

# NIH News in Health

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## Opportunities Abound for Moving Around Get Active, Wherever You Are

You know that physical activity can help you live a longer, healthier life. But did you know you don't need to join a gym or use costly equipment to be physically active? No matter where you live, work, or go to school, you can find ways to move more and sit less throughout your day. In addition to helping your health, you might have fun without spending a lot of money.

Moving more and sitting less can reduce your risk for many serious conditions, including heart disease, diabetes, **osteoporosis**, and certain kinds of cancer. Some studies suggest that physical activity can have mental benefits as well, helping to relieve depression and maintain thinking abilities as you age. Healthful physical activity includes exercise as well as many everyday activities, such as doing active chores around the house, yard work, or walking the dog.

Activities that cause you to breathe harder are called aerobic activities. These make your heart and blood vessels healthier. Aerobic activities include brisk walking, dancing, swimming, and playing basketball. Strengthening activities, like push-ups and lifting weights, help make your muscles and bones stronger and can also improve your balance.

But even though many of us know that physical activity is a good thing, most adults nationwide don't meet

even the minimum recommended amounts of physical activity. (That's at least 30 minutes of brisk walking or other moderate activity, 5 days a week.)

Why aren't we more active? "Lack of time is a common reason for not exercising," says Dr. Mary Evans, an NIH expert on physical activity and nutrition. "Another important factor is location—having safe places to walk and engage in different activities. That can mean having sidewalks, public parks with well-lit walking paths, a shopping mall where you can walk, or other features that can make activity inviting and easy to do."

NIH-funded research has found that your environment—where you live, work, or go to school—can have a big impact on how much you move and even how much you weigh.

Some communities don't have safe playgrounds or sidewalks, so kids tend to spend their free time indoors. Sitting instead of moving makes it hard to maintain a healthy weight. Many adults sit behind the wheel driving to work and then sit most of the day at a computer, taking few breaks to stand up and move around. In suburban neighborhoods, people often have to drive rather than walk to get to grocery stores, shops, and even public transportation.

"Our environments have become less friendly to being active. But studies show that people will walk more if



the environment provides them with opportunities to do so," says Dr. Brian E. Saelens, a health psychologist and behavioral scientist at the University of Washington in Seattle. "How close are you to a library? Can you walk to a store? Is there a safe path for walking to school? All of these factors affect how active we are each day."

Having places to walk and have fun can help more people get moving and active. "It's not just dangerous neighborhoods, broken streets, and crime that can keep people indoors and away from being physically active," says Dr. Allen Glicksman, director of research at the Philadelphia Corporation for Aging. "We've also

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### Definitions

#### Osteoporosis

A disease in which bones thin and weaken so that they become fragile and break easily.

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found that, from ages 18 to 80, if a neighborhood has someplace nice to walk to—desirable destinations like a book store, grocery store, coffee shop, a place to eat or meet—it can have a healthful effect on how much people weigh and how much they walk.”

Research also shows that taking public transportation—like buses and trains—can help boost activity. In a recent Seattle-area study, Saelens and colleagues found that people

tend to add about 15 minutes of activity to their day when they take public transportation, in part by walking to and from the mass transit site instead of taking a car from door to door. “That’s half the recommended amount of physical activity added to their day,” Saelens says.

Having opportunities to connect with others can also have a positive effect. “Many people are more likely to walk if they’ve got one or more buddies to walk with,” Glicksman says. “When you think about what brings people together, what brings people out and active, the answer can vary depending on your community.” In urban Philadelphia, Glicksman and others have found that neighborhood features like access to public transportation, better bus shelters, and even murals in some neighborhoods seem to encourage more physical activity.

When community gardens were created for older adults in Philadelphia, Glicksman says, “we wanted people to garden to help them eat fresh foods and get them out and moving in the nice weather.” When younger adults joined in as well, the gardens had the added bonus of connecting people across generations. The older adults acted as gardening mentors, while the younger people helped with heavy lifting and digging. “Bringing people together is not only a way to encourage more activity; it’s also a way to get people thinking about how we can change our neighborhoods for the good.”

So take a look around your neighborhood, your workplace, or your



## Web Links

For more about physical activity and your environment, click the “Links” tab at: <http://newsinhealth.nih.gov/issue/May2015/Feature1>

school. Can you think of changes that might make the surroundings more inviting for walking or exercise?

“Consider: How can we change our environment so activity is an easier choice for us to make?” Saelens says. In many communities, people have gotten together to organize activities and improve their environments to encourage more physical activity. Steps might include improving local parks, requesting safe and usable bike paths and sidewalks, or asking for more physical activity and healthier meals at schools. If you have some ideas for improving your surroundings, discuss them with your neighbors or local leaders.

Although your environment can affect how active you are, you can still look for new ways to use the world around you to add some movement to your day.

“If you’re at work, try climbing the stairs instead of using the elevator. And get up from your chair and move around at least once an hour,” Evans says. Stand up and walk to a colleague’s office instead of sending an email. Try standing instead of sitting when you’re on the phone, or have “walking” meetings with co-workers instead of sitting in a conference room. And take a brisk walk on your lunch break to get some activity in.

“It’s not really necessary to engage in vigorous physical activity like running to have beneficial health effects. Just 30 minutes of brisk walking most days, in at least 10-minute segments, can have a positive effect,” Evans says.

“We have to look for opportunities to fit physical activity into our days,” Saelens adds. “Some people love to put on their sneakers and to go to the gym, and that’s great for them, but it’s not the only way to get active.” ■



## Wise Choices Get Active in Your Community

- Start a walking group with friends, neighbors, or co-workers.
- Make the streets safer for walking by driving the speed limit and yielding to people who walk.
- Consider joining a low- or no-cost exercise group or an office sports team such as softball or kickball, and enroll kids in community sports teams or lessons.
- Participate in local planning efforts to develop walking paths, sidewalks, and bike paths.
- Work with parents and schools to encourage kids to safely walk or ride bikes to school.
- Join other parents to ask for more physical activity at school.
- Try different activities to find the ones you really enjoy, and have fun while being active!

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# Keep Your Vision Healthy

## Learn About Comprehensive Dilated Eye Exams

People of all ages should have their eyesight tested to keep their vision at its best. Children usually have vision screening in school or at their pediatrician's office. Adults, however, may require more than vision screening.

Even if your vision seems fine, the only way to know for sure that your eyes are healthy is to get a comprehensive dilated eye exam. When you should start getting such exams depends on many factors, including your age, race, and overall health.

Growing older puts you at risk for glaucoma, age-related macular

degeneration, and diabetic retinopathy—the most common cause of vision loss from diabetes. These eye diseases tend to arise without any warning at their earliest stages. By the time you notice vision loss, it usually can't be reversed. Timely treatment may let you keep more of your vision longer.

"Yearly comprehensive dilated eye exams starting at age 60 are the most effective and thorough way to detect eye diseases while we can still minimize vision loss," says Dr. Paul A. Sieving, director of NIH's National Eye Institute.

If you have diabetes, high blood pressure, or a family history of eye disease, you may need yearly comprehensive dilated eye exams earlier. African Americans have a higher risk and an earlier average onset of glaucoma compared to whites, and so are advised to have comprehensive dilated eye exams every 1 to 2 years starting at age 40.

A visual field test gauges the scope of what you're able to see. Looking straight ahead and with alternating eyes covered, you'll respond each time you see a light or the examiner's hand held at the periphery of your vision. A screen or apparatus might also be used. Loss of peripheral vision may be a sign of glaucoma, which damages the optic nerve responsible for carrying visual messages from the eye to the brain.

A visual acuity test detects how well you see at various distances. Looking at an eye chart about 20 feet away, you'll read aloud the smallest letters you see, first with one eye covered, then the other. The results can help assess disease progression or response to treatment, and may reveal a need for low-vision aids.

Next, the eyes are dilated by placing drops in each eye to widen the pupil, which allows more light to enter the eye. A magnifying lens is used to examine the tissues at the



back of the eye, including the retina (light-sensitive tissue), the macula (the central region of the retina required for straight-ahead vision), and the optic nerve. Damage to these areas may be a sign of diabetic retinopathy, glaucoma, or age-related macular degeneration.

Tonometry measures the eye's interior pressure by sending a quick puff of air onto its surface. High intraocular pressure is a risk factor for the optic nerve damage associated with glaucoma.

And that's it. You're good to go. You can watch the video at [www.nei.nih.gov/eyeexam](http://www.nei.nih.gov/eyeexam) for a glimpse of what your eye care provider can see during a comprehensive dilated eye exam. ■



### Wise Choices Healthy Eyes at All Ages

- **Know your family's eye health history.** Learn if any eye conditions affect your family members.
- **Eat right.** Fruits and vegetables (especially dark leafy greens like spinach or kale) and fish high in omega-3 fatty acids (like salmon or tuna) may help your eyes.
- **Maintain a healthy weight.** Excess weight raises your risk for diabetes and other conditions that can harm vision.
- **Wear protective eyewear.** Wear eye protection specially designed for sports, home improvement projects, and other activities.
- **Wear sunglasses.** To protect your eyes from sun damage, choose glasses that block at least 99% of both UV-A and UV-B rays.
- **Quit smoking or never start.** Smoking is linked to an increased risk for several eye diseases.
- **Clean your hands and your contact lenses.** Avoid infection by washing your hands thoroughly before putting in or taking out contact lenses. Disinfect and replace lenses as instructed.



### Web Links

For more about keeping your vision healthy, click the "Links" tab at: <http://newsinhealth.nih.gov/issue/May2015/Feature2>





# Health Capsules

For links to more information, see these stories online:  
<http://newsinhealth.nih.gov/issue/May2015/Capsule1>

## HIV Therapy Promising in First Human Study

Just one dose of an experimental **antibody** significantly reduced HIV levels in infected people for up to 28 days. This promising approach, called immunotherapy, might help to combat many strains of HIV, the virus that causes AIDS.

People with HIV infections often receive antiretroviral therapy to help prevent the virus from multiplying. Despite advances in treatment, scientists haven't yet designed a vaccine that protects people from getting HIV

infections in the first place.

A research team led by long-time NIH grantee Dr. Michel Nussenzweig at Rockefeller University has been trying a different approach. They'd previously isolated human antibodies that can block many strains of HIV. They then produced these antibodies in the lab. Tests showed that these so-called monoclonal antibodies could prevent or treat HIV infections in animals.

In the current study, the researchers evaluated one of these promising antibodies in people. The small clinical trial included 17 HIV-infected volunteers and 12 without HIV infection. Each person received a single infusion of the experimental antibody at differing doses.

The antibody, called 3BNC117, was well-tolerated by all participants. In the 8 people who got the highest dose, HIV levels dropped quickly and steeply. In some, HIV levels remained low for 28 days.

"What's special about these antibodies is that they have activity against over 80% of HIV strains and they are extremely potent," says study coauthor Dr. Marina Caskey.

This study suggests that 3BNC117 is safe in people and could help to control HIV. Future research will continue to explore the use of this and other monoclonal antibodies in HIV prevention and treatment. ■



### Definitions

#### Antibody

Germ-fighting molecule made by the body's immune system.

## Add NIH's Free Content to Your Website

If you have a website or blog, or manage one for your organization, NIH has a new way for you to get

trusted, up-to-date health information added directly to your site. It's called "content syndication," and it's an easy way to share high-quality articles, images, infographics, videos, podcasts, and other credible material that updates

automatically on your site.

Using NIH's information can save you time and money: You can include quality health content without worrying about updating it. Browse and choose from topics in the syndication catalog and then simply add the related code to your Web page. The end result: NIH content will appear on your Web page and fit in with your site's existing look and feel.

To learn more about adding reliable health information to your site, visit [www.nih.gov/health/syndication](http://www.nih.gov/health/syndication). Or see these step-by-step instructions for using NIH content via the U.S. Department of Health and Human Services' Syndication Storefront: [www.nih.gov/health/syndication/instructions.htm](http://www.nih.gov/health/syndication/instructions.htm). ■



### Featured Website Allergens & Irritants

[www.niehs.nih.gov/health/topics/agents/allergens](http://www.niehs.nih.gov/health/topics/agents/allergens)

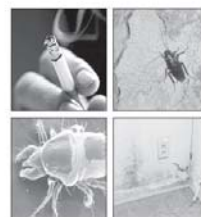
This website can help you survive the seasons by learning more about asthma, allergies, and the common substances that trigger breathing problems. Get tips on preventing exposure to irritants such as cigarette smoke, cockroaches, animals, pollen, and dust mites, so you can keep breathing easier.

#### Allergens & Irritants

Asthma is one of our nation's most common chronic health conditions. Many substances can aggravate allergies or increase the severity of asthma symptoms in individuals who are sensitive to these allergens or irritants.

This Web site is designed to help you SURVIVE THE SEASONS by providing information on asthma, allergies and some of the most common seasonal and non-seasonal allergens and asthma irritants such as:

- Cigarette Smoke
- Cockroaches
- Dust Mites



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