

Get Healthy No Matter What Your Age

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Cutting-Edge Stem Cell Therapies

New treatments target stroke, heart disease, and Alzheimer's.

By Frances Chamberlain

It's the stuff of science fiction: Stroke patients regaining the use of their limbs; heart disease patients' symptoms reversing; people with Alzheimer's regaining full function.

It sounds incredible, but stem cell research is producing such results right now, in ways that can only mean good things for the future, medical experts say.

Dr. Joshua Michael Hare, founding director of the Interdisciplinary Stem Cell Institute at the University of Miami Miller School of Medicine, says he is seeing results in patients that are nothing short of miraculous.

An 80-year-old man's life was turned around by stem cell therapy after a serious heart attack, congestive heart failure. He could do little more than sit all day before the treatment.

"He was able to get out of that chair, go back to work in his garden, and do heavy lifting," says Hare, noting the patient's 40 percent reduction in scar tissue in his heart after stem cell treatment.

"Another young man, who was a cardiac cripple, was able to go back to

break dancing. And eight years later, he is still benefiting."

Hare, whose Miami institute is spearheading some of the most cutting-edge stem cell research in the nation, is the principal researcher on a new study of stem cell benefits for patients with congestive heart failure. That work is funded by the National Institutes of Health Specialized Center for Cell-Based Therapy.

"[Doctors] are good at palliating injuries, but we want to regenerate tissues," he explains. "If someone has a heart attack, the heart muscle dies and it turns into a scar. In the case of a stroke, part of the brain dies and the patient loses critical functioning."

But stem cell therapy holds the promise of reversing that damage, without posing significant risks.

"Compared to other strategies, it's one of the safest ways to treat people," Hare says. "These cells will work or last, for 12 to 18 months, and then a second injection may help to remove more scar tissue."

Years of Research

Stem cell transplants have been used for years to battle various

cancers, with the first therapies emerging 30 years ago.

For instance, stem cell transplants are used in the treatment of leukemia, lymphoma, and myeloma. In some cases, cancer patients receive high doses of chemotherapy or radiation, which can kill tumors, but also wipe out stem cells in the bone marrow. Stem cell transplants help regenerate such cells.

Emerging stem cell research has also shown promise against diabetes, dementia, Parkinson's disease, spinal cord injuries, vision problems, genetic defects, burns, and other ailments.

Hare's research, which has been going on for 15 years, is exploring new and different ways that adult stem cells can be used to treat cardiovascular disease. He and his colleagues at the Interdisciplinary Stem Cell Institute at the University of Miami are participating in two new trials they hope will lead to FDA approval for wider use within the next five years.

Stem cells hold so much

Improving Memory with Stem Cells

Dr. Bernard S. Baumel is recruiting people with mild Alzheimer's disease to participate in a clinical trial designed to assess the benefits of stem cells in treating dementia. He is enrolling patients who meet the following criteria:

- ▶ Participants must be between 50 to 80 years old with mild Alzheimer's, meaning they are in early stages of the disease.
- ▶ They should have no other serious medical conditions.
- ▶ Researchers will use a 30-point test to select participants. Those who score 27 or higher are normal. Those scoring 18 to 24 will be in the study.
- ▶ Enrollment in the clinical trial "Allogeneic Human Mesenchymal Stem Cell Infusion Versus Placebo in Patients with Alzheimer's Disease" will continue until 2018. Baumel has signed up some volunteers for the trial, but is looking for more people.

For more information about participating: Call 305-243-6633 or visit www. ummemoryprogram.org.

promise because they are "master cells" of the body, with the ability to divide and develop into virtually any type of cell. They help repair the body by dividing to replenish cells that are damaged by disease, injury, or normal wear. When a stem cell divides, each new cell can become another type of cell with a more specialized function, such as a nerve cell, a skin cell, or a red blood cell.

"Stem cells reduce scar tissue

and have a pro-regenerative effect," Hare explains. "Everybody uses the same cell types for many disease areas in cardiology, neuropathy, gastroenterology, and diseases of the lung. Any chronic disease with tissue damage is fair game."

Dr. Dileep Yavagal, an associate professor of neurology and neurosurgery at the University of Miami Miller School of Medicine, has focused his research on strokes.

"My focus has been in

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delivering bone marrow-derived stem cells into the carotid artery with a catheter," says Yavagal, a faculty member at the Interdisciplinary Stem Cell Institute. "There is no surgery, no open incision, as opposed to drilling a hole in the skull."

After seeing promising results from stem cell therapies in animals, Yavagal launched a clinical trial involving 48 stroke patients. He found the treatments not only safe, but very effective.

"The results of that trial are about to be published," Yavagal says. "I was concerned that these cells could cause a stroke or block arteries. But there were no side effects. That is a big step forward so we can go on to a larger study."

He says about 70 percent of the patients who received stem cells had improvements, without suffering negative side effects.

In a comparison group of patients who didn't receive stem cells, only 30 percent of them improved.

"I'm quite excited about the future," Yavagal says. "If we had seen side effects, then I would be less optimistic about the future. My hope is that we'll have stem cell therapy as routine treatment."

Treatment for Alzheimer's?

Stem cell therapy is also being explored as a therapy for Alzheimer's disease, a condition for which there is no treatment.

Dr. Bernard S. Baumel, assistant professor of neurology at the Miller School of Medicine, is leading a clinical trial that aims to determine if stem cells can be used to treat Alzheimer's patients.

"Medications that are available

Banking on Your Own Stem Cells

Many companies offer the prospect of harvesting and storing your own stem cells for possible use later in life. Such cells might be used against illness, injury, or other conditions that develop or as donor cells.

Stem cell therapy typically involves removing the cells from a patient's bone marrow, blood, fat, or — in the case of infants — the umbilical cord. The cells are then reintroduced to the patient's body — typically through injection or an IV drip.

About 1.7 million cord stem cell samples are now stored in three dozen private banks in the U.S., according to the Genetic Literacy Project. Each sample costs about \$2,000 to harvest, plus a \$125 annual storage fee.

Among the big stem cell banks:

- SanBio (San-bio.com)
- ViaCord (www.viacord.com)
- Celltex (Celltexbank.com)

for Alzheimer's are mediocre at best," he explains, noting available drugs merely ease symptoms or slow the progress of the disease.

"Some may help improve memory for a few months, but then the disease process continues. Another drug targets behavioral problems. There has been no new treatment for Alzheimer's since the behavioral drug was developed in 2002."

For Baumel's study, Alzheimer's patients will receive stem cells through an IV infusion with the hope of stimulating growth of new brain cells to replace those lost to the terminal brain disorder.

"They will go around the body, but also to the brain," he explains. "Neurogenesis is the process of the brain making new cells, and the stem cells will accelerate this process."

Participants in the study will include 50 to 80 people with mild symptoms of early Alzheimer's.

The researchers will use socalled mesenchymal stem cells (MSCs), which have the ability to develop into many different types of cells and promote the growth of new brain cells in the hippocampus, the memoryforming center of the brain.

Alzheimer's is characterized by extensive inflammation in the brain. This is believed to be promoted by a buildup of amyloid protein plaques that cause tangles which block communication between brain cells.

Stem cells are anti-inflammatory and can promote or accelerate the growth of new brain cells. Baumel's study will show how effectively stem cells encourage that process, and whether or not they can help remove amyloid proteins from the brain, perhaps reversing Alzheimer's.

Baumel expects results to be available within a few years, and is optimistic that his research will lead to an entirely new way to combat Alzheimer's disease, which currently strikes 5 million Americans — a number that is projected to triple by 2050 as the baby boomers grow older.

"There is a lot of frustration out there," he says. "Nothing seems to work for these people and no one else in the country has done any research [on the promise of stem cells to treat Alzheimer's]."



Making **YOU** Live Healthier

with Mehmet Oz, M.D. & Michael Roizen, M.D.

Everyday Ways to Slow Aging

Stanford University researchers were stunned. In a recent experiment that grabbed headlines around the world, they reported that 1 in 3 stroke survivors who received stem cell injections directly into the brain achieved dramatic improvements. One 71-year-old, wheelchair-bound study volunteer even stood up and walked again.

When needed, stem cells spring into action to repair or replace damaged tissue. But stem cells can die off or become less active as we age, slowing the body's ability to repair itself.

Protecting or even lengthening your telomeres—the protective caps on the ends of the DNA in all cells, including stem cells—can help stem cells remain robust as you age.

Telomeres get shorter with age, mostly due to not-so-healthy habits. But the right lifestyle decisions can maintain or even lengthen them, which science suggests could give your stem cells a new lease on life.

While no one has yet performed a study that follows the health of people who've lengthened their telomeres, one researcher observed: "Telomere shortening increases the risk of a wide variety of chronic diseases. We believe that increases in telomere length may help to prevent these conditions and perhaps even lengthen lifespan."

The exciting part is that there's plenty you can do to keep your stem cell repair-and-rejuvenation team in tip-top shape. The key: healthy steps aimed at pampering telomeres.

On the "don't" list? Smoking, which speeds telomere aging by 18 percent. And being obese accelerates telomere aging by a scary 30 percent.

The "do-this-more" list includes four steps in one study that lengthened telomeres by an impressive 10 percent over five years:

1. Make smart food decisions. Add more plantbased foods to your meals. Skip added sugars and simple syrups, most saturated fat, all trans fats, and grains that aren't 100 percent whole. Load up on vegetables, fruits, and plant-based proteins like beans and tofu. For example, have a bowl of berries instead of a dessert loaded with fat, refined flour, and sugar.

- 2. Get 30 minutes of activity every day. Take a walk or a spin on your bike, swim, or stroll on a treadmill. And do it daily. Break it into two 15-minute chunks if time is tight. For example, take a stroll after dinner. If the weather's not cooperating, march in place in your living room. Exercise seems to lengthen telomeres and also can help ease mild depression, which also causes telomere shortening.
- 3. Relieve stress. In the telomere study, men spent an hour a day practicing stress-reduction techniques. If you don't have a spare hour to cultivate serenity, don't sweat it. We've seen evidence that even five minutes of tension-melting meditation can make a big difference. Find a quiet spot, sit comfortably, shut your eyes, and pay attention to your breathing. To add progressive muscle relaxation, flex and relax muscle groups from your toes up to your head. Don't underestimate this step; research shows that stress reduces the effectiveness of an enzyme that replenishes your telomeres.
- **4. Spend time with your favorite people.** Research has found associations between feeling tense and worried and shorter telomeres. Feeling loved, comforted, and safe can ease anxiety. So spend time weekly (or more often) with those who know and love you. They could be friends, neighbors, family, or folks from your faith community. Make time for tea after the Friday night bowling league. There's a reason socializing feels so good: We're wired to be healthier when we're connected.

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Gut Bacteria: Key to Treating Chronic Fatigue Syndrome?

By Nick Tate

Heart disease. Diabetes.
Cancer. Depression. Autism.
Alzheimer's disease. Autoimmune disorders. A growing body of scientific research has linked these conditions to imbalances in gut bacteria — the makeup of "good" and "bad" microbes that live in our digestive tracts.

A new study suggests chronic fatigue syndrome — a hard-to-diagnose condition — may be influenced by a person's gut bacteria. The findings by Cornell University researchers are the first to seriously refute the idea that the syndrome is a psychological disorder.

Maureen Hanson, a professor of molecular biology and genetics who led the study, found that people with chronic fatigue syndrome have a different profile of bacterial species in their gut microbiome. Specifically, sufferers have less diversity of bacteria. They also have more types of microbes that promote inflammation.

Up to 4 million Americans have chronic fatigue syndrome, according to the U.S. Centers for Disease Control and Prevention. But only 1 in 5 with the condition have been diagnosed. Symptoms include severe fatigue, malaise, joint and muscle pain, headaches, and gastrointestinal problems such as irritable bowel syndrome.

The researchers noted the lower levels of microbial diversity seen in the chronic fatigue patients is similar to those seen in people with Crohn's disease and ulcerative colitis. Hanson noted that many species of gut bacteria are beneficial to bodily functions, including the immune system.

The study adds to research on health conditions related to what experts call the gut-brain axis. Such findings suggest diet might be one way to ease symptoms by altering and improving the gut environment. Probiotics and foods that contain "good" bacteria — such as yogurt, aged cheeses, and kimchi — have been shown to help with digestive disorders.

□

Follow the 'Rainbow Diet' for More Nutrients

By Lynn Allison

Colorful foods are rich in phytochemicals and antioxidants that fight premature aging and disease. Here's how to create a "Rainbow Diet," according to Tara Gidus Collingwood, team dietitian for the NBA's Orlando Magic:

Red, purple, and blue. The phytochemical anthocyanin is found in foods with these colors — such as blueberries, strawberries, beets, and tomatoes. Anthocyanins are high in antioxidants and fiber, help

prevent heart disease, and are anti-carcinogenic.

White. Mushrooms, parsnips, potatoes, bananas, cauliflower, and other white veggies get their color from the phytochemical anthoxanthin. Cauliflower is a great source of vitamin C, vitamin K, and folate. Even potatoes have potassium.

Orange and yellow. Peppers, squash, oranges, and carrots contain carotenoids — a healthy source of antioxidants that prevent cellular damage, improve eye health, and help ward off cancer. Beta-carotene helps skin

health by protecting tissues and cells from environmental toxins and disease. And such vegetables contain vitamin C, which promotes healthy immune response and wound healing.

Green. Leafy vegetables and green fruits get their color from chlorophyll, and are naturally high in vitamin A, vitamin C, vitamin E, iron, and zinc. The phytonutrients found in green vegetables also help boost the immune system, protect against inflammatory diseases and cancer. Go for spinach, kale, broccoli, cucumbers, celery, and peas. □

Do You Have Adult ADHD?

By Sylvia Booth Hubbard

Do you have difficulty focusing or concentrating? Is it hard for you to get organized? Are you often restless and impulsive? If so, you may suffer from adult attention-deficit hyperactivity disorder (ADHD).

"Today, 1 in 20 adults suffers from ADHD," says Dr. Gary Small, professor of psychiatry and aging at University of California, Los Angeles, and director of the UCLA Longevity Center.

ADHD is characterized by the inability to pay attention and focus, together with hyperactive and impulsive behavior. Many people assume that ADHD affects only children. But it doesn't always disappear as children mature.

"It's often thought of as a childhood disorder, and, for some, the symptoms decline when they reach their twenties," Small tells Health Radar. "Others have lifelong issues with attention."

ADHD can have devastating effects on adults. "It can impair work, disrupt relationships, and lead to anxiety, depression, and substance abuse," says Small.

Some undiagnosed adults learn to cope with their condition by becoming involved in fast-paced, creative jobs, and don't become concerned until later in life when their symptoms make them fear they are developing age-related mild cognitive impairment.

Symptoms of ADHD include:

- Problems concentrating
- Impulsiveness
- Trouble finishing tasks

- High frustration levels
- Problems controlling anger
- Restlessness
- Difficulty following instructions
- Talking excessively, interrupting
- Being easily distracted
- Relationship problems

When to Seek Help

Because almost everyone has some ADHD symptoms at some point, when do you seek help? "When symptoms seem to interfere with everyday life," says Small. "The good news is that treatments for ADHD can be very effective. Both medications and psychotherapy are helpful, and are often used together."

Stimulant medications improve attention and decrease hyperactivity.

"These medications balance the levels of brain neurotransmitters such as dopamine and norepinephrine," says Small.

Drugs for ADHD include:

- **1. Methylphenidate** (Ritalin, Metadate, Concerta)
- **2. Dextroamphetamine** (Dexedrine)
- 3. Dextroamphetamineamphetamine (Adderall XR)
 - **4. Lisdexamfetamine** (Vyvanse)

Psychotherapy and education are also helpful, teaching patients to control temper, to organize their lives, deal with impulsiveness, and manage time better.

Counseling can also help patients improve relationships.

Coping Strategies

If you have adult ADHD, or just want to improve your mental

focus, Small suggests the following strategies:

Use "to-do" lists. By making a list and prioritizing items, you can keep from overwhelming yourself, and can make sure the most important tasks are finished first.

Make tasks manageable. Break complex tasks into small jobs and complete them one by one.

Carry a calendar. Make a habit of writing down all appointments in a calendar — preferably one you can carry with you, like an app on your phone or tablet.

Write notes. Keep notes of errands and tasks in a place you're sure to see them, such as your computer monitor or refrigerator.

Stick to a routine. Make a schedule of daily tasks, and adhere to it every day, making them easier to remember.

Don't be afraid to try alternative strategies that may work for you. Yoga, meditation, and other relaxation techniques ease anxiety for some people. Others find that eliminating certain foods, such as sugar, and artificial colorings and additives can help control their symptoms.

Even though ADHD isn't a problem most people welcome, it can have a positive side.

"The hyperactive aspect of ADHD also reflects high energy, which can be a positive for someone who needs stamina," says Small. "In addition, even though patients have trouble paying attention, when they are interested in something, they become hyperfocused and may pick up on details others miss."

Common OTC Drugs That Raise Heart Risks

By Nick Tate

A wide range of prescription drugs, over-thecounter pills and herbal products can interact negatively with heart medications, according to a new report from the American Heart Association. Among them: heartburn meds, painkillers, and allergy remedies.

"Because many of the drugs heart failure patients take are prescribed for conditions such as cancer, neurological conditions, or infections, it is crucial for healthcare providers to reconcile whether a medication is interacting with heart failure drugs or making heart failure worse," says Robert L. Page II, who coauthored the new AHA report published in the journal *Circulation*.

Page says the report underscores the need for patients to talk to their doctors about all medications they're taking, as well as nutritional supplements and herbs.

The AHA has compiled a comprehensive guide to prescription medications, over-the-counter drugs, and complementary and alternative medicine products that can worsen heart failure. Among them:

Painkillers. Nonsteroidal anti-inflammatory drugs, including commonly used painkillers such as ibuprofen, can trigger or worsen heart failure by causing sodium and fluid retention, and making diuretic medications less effective.

Heartburn meds. Over-the-counter medications that treat acid reflux often contain significant amounts of sodium, which can boost blood pressure, and are usually restricted for patients with heart failure and those on low-salt diets.

Cold and allergy remedies. Certain OTC medications that knock down allergy and cold symptoms (including antihistamines and decongestants) can cause increases in heart rate or blood pressure that exacerbate some cardiac conditions. They may also contain sodium.

Supplements. Commonly used nutritional supplements and alternative medicines are generally safer than prescription medications, according to the Food and Drug Administration risk-assessment reports. But some can cause or worsen heart failure when taken with cardiovascular medications. Among them: products containing ephedra, St. John's wort, ginseng, hawthorn, danshen, and green tea. □

4 Ways to Sleep Well and Protect Your Heart

By Lynn Allison

A good night's sleep is not only good for your brain, but is also the key to heart health. Research shows that people who sleep less than six hours are more likely to suffer heart risks and die prematurely than those who sleep seven or eight hours.

"There is a natural purpose for sleep that if disrupted can wreak havoc with your health," says Dr. Helene Emsellem of the Center for Sleep & Wake Disorders in Chevy Chase, Md. "Studies have shown that too little sleep increases blood pressure and can lead to heart disease and stroke."

Emsellem recommends
keeping a sleep log and taking
care of issues — such as snoring
— that can disrupt sleep.
Metabolic testing can also rule
out medical issues that may cause
your sleeplessness. Other ways to
get a good night's rest:

Keep a consistent bedtime. Go

to bed and wake up at the same time every day.

Keep electronics out of the bedroom. Avoid having a TV or computer in the bedroom or using an e-reader 30 minutes before you turn in.

Avoid a nightcap. Alcohol can upset your sleep cycle so that you may awaken in the middle of the night. So can caffeine.

Exercise. Daily exercise has been proven to help you get a good night's sleep. □

Foot Pain: Causes, Care, and Cures

By Lynn Allison

Q: How many people in America suffer from foot pain?

A: About 75 percent of people in the United States have foot pain at some time in their lives. The majority of foot pain causes can be loosely categorized as deformities (hereditary or acquired), wear and tear (which includes joint and musculoskeletal inflammatory conditions), and infectious or inflammatory conditions of the skin and nails. Bunions and hammertoes are the most common deformity conditions. The most common wear and tear are Achilles tendinitis and plantar fasciitis, often called heel pain or heel spurs. As for the most common skin or nail disorders that I see, these are typically ingrown toenails and plantar warts.

Q: What are the causes of these conditions?

A: Deformity conditions are usually hereditary or acquired by external factors such as activity, stress, or poorly fitted shoes. Bunions, the most common cause of foot pain, are a good example of a hereditary condition which affects between 30 to 40 percent of the population. But they get worse by wearing certain shoes and changing one's activity level. The majority of hammertoe deformities are acquired and may result from muscle imbalances in the foot over years that lead to pain, shoe-fitting problems, and skin damage. Tendinitis and arthritis conditions are most often the result of overuse or wear and tear to the affected area. Ingrown toenails are usually caused by tight-fitting shoes or improperly cutting the nail. However, in some cases they can also be hereditary conditions caused by abnormally curved nails. Plantar warts are caused by a prior infection from human papillomavirus (HPV), which causes skin eruptions as a result of stress, environmental stimulus, or unknown reasons.

Q: When should you see a doctor?

A: You should see a doctor when you experience pain, have trouble walking, or have an infection in

your feet or lower extremities. Any symptoms that do not improve after a reasonable amount of time or treatment with nonprescription products should be evaluated by a specialist. If you have an actual injury, you should seek care immediately. Primary care physicians or other generic healthcare providers are indispensable parts of our healthcare system, but when the condition involves the feet or ankles, it's best to see a podiatric physician and surgeon.

Q: What are some of the treatments you use to alleviate foot pain?

A: For the foot and ankle, it depends on the condition, but some of the most common treatments include custom orthotics, physical therapy, injections of anti-inflammatory medications, strapping or wrapping of injured areas, laser treatments for pain and fungal nail infections, and the shaving of skin calluses and corns.

Q: When is surgery necessary?

A: For most conditions, surgery is usually only recommended when all other therapies have failed. But depending on the diagnosis, it can be recommended for preventative reasons as well. Bunions are the perfect example of this. Often, people are told by their doctor that "if it doesn't hurt, then don't fix it." But the problem is that bunions are a progressive and degenerative deformity that can lead to arthritis and increased pain from joint damage and shoe irritation. There are a variety of traditional surgeries for bunions, as well as a newer and more advanced technique called FastForward that can avoid bone cutting and recurrences. The success rates for bunion surgeries vary, but generally patients are very happy with their outcomes and the majority of people are glad they chose to undergo surgery. □

Dr. Vladimir Zeetser is a podiatric physician and surgeon in private practice in Encino, Calif. He specializes in reconstructive surgery and is known as an innovator in aesthetic foot surgery.



Are Undiagnosed Parasites Threatening Your Health?

By Shellie Faulkner

I magine that you have a stress fracture, but your doctor dismisses it as a muscle strain and prescribes a painkiller. This absurd situation is not likely to occur in real life, but similar misdiagnoses happen all the time when it comes to parasites. Often, people who complain of low energy, moodiness, stubborn weight gain, bloating, and digestive discomfort are told they may have irritable bowel syndrome or chronic fatigue syndrome.

But if those conditions don't improve with treatment, it could be a parasitic infection, says certified nutrition consultant Mary Vance, author of "Vitality for Life."

"I see a very common pattern where my clients have been to numerous — sometimes up to eight or nine — gastrointestinal doctors, and they are told, 'We can't find anything wrong with you," Vance tells Health Radar.

"They are typically given a diagnosis of IBS, which is a diagnosis of exclusion when nothing else obvious is present."

Parasites draw nourishment from a host, and range in size from microscopic (blood parasites) to visible ones, such as worms. Often, their symptoms masquerade as other illnesses.

An example is Babesiosis, a tick-borne parasitic illness that infects red blood cells and can be mistaken for Lyme disease.

A common misconception

is that human parasites thrive primarily in underdeveloped countries, but in this increasingly globalized culture, infections are present in the United States. In fact, the Centers for Disease Control and Prevention has classified several parasites as neglected parasitic infections (NPIs), because little attention has been devoted to their surveillance, prevention, and treatment.

You might not know you have them, and your doctor might not know to test for them.

Hand-to-mouth contact after touching infected surfaces can transmit pinworms, hookworms, or roundworms, and the parasite trichinosis can be transmitted by undercooked meat.

But one of the main culprits is simply poor gut health. Vance notes that one of the biggest causes of gut problems is stomach acid that is too alkaline.

"We are equipped with acidic stomachs. If your digestion is working properly and you have good levels of probiotic bacteria and a strong immune system, you will fight off parasites and pathogens," she says. "But this is rarely the case due to diet and stress, which raise the pH of the stomach, making it too alkaline to kill pathogens."

Is It a Parasitic Infection?

The symptoms of parasitic infection can be subtle. If you have gut symptoms that persist after being treated for a condition

assumed to be IBS, you should ask your doctor for a DNA-based, pathogen/parasitic stool test to detect gut parasites.

Hookworms can cause a rash, abdominal pain, and can eventually lead to anemia if the infection persists. Roundworm travels through the body, and causes a myriad of symptoms such as abdominal pain, wheezing, poor appetite, and can even travel to the eye. Both parasites can be detected through basic blood tests. If parasites are found, your doctor can prescribe antiparasitic medications and antibiotics.

Preventing Infection

Practicing good hygiene is the start of prevention. Wearing gloves and washing your hands when gardening will help avoid exposure to some parasites. However, Vance points to maintaining strong gut health so that our bodies are better equipped to naturally fight off exposure. She suggests the following steps for maintaining a healthy gut:

- Include fermented foods and probiotic foods in your diet, such as sauerkraut and yogurt.
- Eat omega-3 rich foods like salmon and/or take fish oil.
- Eat plenty of anti-inflammatory foods, such as blueberries, and vegetables from the cruciferous family, like broccoli.
- Address daily stress levels.
- Get eight hours of sleep.
- Do not pop medications like they're candy. □

Curcumin: One Remedy for Many Ills

By Vera Tweed

In the past few years, curcumin has skyrocketed in popularity, becoming the top-selling herb in health foods stores and natural supermarkets.

- Athletes use it to reduce inflammation and soreness after hard workouts or competitions.
- People with chronic pain, such as arthritis, take it to reduce or replace medications.
- Others take it to prevent cancer or relieve many other conditions, from acne to atherosclerosis.

Curcumin is an extract of turmeric, the bright yellow curry spice in Asian dishes. Technically speaking, it's a group of three substances (curcumin, demethoxycurcumin, and bisdemethoxycurcumin) collectively called "curcuminoids," which work on multiple levels.

"The reason curcumin is so effective is that it acts on more than 100 different pathways in the body," says Holly Lucille, a naturopathic doctor and educator based in Los Angeles.

A widely used class of antiinflammatory drugs for arthritis pain, COX-2 inhibitors inhibit one pathway: the COX-2 enzyme. Side effects include increased risk for heart attacks, strokes, and death.

By contrast, curcumin influences many enzymes, substances, and mechanisms in the human body. "Its ability to influence these pathways across the board creates more of a synergistic result," Lucille tells Health Radar.

This synergistic action is

believed to be the reason the herb, unlike drugs, can be therapeutic without dangerous side effects.

Reducing Drug Damage

Studies have found that curcumin improves the effects of chemotherapy and radiation and reduces side effects. It also helps to protect healthy people against cancer.

Among pain relievers, acetaminophen is popular but toxic. It is the top cause of acute liver failure in the U.S. Studies show that curcumin protects the liver against acetaminophen damage. The herb also improves the effects of antiviral drugs used to treat hepatitis B. And it fights non-alcoholic fatty liver disease, the most common liver ailment.

Studies show several beneficial actions of curcumin. It lowers blood sugar, even with a high-fat diet, and improves the natural function of insulin. It blocks deposition of fat in the liver, which contributes to both diabetes and liver disease. And it reduces levels of chronic inflammation, which underlies diabetes, heart disease, arthritis, and most other ills that are not infectious diseases.

Although curcumin has been widely used in Eastern medicine for thousands of years, it's only during the last half-century that scientists have been studying it, but the research is growing fast.

Lucille points out that with any ailment, there are many factors, including diet, toxins, lifestyle, and stress. Curcumin is able to target many of them at once.

□

Who Can Benefit?

In both studies and clinical experience, Holly Lucille has witnessed curcumin's effectiveness in treating a long list of conditions. This includes for prevention, as a natural treatment option, or in conjunction with conventional medical treatment. (For example, to help prevent cancer or with chemotherapy or radiation to reduce side effects or improve results). **Such conditions include:**

- Acne
- ► Alzheimer's disease
- ► Asthma
- ► Atherosclerosis
- Breast cancer
- Chemotherapy (reducing side effects)
- Chronic lymphocytic leukemia
- ▶ Colon cancer
- Cystic fibrosis
- Depression

- Diabetes
- Epilepsy
- Hepatitis B and C
- HIV and AIDS
- Human papillomavirus (HPV)
- Inflammatory bowel disease
- Liver diseases such as non-alcoholic fatty liver disease
- ► Major depression

- Melanoma
- ► Multiple sclerosis
- Osteoarthritis
- Osteoporosis
- Pain
- ► Pancreatic cancer
- ► Parkinson's disease
- Post-traumatic stress disorder
- ► Prostate cancer
- Psoriasis
- ► Rheumatoid arthritis
- Ulcerative colitis

FDA Approvals: HPV Test, Acne Treatment, Essential Tremor, Dry Eye

Compiled exclusively by Health Radar, here are the most significant new drugs and medical devices approved by the U.S. Food and Drug Administration.

HPV Test With Preservative Fluid

The U.S. Food and Drug Administration has approved Roche's cobas HPV Test, the first diagnostic to be used with cervical cells obtained from a Pap test. SurePath is a liquid collection fluid that's frequently used for Pap tests. But until this latest approval, no human papillomavirus (HPV) test could be used with the fluid. Swiss drugmaker Roche in 2012 warned that using cervical cells in SurePath fluid with an existing HPV test could produce a falsenegative leading to lack of treatment and cervical cancer progression.

Over-the-Counter Acne Treatment

The once-daily acne treatment **Differin Gel** 0.1 percent (adapalene) has been approved for over-the counter use among people 12 and older. It's the first among a class of drugs called retinoids to be made available OTC for acne. The drug's active ingredient is the first new OTC acne treatment approved since the 1980s. The agency warned that women who are pregnant, planning to become pregnant, or breast-feeding should get a doctor's approval before using the product. While no specific issues with pregnant or breast-feeding women have been identified, some retinoid drugs can cause birth defects.

Ultrasound Device for Essential Tremor

The **ExAblate Neuro** device has been approved to deliver focused ultrasound to destroy small bits of brain tissue that are thought to be involved in a neurological condition known as essential tremor. The device, approved for people who don't respond to medication or surgery, uses MRI scans to help doctors focus ultrasound on specific areas of the brain. The device was evaluated in a clinical study involving 76 people. Those who used the ExAblate showed nearly a 50 percent improvement in essential tremor, compared to those who used a fake device.

Side effects of the ExAblate device included finger numbness, headache, unsteadiness, loss of complete body control, and walking disturbance.

The device shouldn't be used by people who cannot have an MRI, including people who have had implantation of a metallic medical device such as a pacemaker. Pregnant women and people with advanced kidney disease, heart disease or high blood pressure also shouldn't have the procedure.

Xiidra Eyedrops for Dry Eye

Xiidra (lifitegrast) eyedrops have been approved to treat symptoms of dry eye disease, a group of conditions related to insufficient tear production. The chances of developing symptoms increase with age. Dry eye affects about 5 percent of adults ages 30 to 40, and up to 15 percent of people over age 65. Left untreated, dry eye can lead to pain and sores or scars on part of the eye called the cornea. It can make it more difficult to read a book or stare at a computer screen, and may be particularly noticeable in a very dry environment.

Clinical studies involving more than 1,000 people found that those treated with Xiidra saw improvement in symptoms of dry eye, compared to people given a placebo. Xiidra is the first approved medication among a new class of dry-eye drugs called lymphocyte function-associated antigen agonists. Its most common side effects include eye irritation, blurred vision, and an unusual taste sensation. The drug has not been evaluated in children under 17, because dry eye rarely affects that age group.

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CAN BEER FIGHT HEART DISEASE AND WEIGHT GAIN?

A natural flavonoid called xanthohumol found in hops may fight heart disease and weight gain, according to a study at Oregon State University. Laboratory mice were fed a high-fat diet, and given varying levels of xanthohumol. Compared to animals given no xanthohumol, the "bad" LDL cholesterol of mice given the highest dosage of the flavonoid was lowered by 80 percent. Insulin levels were reduced by 42 percent, and levels of IL-6, a biomarker of inflammation, was cut by 78 percent. Because they were eating a rich diet, the mice that received xanthohumol gained weight, but it was 22 percent less than animals not eating the compound.

WEIGHT-LOSS SURGERY BOOSTS SURVIVAL

A study from Sweden's University of Gothenburg found that people who had weight-loss surgery lowered their risk of dying early. Researchers examined records of 49,000 obese people between the ages of 18 and 74, and compared the 93 percent who underwent gastric bypass with those who did not. At five years after surgery, the death rate was barely more than 1 percent compared to 4 percent for those who did not have surgery. Adjusting for conditions like cancer, heart disease, and diabetes, researchers said the overall death rate decreased by 57 percent in the surgery group.

RED WINE COMBATS MUSCLE FATIGUE

Researchers at Georgetown University found that a component found in red wine can combat some of the negative health effects of a high-fat/high-sugar diet and improve muscle function. When rhesus monkeys that had been fed a high-fat, high-sugar diet were given resveratrol, their muscles became more resistant to fatigue compared to monkeys that ate the same diet without resveratrol. Researchers speculated that adding resveratrol to the diets of humans, especially the elderly, could improve physical activity, mobility, and stability.



DRUG COCKTAIL SHRINKS AGGRESSIVE BREAST TUMORS

Triple-negative breast cancer is difficult to treat because it is aggressive and does not respond to many conventional therapies. But a study at Johns Hopkins Sidney Kimmel Comprehensive Cancer center using mice and lab-grown human cells found that a triple-drug cocktail called EAD can

kill existing cancer cells and stop new tumor growth. EAD therapy consists of the chemotherapy drug doxorubicin; all-trans retinoic acid, or ATRA, which can cause a tumor to lose its self-renewing cells; and entinostat, which makes cancer cells more sensitive to retinoic acid treatment. Compared to other treatments, EAD was the most effective at decreasing tumor growth, reducing the new growth by 80 percent, compared to 40 percent reduction by the next-best treatment of doxorubicin alone.

POTATOES RAISE BLOOD PRESSURE

A study at Boston's Brigham and Women's Hospital found that eating four or more servings of fried potatoes a week raised high blood pressure risk by 17 percent. Frying wasn't necessarily the defining factor because eating baked or mashed potatoes increased risk by 11 percent while potato chips didn't appear to increase risk at all. Experts say the culprit is probably not the potatoes, but the salt, butter, sour cream, and bacon bits Americans add to potatoes.

TAI CHI RELIEVES KNEE PAIN

Victims of knee osteoarthritis frequently try physical therapy and anti-inflammatory medicines to ease their pain, often with little relief. But a study published in *Annals of Internal Medicine* found that the ancient Chinese exercise tai chi may ease pain as well as physical therapy. Researchers studied 200 people who had knee arthritis for an average of eight years and whose average age was 60. The volunteers received either two hour-long sessions of tai chi a week for 12 weeks or

30 minutes of standard physical therapy twice a week for six weeks followed by six weeks of home exercise. At the end of the study, both groups reported similar pain relief, but the tai chi group reported greater increases in mental health and feelings of well-being.

TOBACCO SMOKE FORTIFIES GERMS

Smoking cigarettes increases the risk that bacteria will flourish in your mouth and fight your immune system. University of Louisville School of Dentistry researcher Dr. David Scott, found that the thousands of chemical compounds in tobacco smoke encourage the formation of biofilms by pathogens including Staphylococcus aureus, Streptococcus mutans, Klebsiella pneumonia and Pseudomonas aeruginosa. "Once a pathogen establishes itself within a biofilm, it can be difficult to eradicate. Biofilms provide a physical barrier against the host immune response, can be impermeable to antibiotics, and act as a reservoir for persistent infection," Scott said. In addition, biofilms can lead to antibiotic resistance and increase other factors that promote infection.

PRAYER REDUCES ALCOHOL CRAVINGS

Long-term members of
Alcoholics Anonymous report
they have little or no craving for
alcohol, but scientists haven't
understood why. Researchers at
NYU Langone Medical Center used
MRIs to measure brain activity
of long-term AA members who
reported no cravings in the week
before testing. They discovered that
when members recited prayers after



viewing alcohol-related images, they had increased activity in regions of the brain responsible for attention and emotion compared to MRIs conducted while they read a newspaper after viewing the images. All of the subjects reported some degree of craving after viewing the pictures, but said they diminished after reciting an AA prayer. "This finding suggests that there appears to be an emotional response to alcohol triggers, but that it's experienced and understood differently when someone has the protection of the AA experience," said researcher Dr. Marc Galanter.

FAST FOOD EXPOSES CONSUMERS TO CHEMICALS

Eating fast food exposes consumers to higher levels of potentially harmful chemicals called phthalates, a class of industrial chemicals used in the production and packaging. People who ate the most fast food in the 24 hours before the test had almost 40 percent more of some types of phthalates in their urine than those who ate no fast food before the

test. Phthalates have been linked to health problems including cancer, obesity, asthma, Type 2 diabetes, and reproductive issues.

EAT FIBER FOR HEALTHY AGING

In addition to improving your current health, eating a diet rich in fiber could help you avoid disease and disability in old age. Researchers at Australia's Westmead Institute for Medical Research found that of all dietary factors they examined, fiber made the biggest difference to successful aging. "We found that those who had the highest intake of fiber or total fiber actually had an almost 80 percent greater likelihood of living a long and healthy life over a 10-year follow-up," said lead author Dr. Bamini Gopinath. "They were less likely to suffer hypertension, diabetes, dementia, depression, and functional disability."

GREEN TEA IMPROVES DOWN SYNDROME

Spanish researchers found that a component of green tea called epigallocatechin gallate (EGCG) significantly improved the cognitive function of people with Down syndrome. A supplement containing 45 percent EGCG improved brain functions, such as verbal recall and the ability to remember patterns, throughout the year-long testing period, and the progress remained six months after the study ended. The researchers noted that this was the first time any treatment had been found to be effective in treating Down syndrome, which is an genetic condition causing intellectual

Holistic Treatment of Arthritis

By William S. Maxfield, M.D.

While arthritis most often occurs in older people, it can also strike children. In fact, some 300,000 youngsters have been diagnosed with juvenile arthritis, which leads to joint pain, inflammation, and stiffness, and may start with limping early in the morning.

Juvenile arthritis can be categorized in two groups: juvenile idiopathic arthritis (JIA), and systemic JIA that affects the whole body and may cause fever and skin rashes.

In the past, the treatment for both adult and juvenile arthritis has been predominantly to use antiinflammatory drugs such as aspirin and NSAIDs like ibuprofen.

These drugs treat the symptoms, but do not treat the underlying cause of arthritis, which according to current scientific data is predominantly an autoimmune disorder that leads the body's immune system to attack its own tissues.

Recently, the FDA approved several drugs for treatment of JIA, including Humira (adalimumbab), Orencia (abatacept), Enbrel (etanercept), Actemra (tocilizumab), and Llaris (cariknumav).

The first three drugs are for treating polyarticular JIA, while the last two drugs are for treating systemic JIA.

These drugs are called biologics because they treat the cause of the disease and not just the symptoms. The side effect is that they may increase the incidents of serious infections, including tuberculosis.

In my experience, it is also possible to use vitamins

Dr. William S. Maxfield, M.D., is a board-certified physician in hyperbaric medicine, radiology, and nuclear medicine. He is one of the nation's foremost experts in hyperbaric medicine. He has served on the faculties of the Johns Hopkins School of Medicine. Tulan



Johns Hopkins School of Medicine, Tulane University School of Medicine, and LSU Medical School. He also has served as the chief of the Radioisotope Laboratory at the U.S. Naval Hospital in Bethesda, Md. He currently is in private practice in the Tampa Bay, Fla., area.

to ease arthritic type pain. The program that I have utilized with success includes:

- Vitamin B6 (400 mg per day)
- Vitamin E (1,600 IU per day)
- Vitamin D3, (2,000 IU per day)

If a patient is having pain particularly in the knees and hips, it may be related to problems with his or her cartilage. Such patients also frequently have brittle fingernails, which is due to chondroid deficiency.

My experience has been that use of Knox Gelatin, — which is available in grocery stores — is a good way to correct brittle fingernails.

For patients with this problem, I have prescribed one packet of Knox Gelatin, taken daily, usually with fruit juice or another liquid. I direct them to follow that regimen for two weeks, and then decrease the dose to half a pack of gelatin daily.

I have seen very positive responses to arthritic pain with this therapy, and have also corrected the brittle fingernails.

Sometimes, corticosteroids are suggested for treatment of arthritis. But I strongly suggest avoiding corticosteroids because they decrease the blood flow to the epiphyseal joints and to bones. This is the reason that children who are taking corticosteroids for years tend to be short.

Data indicate that most physicians are not aware that corticosteroids can produce aseptic necrosis of the bones, causing need for hip replacement or core decompression operations to help restore blood flow to the bone periphery.

Core decompression is a procedure in which a large hole is drilled into bony structure to cause it to regenerate blood vessels. This type of procedure should be tried prior to progressing to a joint replacement, which is a much more complicated operation.

In sum, we are applying the concept of holistic medicine to treat arthritic problems in both children and adults. This is the approach that should be utilized, based on my experience.

Adding the vitamin program and Knox Gelatin program that I have suggested also helps control arthritic processes.

10 Functional Foods That Destroy Cancer Cells

By Lynn Allison

It's no secret that certain foods contain powerful compounds that can fight diseases. But research shows that specific foods may prevent and even control the growth of cancer cells in the body.

"The main mechanism behind these foods is their anti-inflammatory properties," Dr. Dmitri Alden, a renowned New York City-based cancer surgeon tells Health Radar. "Inflammation causes cancer cells to grow and spread, so by eating these foods you can prevent this process."

Here are 10 of the most recognized functional foods that destroy cancer cells.

1. Grapes and red wine.

Resveratrol, the ingredient found in grapes and wine, is an extremely powerful antioxidant. It also inhibits cyclooxygenase-2 (COX-2) production, which is related to cancers and other types of inflammation. COX-2 inhibitors such as resveratrol have been shown to decrease incidence of cancer and precancerous growths.

- 2. Sea vegetables. These include nori, arame, kombu, and wakame. They contain a variety of antioxidant and anti-inflammatory compounds that will prevent and reverse the damage done by foods and other factors that cause inflammation and oxidative stress two known contributing factors to many types of cancers.
- **3. Turmeric.** The miracle ingredient in the spice turmeric is

curcumin, which is an extremely powerful antioxidant and anti-inflammatory that reduces the metastases of tumors, and may destroy or prevent their growth in the first place. Alden says the spice inhibits the formation of new blood vessels in cancer cells — crucial to delaying development.

- **4. Green tea.** This type of tea owes its cancer-destroying abilities to a group of plant flavonoids known as catechins. One catechin epigallocatechin gallate (EGCG) is the most powerful anti-inflammatory and disrupts development of cancer cells.
- 5. Cruciferous vegetables.
 Leafy vegetables like broccoli, arugula, cabbage, and kale contain glucosinolates, which create cancer-fighting compounds. The Linus Pauling Institute says they eliminate carcinogens before DNA is damaged.
- 6. Garlic. According to Dr. Carmia Borek, people have used garlic as a cancer remedy for thousands of years. The National Cancer Institute says that garlic may reduce the risk of stomach, colon, esophageal, and breast cancers. The Iowa Women's Health Study revealed that women who consumed the most garlic had a 50 percent lower risk of colon cancer. Borek recommends taking aged garlic extract for the most consistent cancer fighting benefits.
- 7. Hemp oil. Hemp oil is known to speed up the healing process throughout the body, and also raises melatonin levels. Melatonin

has been shown to reduce or even completely stop the growth of certain types of cancer, so the extra production of it thanks to hemp oil is a great asset in your body's fight against cancer. Hemp oil can be consumed in gel caps or even directly out of the bottle.

- **8. Mushrooms.** These fungi have antiviral and anticancer effects that have been proven in numerous invitro and animal research studies. Mushrooms have been used for more than 5,000 years in ancient and traditional medicines due to their powerful effects on a number of diseases and conditions including cancer.
- **9. Ginger.** Certain compounds found in ginger make it a powerful anti-inflammatory and antioxidant to reduce oxidative stress that your body has to fight on a daily basis. Studies have shown that ginger can reduce cancerous tumors by as much as 56 percent and have also shown it to be a more effective remedy than traditional medical treatments like chemotherapy in the case of certain types of cancers.
- **10. Tomatoes.** These red fruits and the products made from them contain lycopene, a compound known for its ability to destroy cancer cells. Scientific studies show that lycopene helps prevent prostate, lung, and stomach cancers. This powerful antioxidant offers a double whammy as it also reduces the risk of heart disease by lowering LDL cholesterol and blood pressure. □



Blood Test Detects Alzheimer's

A ioint venture between Rowan University School of Osteopathic Medicine and Durin Technologies developed a blood test that is 100 percent accurate in detecting early Alzheimer's disease. Researchers studied blood results from patients with mild cognitive impairment (MCI) caused either by early Alzheimer's or by other physical problems, such as side effects due to drugs. The researchers identified the top 50 autoantibody biomarkers capable of detecting ongoing early-stage Alzheimer's pathology in patients with MCI. In multiple tests, the 50 biomarkers were 100 percent accurate in distinguishing patients with MCI due to Alzheimer's memory problems caused by other reasons. "To the best of our knowledge, this is the first blood test using autoantibody biomarkers that can accurately detect Alzheimer's at an early point in the course of the disease when treatments are more likely to be beneficial — that is, before too much brain devastation has occurred," said team leader Dr. Robert Nagele. The researchers hope this could lead to an inexpensive and noninvasive way to diagnose early stage Alzheimer's.

Camera Injected via Syringe

A camera smaller than a grain of salt that can be injected into the body with a syringe sounds like something out of a science fiction novel. But German engineers at the University of Stuttgart using 3D printing have built a three-lens camera that is only 100 micrometers wide (0.004 inches). It can fit onto an optical fiber the width of two hairs that researchers say could be used as endoscopes to view inside the human body, focusing from a distance of 3 millimeters. The camera will fit inside a standard syringe, allowing it to be delivered directly into human organs, perhaps even the brain.

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The study, which was reported in the journal *Nature Photonics*, said the micro-cameras could also be used as essentially invisible security monitors.

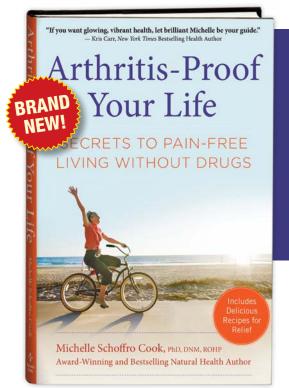
Genetic Testing Reveals Prostate Cancer Therapies

Genetic testing in men with advanced prostate cancer can spot genetic mutations that would identify other men who would benefit from new precision treatments. Researchers at London's Institute of Cancer Research found that about 12 percent of men with advanced prostate cancer had inherited mutations of genes that normally repair DNA damage. The mutated genes include the breast cancer gene BRCA2, which may cause one in 20 cases of prostate cancer. Men diagnosed with the gene mutations could be treated with a new type of drug called PARP inhibitors. These drugs inhibit the enzyme poly ADP ribose polymerase (PARP). Studies have found that blocking PARP in cancer victims with impaired ability to repair damaged DNA kills tumor cells.

Cheap At-Home Test Spots Cancer

Researchers at Ohio State University are developing paper strips that can be designed to test for diseases including cancer and malaria at a cost of only 50 cents per strip. Patients would put a drop of blood on paper strips and mail them to a laboratory where they would be diagnosed. The patient would have to visit a doctor only if the test was positive. Researcher Abraham Badu-Tawiah says the test can be tailored to detect any disease for which the human body produces antibodies, including ovarian cancer and cancer of the large intestine. He says the new technology could bring disease diagnosis to people who don't have access to a doctor or can't afford in-person visits.

In addition to being useful for diagnosis in remote areas of the world, Badu-Tawiah said the tests would be ideal for people who have a family history of cancer or have successfully undergone cancer treatment. Instead of waiting to visit a doctor every six months to confirm that they are still in remission, they could test themselves from home more frequently. The inexpensive strips would make the test much less expensive than current means of diagnosis. \Box



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Around 1.5 million adults in the U.S. have been diagnosed with rheumatoid arthritis (RA), which often starts in middle age and is most common in older people. RA is a serious autoimmune disease that attacks the joints, connective tissue, and other body areas. Osteoarthritis and rheumatoid arthritis are only two of many different types of arthritis.

Unfortunately, millions of arthritis sufferers find themselves limited in their ability to perform basic daily activities, including walking, bending, standing, and climbing stairs. Millions more put up with restrictions in their capacity to work or engage in sports or leisure activities.

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