

## 2 News Briefs

- Shingles and heart attack risk.
- Chronic pain and depression.
- Garlic breath remedies.
- Plant-based menopause treatments.

## 3 Prevention

Lowering blood pressure naturally.

## 4 Heart Health

How chronic inflammation damages your heart.

## 5 Bones & Joints

What you need to know about hip replacement.

## 6 Mind & Memory

Diagnosing Lewy body dementia.

## 7 Prevention

Cancer fighting vaccines.

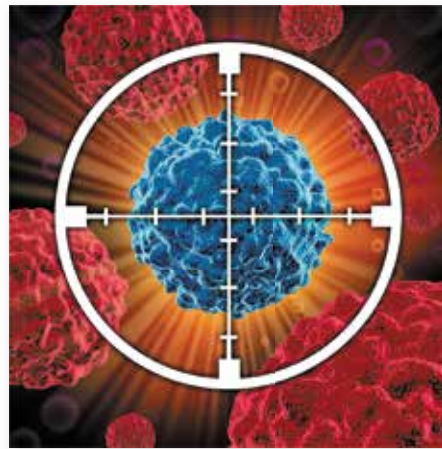
## 8 Ask Dr. Wanagat

- What is walking pneumonia?
- How can I get rid of ear ringing?
- What's the difference between heart attack and sudden cardiac arrest?

# Immunotherapy: Cancer's Newest Enemy

*Fighting cancer with the body's own immune system is working.*

It is widely recognized that the immune system is capable of stopping the growth of cancer. But some cancer cells are smart and can hide from the immune system by mutating and sending false signals. They can also manipulate surrounding cells to produce substances that suppress the immune system, allowing cancer cells to multiply. But researchers are finding ways to thwart these efforts.



*Immunotherapy treatments directly target tumors.*

“The major progress that we have made is to figure out how the cancer can evade the immune system and take away that mechanism so the patient’s immune system can continue to recognize and attack the cancer cells,” explains medical oncologist and researcher Siwen Hu-Lieskovan, MD, PhD, of the UCLA Jonsson Comprehensive Cancer Center.

### Unlocking Checkpoint Inhibitors

The immune system has a built-in braking system to prevent it from over-reacting and destroying healthy cells and tissues. Some cancer cells have figured out how to manipulate that braking system to allow the cells to protect themselves from the patient’s immune system.

“Some tumor cells can sense the danger and they send signals that say, ‘I’m not a bad guy, don’t attack me,’” says Dr. Hu-Lieskovan. “The brakes engage and T cells stop attacking.”

Researchers have developed a way to block those signals with what’s called checkpoint inhibitors. These inhibitors are lab-made antibodies that can stop false sig-

nals from reaching the immune system. In doing so, killer T cells can do their job to destroy cancer cells. At present, the PD-1/PD-L1 checkpoint inhibitors are the most common type of immunotherapy cancer treatment.

There are currently four FDA approved checkpoint inhibitors in clinical use. They treat advanced melanoma, lung, kid-

ney, head and neck, and bladder cancers as well as Hodgkin’s lymphoma.

Among the approved drugs is the checkpoint inhibitor anti-PD-1 pembrolizumab (Keytruda), co-developed by the UCLA Jonsson Comprehensive Cancer Center. The drug helped revolutionize the way in which melanoma is treated. Until recently, pembrolizumab was only given to patients who were no longer responding to ipilimumab, the once standard first-line therapy for people with the disease.

Clinical trial results showed overall survival at one year for patients who received pembrolizumab was 74 and 68 percent in two study groups, compared with 58 percent for those who received ipilimumab. Adverse side effects were also lower for patients receiving pembrolizumab (12 percent) compared with ipilimumab (20 percent).

### Response Rates and Side Effects Vary

While progress is certainly being made with checkpoint inhibitors, they don’t work for everyone. The success rate is 15 to 40 percent, depending on the type of

*Continued on page 7*

## EDITOR-IN-CHIEF

Jonathan Wanagat, MD, PhD  
UCLA Division of Geriatrics

## EXECUTIVE EDITOR

JoAnn Milivojevic

## GROUP DIRECTOR

Jay Roland

## ADVISORY BOARD

Randall Espinoza, MD, MPH;  
Arash Naeim, MD;  
Michelle Eslami, MD;  
John FitzGerald, MD;  
Ellen Wilson, PT

**B** *Healthy Years*  
(ISSN # 1551 4617)  
is published  
monthly for \$39  
per year by Belvoir  
Media Group, LLC,  
535 Connecticut  
Avenue, Norwalk, CT 06854-1713.  
Robert Englander, Chairman and  
CEO; Timothy H. Cole, Executive  
Vice President, Editorial Director;  
Philip L. Penny, Chief Operating  
Officer; Greg King, Executive Vice  
President, Marketing Director;  
Ron Goldberg, Chief Financial  
Officer; Tom Canfield, Vice  
President, Circulation. © 2017  
Belvoir Media Group, LLC.  
Postmaster: Send address  
corrections to *Healthy Years*,  
PO Box 8535, Big Sandy, TX  
75755-8535.

## SUBSCRIPTIONS

\$39 per year (U.S.)  
\$49 per year (Canada)

## SUBSCRIPTION SERVICES

For customer service or  
subscription information:  
*Healthy Years*  
PO Box 8535  
Big Sandy, TX 75755-8535  
Call toll free 866-343-1812

## ONLINE SERVICES

Visit [www.healthy-years.com/cs](http://www.healthy-years.com/cs)  
to change your address, renew  
your subscription, check your  
account status, or contact a  
customer service representative.**Shingles Increases Short-Term Risk of Stroke and Heart Attack**

Herpes zoster, also known as shingles, is associated with an increased risk of stroke and heart attack, according to a study of Medicare beneficiaries conducted at the London School of Hygiene and Tropical Medicine. The research team identified 42,954 adults over age 65 who had been diagnosed with shingles and who had suffered an ischemic stroke, which is a stroke caused by a restriction in blood flow. They also found 24,237 older adults who had shingles and a subsequent myocardial infarction (heart attack). The researchers calculated the chance of having a stroke or a heart attack within 12 months after diagnosis, compared with times the patient did not have the virus. They concluded that there was a 2.4 times greater chance of having a stroke and a 1.7 times higher chance of a heart attack during the first week after a shingles episode, but the risk decreased gradually over the next six months. The study did not take into account the stress that shingles might have caused or the low percentage of participants who had been vaccinated. A one-time shingles vaccine, covered by Medicare, can be effective in reducing complications and the severity of shingles.

**A Connection Between Depression and Chronic Pain**

Chronic pain is a significant source of suffering. While it is a common cause of disability, little is known about why it happens. Researchers from the Universities of Edinburgh, Dundee, Aberdeen and Glasgow sought to better understand the relationship between depression and chronic pain, and the role that genes and the environment might play. The team analyzed information from more than 100,000 people taking part in large nationwide health studies. They considered people's genetic background as well as details about their experiences of pain and depression. They found that partners of people with depression are more likely to suffer from chronic pain. They also found that the two conditions share common causes, some are genetic and other causes come from the environment that partners share. They also identified significant overlaps between the risk factors for chronic pain and depression. Researchers hope the study results will encourage people to think about the relationship between chronic pain and depression, and whether physical and mental illnesses are as separate as some believe. The study appeared in *PLOS Medicine*.

**Natural Remedies for Garlic Breath**

Garlic lovers may have a simple and natural solution to their halitosis problem, according to a recent Ohio State University study published in the *Journal of Food Science*. After chewing three garlic cloves, participants were given one of the following: water, apple, lettuce, mint leaves, or green tea. Their breath was then analyzed through a special instrument that measures volatile organic compounds (VOCs). The researchers found that raw apple and raw lettuce decreased the concentration of VOCs in the breath by 50 percent or more, compared to the control group for the first 30 minutes. Mint leaves had a higher deodorization level compared to raw apple and raw lettuce for all volatile compounds measured. Mint juice, along with the heated apple and lettuce, had some effect but the raw versions worked better. In short, chewing fresh mint leaves or eating raw apple or lettuce were the most effective in reducing garlic breath.

**Plant-based Therapies for Menopause Inconclusive**

An analysis of more than 60 studies suggests that some plant-based therapies are associated with modest reductions in the frequency of hot flashes and vaginal dryness, but no significant reduction in night sweats was found, according to a study in *JAMA*. Researchers analyzed studies that assessed plant-based therapies. A total of 6,653 women participated. The findings showed that phytoestrogen interventions, such as dietary and supplemental soy isoflavones, were associated with improvement in daily hot flashes and vaginal dryness but not night sweats. Several herbal remedies, but not Chinese medicinal herbs, were associated with an overall decrease in the frequency of vasomotor symptoms. Because scientific rigor varied widely among the studies, researchers say more quality studies are needed to validate the association of natural and plant-based therapies with menopausal health. ■

# Lower Your Blood Pressure Naturally

*These lifestyle changes may help you avoid medications.*

**H**igh blood pressure is called the “silent killer” because it often doesn’t cause any obvious symptoms. Uncontrolled, it can be a very serious problem leading to stroke, heart disease, eye problems and even kidney failure. Estimates show that more than half of people over age 65 have high blood pressure. But what you do day-to-day can make matters worse, or significantly better.

“Controlling your blood pressure with healthy lifestyle choices might help you avoid, delay, or reduce the need for medication,” says geriatrician Michelle Eslami, MD, UCLA Medical Center.

## Monitor Your Status and Your Stress

If you’ve been diagnosed with high blood pressure (also called hypertension), checking your blood pressure regularly can help you keep levels under control. If you don’t have high blood pressure, periodically checking your blood pressure will help you stay on top of any changes in status. For example, being diagnosed with “prehypertension” can be a wakeup call to make needed lifestyle changes. A good place to start is by taking stock of your stress levels. Anger, frustration, and worry can all trigger stress levels to rise and unhealthy habits to ensue.

“With stress there is a normal release of adrenaline, which could increase blood pressure as well as heart rate,” explains Dr. Eslami. “Given that high blood pressure typically does not have symptoms, it’s important to remember the role of stress as an aggravating factor that can increase blood pressure.”

## Choices That Make a Difference

By incorporating some of these strategies, you can lower your stress levels

and your blood pressure. And you just might find yourself enjoying life a bit more, too.

➔ **Mindful Breathing.** We do it moment-to-moment without giving it a second thought. But when you turn your attention to how you breathe, you can transform your mental and physical health. Try this simple technique next time you’re feeling frazzled. Breathe in through your nose for a count of five. Hold your breath for a few seconds, then slowly exhale all of your air out to the count of five. Be sure to squeeze out every last bit of air, then slowly inhale again. Pause and repeat. Just a few minutes of this practice can help you feel calmer.

➔ **The Power of Pets.** Studies have shown that owning pets may be associated with lower blood pressure, lower cholesterol, lower incidence of obesity and less stress. Dogs, for example, encourage people to walk more. In a study of more than 5,200 adults, dog owners were more likely to get the recommended level of physical activity. If you don’t have a dog, you could offer to walk a friend’s dog, or volunteer at a local animal shelter.

➔ **The DASH Diet.** This flexible eating plan doesn’t require buying any special foods or supplements. It’s based on eating vegetables, fruits, whole grains, low or fat-free dairy, fish, poultry, beans, nuts and vegetable oils. While you can eat just about anything on this diet, the recommendation is to limit saturated fats (e.g. fatty meats, full-fat ice cream) and sugary beverages as well as other high-sugar sweets (e.g. candy, baked goods). Salt should also be limited. Instead, create palate-pleasing flavor with herbs, spices, and hot peppers. For more tips, search on “living with



© Monkeybusinessimages | Dreamstime.com

*Pets can provide comfort and solace, which can lower blood pressure. Dogs can also help people be more physically active.*

the DASH eating plan”. The result will take you to a National Heart, Lung, and Blood Institute web page filled with tips on preparing foods at home as well as smart choices to make while eating out.

➔ **Maintain a Healthy Weight.** “Blood pressure often increases as weight increases,” explains Dr. Eslami. “Just losing 10 pounds can help you reduce your blood pressure. Regular exercise for at least 30 minutes most days of the week can lower your blood pressure by 4 to 9 mmHg.” Walking, bike riding, or swimming—it doesn’t matter what you do, what matters is that you do it consistently. Having an exercise buddy can help you stay motivated, accountable, and consistent with exercise.

➔ **Mind Your Meds.** For effective blood pressure management, take prescribed medications on time, as directed. If you have trouble remembering, talk with your pharmacist. There are a variety of smart pillboxes and other reminders that can help.

## High Blood Pressure May Be Reversible

Lifestyle choices such as controlling stress, eating more healthfully, and daily physical activity can help you avoid getting high blood pressure in the first place. And if you already have it, better control it, and possibly reverse it. The hardest part of building healthier habits can be getting started. Try some of these ideas for a few weeks. If you feel stuck, talk with your physician or a registered dietitian. They can help you set attainable goals and build a plan of action. ■

# Chronic Low-Grade Inflammation Damages the Heart

*Anti-inflammatory foods protect the heart and foster weight loss, too.*

Inflammation is the body's immune response to help us heal from injuries and infections. But sometimes, a low level of inflammation keeps hanging around, quietly damaging tissues. Chronic low-grade inflammation is thought to kick start atherosclerosis, the buildup of plaque on artery walls, a key component of coronary artery disease (CAD).

"It seems that the inflammation and inflammatory markers that are circulating throughout our bodies can damage the vessel walls," says geriatric cardiologist Deena Goldwater, MD, UCLA Medical Center. "Inflammation and cholesterol work together in a negative way to begin the plaque formation process. Diet and exercise, however, work to lower cholesterol, and have also been shown to lower inflammation."

## Anti-Inflammatory Foods to the Rescue

Anti-inflammatory foods, of which there are many, can help reduce chronic inflammation and low-density lipoproteins (a.k.a. LDL or "bad" cholesterol). These highly nutritious foods also deliciously satisfy hunger and can be a catalyst to weight loss.

Anti-inflammatory foods are every day foods, not some secret ingredients found in a faraway jungle. While "anti-inflammatory" foods may not sound appetizing, they are. The Mediterranean diet, for example, contains a wide variety of naturally anti-inflammatory foods. These foods are favored in the cuisines of countries that border the Mediterra-

nean Sea, including Spain, France, Italy, Greece, Turkey, and Israel.

Think whole grain pasta, fragrant herb-infused couscous, olives, hummus, tabbouleh, nuts, fatty fish, and even red wine.



*Colorful veggies and salmon is a heart-healthy complete meal.*

fats, such as red meat, butter, and whole milk, it raises your LDL cholesterol levels. LDLs are very small cholesterol particles, and as such they are able to squeeze into arteries where they don't belong. Eventually, they can clump together and block blood flow. The clumps can be also swept away, causing clots elsewhere in the body. If these clots reach the brain, a stroke can occur.

High density lipoprotein, or HDL cholesterol, is a good type of fat. HDL acts like a broom to sweep out plaque. Foods that contain healthy fats include: olive oil, fish high in omega-3 fatty acids (tuna, salmon, sardines) and nuts.

## Trans Fats, Just Say No

Trans fats, also known as partially hydrogenated fats, are industrially created by adding hydrogen to the oil's fatty acids. This process transforms the liquid fat into a solid, making it cheaper to produce packaged baked goods and fried foods. These

## WHAT YOU SHOULD KNOW

*Tips for reducing inflammation.*

- > **Fish** high in omega-3 fatty acids (salmon, tuna, sardines) help raise healthy HDL cholesterol.
- > **Studies** do not show that taking omega-3 supplements protects the heart.
- > **Anti-inflammatory** foods include nuts, grains, vegetables, some meats, and red wine.
- > **Exercise** can reduce inflammation, burn calories, lower stress, and improve sleep.

are the worst fats to eat because they raise bad cholesterol and lower good cholesterol.

The FDA stated that partially hydrogenated oils are not generally recognized as safe and that by removing them, thousands of heart attacks and deaths could be prevented every year. Manufacturers have by 2018 to either reformulate products or petition the FDA to permit specific uses. Many fast food restaurants and food manufacturers have already started to remove partially hydrogenated oils from their products.

## Whole Foods and an Active Lifestyle

Many Mediterranean meals can be quick and easy to prepare with just a few key ingredients. High-fiber foods (especially fruits and vegetables), which can help keep arteries clear, are abundantly featured.

"The easiest way to get started is to make sure that veggies take up more than half the plate," says Dr. Goldwater. "That includes salads, roasted vegetables, green vegetables and starches, such as potatoes, in moderation."

It's common for people in Mediterranean countries to walk after dinner. It's simple to do and offers many benefits. Walking aids digestion, helps burn a few calories, reduces stress, lowers inflammation, and is also good for the heart. An easy 20-minute stroll can help you sleep better, too. ■

# Do You Need a Total Hip Replacement?

*Talking with experts and peers can help you make an informed decision.*

**H**ave you stopped doing physical activities due to hip pain? Do you have trouble using stairs or getting out of a chair? Have you tried physical therapy, exercise, walking aids and medications, yet still feel major discomfort in your hip? Then it might be time to consider hip replacement.

It's an extremely common procedure with a high success rate. More than 300,000 hip replacement surgeries are done in the U.S. every year. Osteoarthritis, which creates wear and tear on joints, is why most hip joints are replaced. Of course, a surgeon can provide the details on your particular needs. But talking with someone who has had a similar procedure can also be invaluable.

"Peer-to-peer conversations are very helpful," says Steven Castle, MD, Clinical Director of the Geriatrics program at the Greater VA in Los Angeles and an associate clinical professor at UCLA. "We connect patients at the VA because they usually feel more comfortable talking with someone who has gone through the same thing. It can give them a better understanding of what it's really like on a personal level."

## New Longer Lasting Materials

With total hip replacement, both meeting points of the pelvis and the thighbone (femur) are replaced. The head of the femur is replaced with a metal or ceramic ball mounted on a stem that fits into the thighbone. The worn out portion of the hip socket (acetabulum) is fitted with a cup, typically made of metal and lined with ceramic. Innovative new materi-

als last longer than those used in the past. They are also safer.

"Our new polyethylene materials are rated at 30 years," says orthopaedic surgeon Bruce Brown, MD, UCLA Medical Center "They don't wear out like they did years ago. Also, metal on metal is no longer used. It's either metal on polyethylene or ceramic on polyethylene."

In addition to materials used, the surgeon can access the hip the front, back or sometimes from the side of the hip. While the anterior (front) approach is touted as better because less tissue is cut, according to a recent report from American Academy of Orthopaedic Surgeons, there was no difference in outcomes six months after the surgery. Patients should, however, ask about their surgeon's surgical approach, experience and preference, as well discuss the potential risks and benefits of the surgery.

## Prehab Speeds Recovery

Improving your physical condition before surgery will help you recover faster. Pre-habilitation, or prehab, is recommended four to six weeks prior to surgery. The process typically includes assessing your current fitness levels, and then prescribing an individual program to improve cardiovascular fitness, balance, and strength.



*A trainer with UCLA Gerofit helps his client safely and effectively build strength, flexibility, and balance.*

## WHAT YOU CAN DO

*Here are some questions to ask your doctor.*

- **What** are the risks of surgery?
- **What** are the risks of not having surgery?
- **What** limitations will there be post-surgery and for how long?
- **How** much improvement can I expect based on my condition?
- **What** medications will I need after surgery and for how long?

Participating in a prehab program can cut down on the number of days you stay in the hospital, and possibly avoid the need for a stay in a skilled rehab or nursing facility after surgery. Because staying in the hospital for at least few days after surgery is a reality for most older adults, it's wise to prepare for sleeping in what is often a noisy environment.

"We give patients eye covers and ear plugs to get used to before going to the hospital," says Dr. Castle. "We also provide a spirometer to help them improve their lung capacity, which they can also use in the hospital after surgery."

## What to Expect After Surgery

Every patient is different, but many are on their feet and in physical therapy within a day of surgery. People who are obese, smoke, and have metabolic syndrome (a combination of factors including abdominal obesity, high blood pressure, and insulin resistance) are at higher risk for postoperative complications and may require short stay in a rehabilitation facility for a week or two. Depending on a person's overall physical condition, recovering enough to walk without a cane or drive the car can take four to eight weeks. ■

## Before Surgery, Do Your Homework

Look for centers that do at least 100 hip replacements per year advises Dr. Brown. "You want to be comfortable and confident with your surgeon and the nursing staff," he says. "Prior to surgery, our patients talk with a physical therapist, occupational therapist and the nursing staff to get a full understanding of the process, procedure, and rehab realities."



© Skypixel | Dreamstime.com

*LBD mimics the tremors of Parkinson's and the memory loss of Alzheimer's.*

# Lewy Body Dementia

*Diagnosing this distinct brain disorder can lead to better symptom control.*

**M**ost people are familiar with Parkinson's and Alzheimer's, but not so

much with Lewy body dementia (LBD). It affects an estimated one million Americans, according to the

National Institute on Aging. The late actor-comedian Robin Williams was diagnosed with Parkinson's disease but autopsy showed there were Lewy bodies widely spread throughout his brain. LBD can occur together with Parkinson's and Alzheimer's or they can be separate diseases.

"LBD can mimic the tremors, stiffness and walking difficulties of Parkinson's disease and the memory problems of Alzheimer's disease and thus is often misdiagnosed as other diseases," explains Zaldy S. Tan, MD, PhD and Medical Director for UCLA's Alzheimer's and Dementia Care Program. "The proper diagnosis and treatment of LBD can help with these symptoms and allow patients and families to seek more information and resources for this serious condition."

LBD is the third most common form of dementia after Alzheimer's and vascular dementia. Symptoms typically start to appear after age 60 and affect slightly more men than women.

## What Is a Lewy Body?

Lewy bodies are abnormal deposits of a protein called alpha-synuclein. Everyone has these proteins, as they play an important role in brain cell communication. In LBD, these proteins clump together and interrupt normal brain functions. As a progres-

sive disease, LBD eventually can create widespread brain damage.

Lewy bodies are present in the brains of those who have LBD and Parkinson's. When the diseases begin, they are easier to discern. Parkinson's affects mostly movement, while LBD has more cognitive and psychiatric symptoms. As the diseases progress, however, the symptoms can become similar because they share the same disease process.

## Diagnosing Lewy Body Dementia

At present, the only way to diagnose LBD is through a clinical profile, which, according to Dr. Tan, is accurate and reliable. In the early stages of the disease, memory loss is generally greater in Alzheimer's than in LBD. Movement disorders, however, appear much earlier with LBD.

A number of physical and neurological exams can help diagnose LBD. These include:

➤ **Medical history/examination.** A review of previous and current illnesses, medications, and current symptoms and tests of movement and memory.

➤ **Medical tests.** Laboratory studies can help rule out other diseases and hormonal or vitamin deficiencies that can be associated with cognitive changes.

➤ **Neuropsychological tests.** These assess memory and other cognitive functions and can help identify affected brain regions.

➤ **Brain imaging.** Computed tomography (CT) or magnetic resonance imaging (MRI) can detect brain shrinkage or structural abnormalities and help rule out other possible causes of dementia or movement symptoms.

## Lack of Brain Atrophy May Signal LBD

A new study published in the online

## WHAT YOU SHOULD KNOW

*There are three main features that distinguish LBD from Alzheimer's:*

- **Changes** in mental functioning, particularly alertness and attention, which may look like delirium.
- **Recurrent** visual hallucinations.
- **Parkinson-like** movement symptoms, such as rigidity and lack of spontaneous movement.

issue of *Neurology* showed that a lack of shrinkage in the area of the brain called the hippocampus may be a sign that people with thinking and memory problems may develop LBD rather than Alzheimer's disease. Shrinkage of the hippocampus, the area of the brain responsible for thinking and memory, is an early sign of Alzheimer's disease.

"Identifying people with mild cognitive impairment at risk for dementia with Lewy bodies is critical for early interventions," says the study's lead author Kejal Kantarci, MD, a Mayo Clinic radiologist. "Early diagnosis helps target appropriate medications. For example, as many as 50 percent of people with LBD have severe reactions to antipsychotic drugs."

Study participants with mild cognitive impairment had MRI brain scans to measure hippocampus size. They also had yearly tests for an average of two years. During that time, 38 percent developed Alzheimer's disease, and 13 percent progressed to probable dementia with Lewy bodies.

The people who did not have hippocampus shrinkage were five times more likely to develop LBD. Conversely, 61 percent of those who developed Alzheimer's disease did show shrinkage in the hippocampus.

The relationship of hippocampus volume and disease was stronger among people without memory issues. LBD does not always affect memory. When it does, affected thinking skills usually include issues with attention, problem-solving, and interpreting visual information. ■

## Immunotherapy—cont. from page 1

cancer being treated. The pattern of response to immunotherapy can be immediate, or it can take time. In some cases, the tumor growth can initially outpace the immune system's ability to destroy it. But this isn't always a bad sign.

"In some patients, we see tumor growth before it starts to shrink," explains Dr. Hu-Lieskovan. "If a patient is doing well, we treat again, and often on the second scan we see slower or stabilized tumor growth. That's a good indicator that the patient is responding and we should keep them on the treatment."

While there can be side effects, Dr. Hu-Lieskovan says they are less so with anti-PD-1/PD-L1 treatments (compared to radiation or chemotherapy). The majority of patients have no, or minor problems (e.g. fatigue, skin rash, thyroid dysfunction). She has treated patients in their 80s who have tolerated the treatments well.

Very rarely, some serious side effects do occur, due to activation of the immune system to attack normal cells in the body, including in the

lungs, liver, kidneys and other vital organs, and in extremely rare cases, the heart. High-dose steroid is the first-line therapy to treat these autoimmune side effects and is usually very effective with complete reversal of the abnormalities; however, it needs to be used with caution as it suppresses the immune system and offsets the benefit of the checkpoint inhibitors. Some short-term follow-up studies suggest temporary usage of steroids may not compromise the efficacy of immunotherapy; however, no long-term study has confirmed the result yet.

### Immune Cell Therapy

Still in clinical trials is a form of immunotherapy called adoptive cell transfer (ACT). This approach optimizes a patient's own immune cells. For example, a patient may already have T cells that are fighting a cancer, but there are simply not enough of them to kill the tumor, or they can't disregard the immunosuppressive signals being sent by the cancer cells. The process works by removing infiltrating T cells from the patient's tumors and multiplying them in the lab. The high concentra-

tion of T cells is then infused into the patient's bloodstream. The theory is that by adding massive amounts of tumor-infiltrating T cells (therefore most likely to destroy tumors) will allow the immune system to overcome barriers. Several small clinical trials testing ACT were effective in eradicating advanced melanoma in some patients.

CAR or TCR modified T cell therapy is similar to ACT, but the patient's T cells are genetically modified to allow them to attach to specific proteins on the surface of cancer cells. Once there, they can attack and kill the cells.

### Getting Treatments and Defraying Costs

FDA-approved immunotherapy treatments are often covered by insurance. But the cost with copays and deductibles can be a heavy financial burden for many patients. Drug assistance programs through various pharmaceutical companies can help offset those costs. In addition, Good Days ([mygooddays.org](http://mygooddays.org)) is a nonprofit organization designed to help people in financial need get the treatment they need for a wide variety of diseases, including cancer. ■

## PREVENTION

# Vaccines That Fight Cancer

*It may be possible to prevent some cancers.*

**C**ancer fighting vaccines currently in use are of two types: preventive and therapeutic. Preventive cancer vaccines are aimed at cancer-causing viruses such as human papillomavirus, which can cause a number of cancers, including cervical, anal, and penile. There are also several types of hepatitis B (HBV) vaccines that guard against liver cancer.

### Vaccines as Treatments

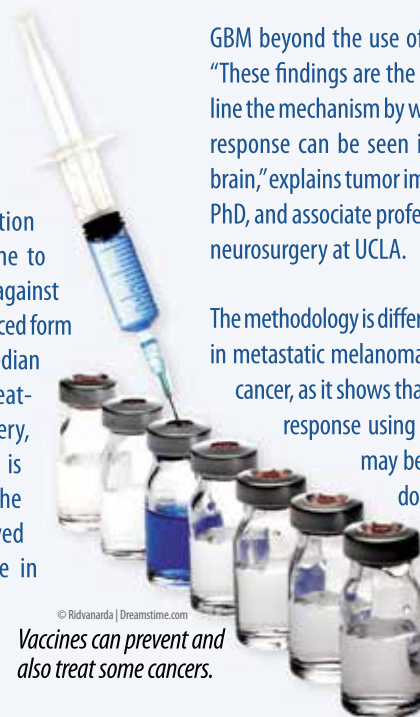
Cancer treatment vaccines are used to help slow or stop tumor growth. Like other vaccines, they trigger the activation of T cells, which kill pathogens. Sipuleucel-T (Provenge) is such a vaccine, and it is used to treat metastatic prostate cancer.

At UCLA, researchers have developed a new combination treatment that uses a vaccine to activate an immune response against glioblastoma (GBM), an advanced form of brain cancer. Estimated median survival after traditional treatments for GBM, such as surgery, radiation and chemotherapy, is generally 14 to 18 months. The three-year UCLA study showed that a dendritic cell vaccine in combination with PD-1, generates a more effective immune response against

GBM beyond the use of either treatment alone. "These findings are the first that specifically outline the mechanism by which an effective immune response can be seen in tumors located in the brain," explains tumor immunologist Robert Prins, PhD, and associate professor in the department of neurosurgery at UCLA.

The methodology is different from previous research in metastatic melanoma and non-small-cell lung cancer, as it shows that activation of an immune response using dendritic cell vaccination may be necessary in tumors that do not respond to PD-1/PD-L1

checkpoint inhibitors alone. The findings were published in the online journal *JCI Insight*. ■



© Ridvanarda | Dreamstime.com  
*Vaccines can prevent and also treat some cancers.*



Editor-in-Chief  
Jonathan Wanagat,  
MD, PhD, Assistant  
Professor, Division  
of Geriatrics

**Q** What is walking pneumonia?

**A** The term is used to describe a milder form of pneumonia. It means that you don't need to be hospitalized or bedridden. In essence, you can be walking around. Pneumonia affects about two million people annually. It is an infection of the lungs (one or both) where the tiny sacs fill with mucous, which causes coughing and makes breathing difficult. The illness is contagious but how contagious depends on the type of pneumonia. Most pneumonia, including walking pneumonia, is caused by bacteria, which can be treated with antibiotics. Pneumonia can also be caused by a virus. If you have the viral form, antibiotics should not be prescribed because they do not kill viruses. Instead, other medicines, such as antivirals, would be the typical course of treatment. For people over age 65, pneumonia can be more dangerous because the immune system weakens with age. The illness can linger longer and cause fatigue for a month or more. Vaccines are recommended for older adults, people with asthma, diabetes, liver disease or other chronic conditions. The current recommendation is that all adults 65 years of age or older receive a dose of PCV13 (pneumococcal conjugate) vaccine followed by a dose of PPSV23 (pneumococcal polysaccharide) vaccine at least one year later. The vaccine is a once-in-a-lifetime shot, though some physicians may recommend a booster shot five to 10 years after the first.

**Q** I suffer from tinnitus, which sometimes comes and goes for no apparent reason. When it does occur, it's really annoying. Are there any new cures out there?

**A** Unfortunately, there are no cures, but there are treatments that can help people better cope with the condition. Tinnitus typically occurs from overexposure to loud noises that damage the sensory hair cells in the inner ear. Musicians, factory workers, police, fire, and ambulance workers as well as military person-

nel can all be affected. But just like your tinnitus comes and goes, sometimes the condition develops for no apparent reason and can disappear as mysteriously as it came. Though you "hear" noise, the problem may not be what's happening in your ears but in your brain. Scientists are still trying to figure exactly what's going on, but the current thinking is that it's like chronic pain in that the sound persists even after the noise that caused it is long gone. Noise-related damage to the inner ear may throw off how sound is processed in the brain. In a recent clinical trial, researchers found that transcranial magnetic stimulation (TMS) significantly improved tinnitus symptoms for more than half of study participants. TMS generates a magnetic field that can penetrate and affect the activity of brain neurons. As for treatments available now, if hearing loss accompanies the tinnitus, some people benefit from hearing aids. There are also wearable sound generators that fit into the ear and emit sounds that mask tinnitus. Behavioral counseling can help people find different ways to cope, too. Earwax can cause tinnitus and simply clearing it out can "cure" the problem. To prevent tinnitus from getting worse, avoid loud environments, or wear ear plugs to dampen the sound.

**Q** What's the difference between heart attack and sudden cardiac arrest?

**A** Both are serious heart events but they are distinctly different. A heart attack is a circulatory issue, and a sudden cardiac arrest is an electrical problem. A cardiac arrest is sudden, often fatal, and occurs without warning. The heart stops beating and no longer pumps blood. Cardiac arrest may be reversed with immediate CPR or use of an automated external defibrillator. A heart attack results from blocked arteries. Without proper blood flow to the heart, a section of it may begin to die. Heart attacks can be mild or intense but typically the heart does not stop beating. While not as fatal as a cardiac arrest, a heart attack is serious. Both conditions require immediate medical attention. ■

## IN COMING ISSUES

HEALTHY  
AGING —  
Managing  
caregiver stress.

TREATMENTS—  
Common  
culprits that  
cause itch.

NUTRITION—  
Energy boosts.

### SUBSCRIPTIONS

\$39 per year (U.S.)  
\$49 per year (Canada)  
Reprints for publication and  
web posting available

For subscriber and customer  
service information, write to:  
*Healthy Years*  
PO Box 8535  
Big Sandy, TX 75755-8535  
Call toll-free: 866-343-1812

### EDITORIAL CORRESPONDENCE

Executive Editor  
*Healthy Years*  
P.O. Box 5656  
Norwalk, CT 06856-5656

HealthyYears@belvoirpubs.com

We regret that we cannot answer  
letters or e-mails personally.

REPRINTS/WEB POSTING AVAILABLE  
Contact Jennifer Jimolka, Belvoir  
Media Group, 203-857-3144

### ONLINE SERVICE

View your current subscription  
information online at  
[www.healthy-years.com/cs](http://www.healthy-years.com/cs).  
You may also renew your subscrip-  
tion, change your address, or  
contact customer service online.  
Express written permission is  
required to reproduce, in any man-  
ner, the contents of this issue, either  
in full or in part. For more informa-  
tion, write to Permissions, *Healthy  
Years*, P.O. Box 5656, Norwalk, CT  
06856-5656.

### DISCLAIMER

*Healthy Years* is intended to pro-  
vide readers with accurate and  
timely medical news and infor-  
mation. It is not intended to give  
personal medical advice, which  
should be obtained directly  
from a physician. Acting on any  
information provided without  
first consulting a physician is  
solely at the reader's risk. We  
regret that we cannot respond  
to individual inquiries about  
personal health matters.

From time to time, we make our  
list of subscribers available to  
carefully screened institutions  
and organizations offering  
products or services we believe  
you may be interested in. If you  
would prefer that we not release  
your name to these organiza-  
tions, just let us know. Please  
include the mailing label from  
your issue with your request,  
and send it to the customer ser-  
vice address at the left.