largely shuffled away behind closed doors or openly marked and mourned? When did you first experience the death of someone you loved? How old were you? How were you told about it? Were you allowed to participate in services? How safe was it to express your own feelings of loss? Was your grief acknowledged, or were you told implicitly or explicitly to stop being so upset? How were sad or angry feelings expressed in your family?

**Replace an unhealthy approach.** Try to replace one unhealthy coping strategy with a healthier possibility. For example, when you feel overwhelmed, call a friend to talk rather than downing a pint of ice cream or a stiff drink. Be judicious, though. Seeking solitude when you need it or occasionally taking second helpings of comfort food or a single drink should not necessarily be considered a problem.

**Up to 50 percent of widows and widowers have symptoms typical of major depression during the first few months after a spouse's death. Usually, this eases over time. Most people are starting to find glimmers of a pleasure and meaning in their lives by six months after a loss.**







### Denial, anger and guilt

Tears and sadness during bereavement are normal. People may expect you to pass through these emotions too quickly, but generally they find this behavior acceptable. Yet other emotions sparked by bereavement make many people uneasy. Chief among these are denial, anger, and guilt, which may emerge in response to a death or during the course of a terminal illness. Not everyone will feel these emotions, but many people do.

Denial is insistence that a diagnosis of illness or a death is simply not possible or is of little importance. It can be expressed as numbness and disbelief. People often say plaintively, “I keep thinking this is a dream and I will wake up.” When a death is unexpected, someone may insist, “But I saw him this morning and he was fine.” Joan Didion described this type of denial eloquently in her memoir, “The Year of Magical Thinking,” in which she recounts the sudden death of her husband, the writer John Gregory Dunne, and her attempts to cope with the aftermath. But denial can take other forms, too, such as when someone brushes aside the importance or the impact of a death — saying, for example, “We never got along.”

Denial can be troublesome when it suspends grieving. A person who is deeply mired in denial may find it hard to deal with harsh realities, such as the need to get treatment, admit that a parent is failing, plan a funeral or pick up the pieces of a shattered life. But denial is not all bad. Sometimes the rush of painful truth is too tough to grapple with all at once. Little by little, as time goes by and a loss sinks in, people may move beyond denial to acceptance. That doesn’t mean that denial disappears forever. Generally, it can still serve as a useful defense at times when unvarnished reality is too hard to bear.

Often it’s easier to recognize denial in others than in ourselves. If you think denial might be interfering with the grieving process of someone you care about — or if denial is hobbling your ability to move forward — the following suggestions may prove helpful. Remember, though, to be patient with the grieving person or yourself and understand that denial can be protective and useful.

**Acknowledge it.** Sometimes denial offers a safe haven or a much-needed break. Avoidance has a place in grief. Some bereavement experts note that when you’re ready to learn more, explore more, or do more, you will. Sometimes accepting rather than pushing against denial allows other feelings to surface.

**Explore it.** Think about what your “stuckness” or disbelief might be protecting you from. Often, fear — of forgetting your loved one, of moving on, or of feeling overwhelming pain — is holding you back. Realizing this can help you feel more in control. Writing out your feelings may help you move forward.

If you can’t seem to shake persistent numbness or a sense of disbelief, consider seeking help.

**Denial is insistence that a diagnosis of illness or a death is simply not possible or is of little importance. It can be expressed as numbness and disbelief. People often say plaintively, “I keep thinking this is a dream and I will wake up.”**





### Anger is common

People express anger in many ways and for many different reasons. It may appear as envy, bitterness, impatience, simmering resentment, explosive rage or puzzlement over the unfairness of it all.

Some people feel more comfortable getting angry than crying. Children who are grieving may express their feelings through frequent tantrums or irritability.

One problem with anger is that it often gets directed at everything but its true object. Family, doctors, God and entirely unrelated people or organizations may bear the brunt of this emotion. Grieving people sometimes find that their

anger bubbles over unexpectedly, pushing others away at times when their support could be helpful. Sometimes anger serves to hide other emotions — it's a secondary emotion masking the primary one.

If the death of someone you love has left you feeling angry or bitter, you might find it helpful to try the following techniques.

**Consider it.** Is anger a stand-in for more painful emotions, or does the situation warrant it? Do you feel afraid or abandoned — by others or by God? If so, could you enlist support from others or spend some time thinking about your distress and understanding it better? It might help to share your feelings with a spiritual leader or with

members of a grief support group, who can tell how they have dealt with similar feelings.

**Express it.** Set aside a safe time and place each day to defuse angry feelings. Some people yell in the car with the windows rolled up. Some find stress-relief techniques like meditation or yoga helpful. Others find release in punching pillows or in exercise. Think about options for releasing anger, and plan how to express it safely when it crops up. Sometimes writing about situations that make you feel angry can help you focus on what you are really feeling beneath your anger.

**Explain it.** Tell others how short-fused you are right now. If you know you stepped over the line, apologize. Most people will make allowances.

**One problem with anger is that it often gets directed at everything but its true object. Family, doctors, God, and entirely unrelated people or organizations may bear the brunt of this emotion.**







## The burden of guilt

Guilt evokes a sense of failure, remorse and regret. Questions about what you might have done to avert the death may gnaw at you, and are a common and normal feature of grief. Or you may simply feel guilty for not having been present when your loved one died — a very common occurrence, since you cannot be by a dying person's bedside 24 hours a day, no matter how devoted you are. Guilt may also arise when a relationship was rocky and conflicts remain unresolved, or when the emotions you feel — numbness, anger, relief or even surges of happiness — don't seem to jibe with what other people think you should feel. When a death follows a long or difficult illness, caregivers may feel guilty about feeling a sense of relief.

Often people have unresolved issues in their relationships with their deceased loved ones. To feel whole again, it's important to work through any feelings of guilt you may have.

### These exercises may help.

**Write a letter.** Express your feelings to the person who died. Read it aloud in a favorite spot or perhaps in a place where you can feel his or her presence. Keep the letter with you so you can read it or add to it whenever you like. This may be especially helpful if you didn't get to say goodbye.

**Consider good and bad.** Write down the good things about the relationship or experiences you are glad to have shared. Then note what worked poorly in the relationship or things you wish you hadn't shared. Accept that people, including you, are imperfect. You can't always give or get love in the way you might wish to do so.

**Talk to a friend.** Try to find a good listener who won't attempt to tell you what you should be feeling. Discussing your true feelings with an empathetic friend, preferably one who's experienced a similar loss and can understand what you're going through, can help lighten the burden of guilt and may reveal other perspectives that you are overlooking. Alternatively, confide in a minister, rabbi, priest or grief counselor.

## When to seek help

The vast majority of people who experience a loss are able to recover on their own. After the death of a close friend or family member, many people report trouble sleeping and eating, little interest in daily routines, tearful outbursts, sadness, irritability or anger. All of these symptoms can be signs of depression or simply part of healthy grieving. How can you tell the difference?

When you're grieving, it's normal to feel somewhat depressed and sad and to experience waves of intense feelings. But feeling occasional waves of depression differs from sinking into a clinical de-



pression. Up to 50 percent of widows and widowers have symptoms typical of major depression during the first few months after a spouse's death. Usually, this eases over time. Most people are starting to find glimmers of a pleasure and meaning in their lives by six months after a loss. A review of studies on the topic noted that 10 percent of bereaved people are depressed at the one-year mark. By two years, this dwindles to 7 percent. A personal or family history of depression may put you at greater risk of major depression when bereaved.

Depression can be helped with medication (anti-depressants and anti-anxiety agents) and psychotherapy. **Talk with your doctor or a mental health professional if you experience any of these other symptoms of bereavement-related depression:**

- Suicidal thoughts
- Persistent feelings of worthlessness, which is generally felt with depression but not with healthy grief
- Hopelessness, helplessness
- Ongoing guilt
- Marked mental and physical sluggishness
- Persistent trouble functioning
- Hallucinations, other than occasionally thinking you hear or see the deceased.

If months or even years go by with no improvement, however slow or painful, you may be suffering from complicated grief or prolonged grief, which

affects about 10 percent of the bereaved. The most common feature of complicated grief is intense, unremitting yearning and longing for the loved one. **By definition, complicated grief also includes at least four of the following symptoms:**

- Difficulty moving on
- Numbness or detachment
- Bitterness
- Feelings that life is empty without the deceased
- Trouble accepting the death
- A sense that the future holds no meaning without the deceased
- Being on edge or agitated
- Difficulty trusting others since the loss
- Social withdrawal
- Difficulty re-engaging with life

Talk to your doctor or a mental health professional if you experience any of these symptoms. Other reasons to seek professional help include drug abuse or increased use of tobacco or alcohol, suffering several losses, gaining or losing a significant amount of weight, experiencing uncontrollable anxiety and failing to feel somewhat better after a year has passed.

### Medical Editor:

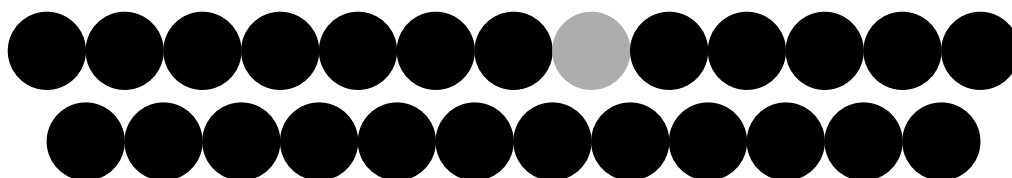
**Susan D. Block, MD:** *Professor of Psychiatry and Medicine, Harvard Medical School*



EVERY DAY, APPROXIMATELY  
**105 AMERICANS**  
**DIE BY SUICIDE**

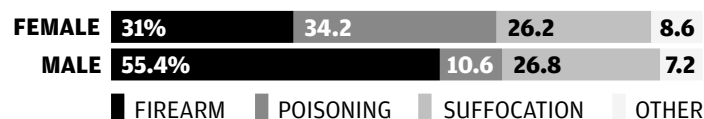


# Facts and figures about suicide; where to go for help

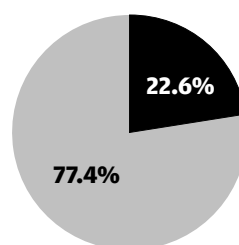


**FOR EVERY 1 SUICIDE THERE  
ARE 25 SUICIDE ATTEMPTS**

## SUICIDE DEATHS BY METHOD - 2014



## SUICIDE DEATHS BY AGE - 2014



**2014 SUICIDE  
DEATHS BY SEX**

WOMEN MEN

## Warning signs

Some warning signs may help you determine if a loved one is at risk for suicide, especially if the behavior is new, has increased, or seems related to a painful event, loss, or change.

- Talking about wanting to die or to kill themselves
- Looking for a way to kill themselves, like searching online or buying a gun
- Talking about feeling hopeless or having no reason to live
- Talking about feeling trapped or in unbearable pain
- Talking about being a burden to others
- Increasing the use of alcohol or drugs
- Acting anxious or agitated; behaving recklessly
- Sleeping too little or too much
- Withdrawing or isolating themselves
- Showing rage or talking about seeking revenge
- Extreme mood swings

## Tips for talking

Talking with and finding help for someone that may be suicidal can be difficult. Here are some tips that may help.

- Be direct. Talk openly and matter-of-factly about suicide.
- Be willing to listen. Allow expressions of feelings.
- Be non-judgmental. Don't debate whether suicide is right or wrong, or whether feelings are good or bad.
- Get involved. Become available. Show interest and support.
- Don't dare him or her to do it.
- Don't act shocked. This will put distance between you.
- Don't be sworn to secrecy. Seek support.
- Offer hope that alternatives are available.
- Take action. Remove means, like weapons or pills.
- Get help from people or agencies specializing in crisis intervention and suicide prevention.

**1-800-273-8255**

NATIONAL SUICIDE PREVENTION LIFELINE

## Creating a safety plan

A safety plan is designed to guide you through a crisis. As you continue through the steps, you can get help and feel safer. Keep your plan easily accessible in case you have thoughts of hurting yourself.

- **Recognize your personal warning signs:** What thoughts, images, moods, situations, and behaviors indicate to you that a crisis may be developing? Write these down in your own words.
- **Use your own coping strategies:** List things that you can do on your own to help you not act on urges to harm yourself.
- **Socialize with others who may offer support as well as distraction from the crisis:** List people and social settings that may help take your mind off of difficult thoughts or feelings.
- **Contact family members or friends who may help to resolve a crisis:** Make a list of people who are supportive and who you feel you can talk to when under stress.
- **Contact mental health professionals or agencies:** Make a list of names, numbers and/or locations of clinicians, local emergency rooms, and crisis hotlines.
- **Ensure your environment is safe:** Have you thought of ways in which you might harm yourself? Work with a counselor to develop a plan to limit your access to these means.

## BY THE NUMBERS

**3x**

While males represent 77% of U.S. suicides, females attempt suicide three times as often.

**9.3 million**

U.S. adults reported having suicidal thoughts – roughly 3.9% of the population in 2013.

**2.7 million**

1.1% of U.S. adults made a plan on how they would attempt suicide in 2013.

**1.3 million**

0.6% of American adults attempted suicide in 2013.

**\$51 billion**

Suicide results in an estimated \$51 billion in combined medical and work lost costs in 2013.

**250,000**

An estimated quarter million people each year become suicide survivors.

SOURCES: Centers for Disease Control and Prevention, NCHS, National Vital Statistics System, Mortality, American Association of Suicidology, Suicidepreventionlifeline.org



# What's on your mind?

**A**sk a handful of people with an anxiety disorder to describe it, and they're likely to paint different pictures. One might dread speaking in public, while another is gripped by intense fear at the mere thought of getting on an airplane. A third might label herself a "chronic worrier" because she regularly frets about all sorts of things. A fourth experiences unpredictable episodes of panic, with shortness of breath, sweating and chest pains. Many people would undoubtedly mention that they have trouble sleeping.

Why the broad array of symptoms? It's because anxiety and stress disorders aren't actually a single condition but rather a spectrum of related disorders. However, many different anxiety disorders are believed to have the same biological underpinnings. That helps explain why more than half of all people with one anxiety disorder also have another.

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## Types of anxiety and stress disorders

**Panic attack:** A sudden wave of intense anxiety, apprehension, fearfulness or terror with physical symptoms such as shortness of breath, palpitations, sweating and chest pains.

**Panic disorder:** Recurrent panic attacks that occur suddenly and without warning, causing persistent concern and interfering with social functioning. Sometimes this leads people to avoid leaving home (agoraphobic avoidance).

**Specific (simple) phobia:** Substantial anxiety caused by exposure to a particular feared object or situation.

**Social phobia (social anxiety disorder):** Substantial anxiety caused by certain social situations or performing in front of a group, such as speaking in public.

**Obsessive-compulsive disorder:** Recurrent distressing thoughts (obsessions) and uncontrollable repetitive behaviors (rituals or compulsions) intended to reduce anxiety provoked by those thoughts. Symptoms last more than an hour a day and cause significant distress or interfere with normal functioning.

**Acute stress disorder:** Anxiety symptoms that last for up to a month after a traumatic experience.

**Post-traumatic stress disorder:** Intrusive and distressing thoughts, sleep problems, hypervigilance, social withdrawal, anger and other anxiety symptoms that occur for more than a month after a life-threatening or severely traumatic experience.

**Generalized anxiety disorder:** Excessive anxiety and worry about a variety of things on most days for at least six months. Physical symptoms, such as muscle tension, increased heart rate and dizziness, may also occur.

**Medical conditions that mimic or provoke anxiety symptoms:** Pronounced anxiety, panic attacks, obsessions or compulsions caused by a medical condition such as thyroid disease, treatment with steroids or respiratory disease that causes difficulty breathing.

**Substance-induced anxiety:** Pronounced anxiety, panic attacks, obsessions, compulsions or possibly paranoia caused by a medication, drug abuse or exposure to a toxin. Examples include amphetamine or cocaine use.





## When does worry become a serious concern?

The whole family can be affected with, and/or impacted by it

It's not that people with anxiety disorders have these symptoms and other people never do. At some time, most of us feel afraid, tense or even anxious enough to become short of breath. The difference is that people who don't have anxiety disorders experience these reactions in

response to genuine threats. When a burglar breaks into the house, for example, anxiety can be a lifesaver, spurring an individual to call the police or flee the building. But people with anxiety disorders face worry and fear even in ordinary, relatively harmless situations.

### Everyone worries from time-to-time, but ...

... not everyone who worries has an anxiety disorder. The severity of your symptoms and your ability to manage them can help you tell the difference.

#### Everyday anxiety.....

Anxiety disorder.....

#### You worry about paying bills or getting a new job.

You think about your finances or job prospects constantly, to the point where these thoughts interfere with your daily life.

#### Everyday anxiety.....

Anxiety disorder.....

#### You sometimes get nervous before a big test or presentation at work.

You have panic attacks, where you break into a sweat, shake and have heart palpitations. You live in constant fear of another panic attack.

#### Everyday anxiety.....

Anxiety disorder.....

#### You're afraid of bees because you're allergic to them.

You're terrified of something that doesn't pose a threat to you, like tall trees or the color red — and you do everything you can to avoid it.

#### Everyday anxiety.....

Anxiety disorder.....

#### You sometimes get embarrassed or feel awkward at social gatherings.

You avoid social situations out of fear that people will laugh at or judge you.

It's possible to live with a mild anxiety disorder. But when the anxiety is severe enough to interfere with everyday life, treatment is usually the only way to control it. Treatment options include medication, psychotherapy or both. Without treat-

ment, it's likely that the disorder will worsen or that another anxiety disorder will develop. Treatment is also important for conditions that often accompany anxiety, such as depression and alcohol or drug dependence.





# How dogs keep us healthy

**T**he writer Anatole France stated the joy of dog ownership perfectly when he wrote, “Until one has loved an animal, a part of one’s soul remains unawakened.” Certainly most dog owners today would agree. But the bond between people and dogs appears to run both ways.

Our reciprocal relationship is simple and based on unconditional love, affection, fun and joy. No wonder Americans own more than 78 million dogs. As many as 46 percent of U.S. households include a dog — and for most dog owners, the responsibilities and costs of owning a dog are minimal compared with the tremendous benefits the animals offer.

Living so closely with families, dogs have evolved to be acutely attuned to human beings and their behaviors. Research suggests that dogs bond with humans in much the same way that infants bond with their parents, and that this connection develops very quickly.

## Benefits of dog ownership

There are many ways in which dogs enrich our lives and contribute to healthier lifestyles.

**Filling the need for companionship.** For humans, dogs fulfill a basic need for connection, a key component of both happiness and healthy aging. Two large, long-term studies (one conducted at Harvard University and the other at the California-based Longevity Project) that followed groups of Americans from childhood to old age showed that social connection can stave off illness and add years to life. Basically, these studies found that the happier and more engaged we are in life and with others — both people and animals — the longer and better we’ll live.

**Boosting your activity level.** Numerous studies have shown that having a dog leads to a more active lifestyle and that dog owners are more likely to achieve recommended exercise levels than non-owners.







Dogs, of course, need to be walked, which offers an incentive for getting outside and walking yourself, even for short spurts.

**Helping you be calmer, more mindful and more present in your life.** Ever watch a dog on a walk? One minute she's sniffing a patch of grass, the next wagging her tail at an approaching stranger, and the next rolling in the grass. Dogs epitomize the joyful act of being in the present moment and can help you be more mindful as well. Walking with your dog puts you more in touch with nature and helps you focus on the here and now, pushing worries away. Dogs also tend to alter our behavior, helping us to be calmer and less stressed, and to speak more slowly and softly.

**Making kids more active, more secure, and more responsible.** Research shows that kids with pets tend to be more active and that they feel

more secure and less lonely. Dogs provide a sense of safety, protection and love, and in return teach children valuable lessons about responsible behavior. A pet is often a child's first friend — serving as a morale booster when something is going wrong at school or quarrels with parents loom. Animals are constant, nonjudgmental companions and loyal allies. In addition, playing a part in an animal's life helps kids feel important, which is a key step toward a positive self-image. Children can care for dogs by helping feed them, playing fetch with them in the yard, or training them to sit, stay, or roll over.

**Improving the lives of the elderly.** Having a pet to care for helps seniors fill the long hours of the day that used to be devoted to family responsibilities and work. It gives them a reason to get out of bed and adds structure to their day, centering around pet meal times and walking schedules. And

it gives them a reciprocal relationship that boosts their health, offering a meaningful emotional connection to another living being. As they tend to their animal companions, seniors are reminded to take care of themselves.

**Making you more social and less isolated.** Dogs also provide the opportunity to socialize with people every day, especially if you go to a dog park, walk your dog in a neighborhood, or bring your dog with you on errands. Other people who are walking outside and doing errands are drawn to dogs, and so opportunities for conversations and connections multiply. Having a dog makes you more attractive and approachable to others, as dogs often act as social lubricants, inviting petting and conversation. One study found that close to 70 percent of walks that involved dogs led to at least one spoken interaction between the dog owner and a stranger.





### Benefits without ownership

The good news is that you don't need to own a dog to benefit from canine companionship. If you are too ill or frail to care for a dog, arrange for a therapy dog visit on a regular basis. You can find one through a local therapy dog group. At the very least, you can go to the dog park to enjoy watching dogs at play.

If you can take on a little more responsibility, try pet-sitting, or offer to walk a dog for a friend or neighbor. Volunteer your dog-walking services at a shelter. You can also serve as a foster parent for a rescue dog waiting to be placed or foster a puppy that is being considered for a life as a service animal (typically, you keep these animals for about a year and a half before they are ready for training). There are myriad ways to incorporate the joys of interacting with a dog into your life without having to take one home with you on a permanent basis. Not only do you reap the benefits, you also do a good deed at the same time, because the dogs

also benefit from these interactions.

A case in point: a study by the University of Missouri College of Veterinary Medicine's Research Center for Human-Animal Interaction (ReCHAI) found that encouraging public housing residents to walk certified therapy dogs led to weight loss. Twenty-six people were recruited for the Walking for Healthy Hearts project, which had them walk a dog, accompanied by a handler, three days a week for 10 minutes, gradually working up to five days a week for 20 minutes. Thirteen people signed up for a 50-week program and lost an average of 14.4 pounds over a year without changing their diets. Another 13 participants signed up for a 26-week period and lost an average of 5 pounds over six months. Subjects were very adherent to the exercise regimen (72 percent stuck with the schedule in the 50-week group, and 52 percent stuck with it in the 26-week group), mostly because they felt that the dogs "need[ed] us to walk them." Participants also said that the dogs made walking a pleasant activity.

The effects of spending time with dogs can be particularly profound for older adults, who may feel isolated. In a 12-week walking study of 35 older adults who were living in an assisted-living facility, also conducted by ReCHAI, those who chose to walk with a dog from a local animal shelter were more likely to stick with their walking program than those who chose a friend or spouse as a walking partner. In addition, the older adults who walked with a dog improved their walking speed by 28 percent compared with just 4 percent among those who walked with another person. This suggests that the seniors' walking ability and balance both improved, as did their walking confidence.

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