Easy upper-body boosters

Arm, shoulder, and chest strength are crucial to maintaining independence and warding off injury.

When your upper-body strength dwindles, you risk more than the loss of power to open a car door or lift a bag of groceries. “It’s not just a strength problem; it may also be a length problem. Shorter muscles reduce your range of motion. And if you do any reaching activities without adequate range of motion or muscle strength, like hanging curtains or putting dishes in an upper cabinet, you can get a small tear in a muscle or rotator cuff or tendinitis in the shoulder,” explains Clare Safran-Norton, clinical supervisor of rehabilitation services at Harvard-affiliated Brigham and Women’s Hospital.

The oomph in the upper body

A number of major muscles and muscle groups enable us to use our arms and shoulders throughout the day.

- The deltoid muscle moves your entire arm at the shoulder joint and helps you wave your arm overhead.
- The biceps muscle on the top of your upper arm helps bend your arm at the elbow joint, making it possible to raise a glass to drink.
- The triceps muscle on the underside of your upper arm straightens your arm at the elbow joint, so you can push a window up.
- The pectoralis muscles in the chest allow you to move your arms up, down, in, and out, so you can push something away from you or lift something up.
- The trapezius muscle in your upper back moves your shoulder and shoulder blade, so you can shrug.
- The rhomboid muscles, under the trapezius, move your shoulder blade back and forth (think of starting a lawnmower).
- The latissimus dorsi muscle at the side of your mid-to-lower back pulls your arm down, so you can pull a window down.

Also crucial to upper-body strength is the rotator cuff in each shoulder: the group of tendons and muscles that helps you raise and rotate your arm.

Why do muscles change?

At around age 35, we start losing muscle mass at a rate of 1% to 2% per year. After age 60, muscle loss accelerates to 3% per year. This deterioration is called sarcopenia.

“Your muscle cells shrink, and you also lose some of the speed at which the motor neurons fire messages from the brain to the muscle. So you become slower, and you lose muscle mass, bulk, and power,” explains Safran-Norton.

If you’re less active when you’re older—maybe because of energy or arthritis pain—you face a “use it or lose it” problem: that sedentary lifestyle and disuse of the muscles can also cause them to shrink or tighten.
Are gut bacteria linked to heart health?

I heard on TV that bacteria in a person's gut might cause heart disease. How could that possibly be true?

I can understand your skepticism, and I shared it until recently. We've known for nearly two centuries that every human being carries various microbes (bacteria, viruses, and other microorganisms) on us and inside us. However, we've long thought they were just freeloaders, taking advantage of the warmth and nutrients our body provided them, not having any effect on our health.

In the last 10 years, however, research has produced two big surprises. Each microbe has its own genes. The first big surprise was that, collectively, all the microbes that live on us or in us have more than 100 times as many genes as we have human genes. All their genes, taken as a group, are called our microbiome.

The function of any gene is to make a particular protein. The second big surprise was the discovery that many of the proteins made by our microbiome are like the proteins made by our own genes. Those microbiome-produced proteins get into our bloodstream, travel around our body, and affect our health. In other words, it has suddenly become very plausible to imagine that bacteria (or other microbes) living in our gut could affect other organs in our body, including the heart.

For one thing, it appears the bacteria in our gut can affect risk factors for heart disease. For example, the gut microbiome probably influences whether we become obese or develop type 2 diabetes. It also can affect the levels of LDL (bad) cholesterol in our blood, and our blood pressure. People who suffer from obesity, diabetes, high levels of LDL cholesterol, or high blood pressure are at greater risk for developing heart disease.

In addition, bacteria in our gut can directly affect the plaques of atherosclerosis in the arteries of our heart—the most common cause of heart disease. Most heart attacks occur when a plaque of atherosclerosis ruptures. This causes a clot to form and the artery to narrow, blocking blood flow and causing a part of the heart muscle to die. The gut microbiome can increase the tendency of a plaque to rupture, reduce the ability of the artery to widen, and increase the tendency of blood to clot: not a healthy combination.

So the bacteria in our gut probably are a risk factor for heart disease. However, our understanding of this connection isn’t yet sufficient to develop treatments that will protect us against heart disease, and such knowledge is unlikely to come soon. But because the influence of the microbiome on health may be profound, future treatments based on the microbiome may be profoundly effective.
Are you missing these signs of anxiety or depression?

It’s easy to overlook the clues that you may need help for one of these common conditions.

The signs of mental illness aren’t always obvious. Subtle changes in mood or behavior are often attributed to aging, just like weaker muscles and fuzzy thinking. “There’s a tendency to dismiss it as, ‘Well, of course I’m worried, I have heart disease,’ or, ‘Of course I’m sad, I’m not as relevant as I once was,’” says Dr. Michael Craig Miller, an assistant professor of psychiatry at Harvard Medical School.

But depression (extreme sadness, worthlessness, or hopelessness) and anxiety (debilitating worry and agitation) do not need to be routine parts of aging. Getting help for these feelings can help you maintain your health and enjoy life to the fullest.

Symptoms

Sometimes recognizing depression and anxiety takes a little honest reflection about your behaviors, feelings, and habits. Here are some signposts:

- **Apathy.** Have you lost interest in the activities that used to bring you joy? Has life lost so much meaning that you feel empty? Those are classic signs of depression.
- **Helplessness or hopelessness.** Do you feel there is little you or anyone can do to improve your life? Helplessness and hopelessness also are classic signs of depression.
- **Changes in habits.** Sleeping or eating too much or too little can be a sign of depression. So can drinking more alcohol than usual or engaging in risky behavior.
- **Persistent fatigue.** It’s normal to be tired at the end of the day. But if you’re tired all the time, it could be due to depression or anxiety. Or it may be related to an underlying medical condition, such as an underactive thyroid or heart failure.
- **Difficulty focusing or making decisions.** “People who are depressed and anxious have difficulty making decisions because they worry whatever they do will be wrong,” says Dr. Miller. Or you may have trouble concentrating or paying attention to others.
- **Mood swings.** If you’re easily irritated (or extremely impatient or overly self-critical), or if you experience frequent mood swings, it could be a sign of depression or anxiety.
- **Unending worry.** “Are you anticipating every possible problem and focusing on it rather than looking at the lake or sky or enjoying being with your grandchild?” Dr. Miller asks. He says that kind of worry could be due to an anxiety disorder.
- **Wanting to be alone.** “If you enjoy solitude because you like the time to read or meditate, that’s fine. But that’s different from staying home because it takes too much energy to interact with others. That’s a sign of depression,” says Dr. Miller.

What you should do

Just because you’re experiencing one of those symptoms doesn’t mean you’ll be diagnosed with an anxiety disorder or depression. “But if you’re too caught up in one feeling or another, having less pleasure in life or having trouble doing what you need to do, then certainly get help,” says Dr. Miller.

Reaching out to family and friends may be a good way to start the process. “Talk to people who might be understanding, compassionate, and helpful,” Dr. Miller says. If you feel embarrassed to share your feelings or worries with those close to you, make an appointment with your doctor.

Treatment

Help for depression and anxiety can come in a variety of forms, such as treating underlying conditions that may be causing depression, taking anti-depressant medications, or taking part in talk therapy.

There are also plenty of pill-free approaches that can help. Exercise is an important one. A daily walk can help you maintain your overall mood, energy, and positivity. “Increased blood flow to the brain seems to make nerves healthier. They plump up and make firmer connections,” Dr. Miller explains.

Another strategy is staying connected socially. Social connections are associated with reduced stress, improved immune system function, and longer life. People with more social connections also have lower levels of anxiety and depression, higher self-esteem, and a better overall sense of well-being.

The takeaway

You don’t have to suffer with depression or anxiety, no matter what your age. “It’s useful to find a way to manage it better so you can live your life fully and experience being alive,” says Dr. Miller. “You want to feel like every day that you wake up is a good day.”

For more information, check out the Harvard Special Health Report Understanding Depression (www.health.harvard.edu/ud).
The importance of bystander CPR

This newer way to perform CPR is easier than the traditional method, and it’s saving lives.

Every year, more than 350,000 Americans experience sudden cardiac arrest, when the heart stops beating without any warning. In the agonizing moments before paramedics arrive, there’s no blood circulating in the body to deliver oxygen to the brain and other organs; death is just minutes away.

“When the cardiac arrest occurs outside of a hospital setting, the survival rate ranges from 2% to 15%,” says Dr. Kei Ouchi, an emergency physician at Harvard-affiliated Brigham and Women’s Hospital.

That grim reality has led to a national call to arms from the American Heart Association (AHA) to learn a simple, potentially lifesaving skill to help someone in cardiac arrest: an abbreviated form of cardiopulmonary resuscitation (CPR) known as bystander or hands-only CPR. The American Heart Association says when a bystander promptly performs CPR, it doubles or triples the survival rate.

What is bystander CPR?

Traditional CPR involves chest compression to manually keep the heart pumping, and also mouth-to-mouth resuscitation to provide oxygen to the person in cardiac arrest. Bystander CPR consists of only the chest compressions.

“They’re both important,” says Dr. Ouchi, “but when cardiac arrest occurs, there’s already some oxygen left in the blood. We’ve learned it’s much more important to pump that blood to the brain than spend the extra seconds or minutes trying to give the patient more oxygen. So now it’s compression, compression, compression.”

How do you do it?

Someone in cardiac arrest will collapse, stop breathing, and have no pulse. That’s the time to begin bystander CPR. The first step is the most important: call 911. Once you’ve reported the emergency, you can begin chest compressions. Dr. Ouchi explains the process this way:

• Kneel next to the person’s chest.

• Place the heel of one hand over the other in the middle of the chest.

• Extend your arms completely.

• Push down hard at a 90° angle (put your shoulders into it), and after the push completely release your pressure. That’s one compression.

• Aim for 100 or more compressions per minute. It may help to sing to keep up your pace. A common recommendation is the Bee Gees’ disco hit “Stayin’ Alive,” which has almost exactly 100 beats per minute. “You can get tired very quickly. Switch with someone to get a break,” Dr. Ouchi says.

Does it work?

Chest compressions can help push any remaining oxygenated blood to the organs to keep them alive. Not only can CPR prevent sudden death, the prognosis is good for the person who survives and is discharged from the hospital: the cardiac arrest usually does not leave them with brain damage or other medical problems. Indeed, a 2015 study of more than 4,000 people in Denmark, published May 12, 2015, in Circulation, found that more than 75% of people who survived a cardiac arrest that occurred outside a hospital were able to return to work in about four months. Those who received CPR from a bystander were nearly 40% more likely to go back to work, compared with survivors who didn’t get CPR.

Dr. Ouchi says that when CPR is accompanied by the use of an automated external defibrillator (AED)—which uses electricity in attempt to restart the heart—that’s even better chance for survival. AEDs are used only for certain kinds of irregular heartbeats.

Where can you learn it?

The AHA, American Red Cross, YMCAs, and even some local hospitals offer classes in bystander CPR. They may or may not be free. You can also watch this video that demonstrates the lifesaving skill: www.heart.org/HandsOnlyCPR.
The pros and cons of root vegetables

They’re packed with nutrients but high in starchy carbohydrates.

Root vegetables—like turnips, rutabagas, and parsnips—may not be the sexiest foods on the table. But they’re big celebrities in a number of cuisine trends like the “vegetable forward” movement (which elevates vegetables into creative entrees and side dishes) and root-to-stem cooking (which uses every part of a vegetable, including the tops, stems, and skins).

While it’s fun to use old standbys in more interesting ways (like roasted parsnips with pistachio and lemon), it’s important to eat root vegetables judiciously. “They are so high in carbohydrates that they are more like grains than greens. It makes more sense to put them in the same category as breads, rice, or pasta,” says dietitian Teresa Fung, adjunct professor in the nutrition department at the Harvard T.H. Chan School of Public Health.

What are root vegetables?

Root vegetables grow underground at the base of a plant. Technically they’re not all roots; some are bulbous growths that store nutrients to feed the plant in colder months.

Examples include bulbs (fennel, onions), corms (celery root, water chestnut), rhizomes (ginger, turmeric), tap roots (beets, carrots, parsnips), tuberous roots (sweet potatoes, yucca), and tubers (potatoes, yams).

The bulbs, roots, and tubers absorb water and nutrients to feed the rest of the plant. Those nutrients make them dietary powerhouses for us.

The pros of root vegetables

Root vegetables are low in calories and high in antioxidants. Each one contains a wide variety of vitamins and minerals. Some have nutrients in surprisingly high amounts. For example:

- **The flesh of a medium baked sweet potato** has only 103 calories and enough vitamin A—1,096 micrograms (mcg)—to meet your entire Recommended Dietary Allowance for the day (for adults 51 or older, that’s 700 mcg for women, 900 mcg for men). Carrots are also a good source of vitamin A, with 1,069 mcg in a cup of chopped raw carrots.
- **A cup of mashed turnips** has 51 calories and 76 milligrams (mg) of calcium—as much calcium as half of a slice of cheddar cheese.
- **A medium baked russet potato** (including its skin) has 164 calories and 935 mg of potassium (more than twice the potassium of a medium-sized banana).

The cons of root vegetables

Most root vegetables are also starches—a kind of carbohydrate that the body breaks down into glucose for energy. For example, there are 37 grams of carbs in a baked russet potato, and 24 grams in a medium baked sweet potato.

Fung warns that if you eat more carbs than your body needs, it will store them as fat, leading to weight gain. Eating too many carbs in one sitting can spike your blood sugar. Frequent spikes of blood sugar can increase the chance of developing diabetes and make it more difficult to manage diabetes if you already have it.

Still, some root vegetables have fewer carbs than others. For example, a cup of chopped raw carrots has only 12 grams of carbs; a large cooked onion has 13 grams of carbs.

Another potential problem: how you prepare root vegetables. “When you eat mashed potatoes you’re probably adding butter and other unhealthy ingredients. Or maybe you top a baked potato with sour cream and bacon bits. And it’s quite easy to overeat, and you end up eating a lot of calories that aren’t so satiating,” Fung says.

What you should do

Root vegetables are still fresh whole foods that contain many vitamins and minerals. Eating a variety of them is good for your health.

Fung says that, if you’re healthy, you can probably eat one serving of root vegetables every day. “Just make sure it’s a side dish or part of another dish, and that it’s the only starch on your plate,” she advises. In other words, don’t have a serving of rice and a serving of sweet potatoes.

And don’t eat the same root vegetables all the time; eat a variety of them to get a wider selection of nutrients. Try turnips, yucca (cassava), Jerusalem artichoke, yams, beets, or radishes.

If you’re looking for easy ways to eat root vegetables, try them boiled, mashed, baked, roasted with a little olive oil, or tossed into soups and casseroles. Alternatively, you can follow a food trend and get creative with root vegetables. The secret is using atypical cooking methods (such as braising, barbecuing, or searing) and then pairing the vegetables with interesting flavors. Consider barbecued carrots with yogurt and pecans, miso-glazed turnips, or Jerusalem artichoke with shallots and toasted hazelnuts.

With a little imagination, you may soon find root vegetables a lot more interesting.
Are drugstore sleep aids safe?
Observe these caveats if you use over-the-counter drugs or dietary supplements to help you sleep.

It's 2 a.m. and you can't sleep. Is it okay to take a nonprescription remedy? “They're not meant for the long term, but it may be okay for an occasional night of problems with sleep,” says sleep expert Dr. Lawrence Epstein, an instructor in medicine at Harvard Medical School.

But which option should you reach for? Drugstore shelves are lined with a dizzying array of products promising a good night's sleep. They fall into two categories: nonprescription medications and dietary supplements.

Nonprescription medications
Sleep medications that are available over the counter use antihistamines as their main active ingredient. Nytol, Sominex, and Unisom (the blue capsule form), for example, contain 25 to 50 milligrams (mg) of the antihistamine diphenhydramine per pill.

Other over-the-counter sleep medications, such as Unisom SleepTabs, contain 25 mg per pill of an antihistamine called doxylamine succinate.

These medications work by blocking certain brain chemicals, which can have a sedating effect. They are generally safe but come with some risks. “You tend to become tolerant of the effect relatively quickly, so they stop working for you. And we don’t have a lot of long-term data about what happens if you use them for long periods of time,” Dr. Epstein says. “And there is the potential that antihistamines may cause side effects in older adults, such as confusion and falls.”

Another risk: some over-the-counter sleep aids contain other medications. For example, Tylenol PM contains not only 25 mg of diphenhydramine but also 500 mg of acetaminophen, a pain reliever. You might not be aware of that if you’re focused only on the sleep benefits of a medication.

Dietary supplements
Many kinds of supplements claim to help you sleep. For example:

Valerian root. The root of this tall, flowering plant is said to help people fall asleep and to quell anxiety and stress. It has been used as a medicinal herb since the days of ancient Rome.

Chamomile. Use of this flower, which looks like a daisy, also goes back thousands of years. It’s taken in pills as well as teas (many people drink a cup of chamomile tea at bedtime). It is considered mild and safe to help you become drowsy. But some people have an allergic reaction to chamomile (especially those who are allergic to ragweed).

Melatonin. This supplement comes from a lab, not a plant. It’s a synthetic version of the human hormone that helps regulate your sleep-wake cycle. But Dr. Epstein says it’s not a sleep medication. “It makes people a little sleepy, but it has a much greater effect in shifting the timing of the sleep phase,” he explains.

Dr. Epstein advises taking one to three mg of melatonin two to three hours before bedtime, if you’re trying to better align your sleep cycle because of jet lag or a night-shift job. He says you can take melatonin safely for the long term.

A word about prescription sleep aids
Prescription sleep medications are powerful drugs that work on different parts of the brain.

- Benzodiazepines like lorazepam (Ativan) and temazepam (Restoril) target gamma-aminobutyric acid (GABA), a brain chemical that reduces nerve activity and promotes sleep. These medications can be habit forming, may cause daytime sleepiness, and may be associated with dementia.

- Nonbenzodiazepines—such as zolpidem (Ambien) and eszopiclone (Lunesta)—also work on GABA, but they leave the body faster and have fewer side effects, allowing for regular waking and daytime functioning the next day. However, they still increase the risk for sleepwalking and daytime sleepiness, which can lead to falls and injury.

- Melatonin-receptor agonists such as ramelteon (Rozerem) target melatonin receptors in the brain. They leave the body quickly and are not thought to be habit forming.

These medications are meant for short-term use only, under the direction of your doctor. “They’re most helpful for the treatment of insomnia. But medications are just one option to treat insomnia. Behavioral therapy, which involves looking at your sleep habits and ways you think about sleep and routines, is equally effective,” says sleep expert Dr. Lawrence Epstein, an instructor in medicine at Harvard Medical School.
A word of caution
Even though supplements are widely taken to help people sleep, we don’t actually know if they work.

“There are essentially no data on any of the herbal supplements that show effectiveness, except for a minor beneficial effect of valerian root,” Dr. Epstein says.

Many supplements can have minor side effects, such as headache, dizziness, or nausea. Or they may increase the effect of alcohol or other drugs you’re taking, such as other sleep medications.

Perhaps the biggest concern is that the FDA doesn’t regulate supplements, so there’s no way to know if a pill contains what its manufacturer claims.

What you should do
If you want to take an over-the-counter sleep drug or a dietary supplement, speak with your doctor or pharmacist to make sure it won’t interact with any medications you’re taking.

If you’re having more than an occasional night of sleeplessness, it may be time to figure out what’s causing the trouble.

“Most sleep problems can be corrected without medication,” Dr. Epstein says. “But it may take many approaches. Sleep problems are often caused by many things, not just one thing that can be fixed with a pill.”

Upper-body boosters ... from p. 1
Get your power back
The great news is that you can improve muscle size and strength. Safran-Norton recommends working with a physical therapist to get back on track.

The therapist can evaluate the strength and length of your muscles and the range of motion of your joints, and then design a program to fit your particular needs.

A program typically involves gentle stretching to keep muscles supple, plus strengthening exercises like triceps curls, with low amounts of weight (just a few pounds) and a high number of repetitions. That’s because you don’t need to bulk up; you need to condition your muscles and increase their stability and endurance.

Just remember that once physical therapy is over, it will be up to you to keep your muscles strong, either by going to a gym or maintaining your own home workout two or three times per week.

We’ve given you a few easy upper-body boosters below. For more workout ideas, check out the Harvard Special Health Report Strength and Power Training for Older Adults (www.health.harvard.edu/spt).
What's coming up:

- What does your chronic cough indicate?
- What you should know about protein powders
- Easy ways to perfect your posture
- Tips to cope: The emotional side of downsizing