



SAFEGUARDING OUR HEALTH

Vaccines Protect Us All

We share more than food and culture within our homes and communities. We can also spread disease. Luckily, we live in a time when vaccines can protect us from many of the most serious illnesses. Staying current on your shots helps you—and your neighbors—avoid getting and spreading disease.

“Vaccines have led to large reductions in illness and death—for both kids and adults—compared with the “pre-vaccine era,” says Dr. David M. Koelle, a vaccine expert at the University of Washington in Seattle. Vaccines will prevent about 322 million illnesses, 21 million hospitalizations, and 732,000 deaths among U.S. children born over the last 20 years, according to a recent report.

Vaccines harness your immune system’s natural ability to detect and destroy disease-causing germs and then “remember” the best way to fight these germs in the future. Vaccination, or immunization, has completely eliminated naturally occurring smallpox worldwide—to the point that we no longer need to get shots against this fast-spreading, once-deadly disease. Polio too has been eliminated

in the U.S. and most other nations as well, thanks to immunizations. Poliovirus can affect the brain and spinal cord, leaving people unable to move their arms or legs, or sometimes unable to breathe.

Experts recommend that healthy children and teens get shots against 16 diseases. With this growing list, many disabling or life-threatening illnesses have significantly declined in the U.S., including measles, rubella, and whooping cough. But, unlike smallpox, these disease-causing germs, or pathogens, still exist around the world.

WIDESPREAD BENEFITS

When enough people are vaccinated, the entire community gains protection from the disease. This is called community immunity. It helps to stop the spread of disease and protects the most vulnerable: newborns, the elderly, and people fighting serious illnesses like cancer. During these times, your immune system is often too weak to fend off disease and may not be strong enough for vaccinations. Avoiding exposure becomes key to safeguarding your health.

“There’s a huge benefit to all of us getting the recommended vaccines,” explains Dr. Martha Alexander-Miller, an immune system expert at Wake Forest Baptist Medical Center in Winston-Salem, NC. “Number one, vaccines protect you. But they also limit the presence of disease-causing entities that are circulating in the community. So, you’re helping to protect individuals who may not be capable of protecting themselves, for example because they are too young to get vaccinated.”

Doctors recommend that moms-to-be get both flu and Tdap (tetanus, diphtheria, and whooping cough) shots, so her body will make antibodies against these diseases. A mother’s antibodies can help protect the newborn until they can receive their own vaccinations.

Some vaccines must be given before pregnancy. Rubella, for instance, can cause life-altering birth defects or miscarriage if contracted during pregnancy. There’s no treatment, but the measles, mumps, and rubella (MMR) vaccine given pre-pregnancy offers prevention. Vaccines for many other common diseases that put newborns at risk are being studied.

“We’ve made amazing progress in the development of effective vaccines,” says Alexander-Miller. “Our ability to have such breakthroughs is the end result of very basic research that went on for years and years. But we still don’t know everything that we need to know about how to create the very best vaccine.”

Ask your doctor’s office whether your vaccinations are current. You may also find records of vaccinations at your state health department or schools. If you can’t find your records, ask your doctor if it’s OK to get a vaccine you might have received before.

Most side effects of vaccines are mild, such as a sore arm, headache, or low-grade fever.

Help your community keep diseases at bay: Stay up-to-date with vaccines.

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RECOMMENDED VACCINES

Talk to your doctor about staying up-to-date on shots for these 16 vaccine-preventable diseases. Learn more at www.cdc.gov/vaccines/schedules/easy-to-read/index.html.

- Bacterial meningitis
- Chickenpox
- Diphtheria
- Haemophilus influenzae type b
- Hepatitis A and Hepatitis B
- Cervical & other cancers caused by human papillomavirus (HPV)
- Influenza (flu)
- Measles, Mumps, and Rubella
- Pertussis (whooping cough)
- Pneumococcal pneumonia
- Rotavirus diarrhea
- Shingles
- Tetanus



WHAT YOUR NOSE KNOWS

Sense of Smell and Your Health

Your sense of smell enriches your experience of the world around you. Different scents can change your mood, transport you back to a distant memory, and may even help you bond with loved ones. Your ability to smell also plays a key role in your health. If your ability to smell declines, it can affect your diet and nutrition, physical well-being, and everyday safety.

“It’s estimated that the number of odors that people can detect is somewhere between 10,000 and 100 billion, or even more,” says

Dr. Gary Beauchamp, a taste and smell researcher at Monell Chemical Senses Center in Philadelphia. We all have different combinations of odor-detecting cells in our noses, he explains, so people vary greatly in their sensitivity to smells. “In fact, when you or I smell the same physical thing, our perceptions may be very different,” Beauchamp says.

SMELL & OUR HEALTH

Because smell information is sent to different parts of the brain, odors can influence many aspects

of our lives, such as memory, mood, and emotion. For thousands of years, fragrant plants have been used in healing practices across many cultures, including ancient China, India, and Egypt. Aromatherapy, for example, aims to use essential oils from flowers, herbs, or trees to improve physical and emotional well-being.

Smell is also important for your perception of taste. Chewing your food releases aromas that travel from your mouth and throat to the nose. Without smell, we can detect only 5 basic tastes:

sweet, salty, bitter, sour, and umami (savory). But our brains incorporate information from both taste and smell receptors to create the perception of many different flavors.

Some people may think they've lost their sense of taste if food begins to taste bland or slightly "off." But in fact, they may have lost their ability to smell.

Many things can cause smell loss. A stuffy nose, or a harmless growth in the nose (called a polyp) can block air and thus odors from reaching the sensory cells. Certain medications, like some antibiotics or blood pressure pills, can alter smell. These effects are usually temporary. Your smell should come back once you've recovered or stopped the treatments.

But some things can cause a long-lasting loss of smell. A head injury or virus, for example, can sometimes damage the nerves related to smell. And your ability to smell may naturally fade as you get older.

People who've lost their sense of smell sometimes try to boost flavor by adding more salt or sugar to their foods. But these additions might cause problems for those at risk for certain medical conditions,

such as high blood pressure, kidney disease, or diabetes. Talk with your doctor if you think a smell deficit might be affecting your quality of life.

If your food doesn't smell or taste the way you think it should, talk to your doctor. Health care providers can give you a "scratch and sniff" smell identification test to help assess the kind of smell disorder you might have. This test alone can't diagnose more serious health problems, but it can be informative when used alongside other tests.

Like all of your senses, your sense of smell plays an important part in your life. If you think you're experiencing a loss of taste or smell, see your health care provider. There may be ways to help fix the problem. If not, your doctor can help you learn to cope with the changes in smell and taste.



LOSS OF SMELL & SAFETY

If you've lost your ability to smell, it's important to find other ways to detect:

- **Smoke.** Check your smoke detectors once a year to make sure they work.
- **Gas leaks.** Make sure you have a gas detector in your home.
- **Spoiled food.** Throw out food that's been in the refrigerator too long and practice other basic food safety. Learn more at www.foodsafety.gov.
- **Household chemicals.** Make sure there's fresh air where you live and work.



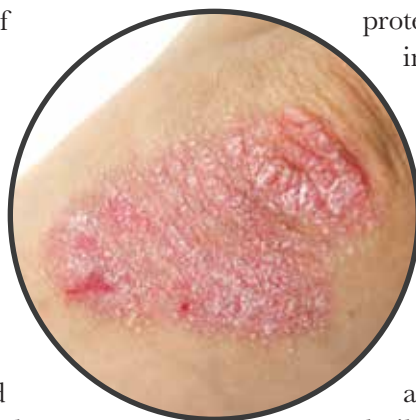


SPOTLIGHT ON PSORIASIS

Preventing Patches of Itchy, Sore Skin

You may have heard of psoriasis, but do you know what it is? Psoriasis is a long-term, or chronic, skin disorder that affects more than 6.7 million U.S. adults. Symptoms can vary, but it's usually recognized by itchy or sore patches of thick, red skin with silvery scales. There's currently no cure, but treatment often helps.

Psoriasis occurs when skin cells quickly rise to the surface of the skin and build up into thick patches, or plaques. Ordinarily, skin cells mature as they rise from their origins below the surface of the skin.



In psoriasis, these cells pile up before they've had a chance to properly mature.

Psoriasis actually begins in the immune system, which normally protects the body against infection and disease.

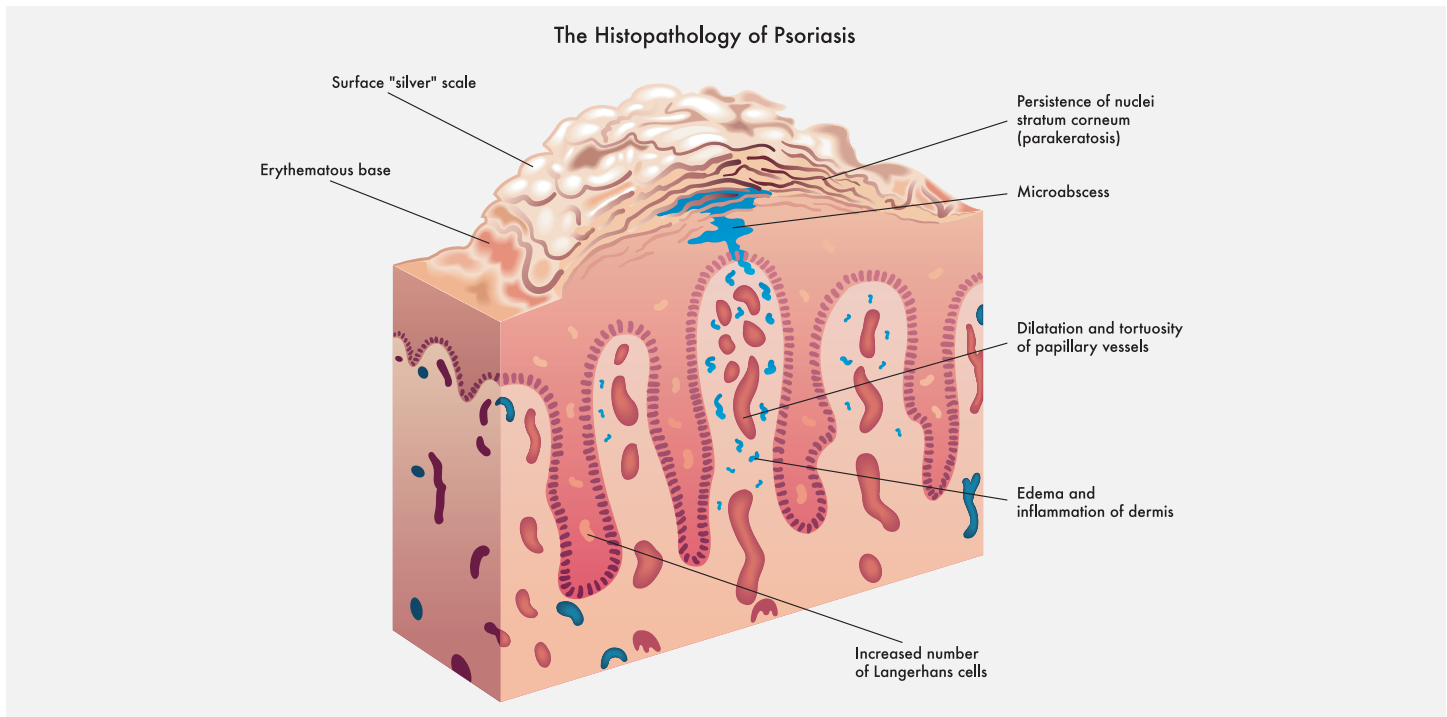
In psoriasis, the immune system becomes misdirected and overactive. This can cause redness and swelling (inflammation) and lead to the rapid buildup of skin cells.

Plaques are most often found on the elbows, knees, or scalp. But they

can also affect the face, fingernails, toenails, soft tissues of the genitals, or any skin-covered region.

"Patients can have a lot of symptoms like itching, cracking, and bleeding that can disrupt their sleep and their social relationships," says Dr. Joel Gelfand, a skin specialist (dermatologist) at the University of Pennsylvania. People with moderate to severe psoriasis may feel self-conscious or have a poor self-image, which can lead to depression or social isolation.

Some people with psoriasis also experience joint inflammation that produces arthritis-like pain. This condition is called psoriatic arthritis. Gelfand and other researchers have



found that psoriasis—especially severe psoriasis—is linked to certain other disorders as well, such as heart conditions, obesity, high blood pressure, and diabetes.

DIAGNOSIS & TREATMENT

Psoriasis can occur at any age, but it typically first appears in young adulthood. Many people with psoriasis have a family history of the disorder. Researchers have been able to identify certain genes linked to the disease, but they still don't fully understand the disease process. They do know that it isn't contagious. You can't "catch" psoriasis by touching someone who has it.

Psoriasis can be hard to diagnose, because it can look like other skin diseases. Your doctor might need to look at a small skin sample under a microscope. It's often best to make an appointment with a primary care doctor or a dermatologist to get an accurate diagnosis.

There are many approaches for treating psoriasis. Safe and proven treatment options include creams, light therapy, and medications given as pills or a shot.

"Treatment decisions in psoriasis need to be highly individualized and tailored toward the patient's clinical

condition and underlying health status, as well as their preferences and goals," Gelfand says. Be sure to ask your doctor about the best treatment options for you.

Psoriasis symptoms may briefly worsen, or flare. These flares can arise when people are stressed or experience a traumatic event like the death of a family member or friend. Smoking, heavy alcohol use, and being overweight can also aggravate psoriasis.

Gelfand and other researchers have been working to develop better therapies. "It's a great time to be hopeful and optimistic about this disease," Gelfand says. "Most of the therapies coming out now seem to be well-tolerated and have impressive effectiveness."

AVOID PSORIASIS TRIGGERS

Factors that may trigger psoriasis or make it worse include:

- physical and emotional stress.
- injury to the skin such as cuts or burns.
- infections, especially strep throat.
- cold weather.
- smoking or heavy alcohol use.



A BLURRY WORLD

Understanding Myopia

As a child in school, did you ever struggle to see what the teacher wrote on the board? Maybe you could easily read from a book, but things farther away—like highway signs—looked blurry. Blurry distant vision is the main symptom of myopia, a condition that affects about a third of American adults.

If you have myopia, you'll have trouble seeing things far away, but you'll be able to see nearby things clearly. This is why myopia is commonly called nearsightedness. Other symptoms of myopia include headaches, eyestrain, and squinting.

Myopia typically begins in childhood. In most cases, the amount of nearsightedness someone has stabilizes

by the time they reach adulthood. Some people, however, may have myopia that continues to worsen with age.

"Myopia develops gradually, says Dr. Mary Frances Cotch of NIH's National Eye Institute. "Children often don't realize they are myopic because myopia develops gradually and they don't have any way of knowing that their blurry vision is different from others."

When you look at an object, the light rays of that object pass through the cornea and the lens of the eye. These bend (refract) the light and focus it on the light-sensitive tissue at the back of the eye (the retina). If you have perfect vision, the rays focus directly on the surface of the retina. In a myopic eye,

the eyeball is usually too long from front to back. This causes light rays to focus at a point in front of the retina, rather than directly on its surface. This makes distant objects blurry.

Myopia can also be the result of a cornea that is too curved or a lens that is too thick. For some, myopia may be caused by a combination of these problems.

What causes the eyeball to grow too long isn't completely known. For many people, myopia appears to be inherited, so if you have a parent with myopia, you're at increased risk for developing it yourself.



A GROWING PROBLEM

Myopia is becoming increasingly common, both in the U.S. and around the world. The problem is especially prominent among school-age children living in urban areas in some Asian countries. In a study published in 2008, experts found that the number of Americans with myopia increased significantly from the 1970s to the early 2000s. The researchers estimated that at least 33% of Americans are nearsighted.

Researchers are looking to see if and how myopia might be related to a person's sex, age, ethnicity, and environmental exposures—such as sunlight or the amount of time spent doing

close-up work. In the past, experts thought that myopia might arise in children who spent too much time indoors reading and writing, which require close-up vision, or from reading in poorly lit rooms. Recent studies, however, suggest that increased myopia in children might instead be related to kids spending less time outdoors. Continued research into how myopia develops will begin to sort out the potential causes and influences.

If distant objects seem out of focus, talk with an eye care professional. He or she can diagnose myopia or other eye problems and recommend options to improve your vision.

TO CORRECT MYOPIA

- » **Prescription lenses**, either eyeglasses or contacts, are precisely curved to refocus light before it enters the eye. This helps light hit the sweet spot on the retina to provide the clearest possible vision.
- » **Eye surgery**, such as LASIK and PRK, changes the shape of the cornea so that light hits the retina properly. Phakic intraocular lenses (IOLs), a new option for people who are very nearsighted or whose corneas are too thin for LASIK or PRK, are surgically implanted inside the eye.

Visit an eye care professional for a diagnosis, prescription lenses, and to discuss surgical options.

