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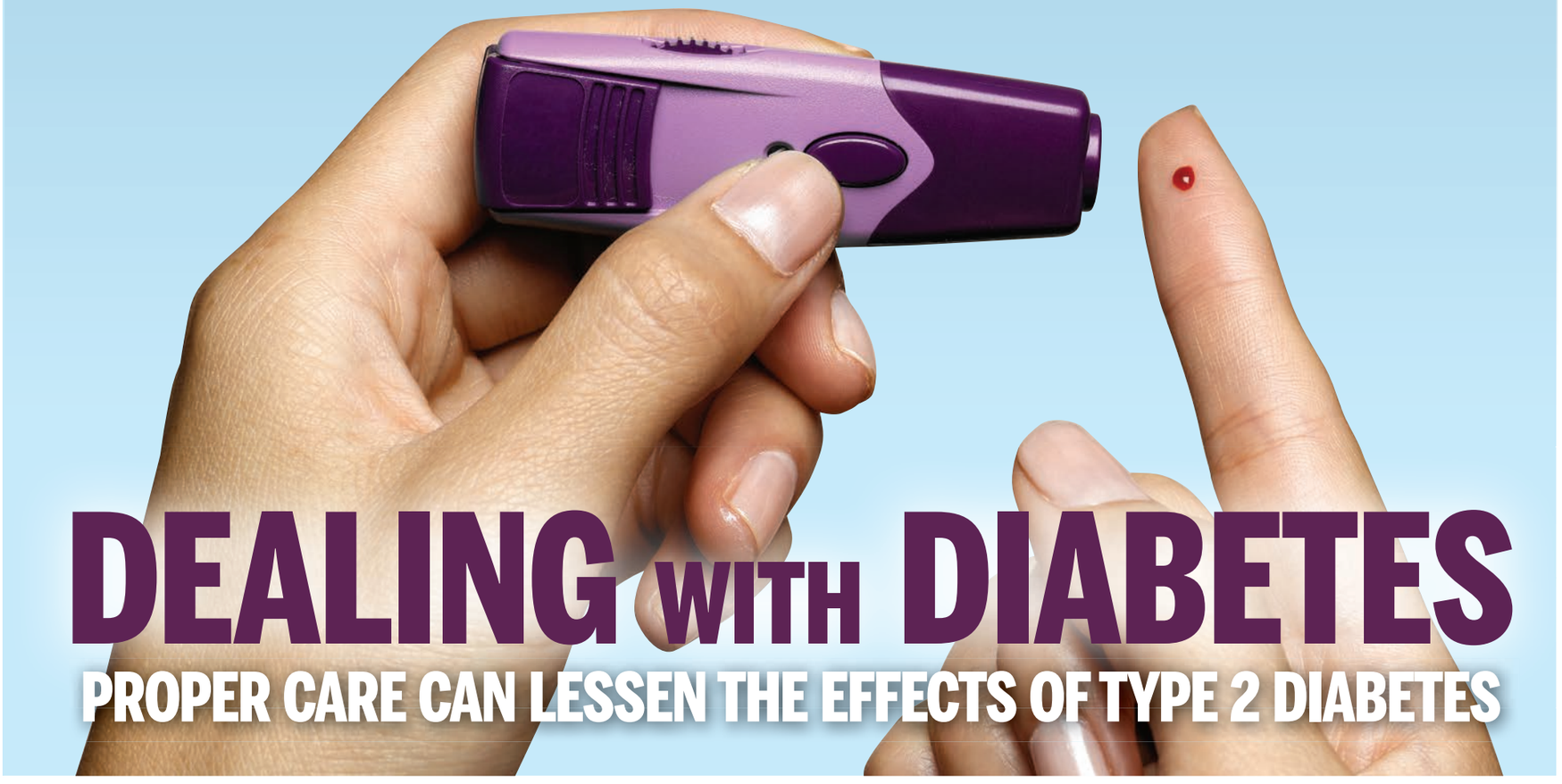
NOVEMBER 24, 2018



DEALING WITH DIABETES

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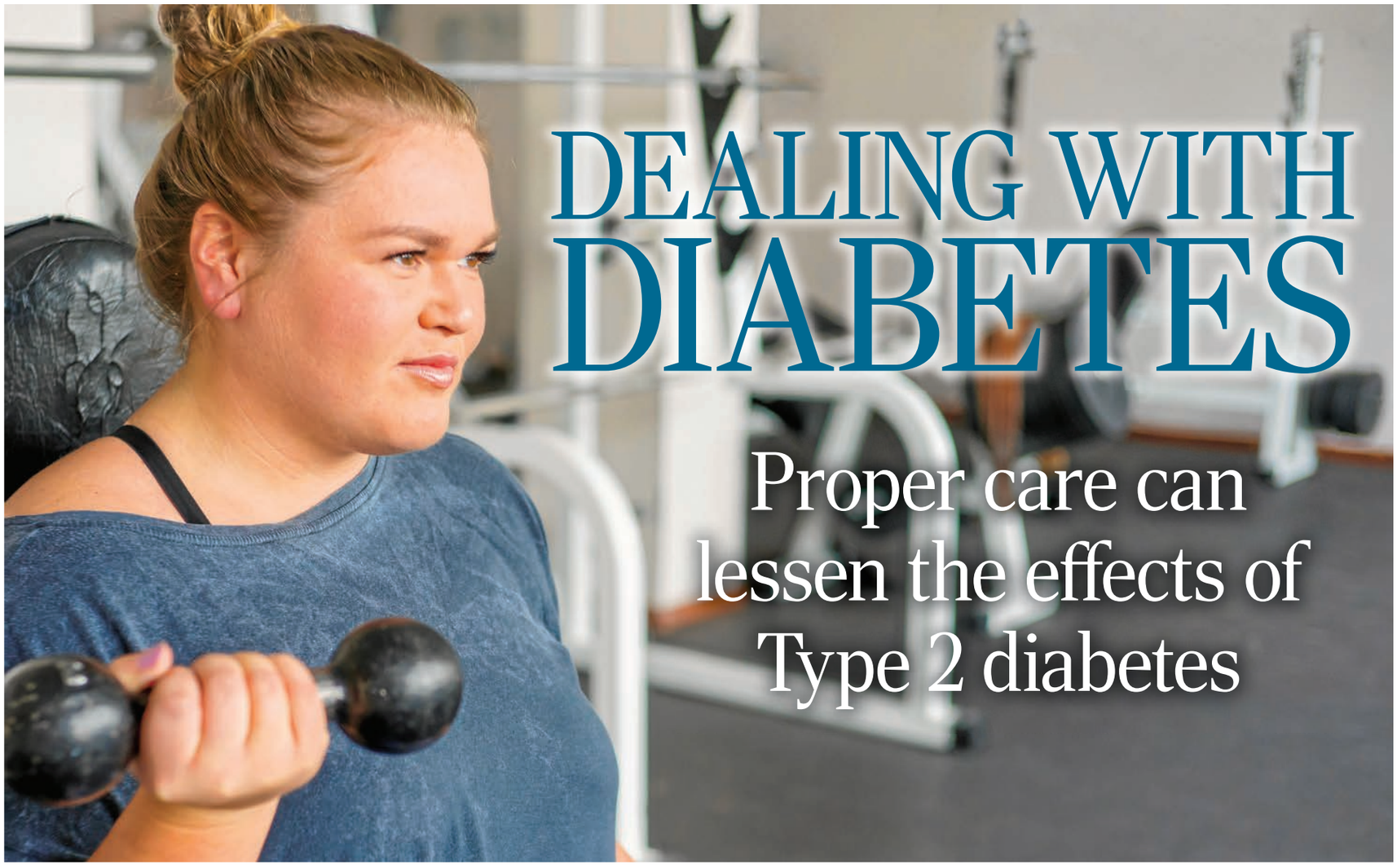

DEALING WITH DIABETES

Proper care can lessen the effects of Type 2 diabetes

JILL WEISENBERGER | Environmental Nutrition

If you have Type 2 diabetes, you've likely heard that lifestyle changes may give you a clean bill of health. While diet and exercise can help tamp down blood sugar levels and dial back the need for certain medications, a cure for Type 2 diabetes isn't so straightforward.

Why is it so complicated?

"At this time, evidence does not demonstrate that Type 2 diabetes can be cured," said Tami Ross, R.D., L.D., the 2013 president of the American Association of Diabetes Educators. Weight loss, dietary changes and exercise may normalize blood sugar levels, but this is not a true cure, she cautions. Instead, it's diabetes under control. And because Type 2 diabetes is progressive, there's no guarantee that lifestyle changes will keep blood sugar levels in the normal range indefinitely without medications.

Before you were diagnosed with diabetes, you likely had blood sugar levels in the prediabetes range for a few years, even if you weren't diagnosed with prediabetes. Both disorders are characterized by a combination of insulin resistance and loss of insulin-making ability. It's a double whammy with some cells in the body refusing to use insulin properly and the beta-cells of the pancreas unable to produce enough insulin to make up for this resistance. The longer you've had diabetes, the more likely you'll need medications because of the loss of insulin-producing capacity.

Take action today

Your best chance for a lasting reversal of Type 2 diabetes is to take action early, said Erin Palinski-Wade, R.D., C.D.E., author of "2 Day Diabetes Diet." Regardless of your stage of disease, reversing insulin resistance is critical for blood sugar control, she said. Here are some science-backed strategies:

1 Eat well

People with Type 2 diabetes often experiment with a range of eating patterns, but not all plans are based on wholesome foods. A meta-analysis of nine studies finds a Mediterranean-style diet superior at blood-sugar management compared to control diets. A Mediterranean-style diet is one that is rich in fruits, vegetables, legumes, olive oil, nuts, fish and whole grains and is moderate in carbohydrate content. The American Diabetes Association recommends individualizing the diet based on preferences and budget and emphasizes healthful eating patterns and nutrient-dense foods over specific nutrients.

2 Lose weight if overweight

Dropping even a few pounds boosts your body's insulin sensitivity. One study found that losing as little as 5 percent of body weight improved insulin sensitivity in the fat, muscle and liver cells and even improved the body's ability to secrete insulin.

3 Walk, bike, swim

Exercise reduces insulin resistance for two to 48 hours. The ADA recommends that people with Type 2 diabetes engage in at least 150 minutes of moderate to vigorous cardiovascular activity each week, with no more than two consecutive days between sessions.

4 Lift weights

Pump iron or lift your own body weight. Strength training is at least as important as aerobic activity, said Sheri Colberg, Ph.D., professor emerita at Old Dominion University. "We store most of the carbohydrates we eat in our muscles."

5 Reduce sedentary time

The ADA recommends breaking up long stretches of inactivity with at least three minutes of light activity such as walking or leg lifts every 30 minutes. These activities stimulate the muscles to use blood sugar, Colberg said.

Stay home, work can wait

It's flu season, which means you know the drill: If you get sick, stay home from work. But what if you have a big meeting, or an important deadline?

"Most people know they should stay home, but still find reasons to go into work," said Liz Hill, SAIF's Total Worker Health® adviser. "Not only does this expose your co-workers to an illness, it also makes it a lot harder for your body to recover."

Hill suggests managers can help set expectations during flu season. This includes:

- Encouraging workers to use their sick leave. Oregon law requires employers with 10 or more employees to provide 40 hours of paid leave per year.
- Making it easy for workers to wash their hands. Consider having alcohol-based hand sanitizer available on worksites where handwashing facilities are not available.
- Planning for flu season. When employees are out, extra work can fall to other staff members—increasing their likelihood of getting sick or injured. Have a contingency plan for being short on employees.


THINKSTOCK PHOTO

Most importantly, managers should lead by example.

"It sometimes seems managers are the least likely to take a sick day," said Hill. "Remember, you are setting the tone for the whole team—if you get sick, stay home."

For more information on flu prevention at work, visit saif.com/flu.

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Diabetes

From S3

Mediterranean diet basics

Plant-based diets can improve blood sugar control and are associated with less obesity and heart disease. Here are some steps to get you started

- **Eat your veggies and fruits — and switch to whole grains.** An abundance and variety of plant foods should make up the majority of your meals.
- **Go nuts.** Try almonds, cashews, pistachios or walnuts for a quick snack.
- **Pass on the butter.** Try olive or canola oil as a healthy replacement for butter or margarine.
- **Spice it up.** Herbs and spices make food tasty and are also rich in health-promoting substances.
- **Go fish.** Eat fish once or twice a week. Fresh or water-packed tuna, salmon, trout, mackerel and herring are healthy choices.
- **Rein in the red meat.** Substitute fish and poultry for red meat.
- **Choose low-fat dairy.** Switch to skim milk, fat-free yogurt and low-fat cheese.

– Mayo Clinic

Diabetes by the numbers

30.3 million
People in the U.S. have diabetes

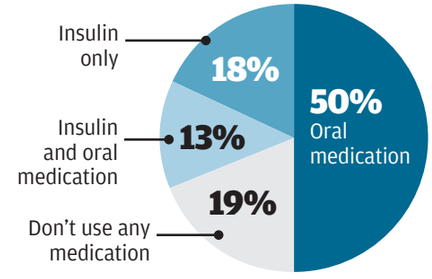
7.2 million
People are living with undiagnosed diabetes

About 1.5 million
New cases will be diagnosed each year.

Source: Centers for Disease Prevention and Control

How it's treated

In addition to diet and exercise, diabetes patients use a variety of medications to treat their disease.



Type 1 vs. Type 2 diabetes

Type 1 diabetes
An immune system attack destroys the insulin-producing cells in the pancreas, reducing insulin levels and the "keys" that open the cell doors to glucose. Glucose and other nutrients cannot enter the cells, so their levels rise in the bloodstream.

Type 2 diabetes
Cells develop a resistance to insulin. Even though the insulin key fits into the lock, it doesn't effectively "open the door" to glucose (that is, fewer glucose transporters are mobilized). Glucose builds up in the bloodstream.

– Harvard Health

Researchers closer to gonorrhea vaccine after exhaustive analysis of proteins

STEVE LUNDEBERG
Oregon State University

CORVALLIS, Ore. – In a study of proteins historic in its scope, researchers at Oregon State University have pushed closer both to a vaccine for gonorrhea and toward understanding why the bacteria that cause the disease are so good at fending off antimicrobial drugs.

The findings, published in Molecular & Cellular Proteomics, are especially important since the microbe, Neisseria gonorrhoeae, is considered a "superbug" because of its resistance to all classes of antibiotics available for treating infections.

Gonorrhea, a sexually transmitted disease that results in 78 million new cases worldwide each year, is highly damaging if untreated or improperly treated.

It can lead to endometritis, pelvic inflammatory disease, ectopic pregnancy, epididymitis and infertility.

Babies born to infected mothers are at increased risk of blindness. Up to 50 percent of infected women don't show any symptoms, but those asymptomatic cases can still lead to severe consequences for the patient's reproductive health, miscarriage or premature delivery.

Aleksandra Sikora, a researcher with the OSU College of Pharmacy and OHSU's Vaccine and Gene Therapy Institute, helped lead an international collaboration that performed proteomic profiling on 15 gonococcal strains; proteome refers to all of the proteins any given organism produces.

Among the isolates in the study were the reference strains maintained by the World Health Organization that show all known profiles of gonococcal antimicrobial resistance.

For each strain, researchers divided the proteins into those found on the cell envelope and those in the cytoplasm. More than 1,600 proteins – 904 from the cell envelopes and 723 from the cytoplasm – were found to be common among the strains, and from those, nine new potential vaccine candidates were identified.

A vaccine works by introducing an "invader" protein known as an antigen that triggers the body's immune system and subsequently helps it quickly recognize and attack the organism that produced the antigen.

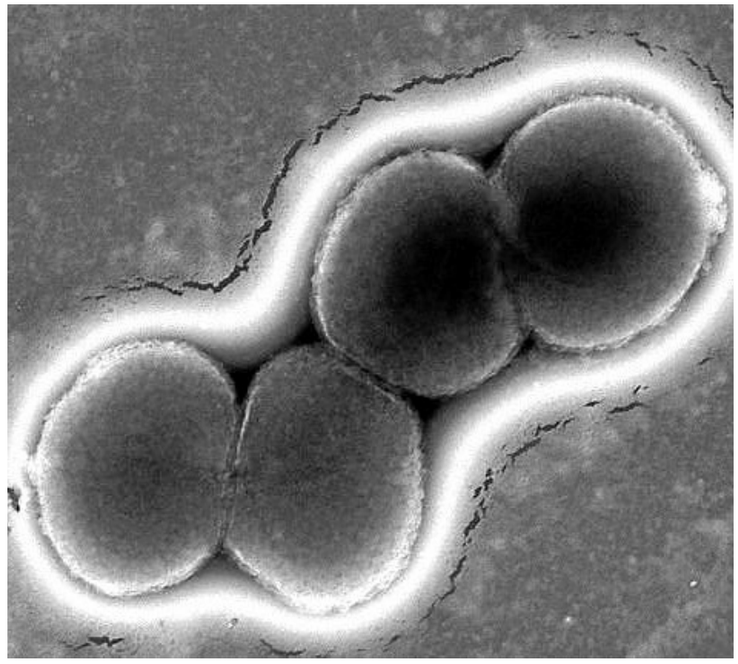


IMAGE BY RYSZARD ZIELKE, OSU/OHSU COLLEGE OF PHARMACY
Microscopic image of the wild type Neisseria gonorrhoeae bacteria that causes gonorrhea.

Researchers also found six new proteins that were distinctively expressed in all of the strains, suggesting they're markers for or play roles in drug resistance and thus might be effective targets for new antimicrobials.

In addition, scientists looked at the connection between bacterial phenotype – the microbes' observable characteristics and behavior – and the resistance signatures that studying the proteins revealed; they found seven matching phenotype clusters between already-known signatures and the ones uncovered by proteomic analysis.

Together, the findings represent a key step toward new weapons in the fight against a relentless and ever-evolving pathogen.

"We created a reference proteomics databank for researchers looking at gonococcal vaccines and also antimicrobial resistance," said Sikora, co-corresponding author on the study. "This was the first such large-scale proteomic survey to identify new vaccine candidates and potential resistance signatures. It's very exciting."

The findings add new momentum to a vaccine quest that also received a boost in summer 2017, when a study in New Zealand showed that patients receiving the outer membrane vesicle meningococcal B vaccine were 30 percent less likely to contract gonorrhea than those who didn't get the vaccine.

"All previous vaccine trials had failed," Sikora said.

Gonorrhea and meningococcal meningitis have different means of transmission and they cause different problems in the body, but their source pathogens are close genetic relatives.

Working with Sikora on the proteomics study were co-corresponding author Magnus Unemo of Orebro University in Sweden, Fadi El-Rami and Ryszard Zielke of the OSU College of Pharmacy, and Teodora Wi of the World Health Organization.

The WHO, the National Institute of Allergy and Infectious Diseases, and the Foundation for Medical Research at Orebro University Hospital supported this research.

THINKSTOCK PHOTO

Paradise Marketing sends stern warning about counterfeit condoms Stock

VISTA, Calif. — Paradise Marketing, America's Number One source of condoms and lubricants, wants to make customers aware of the dangers of counterfeit brand-name condoms flooding the worldwide market.

Following a spate of raids on illegal production centers and fake products in Puerto Rico, Kenya and across China, the California-based company is getting the word out about the dangers of cheaply- made prophylactics and sexual health products.

Dennis Paradise, President and CEO of Paradise Marketing, says that "the illegal manufacturing of counterfeit condoms, made with substandard-quality materials that compromise customer safety, has become a serious problem.

"Paradise Marketing is the direct and authorized distribution source for Durex, Okamoto, Trojan, Lifestyles, One, Atlas, Kimono and others, and our products are *guaranteed* to be factory-direct and covered by proper liability insurance."

Paradise warns that buying cheap imitations comes at a very large cost: "Counterfeit condoms not only do *not* protect against pregnancy or sexually-transmitted infections, they are often made with hazardous, unsafe materials. Make sure to buy from a reputable, authorized seller and check the packaging very carefully before using."

For more information, contact www.paradisemarketing.com.

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MAYO CLINIC Q&A

Reduce risk of cancer

TIMOTHY MOYNIHAN, M.D.
Mayo Clinic

DEAR MAYO CLINIC: It seems like I see a new story every day about things I should or shouldn't do to prevent cancer — and the list feels endless. What really makes a difference? Are there some steps I can take that science has proven will lower my chance of getting cancer?

ANSWER: This is a wonderful question. Although each individual's risk of cancer is different, depending on factors such as medical history, family history and ethnic background, research clearly shows there are several significant lifestyle changes that can lower the risk of cancer.

A recent study by the American Cancer Society found that 45 percent of cancer deaths and about 40 percent of diagnosed cancer cases can be attributed to risk factors you can do something about.

Not surprisingly, the one that has the biggest effect is smoking and other forms of tobacco use. Awareness about the health risks of smoking has grown significantly. Accordingly, the number of lung cancer deaths attributed to smoking is declining. But smoking remains the largest preventable cause of cancer.

The best approach to smoking is not to start. If you smoke, however, stopping now will make a difference. Quitting smoking or other use of tobacco significantly lowers your risk of lung cancer, as well as cancers of the mouth, throat and esophagus; bladder; kidney; and pancreas.

Another lifestyle factor to consider is sun exposure. Unlike lung cancer, which is decreasing, skin cancer is rising. Many cases of skin cancer are related to the effects of too much time in the sun without proper skin protection. Take precautions whenever you're in the sun. Wear a broad-spectrum sunscreen with a sun protection factor, or SPF, of at least 30. Reapply it often. Avoid the midday sun. Wear protective clothing, sunglasses and a hat with a wide brim. If you're a parent, take extra care to shield your children from the sun. People who have multiple blistering sunburns as children are at high risk for developing melanoma — a particularly dangerous form of skin cancer.

A third way you can lower your risk of cancer is to be careful with the amount of alcohol you drink. Excessive alcohol has been shown to contribute to liver, stomach, mouth and throat cancer. To stay in the low-risk range, women should have no more than three drinks in any one day and no more than seven drinks a week. For men, it is no more than four drinks a day and no more than 14 drinks a week.

Controlling your weight makes a difference, too. This risk affects men and women, but it seems to have a greater effect on women. Research has found that women who are obese are at increased risk for breast and uterine cancer. Several other factors often act in conjunction with weight to raise cancer risk. They include a diet high in fats, lack of regular exercise and a sedentary lifestyle.

Vaccinations also help prevent certain types of cancer. Vaccination against the hepatitis B virus decreases the risk of liver cancer. The HPV vaccine is recommended for all boys and girls before they become sexually active because it can prevent the most common cause of cervical cancer and penile cancer, as well as cancers of the throat and mouth.

Although the factors mentioned here are not the only ones that affect your cancer risk, they are some of the most significant, modifiable risk factors that apply to everyone. If you'd like to learn about your specific cancer risk, have a discussion with your health care provider about your individual risk factors and how you may be able to lower your overall risk for cancer.

WALK THIS WAY

Make sure you're exercising effectively

TRIBUNE CONTENT AGENCY

Walking can be a wonderful way to get exercise. But do you ever wonder if you're moving briskly enough to benefit your heart?

There's a quite a difference between a leisurely neighborhood stroll and a purposeful gait when you're late for the bus. Now, new research suggests that a pace of about 100 steps per minute qualifies as brisk walking for many people.

Using that cadence as a benchmark might make sense for some — but not all — people, said Dr. Beth Frates, who directs wellness programming for the Stroke Research and Recovery Institute at Harvard-affiliated Spaulding Rehabilitation Hospital. "For example, 100 steps per minute could be a good goal for a middle-aged, relatively healthy person who's walking on a mild day when the conditions allow for safe footing."

In fact, that pace might even seem a bit slow for a fit person who exercises regularly, she said.

In contrast, 100 steps per minute might be too fast for people who are out of shape, either because they don't have a regular fitness routine or have been sidelined by injury or illness. That's why she and other physicians often recommend that people use the "rate of perceived exertion" scale, also known as the modified Borg scale, to estimate how hard they're exercising.

Study of walking speeds

To estimate the number of steps per minute (pace) that correlates with brisk or moderate walking, a team of researchers reviewed findings from 38 recent, high-quality studies. All of the studies tracked people's walking pace, as well as other measures of effort, such as increases in heart and breathing rates.

The studies included people ages 18 and older, although the average age in most of the studies was under 40. Even though the participants had a range of different body weights and fitness levels, researchers found that what constituted brisk or moderate walking was consistent across the studies: about 100 steps per minute (or about 2.7 miles per hour).

However, these results don't necessarily apply to older adults, who may reach moderate-intensity exercise levels at a cadence lower than 100 steps per minute, the authors point out. Other factors such as height (which affects the length of your stride) and health status could also influence an individual's step count.

A mid-range effort

"To use the Borg scale, you have to pay attention to how hard you're breathing, which is a clear indicator of how hard your heart and body are working," Frates said. Aim for an exertion level around five or six — about halfway between sitting still and exercising as hard as you possibly can.

Measuring your heart rate is another way to assess how hard you're exercising, but this method has a few drawbacks. For example, it's not always easy to find and count your pulse with your fingers. Also, the heart rate monitors on fitness trackers and smartwatches aren't always accurate. And if you're taking a beta blocker such as metoprolol (Lopressor, Toprol) or atenolol (Tenormin) to lower your blood pressure, the drug will also lower your heart rate. That means your heart rate will not be a good indicator of how hard you're exercising, Frates said. But even with a beta blocker, you'll breathe harder and your muscles will become tired, so you still can use the Borg scale.

How fast should you walk?

Known as the modified Borg or "rate of perceived exertion" scale, this measure can help you gauge whether you are exercising intensely enough. For proper exercise, aim for a 5 or 6 on the scale.

Scale	Intensity	Breathing/speaking pattern
1	Extremely easy	Restful breathing; able to sing
2	Very easy	Can easily speak in complete sentences
3	Easy	
4	Easy to moderate	Speech becomes broken
5	Moderate	Breathing becomes heavier
6		Talking is difficult
7	Moderate to vigorous	Deep, forceful breathing, but still sustainable
8	Vigorous	Labored breathing; cannot talk
9		Very labored breathing; nearly breathless
10	Very vigorous	Gasping for air

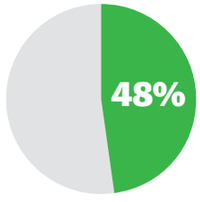
Another way to track your speed

Another good option is to just track the time you spend walking. If you're just getting started, begin with 10 minutes a day and gradually add a few more minutes every week. If you have a walking routine, try counting how many steps you take in 10 seconds and multiply by six to find your steps per minute. If the number is not close to 100, don't worry — listen to your body and use the perceived exertion measure instead.

— Harvard Health Letter

How many people walk for exercise?

More than 145 million adults now include walking as part of a physically active lifestyle.



About half of all adults get enough aerobic physical activity.

About 6 in 10 adults reported walking for at least 10 minutes in the previous week.

Source: Centers for Disease Prevention and Control

How much should you walk?

According to The U.S. Department of Health and Human Services, adults should do at least 150 minutes (2 hours and 30 minutes) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) a week of vigorous-intensity aerobic activity, or an equivalence combination of moderate- and vigorous-intensity aerobic activity.

Walking falls into the moderate-intensity category so that means 2 hours and 30 minutes pounding the pavement each week or roughly 20-22 minutes each day.

ASK DR. H

Help for breathing problems

Dear Doc H:

Q: I was seen at my doctors for an annual physical and he said he noted a lump in my neck and gave me an antibiotic for it. I know that finding a lump isn't always a good thing. How concerned should I be about this? — Worried

DR. CHARLES HURBIS

Dear Worried:

A: Finding a lump anywhere does raise a bit of a red flag but is not necessarily a cause for alarm. Clearly, the big worry for everyone finding a new lump is, do I have cancer? Well it's the doctors job to address that concern and ideally rule that out or treat it properly if your worst fears are realized. When we identify a lump in the neck (or anywhere for that matter) we need to go back to the basics of medicine, the history and physical. In the history, we need to consider a few things: 1) How long has it been there; 2) has it changed in size; 3) Were there any associated conditions such as a regional infection or injury; and 4) Is it painful. In the physical exam, the location, size, shape, texture, and tenderness shed light on the pathology.

When considering a pathologic process in the body there are certain categories that are normally considered. I'll list them then we'll look at them one at a time, these are: Congenital, Inflammatory, Infectious, Neoplastic, Traumatic or Special.

In the neck there are only a few congenital masses seen with any frequency. Those are a Thyroglossal duct cyst or Branchial cleft cyst. Both of these represent remnants of embryologic tissue that can flare later in life. There isn't enough room for a real discussion of this, but suffice it to say that these remaining rests of tissue can flare at any time in a person's life, usually associated with a head cold. They produce a mass that can be quite dramatic. Treatment is removal.

Regarding inflammatory, probably the most common cause of a mass is a blocked salivary duct which can cause a fairly sizable and usually painful lump under the jaw (submandibular gland) or one in the cheek (parotid gland). An infectious lump will usually be either an enlarged lymph node or rarely an abscess. With any head and neck infection, be it a head cold, or a sinus, dental or skin infection, there will be a reaction from a lymph node somewhere in the neck. Infected areas of the head and neck drain to specific groups of nodes. The most commonly swollen nodes are those just below the back of the jaw bone, or the upper jugular lymph nodes. The thing about an infection is that properly treated it can usually be controlled and all associated reactive nodes will shrink. This is the essence of a less dangerous neck lump. If it goes away with treatment it's unlikely anything to worry about.

GETTY IMAGES

Traumatic pretty much speaks for itself. If you hurt yourself you're likely to get some swelling or even a hematoma which may take some time to go away. Special items are so rare they don't warrant discussion here.

Everyone's real concern is, "do I have cancer"? Well, if you can rule out tobacco use (smoke or chew), heavy alcohol use, HPV or troublesome skin cancer, you probably don't. A cancerous lump is usually painless, will slowly increase in size and may eventually develop other lumps around it. The pathology can be diagnosed in your doctor's office with the use of FNA or Fine Needle Aspiration. By this technique, cells are withdrawn and sent to the lab to establish a diagnosis. Cancer can actually start in a lymph node as is the case in lymphoma. More commonly cancer in a node has spread from another site. From the FNA results and a thorough exam (which might require endoscopy), your doctor can usually locate where the tumor originated. The most common sites are the tonsil, tongue base, voice box or floor of the mouth. Any of these cancers can spread to lymph nodes in the neck. The FNA and/or direct biopsy will correctly diagnose the process. On a positive note, head and neck cancers, even those that are somewhat advanced, can be effectively treated with combined treatments now available.

So ideally, your doctor will be able to identify a cause for your lump that isn't a cancer. The odds are on your side since the vast majority of neck lumps are not. Certainly don't waste time getting it checked out. I'm a firm believer that there is no value in worrying until you clearly have something to worry about. Even then worrying is a waste of time, just put yourself in the proper hands and get managed. Nowadays there are effective treatments for just about every mass you might find in the neck.

Dr. Charles Hurbis is an ENT-otolaryngologist has been practicing in the Bay Area since 1991. His areas of interest/expertise include the diagnosis/treatment of sinus disease and nasal airway issues, treatment of skin cancer, sleep medicine, facial plastic surgery as well as the other spectrum of head and neck disease.

Dr. Hurbis's practice is located at 2695 N 17th St. in Coos Bay. 541-266-0900

Little emergencies

How to handle it when your kids end up in the ER

STEVE CALECHMAN
Harvard Health Publications

During a recent walk with my sons, I slipped and fell onto my youngest son. He fell onto a rock, which cut his forehead and meant a trip to the emergency room for four stitches. I'm pretty good at keeping my head, but I'm not at my best in an ER. I end up being too polite and deferential. In essence, I say, "Stop this bleeding now, and in exchange, I won't bug you with more than two questions. Promise."

Advocate for your child

It's not a winning formula. Doctors have skill, but they're just people. They're often rushed and can't know everything about my child. They will fail to cover everything that worries me and my wife.

Bottom line: They need help, and that means they need me. I'm the biggest expert on my child: I need to ask questions, and share relevant information.

Help the emergency room doctor help your child

It's not close to an exhaustive list, but Vincent Chiang, M.D., Harvard Medical School associate professor of pediatrics and emergency medicine and emergency room physician at Boston Children's Hospital, has some suggestions of what to share:

- Your child's ability to cope with any part of a medical visit. Do not equivocate. "He does not like … shots, blood, being sick, pain, lying still, anything doctors" is all helpful. Some hospitals have child-life specialists that can help reduce the stress. It would be stellar if the doctor mentions it and calls for one. If not, ask if someone's available.
- "This is our first time dealing with this." For the doctor, most stuff registers as routine, but it's not for parents, and saying this should be enough of a reminder to explain everything slowly, fully and clearly. If it's not, repeat it.
- "She never complains" or "He complains about everything." It tells the doctor two things: Something is different, and that worried you enough to come in.
- It can be hard to pinpoint, but try to verbalize your big concern ("My uncle had a headache and it turned out to be a tumor.") The doctor can possibly address it, so you're not unnecessarily sitting with it.

None of this guarantees quick answers, Chiang said. Some conditions only fully reveal themselves over time. Sometimes tests are needed. If so, ask if they're being done to rule out things or to look for something specific. More pointedly, ask the doctor if there's anything that's worrisome.

And then ask when you two will have the next discussion, since all of this entails waiting, and that's often the most stressful part.

Four things to know when your child is discharged

It's understandable to forget questions and not mention every relevant detail. But before you leave the hospital, Chiang said to know these four things:

1. The diagnosis. It's simple, but you want to be clear on what the doctor decided your child was being treated for.

2. The treatment plan. It needs to address the medical problem and the comfort measures. Example: Sprained ankle. Rest, ice, compression, elevation. If there's pain or nausea or other discomfort, know your options for relief.

3. The follow-up plan. It could be meeting with your pediatrician or a specialist, but it's rare that there would be nothing to do. At the least, let your pediatrician know what happened as soon as possible and make sure that the follow-up plan makes sense. You cannot assume that the hospital will provide the information.

4. The reasons to return. Most often, when you leave the emergency room, follow-up happens outside of the hospital, but you want to know what signs and symptoms suggest urgent care is needed again.

When you should go to the ER

Whenever your child is sick or injured, you need to decide how serious the problem is and how soon to get medical care.

Call 911 to have the emergency team come to you right away if you cannot wait, such as for:

- Choking
- Stopped breathing
- Possible poisoning
- Head injury with passing out, throwing up or not behaving normally
- Injury to neck or spine
- Severe burn
- Seizure that lasted 3 to 5 minutes
- Bleeding that can't be stopped

Go to an emergency department or call 911 for problems such as:

- Trouble breathing
- Passing out, fainting
- Severe allergic reaction with trouble breathing, swelling, hives
- High fever with headache and stiff neck
- High fever that does not get better with medicine
- Suddenly hard to wake up, too sleepy or confused
- Suddenly not able to speak, see, walk or move
- Heavy bleeding
- Deep wound
- Serious burn
- Coughing or throwing up blood
- Possible broken bone
- Unusual or bad headache or chest pain
- Fast heartbeat that does not slow down
- Throwing up or loose stools that do not stop
- Mouth is dry, no tears, no wet diapers in 18 hours, soft spot in the skull is sunken (dehydration)

Source: Medlineplus.gov

What to do when the incident isn't severe enough for the ER

When your child has a problem, do not wait too long to get medical care. If the problem is not life-threatening or risking disability, but you are concerned you cannot see a doctor soon enough, go to an urgent care clinic.

The kinds of problems for an urgent care clinic:

- Common illnesses, such as colds, the flu, earaches, sore throats, minor headaches, low-grade fevers and limited rashes
- Minor injuries, such as sprains, bruises, minor cuts and burns, minor broken bones or minor eye injuries

– U.S. National Library of Medicine

THE MEDICINE CABINET

How to treat sinus pressure, infection

HOWARD LEWINE, M.D.
Tribune Content Agency

Q: I experience occasional bouts of sinus pressure and am never sure when I need antibiotics. How can I tell when it is a bacterial infection?

A: Your sinuses are moist air spaces between the eyes and behind the forehead, nose and cheeks. Normally, mucus in the sinuses drains through small openings into the nose.

If something triggers inflammation within one of the sinuses, it can interfere with normal drainage, so mucus builds up. You feel painful pressure in the upper parts of the face, especially in the forehead or cheeks, behind the nose or between or behind the eyes.

You may also notice thick, discolored nasal discharge. Many people think that this yellow-green mucous always means a bacterial infection. But that is not the case.

The discolored sputum comes from white cells responding to the inflammation that is most often caused by a virus, allergy or just irritation from heavy pollen or pollution.

Home treatments

As soon as you start having symptoms, spray in some saline (salt water). The most convenient option is a prepackaged nasal spray; frequent, gentle snorts of saline can help to loosen the mucus.

A neti pot also works very well. Use distilled water, or boil tap water and let it cool before use.

Use a nasal decongestant spray such as Afrin or a generic equivalent. Limit yourself to no more than two doses per nostril per day for no longer than five days. If you use a nasal decongestant for too long, your nose may start running when you stop.

If you prefer, you can use an oral decongestant such as pseudoephedrine (Sudafed). A common side effect is moderate jitteriness, and you shouldn't take this drug if you have uncontrolled high blood pressure or a heart condition.

For pain, take over-the-counter ibuprofen (Advil, Motrin), naproxen (Aleve) or acetaminophen (Tylenol).

Prescription treatments

There is no easy test to diagnose bacterial sinusitis. Our noses are always colonized with bacteria. So a culture won't determine whether or not the bacteria sitting in your nose is actually infecting your sinus.

Here are my three reasons for considering an antibiotic to treat sinusitis.

- **Prolonged symptoms:** You are doing all the right things for a week and still not getting better.
- **Severe symptoms.** You experience a sharp pain in the cheeks or teeth accompanied by a fever.
- **The symptoms are getting worse.** It feels like a cold or allergy at first, but then you start to feel worse with more pain or fever.

Howard LeWine, M.D., is an internist at Brigham and Women's Hospital in Boston and assistant professor at Harvard Medical School.

Get an accurate reading on a thermometer

HARVARD HEALTH LETTER

Blood pressure is a key indicator of cardiovascular health. So it's vitally important to make sure that you check yours regularly — and accurately. But according to the American Heart Association (AHA), health care professionals don't always follow the proper techniques when measuring a person's blood pressure. The AHA cites seven common errors that can lead to an artificially high blood pressure reading.

Plus, there's one additional step that may be overlooked after you get a blood pressure reading of 130/80 mm Hg or higher, a level that defines high blood pressure, said endocrinologist Dr. Naomi Fisher, director of the Hypertension Service and Hypertension Innovation at Brigham and Women's Hospital.

"Blood pressure is very dynamic. A reading can change 10 or even 20 points over the course of seconds," she said.

That's why the current blood pressure guidelines recommend waiting one minute, retaking the reading and averaging the two numbers. If the systolic values (the first number in a blood pressure reading) are more than around 10 points apart, consider doing a third reading a minute later. Averaging three values will likely provide an even more trustworthy result, Fisher said.

Common mistakes

Fisher, an associate professor of medicine at Harvard Medical School, also shared some perspective and advice about the AHA's list of blood pressure measuring mistakes. Any of these errors may elevate your reading by several points (even as much as 10 points, in some cases), although they are generally not additive, she notes.

1. Having a full bladder. An uncomfortably full bladder might increase your reading. So should you always empty your bladder beforehand, as the AHA advises? That might not be practical if you need to provide a urine sample at your doctor visit. Consider that possibility and plan accordingly, Fisher said.

2. Having no support for your back or feet. Slouching or dangling your feet when sitting can increase your reading. Make sure you sit in a chair with your back supported and feet flat on the floor or a footstool. At home, don't sit on a sofa or reclining chair.

3. Sitting with crossed legs. Crossing your legs squeezes the large veins in your legs, which may raise the reading slightly.

4. Not supporting your arm. This mistake is very common in doctor's offices, Fisher said. Your arm should be totally relaxed so your biceps (upper arm) muscle isn't contracted. Be sure to position your arm on a chair or counter, so that the blood pressure cuff is level with your heart.

5. Wrapping the cuff over clothing. Depending on the thickness of the fabric, putting a cuff over clothing can boost the reading by quite a bit, the AHA says. Wear a short-sleeved shirt (along with easily removable layers, if you're chilly in the doctor's office) so the cuff is placed on your bare arm.

6. Using a cuff that's not the correct size. Many people need a large-sized cuff, Fisher notes. Using one that's too small will be uncomfortable and may elevate your pressure by several points.

7. Engaging in conversation. Chatting during the measurement — or even actively listening — can boost blood pressure.

How to tell if it's allergies or a cold

HOWARD LEWINE, M.D.
Tribune Content Agency

Q: With winter coming, I worry that I will have my usual cold-like symptoms much of the time. I'm never sure when it's an infection or indoor allergies. How can a person know which one it is?

A: It's often difficult to tell the difference between a cold caused by a virus versus an allergy due to the immune system response to a trigger, known as an allergen. Both colds and allergies produce many of the same symptoms: a stuffy or runny nose, feeling congested, sneezing, tiredness and sometimes a sore throat.

But there are ways to help distinguish one from the other. Colds sometimes produce a low-grade fever, but allergies never do. In addition, if you are suffering from allergies, you may also have itchy, watery eyes, symptoms that won't typically accompany a cold.

The biggest clue to differentiating the two is the duration of symptoms. Cold symptoms usually last a week or less and rarely drag on for two weeks.

However, allergies can last as long as you are exposed to the substance that is triggering the reaction. So, if your "cold symptoms" appear at the same time every year and last for an extended period of time, the cause is more likely to be an indoor allergy.

What can make it even trickier is that you can have ongoing allergies and develop more than your usual symptoms. Then you won't be sure if your allergies are just acting up or you caught a cold. If you are allergic to something in your home, such as dust mites, mold or pet dander, your symptoms could get worse during the winter months, because the house is sealed up and fresh air isn't getting in.

In addition, your heating system may be recirculating the allergen. While it's probably not possible to eliminate all the allergens inside your home, you can reduce the number — and your exposure to them — by making some simple changes. Here are some tips:

- Vacuum carpets and area rugs at least once or twice a week with a vacuum equipped with a HEPA filter.
- Regularly launder bedding, drapes and other items that tend to attract allergens — particularly if you have pets.
- Keep the greenery outdoors. They can collect and foster the growth of mold.
- Change your filters regularly if you have a forced-air heating system.
- Consider putting a dehumidifier in damp areas, such as a basement, to help prevent the growth of mold and keep bathrooms well ventilated.
- Let the fresh air in. Even in the cold months, open windows from time to time to allow fresh air to move into the house.

Howard LeWine, M.D., is an internist at Brigham and Women's Hospital in Boston and assistant professor at Harvard Medical School. For additional consumer health information, please visit www.health.harvard.edu.

Healthy Eating Active Living

Tantalizing Turmeric

By Stephanie Polizzi, MPH, Registered Dietitian Nutritionist
Healthy Eating Active Living (HEAL) Committee Chair

Looking for a way to spice up your meals? Think about using Turmeric. This bright yellow spice is a close cousin to one you may already have in your home, ginger. Turmeric has a long history of medical uses throughout the Eastern world with the powder even being used as a dye before it was found to have culinary value. It's mildly aromatic and has scents of orange and ginger.

Health Benefits of Turmeric

Turmeric, having been used in Ayurvedic and Chinese medicine for 5,000 years, has undergone recent research into its health benefits. Research into turmeric, or more specifically curcumin which gives the root its distinctive bright yellow color, has demonstrated many different possible health benefits.

Among the researched health benefits of curcumin is the possible influence of lowering or preventing inflammation and cellular damage. Some studies have shown that the regular use of curcumin can inhibit the formation of cholesterol and triglycerides and reduce blood clot formation, helping to improve blood flow and lower the risk of a heart attack or stroke. In addition, the lowering of inflammation in brain cells may help to reduce or prevent the formation of plaque in the brain that is associated with Alzheimer's and other dementia.

Spicing Things up with Turmeric

Even if you aren't already familiar with turmeric you may have had it before, as it is a main component in curry power. While it is typically found in Indian, Thai, and Moroccan dishes, it can be used in a variety of meals.

While turmeric's presence in curry powder may lead you to believe that it is a hot spice, it actually has a mild, peppery flavor. In fact, a pinch of black pepper (1/8 tsp) has been found to increase the body's ability to absorb curcumin, the component in turmeric which is believed to have the greatest health benefits.

December Healthy Bytes Initiative

Indian Vegetable and Rice Skillet Meal

Ingredients
- 2 teaspoons vegetable oil
- 1 onion chopped
- 1 teaspoon ginger, fresh or ½ teaspoon ground
- ½ teaspoon turmeric
- ½ teaspoon ground cumin
- 2 cups mixed vegetables, chopped (try cauliflower, peppers, carrots or peas)
- 1 large baking potato, peeled and diced
- 1 cup white rice, uncooked
- A pinch of black pepper
- ½ teaspoon salt (optional)
- 2 ½ cups water
- 1 can (15.5 ounces) kidney beans, drained and rinsed

Directions
1. Heat oil in a large skillet over medium heat (300 degrees in an electric skillet).
2. Add onion, ginger, turmeric, and cumin, and s.r while cooking for 1 min.
3. Add remaining ingredients. Bring to a boil, cover, and reduce heat.
4. Simmer 20-25 minutes. Serve hot.
5. Refrigerate leftovers within 2 hours.

Notes
- For a flavor boost, cook ½ cup raisins or diced apples with the vegetables.
- Try using brown rice instead of white, and increase the simmering time to 45 minutes.
- Coos your own dry beans. One can (15 oz.) is about 1½ to 1¾ cups drained beans.

Recipe provided by Food Hero, an Oregon State University Extension Service initiative.

Thanks to our sponsors for making the Healthy Bytes Initiative possible:

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Would You Benefit from Balloon Sinuplasty?

Balloon Sinuplasty is a minimally invasive sinus procedure performed on eligible patients who suffer from the symptoms of chronic sinusitis. A tiny balloon is placed in key areas in the sinuses, which are then dilated to widen the sinus passageways. Studies show that over 90% of patients treated by sinuplasty have their symptoms greatly improved.

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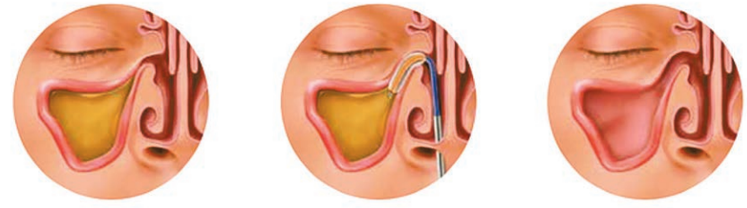

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Affordable care means better access to diabetes services

JAMIE CARTALES
Oregon Health Sciences University

OHSU study compares rates of health care utilization at Community Health Centers in states with, without Medicaid expansion programs.

According to the Centers for Disease Control and Prevention, more than 100 million Americans are either living with diabetes or have higher than average blood sugar levels consistent with prediabetes.

Management of these chronic conditions requires consistent monitoring of blood sugar levels, robust medication regimens and frequent health care appointments, all of which take time, resources and money. Because of these barriers, many Americans with diabetes often go undiagnosed or ignore necessary treatment options altogether.

A study published online in the *Journal of the American Board of Family Medicine* has confirmed one way to ensure broader usage of preventive and disease management services for diabetes patients: access to affordable health care.

Nathalie Huguet, Ph.D.Using electronic health record data, Nathalie Huguet, Ph.D., and a team of researchers at OHSU in Portland, Oregon, compared changes in insurance and primary care visit rates among patients diagnosed with diabetes or prediabetes, and individuals with no diagnosis. Patients received care at community health centers in 13 U.S. states, nine of which have Medicaid expansion programs.

Researchers found that the rates of uninsured visits to Community Health Centers decreased in all states across the three patient groups. Further, consistent with national averages, patients previously diagnosed with diabetes had higher clinic visit rates when compared with prediabetes or undiagnosed patients.

While the researchers did not find an overall increase in visits among this population, Huguet, a research assistant professor of family medicine in the OHSU School of Medicine, says that due to higher rates of obtained insurance, many patients were able to receive critical treatments and services, including preventive screenings, lab testing, specialized care and some medication not accessible to them before.

"This is particularly true for patients with lower socioeconomic status," she said. "The utilization rates of these services prove how critical programs such as the Affordable Care Act and Medicaid Expansion are to a growing and vulnerable patient population."

This research was supported by the U.S. Centers for Disease Control and Prevention; the National Institute of Diabetes and Digestive and Kidney Disease (U18DP006116) and the National Cancer Institute (R01CA204267, R01CA181452), both components of the National Institutes of Health; and the Agency for Healthcare Research and Quality (R01HS024270).

Diabetes Prevention & Management for a Healthier You

By Ganesh D. Kini, MD, PhD, FACP, FHM, Medical Director, Advanced Health

When it comes to type 2 diabetes — the most common type — prevention and management are key. Diabetes can lead to serious health issues such as heart, vascular and kidney disease. Rates of diabetes among adults in Oregon have more than doubled in the last two decades. Recent studies have also shown that a growing number of children are being diagnosed with diabetes often due to rising obesity rates. According to the CDC, over 84 million are prediabetic, and 90 percent go undiagnosed.

It's important to make diabetes prevention a priority, especially if you're at increased risk (which could include being overweight or having a family history). For those who are prediabetic or have been diagnosed, it's never too late to proactively manage your diabetes. The good news is that lifestyle changes can help prevent and manage diabetes and reduce its impact on your health.

What is diabetes?

Diabetes is a chronic disease in which blood sugar levels are above normal. There are three main types: type 1, type 2, and gestational diabetes (diabetes while pregnant, which can put the pregnancy and baby at risk and lead to type 2 diabetes later in life). If you have type 1 diabetes, your body can't make insulin (a hormone that regulates blood sugar), so you need to take it every day.

Type 2 diabetes, which is the most common form, has much stronger connection to lifestyle choices. With type 2 diabetes, your body doesn't use insulin well and is unable to keep blood sugar at normal levels. A doctor may also diagnose you with prediabetes, if your blood sugar levels are slightly higher than normal.

Risk factors for type 2 diabetes and symptoms

Risk factors associated with type 2 diabetes include being overweight, family history, lack of physical activity, high blood pressure, and smoking. Even a person's age can be a risk factor. According to the American Diabetes Association, any adult with a Body Mass Index, or BMI, of over 25 and having at least one other risk factor for diabetes should be screened every three years.

Common symptoms include feeling very thirsty and/or hungry (even though you are eating), urinating often, extreme fatigue, blurry vision, and tingling, pain, or numbness in the hands/feet. Even if you don't have any symptoms, if you're age 45 or older, talk with your doctor about getting screened.

Diabetes prevention

The good news about type 2 diabetes is that it can be prevented by incorporating healthier habits into your daily routine. Even with small changes, you can make big steps towards preventing diabetes.

- Be more active: get more physical activity into your day
- Lose weight: try eating more vegetables, fruits and whole grains
- Check with your doctor: anyone older than 45 should ask their doctor about diabetes testing

Tips for managing diabetes

There isn't a cure yet for diabetes, but maintaining a healthy lifestyle can reduce its impact on your overall health. What you do every day makes a difference: eating a healthy diet, being active, taking medicines (if prescribed), and regularly monitoring your diabetes.

- Skip processed foods, eat more whole grains, fruits and veggies, and reduce your sugar and salt intake
- Try getting in at least 10 to 20 minutes of exercise each day—whether it's walking, biking, swimming, doing yoga, or whatever moves you
- Take diabetes medicines as prescribed by your doctor
- Know your diabetes ABCs — check and track:
  - A—the A1C test, which measures average blood sugar over 2 to 3 months.
  - B—blood pressure, the force of blood flow inside blood vessels.
  - C—cholesterol, a group of blood fats that affect the risk of heart attack or stroke.
  - S—stop smoking or if you don't smoke, don't start!

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THE MEDICINE CABINET

Why your generic meds are effective

HOWARD LEWINE, M.D.
Tribune Content Agency

Q: I am saving a lot of money since all of my prescription drugs changed to generics. I don't notice any difference in how I feel. But how do I know that they are just as effective?

A: Many people worry that generic drugs are inferior because they cost less. But the reason for the price difference is the development costs of new drugs. It's enormously expensive to research, test and market new brand-name drugs.

The investment is protected for several years by a patent granting the company that develops a drug the sole right to sell it.

Once the patent expires, generic drug makers can manufacture essentially the same drug, but they can charge less because they don't have the same up-front costs as the company that first developed and introduced the drug.

A generic drug and its brand-name version should be equally effective.

They are identical in most ways: They contain the same active ingredient at the same dose and strength, and they are taken in the same way for the same conditions. In fact, a generic drug doesn't gain FDA approval until the manufacturer proves that it is statistically as effective and as safe as the brand-name drug and is manufactured according to the same standards.

Generics can differ from brand-name drugs in their color, flavor and inactive ingredients. In the United States, trademark regulations prevent the sale of generic drugs that look exactly like the brand-name drug. Individual reactions to the inactive substances in the generic drug — including allergic reactions — could alter its effectiveness, but these reactions are just as likely with a brand-name drug.

Given the FDA requirements that generic versions have the same active ingredients, purity and safety compared to brand-name medications, you are spot on to ask if your particular drugs are equally effective. Almost always the answer is yes.

For example, let's say you take generic drugs to keep your blood pressure controlled, lower your blood sugar or bring down your cholesterol level.

If you are reaching your goals, then indeed you can be sure that your medications are as equally effective as the brand-name drugs.

Even if you have required higher doses of your medications over time, don't blame the generic drugs. The same increased doses would be needed with the brand-name drugs.

Howard LeWine, M.D., is an internist at Brigham and Women's Hospital in Boston and assistant professor at Harvard Medical School.

High hopes for 4-year-old's vision after gene therapy

FRANNY WHITE
Oregon Health Sciences University

Portland boy among first in Oregon to have new treatment for rare, blindness-causing genetic mutation.

Throughout his first four years, young Caspian Soto has navigated life differently than most.

He wears a headlamp to brighten the world before him and uses a cane to feel the ground's surface – and sometimes, for fun, also rides it like a witch on a broom. Without these items, he used to become frustrated as he routinely bumped into objects that were in clear view for others, but hidden to him.

"The headlamp gave him a feeling of control," explained his mom, Krista Soto, of Portland, Oregon. "It's been his beacon."

The lamp and cane have become Caspian's constant companions, serving as his unique and practical pair of security blankets. Though his parents have assured him he's welcome to keep both items, he doesn't actually need them anymore.

PHOTOS BY KRISTYNA WENTZ-GRAFF, OHSU

Dr. Paul Yang takes a look in Caspian's eyes as he sits on his mother's lap, at the OHSU Casey Eye Institute in July. Caspian is among first in Oregon to have a new gene therapy treatment to treat his vision impairment.

One tiny mutation

Caspian was born with a rare mutation in his *RPE65 gene*, which produces proteins needed for a fully functioning retina — tissue in the back of the eye that detects light and color. The mutation caused a condition called Leber's congenital amaurosis in Caspian that turned his vision dark and blurry, making low-light areas a challenge. Until recently, his parents expected the Leber's would worsen and eventually cause Caspian to go completely blind.

Called Luxturna, it involves injecting a modified virus into a patient's eyes to correct the *RPE65* mutation. The treatment was developed by Spark Therapeutics of Philadelphia and became the first FDA-approved gene therapy for an inherited disease in December. OHSU is one of nine U.S. institutions that currently offer the therapy.

"Gene therapy can give some patients who face the possibility of blindness the gift of restored eyesight," said David Wilson, M.D., director of the OHSU Casey Eye Institute. "OHSU is proud to offer this treatment and participate in clinical trials for nine other ophthalmologic gene therapies to help give more people a lifetime of vision."

The OHSU team that cares for patients who undergo this gene therapy includes:

- Steven Bailey, M.D., associate professor of ophthalmology in the OHSU School of Medicine
- Andreas Lauer, M.D., professor of ophthalmology in the OHSU School of Medicine and Thiele-Petti Chair of Ophthalmology at OHSU Casey Eye Institute
- Mark Pennesi, M.D., Ph.D., associate professor of ophthalmology and Swan Professor of Ophthalmology in the OHSU School of Medicine; and chief of the ophthalmic genetics division at OHSU Casey Eye Institute
- Paul Yang, M.D., Ph.D., assistant professor of ophthalmology in the OHSU School of Medicine
- Clinicians and support staff in OHSU Casey Eye Institute's operating room, pharmacy and admitting departments.

"He's never seen the stars," says Krista Soto, of her son, Caspian, 4. Caspian was born with a rare genetic mutation that severely limits his sight.

Early worries

As a newborn, Caspian stared at lights and out of windows a lot.

"At first we thought it was cute, but then we realized just how much he was staring," said his mom, Krista. "And then his eyes started doing this weird rolling thing, and it really freaked us out."

An MRI ruled out brain tumors and lesions, but a doctor told his parents they'd have to wait and see how his vision would develop. By the time Caspian was two and came to the OHSU Elks Children's Eye Clinic, he was frequently bumping into tables, walls and other everyday obstacles. A year later, a genetic test revealed he had the *RPE65* gene mutation.

"I was relieved because I knew *RPE65* was one that there were clinical trials for at the time, and gene therapy to treat it was on the horizon," Krista said.

'The world ... will open up'

Krista and her husband, Zack Soto, had heard the FDA might rule on Luxturna in January 2018, but then the treatment was surprisingly approved a month earlier. Krista's birthday is in December, making the announcement "a massive birthday present," she said.

They knew they wanted to pursue the treatment for their son, but they weren't sure how they'd cover the $850,000 price tag announced by Spark Therapeutics. Fortunately, their insurance agreed to pay for the procedure.

Caspian had his right eye treated on Sept. 17 and his second eye was treated a week later. Because it takes a while for the treatment's modified virus to make the proteins needed for good vision, patients typically start seeing improved eyesight about two to four weeks after receiving treatment. "He's never seen the stars. I can't even take him to the Smithsonian — and I *love* the Smithsonian — because it's too dark," Krista Soto said. "To give him the opportunity to experience those things is indescribable. I can't even begin to fathom the world that will open up."

Just two weeks after the first procedure, Caspian's parents began to notice improvements in their son's vision. For example, they recently visited a local museum and he pointed out a blinking plane as it flew through a night sky.

In the future, OHSU may be able to provide similar hope to other patients with inherited retinal disorders. OHSU is a treatment center for nine different gene therapy trials for other blindness-causing genetic mutations. If the trials are successful, the developers of each treatment may submit them for federal approval so more patients can benefit from a lifetime of eyesight.

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