

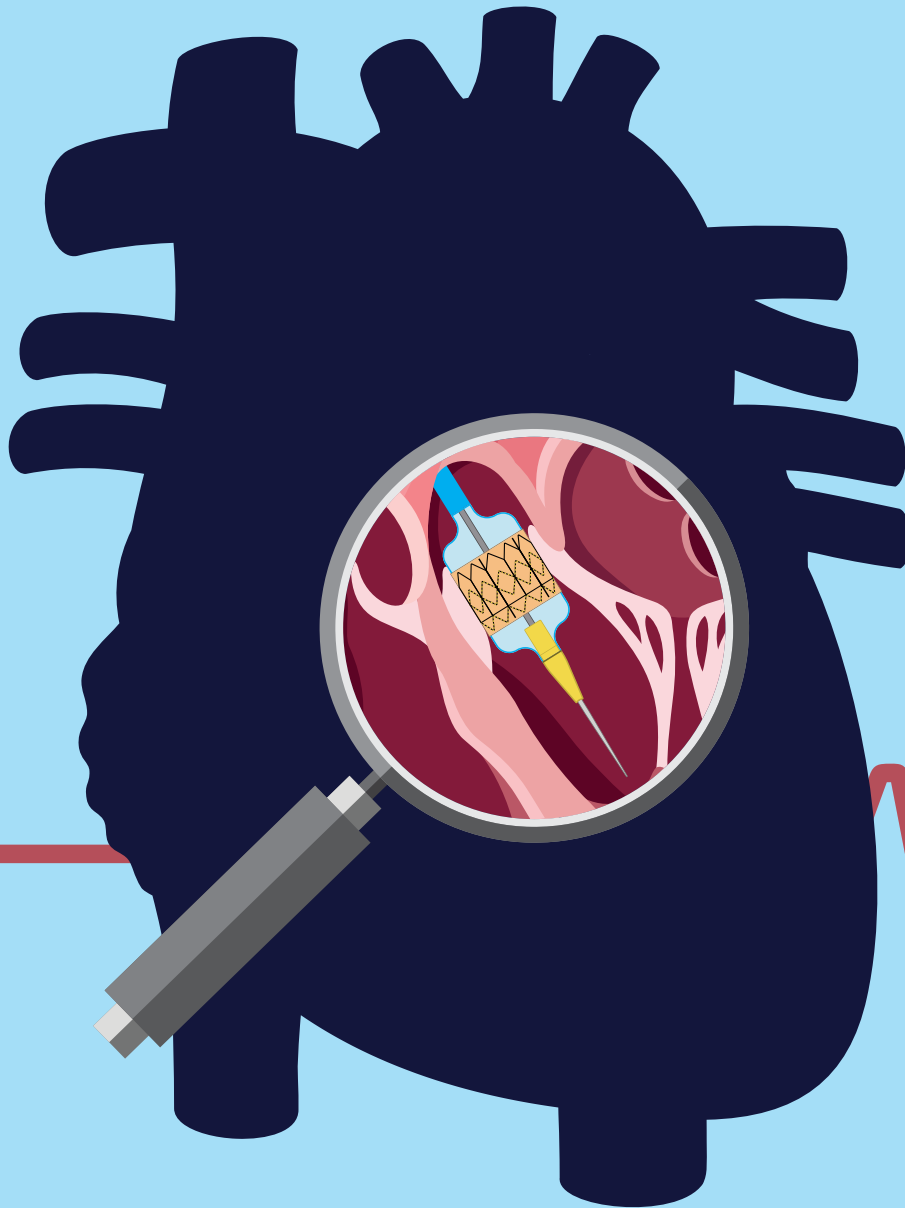
MAY/JUNE 2024

 AMERICAN ASSOCIATION
OF MEDICAL ASSISTANTS

Volume 57 | Issue 3

Medical Assisting **Today**

The Magazine for Professional Medical Assistants



IN A
HEARTBEAT

Transcatheter Aortic
Valve Replacement for
Patients with Aortic Stenosis

A-May-zing Opportunities

May is the month for sunshine, flowers, and endless possibilities. This is the time of year to celebrate our new state society and local chapter leaders. The achievements made to get to this level are just the beginning.

I am happy to report that the AAMA Board of Trustees (BOT) has been diligently working on projects to enhance the association and recognition of the profession. The AAMA website is undergoing a rebuild, and many exciting new features are to come.

The BOT Representatives Bureau members were exhilarated by the opportunity to attend state meetings. Providing AAMA updates, networking, and learning from state society leaders and members were just a few highlights. Interacting with members has always inspired me. The BOT thanks the members for their hospitality and for sharing their time and ideas during their state meetings.

When I was a student, my medical assisting educator encouraged me to become an AAMA member, but I did not fully understand the importance. However, as a mentee, I quickly learned the value of networking and keeping abreast of changes through continuing education and professional development opportunities. Discuss the value of lifelong learning experiences with your coworkers and employers. Share why you became an AAMA member, maintain membership, and keep your credential current. Remember, you are the best member advocate and can recruit, encourage, and mentor new members.

We thank medical assisting educators for their contributions. Let us celebrate graduating medical assisting students, encourage them as they take certification exams, and welcome them to the profession. Post a message on your social media pages. Reach out to a school with some words of encouragement and offer information about attending a local chapter or state meeting.

AAMA members are winners because of their commitment to the profession and dedication to continued learning and professional development. Continue promoting the profession by spreading the word about medical assisting and the numerous opportunities available.

Each year, AAMA members nominate deserving candidates for the various categories of the Excel Awards. Share information about the Student Essay Competition, Medical Assistant Employer of the Year Awards, and Rising Star Awards. Submit nomination forms for the State Society Excellence Awards and Awards of Distinction. Submission forms and eligibility information are available on the "2024 Excel Awards" webpage on the AAMA website. The deadline for all awards is July 15, 2024, and winners will be announced and honored during the 2024 AAMA Annual Conference.

Join us for the 68th AAMA Annual Conference "Strength in Learning"
September 20–23, 2024. The location is Grand Rapids, Michigan, and the host hotel is the Amway Grand Plaza Hotel, Curio Collection by Hilton.
This conference offers excellent continuing education, opportunities to meet fellow members, and networking with leaders.

Monica Case, CMA(AAMA)

Monica Case, CMA (AAMA)
2023–2024 AAMA President



AAMA® Mission

The mission of the American Association of Medical Assistants® is to provide the medical assistant professional with education, certification, credential acknowledgment, networking opportunities, scope-of-practice protection, and advocacy for quality patient-centered health care.



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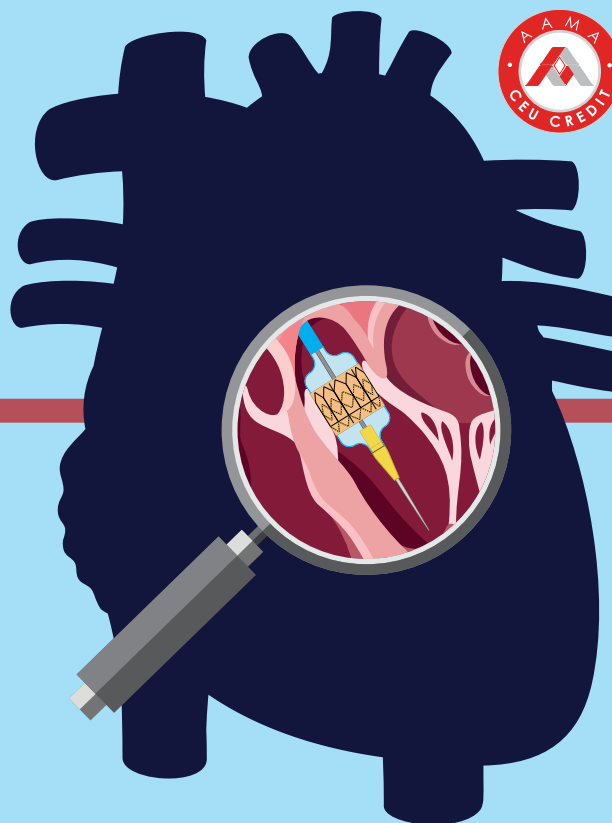


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AAMA update

Get Your Ducks in a Row for Conference

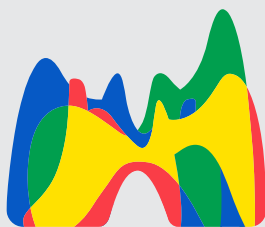
Register online for the 68th AAMA Annual Conference via Cvent. Registrants may securely pay their registration fees online, select the continuing education sessions they wish to attend, and note any dietary restrictions.

Reserve your spot in the AAMA room block at the host hotel by Aug. 28, 2024, to take advantage of the conference registration discount. You must provide a reservation confirmation number from the Amway Grand Plaza Hotel, Curio Collection by Hilton to get the conference registration discount.

Conference dates: Sept. 20–23, 2024

Conference registration deadline: Aug. 20, 2024

Hotel registration deadline: Aug. 28, 2024



68th Annual
AAMA CONFERENCE
Strength in Learning



Forms Due Soon

Find all these forms, deadlines, and more on the “Guidelines and Forms” webpage, which is accessible via the “Volunteers” drop-down menu:

State and Chapter Officer Election Notification Form. *State and chapter officers*—don’t miss important mailings! Complete and submit this form to OfficerNotification@aama-ntl.org by **June 1**.

AAMA Life Membership Applications. *State officers*—nominate an outstanding leader of the AAMA for national Life Membership by sending the application to SFlynn@aama-ntl.org by **June 1**.

Delegate and Alternate Submission Form. *AAMA members and state presidents*—note this deadline:

- *Members*—talk to your state president about serving as a delegate or alternate in the AAMA House of Delegates. If you are attending, consider volunteering to serve on a House committee.
- *State presidents*—complete and submit this form to SFlynn@aama-ntl.org by **June 23**. ♦

On the Web

Check Certification Expiration [Under My Account/My Certification Information](#)

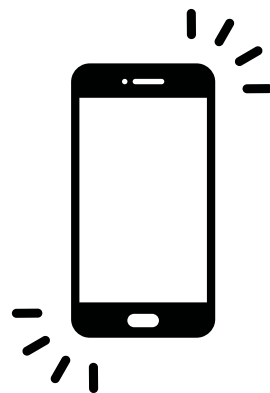
Time flies—make sure you know when your recertification expires! CMAs (AAMA)* can double-check their certification expiration dates on the AAMA website. Sign in or create an account to stay ahead of the curve.

Recertify Online [Under Continuing Education/Apply to Recertify by CE](#)

Current CMAs (AAMA) can recertify online—regardless of having all 60 or as few as 30 recertification points from AAMA continuing education sources. Recertification is just a few clicks away! ♦

Text Reminders for Recertification

Make sure the cell phone number on your AAMA profile is correct so you receive reminders and tips about CMA (AAMA) recertification. Allow the AAMA to track your deadlines and keep you updated on when you must take action to maintain your credential. ♦



AAMA Calendar

Events

AAMA Annual Conferences

68th—Grand Rapids, MI

Sept. 20–23, 2024

69th—Arlington, VA

Sept. 19–22, 2025

Medical Assistants Recognition (MAR)

MARWeek

Oct. 21–25, 2024

MARDay

Oct. 23, 2024

Board Meetings

Board of Trustees

June 23–24, 2024

Continuing Education Board

June 21–22, 2024

Certifying Board

July 18–19, 2024

2024 deadlines

Life Membership nominations

June 1

State officer election notification submissions

June 1

State delegates and alternates submissions

June 23

Conference program advertising

July 1

Excel Awards

July 15

National volunteer leadership applications

Aug. 1

Visit the “Guidelines and Forms” webpage (which is available via the “Volunteers” tab) to access the information hub for deadlines and forms. ♦

2024 Excel AWARDS ★



Enter the Excel Awards!

The AAMA Excel Awards recognize the most excellent publications, promotions, people, and more! Here are the award categories:

- Medical Assistant Employer of the Year Awards
- Student Essay Competition
- Rising Star Awards
- State Society Excellence Awards
 - Excellence in Publishing
 - Excellence in Marketing, Promotion, and Recruitment
 - Excellence in Website Development
 - Excellence in Community Service
- Awards of Distinction
 - Medical Assistant of the Year Award
 - Leadership and Mentoring Award
 - Golden Apple Award

Submission Info

Instructions and forms:

Find details on the “Excel Awards” webpage (click the “News & Events” tab, then “Conference” from the drop-down menu, then “Excel Awards” from the left-side menu).

Deadline: July 15, 2024

Recognition: Winners will be formally saluted at the 2024 AAMA Annual Conference.

New York Governor Urges New York Legislature to Allow Medical Assistants to Administer Immunizations



Donald A. Balasa, JD, MBA
AAMA CEO and Legal Counsel

For over thirty years, New York law has not permitted licensed providers to delegate to medical assistants the administration of medication. On January 17, 2024, New York Governor Kathy Hochul submitted legislation to the New York State Senate and General Assembly that would permit physicians, nurse practitioners, and physician assistants to delegate to appropriately trained medical assistants the drawing up and administering of immunizations in outpatient settings under the licensed provider's authority and supervision.

This legislation is similar to the 2022 Connecticut legislation that allows licensed providers to delegate the administration of vaccines to educated and credentialed medical assistants.

One factor in the introduction of this legislation was the following resolution debated during the 2023 House of Delegates of the Medical Society of the State of New York:

Whereas, maintaining adequate clinical staffing levels ensures optimal access to primary care services and reduces stressors leading to primary care physician burn-out; and

Whereas, the ongoing shortage and cost to recruit and retain the limited pool of nurses has directly impacted access for private practice primary care services relative to hospital systems that regularly receive external funding, further stressing primary care physicians; and

Whereas, Credentialed Medical Assistants are an established contributor in supporting primary care, working under direct supervision of physicians, are educated

and trained in administrative and clinical tasks; and

Whereas, relative to neighboring states, the existing scope of work for Credentialed Medical Assistants as stated by the New York State Law Section 6530(11) is notably limited considering the training and education Credentialed Medical Assistants receive; and therefore be it

RESOLVED, that Medical Health Associates of Western New York, PLLC, the largest provider of pediatric primary care services in WNY with 55,000 pediatric and adolescent patients, supports legislation to require the New York State Department of Education to review and expand the scope of work of Credentialed Medical Assistants; therefore, be it further

RESOLVED, the legislation should result from input directly from organized primary care physician groups prior to being submitted to the New York State Department of Education for drafting; ... and be it further

RESOLVED, that the existing scope of work for other states, including Pennsylvania, Colorado, Ohio, and Florida be considered as appropriate alternatives to the scope of work currently in place in New York State.¹

For historical perspective, the following resolution was considered by the 1996 House of Delegates of the Medical Society of the State of New York. (The language from 1996 is being kept in the below.) I was the primary drafter of the following resolution, with significant assistance from Clive Caplan, MD, and AAMA Past President Janice Caplan, CMA-A (AAMA):

WHEREAS, for several decades physicians duly licensed by the State of New York

have had the de facto right to delegate to unlicensed personnel under their direct supervision certain clinical procedures which do not constitute the practice of medicine, require the exercise of any medical judgment, or are explicitly limited by New York law to only licensed allied health personnel;

WHEREAS, for several decades the unlicensed allied health professionals known as medical assistants have provided invaluable assistance to New York physicians in the administrative, clinical, and managerial aspects of practice;

WHEREAS, the New York State Department of Education and the New York Board of Nursing are currently taking the position that New York law prohibits physicians from delegating the administration of non-intravenous injections and other clinical duties to unlicensed employees functioning under the physician's direct supervision, and some clinics and physicians' offices have been inspected and cited for such alleged violations of New York law;

WHEREAS, the medical assisting profession is recognized by the United States Department of Labor, is listed in the *Dictionary of Occupational Titles* and the *Occupational Outlook Handbook*, and is projected by the United States Bureau of Labor Statistics to be one of the fastest growing health professions through the year 2005;

WHEREAS, joint accreditation of post-secondary academic programs in medical assisting has been done by the American Medical Association's Committee on Allied Health Education and Accreditation (CAHEA) and the Curriculum Review Board (CRB) of the American Association

For more reading, visit the AAMA Legal Counsel's blog:

Legal Eye

On Medical Assisting



of Medical Assistants Endowment since 1969;

WHEREAS, the Certification Examination for Medical Assistants leading to the Certified Medical Assistant (CMA) credential has been given by the American Association of Medical Assistants since 1963;

WHEREAS, both the American Association of Medical Assistants and the New York State Society of Medical Assistants do not advocate licensure for medical assistants and do not intend to pursue licensure for medical assistants in New York State unless: (1) licensure is the only way of protecting the physician's right to delegate and the medical assistant's right to be delegated to; and (2) the Medical Society of the State of New York agrees that medical assisting licensing legislation should be pursued in the New York legislature;

RESOLVED, that it is the position of the Medical Society of the State of New York (MSSNY) to support the New York State Society of Medical Assistants (NYSSMA) in its efforts: (1) to protect the legal authority of licensed physicians to delegate to unlicensed personnel under their direct supervision certain clinical procedures which do not constitute the practice of medicine, require the exercise of any medical judgment, or are explicitly limited by New York law to only licensed allied health personnel; and (2) to protect the legal right of unlicensed personnel to be delegated such procedures by a supervising physician.

RESOLVED, that the Medical Society of the State of New York support the position of the New York State Society of Medical Assistants that medical assistants be allowed to continue to perform the usual

duties of their profession—including but not limited to functions such as telephone screening, venipuncture, administration of intramuscular and subcutaneous injections (including immunizations), placement of skin tests, performance of EKGs and other tests—under the direct supervision of a physician-employer, the physician having evaluated and approved of the medical assistant's ability to undertake any specific procedure or responsibility; and be it further

RESOLVED, that the Medical Society of the State of New York evaluate the various legal means to protect the physician's right to delegate and the unlicensed employee's right to be delegated to, and that if a statutory change is deemed to be the best or the only means of accomplishing the aforesaid ends, that the MSSNY develop and promote the appropriate legislation as part of its Annual Legislative Agenda until such ends have been accomplished.²

Further information about this New York legislation will be provided on the AAMA website and in *Medical Assisting Today*. ♦

Questions and thoughts about this article may be directed to the author at DBalasa@aama-ntl.org.

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2. Medical Society of the State of New York. 1996.

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By Pamela Schumacher, MS, CCMP

Nitrous oxide (N_2O) is a colorless gas long relied on for its sedative and analgesic properties in dental procedures and pain relief in other areas, such as labor and delivery. However, as with any drug, it can be abused, and medical assistants should understand its side effects and recognize symptoms of overexposure and abuse to best protect patients.

Airing It All Out

N_2O , which has been in use for over 150 years, was discovered in 1793 by the English scientist Joseph Priestly. It is sometimes referred to as laughing gas or happy gas due to its ability to cause euphoria.¹

“Nitrous oxide helps with sedation and pain relief, which makes it great for dental procedures,” says Alopi M. Patel, MD, FASA, an associate professor in the anesthesiology and perioperative medicine department at Rutgers Robert Wood Johnson Medical School in New Brunswick, New Jersey. “It fills a niche because it has analgesic and anxiolytic [anxiety-reducing] properties, meaning it can help the patient relax but not cause so much sedation that they have to be reawakened.”

N_2O is administered by inhalation, absorbed by diffusion through the lungs, and eliminated through respiration. The elimination half-life of N_2O is about five minutes. N_2O gets excreted essentially unmetabolized through the lungs; humans metabolize less than 0.004% of N_2O .¹ As a general anesthetic, N_2O is generally not used as a single agent due to its weakness. However, it is commonly used in dentistry as a single agent with oxygen for partial sedation. It may be used as a carrier gas with oxygen in combination with more potent gases for surgical anesthesia.¹

“Being relatively insoluble in blood and body tissues gives nitrous oxide a fast-on and fast-off clinical effect,” says Mark Zakowski, MD, FASA, a professor of anesthesiology at Cedars-Sinai Medical Center in Los Angeles, California. “The clinical effect may, in part, be due to N-methyl-D-aspartate receptor antagonism, which produces dissociative

anesthesia, similar to ketamine use.”

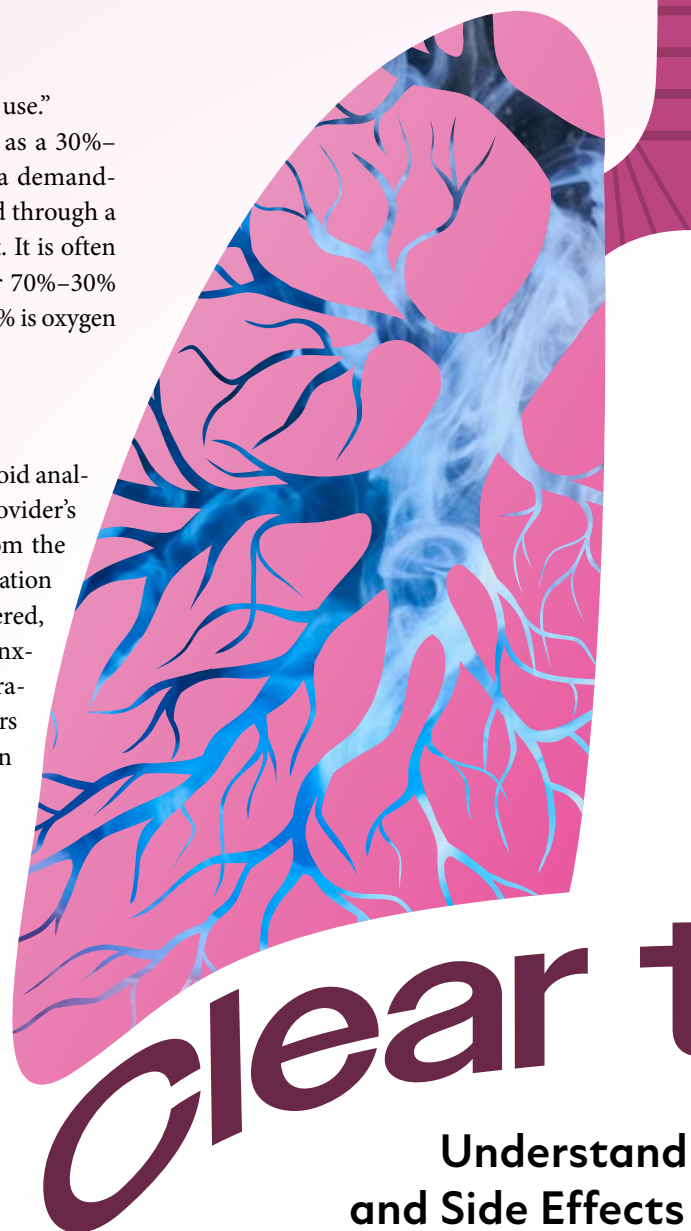
N_2O can be administered as a 30%–70% N_2O -oxygen mixture by a demand-valve mask or self-administered through a mouthpiece held by the patient. It is often administered as a 50%–50% or 70%–30% N_2O -oxygen mixture; at least 30% is oxygen to avoid hypoxemia.²

Breathe Easy

N_2O is a good alternative to opioid analgesia, because it removes the provider’s subjective choice of dosage from the equation. Patients like the medication because it can be self-administered, significantly reduces pain and anxiety, and does not require an intravenous administration.³ N_2O offers several other key benefits when used for pain relief²:

- N_2O ’s low solubility in the blood allows for rapid onset of action in the brain and rapid clearance through the lungs shortly after discontinuing use, decreasing patients’ length of stay.
- It provides a minor amnestic effect; patients sedated with N_2O often have little recollection of pain during a procedure.
- It causes minimal effects on the patient’s hemodynamic status, spontaneous respiration, cerebral blood flow, and protective airway reflexes. This makes it safe to use in emergencies in which patients may have underlying physiologic issues.
- N_2O has a long history of having an excellent safety profile with few reported cases of adverse events.

Despite its many positive attributes, patients can experience side effects from N_2O , including lightheadedness, headaches, dizziness, confusion, nausea, and vomiting—particularly with prolonged use or when combined with other analgesic agents—as



Understand and Side Effects

well as euphoria. This euphoria contributes to its abuse potential. In fact, at least 20% of medical and dental students have admitted to recreationally trying nitrous oxide.³

“Nitrous oxide may produce nausea—reported incidence 0–45%, vomiting—0–16%, and dizziness, drowsiness, or dysphoria—[less than] 5%,” notes Dr. Zakowski, who is also the chair of the American Society of Anesthesiologists Committee on Obstetric Anesthesia. “Nitrous oxide also binds to and inactivates vitamin B_{12} , an important cofactor for key metabolic pathways.”

No Laughing Matter

“Nitrous oxide is mostly used in the operating room during surgery, where it’s used as an



the Air

the Benefits of Nitrous Oxide

adjunct, but it's not the only type of gas we use," says Dr. Patel, who also cohosts *The Hurt* podcast, which covers topics relating to women's pain and general health. "Nitrous oxide is also used on the labor and delivery floor. It's relaxing, doesn't harm the baby, and moms can breastfeed after using it. It helps with pain relief before an epidural and may even help them to forego an epidural. It's also used in dental offices [to provide] relaxation and pain relief."

"Nitrous oxide has been widely used in Europe and Australia during labor, but not as much in the United States," says Dr. Zakowski. "It became slightly more popular after the equipment for administering nitrous oxide during labor became available a decade ago. While nitrous [oxide] has

A Real Gas

Share the 411 about N_2O with patients⁴:

- Nitrous oxide is a generally safe medication with fewer side effects than other inhaled gases.
- Side effects (e.g., dizziness, nausea, vomiting, fatigue, headache, excessive sweating, or shivering) can occur if the patient inhales too much gas or too quickly.
- Patients may feel sluggish after inhaling nitrous oxide, which typically wears off quickly.

not been shown to be particularly effective in reducing pain scores during labor, ... patient satisfaction may be higher for those who used it. People like the self-administration, fast onset, and feeling in control."

Because of its unique characteristics, N_2O can be especially useful in rescue environments, in which time is critical.³ N_2O has been used successfully by emergency medical personnel in cases of chest pain, acute urinary retention, kidney stones, severe burns, fractures, dislocations, and other forms of musculoskeletal trauma. N_2O has also proven effective among the pediatric population used as sedation and analgesia before intravenous cannulation.³

N_2O is also widely used in nonmedical areas, including the semiconductor industry, car racing, and food processing.¹

Medical assistants may encounter patients who have been exposed to N_2O professionally or recreationally. Though typically very safe, a person could overdose on N_2O . The most common reasons for an overdose include inhaling too much of the gas at once and long-term exposure.⁴

"Aside from clinical uses, chronic exposure may lead to megaloblastic anemia and neurologic symptoms like ataxia, neuropathy, and myelopathy," says Dr. Zakowski. "Older studies before dental office scavenging of anesthetic gases showed an association with pregnancy loss. Nitrous oxide also produces reactive oxygen species—free radicals which can produce damage to other compounds—which can damage DNA."

In addition to overexposure in work settings, the gas can be abused recreationally. Most commonly, this occurs through household products in which nitrous oxide is used as a propellant.³ Symptoms of N_2O overdose may begin with hypersensitivity in the hands and feet, with long-term exposure leading to loss of sensation, motor weakness, and neuromotor deficits. Repeated occupational exposure may lead to problems with fertility and increased rates of spontaneous abortion, so pregnant people should avoid nitrous oxide in the first two trimesters of pregnancy.³

"Medical assistants should be familiar with the pharmacology, side effects, signs of oversedation, and treatment protocols," says Dr. Zakowski. "Scavenging should always be used to reduce environmental and personal exposure to nitrous and other medications. Nitrous oxide exposure badges are also available for intermittent checking of personal exposure. Also, note that nitrous oxide supports combustion to a [greater] extent than oxygen. That's why they use nitrous oxide to boost race cars, so no smoking!" ♦

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Inhaler Screening Test for Lung Cancer

Lung cancer is the leading cause of cancer deaths around the world, causing nearly 2 million deaths each year, according to the World Health Organization. Past research shows that only 16% of people received a lung cancer diagnosis at an early stage; early detection can offer patients better outcomes. In the United States, the average five-year lung cancer survival rate is as low as 18%, but the rate is 55% when diagnosis is made at an early stage.

Researchers from the Massachusetts Institute of Technology developed a new method for detecting lung cancer at earlier stages using an inhaler and a urine test. They worked with a technology using nanoparticle sensors breathed in through an inhaler or nebulizer. The nanoparticle sensors can search the lungs for cancer and provide results within 20 minutes, reports Medical News Today.

Lung cancer is hard to detect early. The current standard for detecting lung cancer is through a low-dose computed tomography (CT) scan, but they can sometimes produce false positives and negatives. Most lung cancer cases are diagnosed at an advanced stage due to the lack of symptoms in the early stages.

Scientists believe that lung cancer screenings via inhaler can expand accessibility around the world, as CT scans are limited in some countries. Additionally, CT scans can be costly. This promising advancement can help encourage the early detection of lung cancer and improve health outcomes for lung cancer patients in the future.



Marijuana Use Linked to Worsened Heart Health

The number of cannabis users has significantly increased in recent decades in the United States, where recreational use is now legal in nearly half the states. A federal survey in 2019 showed that nearly 50 million people ages 12 and older reported trying cannabis at least once, a number that nearly doubled since 2002. However, new research published in the *Journal of the American Heart Association* reveals alarming associations between cannabis use and increased risk for heart attacks and strokes.

The study analyzed survey data from nearly 435,000 patients. Notably, researchers sought some participants from the general public, some who had never smoked tobacco or electronic cigarettes, and some who were at risk for heart disease.

Survey respondents who said they used cannabis in any form had a higher risk for cardiovascular problems, regardless of tobacco use or underlying cardiovascular risk factors. Smoking cannabis, however, may pose additional risks because of the inhalation of particulate matter.

Compared to those who did not use cannabis, daily cannabis users faced a 25% higher risk of heart attacks and a 42% higher risk of strokes. Among men under 55 and women under 65, using marijuana resulted in 36% higher combined odds for coronary heart disease, heart attack, or stroke, regardless of whether they also used tobacco products.

While the research does not confirm causation, it signals a potential link between cannabis use in any form and heart problems, prompting health care workers to caution patients of the risks of cannabis, especially as it becomes more prevalent and legal across the United States.



PrEP Underused

Over 30,000 people in the United States are diagnosed with HIV annually, and about 1.2 million people are living with the infection. Only a fraction of people in the United States who are at risk of HIV are taking—or even aware of—highly effective HIV prevention drugs on the market, reports CBS News.

Pre-exposure prophylaxis (PrEP) is about 99% effective in preventing HIV infection through sexual contact when taken as prescribed, but only about one-third of the more than million Americans who could benefit from PrEP are using it, according to the Centers for Disease Control and Prevention (CDC).

The CDC identifies individuals having unprotected sex, especially those with partners living with HIV, multiple sexual partners untested for HIV, or recent sexually transmitted disease diagnoses, as potential candidates for PrEP.

While 94% of white individuals at risk are on PrEP, the numbers drop significantly for Black and Hispanic/Latino communities, as well as for women.

Cost remains a significant barrier, with an average annual expense of the medication, clinic visits, and laboratory tests exceeding \$5,000.

Awareness and access to PrEP are crucial in the fight against HIV. Health care workers must normalize conversations about sexual health and ensure all patients have the information and resources they need.

Dementia Detection via Curved Walking Paths

Scientists can use several different methods to determine whether a person is experiencing early cognitive decline, including evaluating their coordination and balance by observing their walk. In a recent study conducted by Florida Atlantic University, researchers found that having participants walk along a curved path instead of a straight line may be better for detecting mild cognitive impairment (MCI) due to the increased demand for coordination and motor skills.

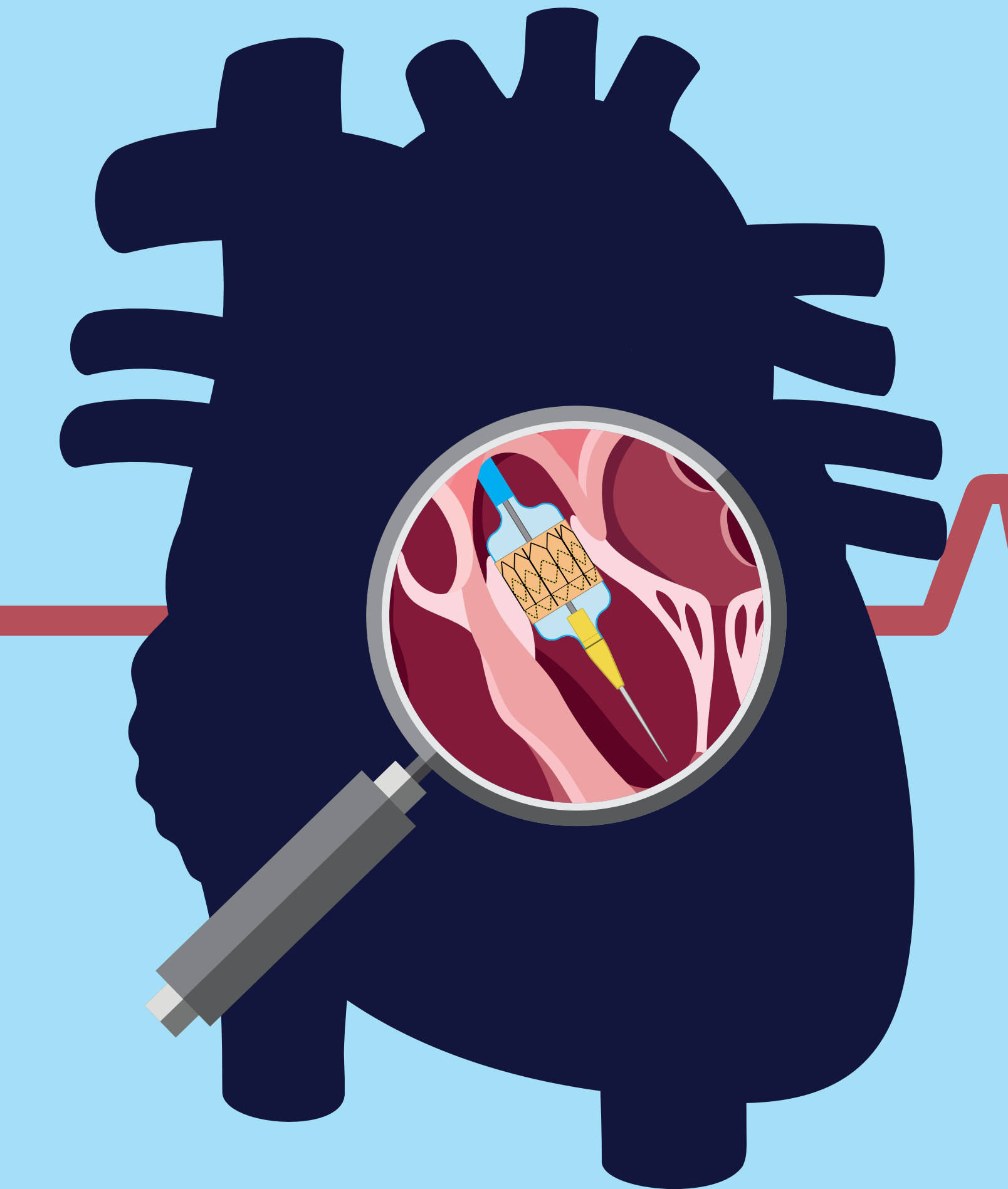
MCI is defined as an early stage of memory loss or other cognitive ability loss in those who can still independently perform most daily activities, according to the Alzheimer's Association. Those with MCI are at greater risk for Alzheimer disease, according to the National Institute on Aging, but early intervention can slow the progression and improve the quality of life for patients.

The study had 30 healthy controls and 25 people with mild cognitive impairment perform walking tests on straight lines and oval paths. Researchers used depth cameras to detect participants' body movements and gaits.

Participants with MCI had reduced walking performance, which was even more pronounced on curved paths. Participants with MCI also showed reduced step length and speed, according to Everyday Health.

Currently, standard clinical evaluations for dementia include physical and neurological examination, blood work, brain imaging, detailed history, and cognitive testing. However, these methods can be time-consuming, expensive, and outside some physicians' capabilities. This study suggests that observing gait changes can be a noninvasive, inexpensive, and easy way to detect MCI, offering a path forward for the early detection of MCI in older patients.







IN A HEARTBEAT

Transcatheter Aortic Valve Replacement for Patients with Aortic Stenosis

By Mark Harris

The field of minimally invasive heart surgery is giving new hope to many patients with aortic stenosis. Transcatheter aortic valve replacement (TAVR) is a groundbreaking cardiac procedure that makes it possible for individuals with severe aortic stenosis—a potentially life-threatening heart condition—to replace their faulty aortic valve with a new valve without undergoing open-heart surgery.

For eligible patients, TAVR is an attractive alternative to surgical aortic valve replacement (SAVR), the traditional open

surgery used for decades to replace faulty aortic valves. During TAVR, the cardiologist inserts a catheter into a blood vessel in the groin or chest area to thread a new replacement valve to the area of the aortic valve. Once the new valve, which is made from animal tissue, is set in the right location, a balloon on the tip of the catheter will press the replacement valve into place. Notably, cardiologists may sometimes use a replacement valve that expands without the use of a balloon.¹

The TAVR procedure requires minimal sedation and offers much faster recovery

than SAVR. Typically, patients undergoing TAVR will stay one night in the hospital and can resume their normal activities within a week or so.² After the TAVR procedure, patients were advised until recently to take a prescription blood thinner (Plavix) and low-dose aspirin to prevent blood clots. More recent guidance recommends using low-dose aspirin alone as adequate anti-coagulant therapy. Otherwise, patients in recovery face few restrictions.²

TO THE CORE

Notably, aortic stenosis is a common and

serious heart valve disease.³ More than 12% of older Americans have some degree of stenosis in their aortic valve, according to the American Heart Association.³ The condition involves the narrowing of an opening in the aortic valve that restricts blood flow from the left ventricle to the aorta. It can also adversely affect pressure in the left atrium.⁴

As the condition develops, aortic stenosis can lead to muscular thickening in the wall of the left ventricle. The muscle thickens because the ventricle must work harder to pump blood through the narrowed valve. This left ventricular impairment restricts the room in the lower heart chamber, which is necessary to adequately supply blood to the body. Consequently, heart failure can occur as the body is no longer getting enough oxygen-rich blood to function properly.⁴

“Aortic stenosis is a condition that develops as we age, and it’s much more common in patients in their 70s, 80s, and 90s than in younger patients,” says Paul Michael Grossman, MD, an interventional cardiologist with the Frankel Cardiovascular Center at the University of Michigan Health in Ann Arbor. “The most common form of aortic stenosis is calcific aortic stenosis. As the patient ages, the valve wears out and becomes more calcified, thick, stiff, and scarred. And patients develop aortic stenosis. Other forms of aortic stenosis often come on at slightly younger ages. These patients are born with an abnormal aortic valve, [called a] bicuspid aortic valve. Because of the turbulent flow through those valves, these valves

generally can wear out at a younger age, so [in] patients in their 60s and 70s as opposed to patients in their 80s or older.”

In the early stages, patients may not recognize they have a developing problem with their aortic valve. “The symptoms associated with aortic stenosis are often very subtle at first,” remarks Dr. Grossman. “Many patients may experience a decline in exercise tolerance or shortness of breath with physical activity. They may attribute it to other things like old age, arthritis, etc. But generally, we see when we interview patients that they start limiting themselves. Their family or friends may notice that the loved one or the friend is slowing down, [is short] of breath at the top of the stairs, and doesn’t do as much as they used to. They seem more tired and less active. Then, as the disease progresses, patients get more symptoms of heart failure, light-headedness with position changes, and angina.”

As a progressive disease, the medical management of aortic stenosis will depend on the stage or severity of the condition. “When patients develop symptoms of aortic stenosis, we need to do something, because the condition will continue to progress over time,” explains Dr. Grossman. “Survival with severe symptomatic aortic stenosis if left untreated is poor. In fact, it’s only about 50% at one to two years, based on historical population studies. The management of all patients with severe, symptomatic aortic stenosis is valve replacement.”

IN THE SAME VEIN

In 2011, the Food and Drug Administration (FDA) approved the TAVR procedure for patients considered ineligible for open-heart surgery.⁵ Since then, TAVR eligibility has gradually expanded based on results from randomized controlled trials demonstrating that TAVR is either superior or equivalent to SAVR.⁶

As such, TAVR was approved in 2016 by the FDA for use in eligible patients at moderate surgical risk. In 2019, the FDA expanded TAVR eligibility to include all surgical risk categories for patients with severe symptomatic aortic stenosis.⁵ While TAVR is now a viable treatment option for many patients with aortic stenosis, it has not fully replaced the older surgical approach. Which treatment intervention is the most appropriate option will depend on a host of clinical considerations assessed by the patient’s heart team.⁷

“Like many medical procedures, TAVR was initially tested in patients who were not good candidates for more invasive surgical aortic valve replacement,” explains Dr. Grossman. “So early on, it was tested in patients who were not candidates for surgery or [were at] high risk for surgery. By high risk, I mean high risk of a complication, either at the time of surgery or [during] recovery or prolonged recovery. These are patients who had other comorbid conditions, which increased the risk of a traditional surgical aortic valve replacement. In those patient populations, TAVR was found to be as good or superior to open-heart surgery.”

Today, the TAVR option is rapidly transforming medical care for aortic stenosis. “Over the last ten years, the indications for TAVR have expanded as TAVR versus surgery has been tested in healthier patient populations,” reports Dr. Grossman. “For many patients, TAVR is now the preferred treatment option compared to surgical aortic valve replacement.”

RED FLAGS

Despite advances in treatment, concerns that aortic stenosis is underdiagnosed in many patients prevail. “We need to acknowledge

RESOURCES

University of Michigan Health Frankel Cardiovascular Center

<https://www.umcvc.org>

UCLA Health Cardiovascular Center

<https://www.uclahealth.org/locations/cardiovascular-center>

Mended Hearts

<https://mendedhearts.org>

WomenHeart: The National Coalition for Women with Heart Disease

<https://www.womenheart.org>



The advent of TAVR has been transformative for the field of interventional cardiology, offering a less invasive alternative for aortic valve replacement. I remember the first patient that I ever had to take care of was during ... my third year of medical school in 2003. It was a patient with severe aortic stenosis that was not an operable candidate. We could not offer that patient therapy at that time, and I keep thinking about how today, that patient would have been a routine TAVR procedure. It's amazing how technology has changed so rapidly. TAVR represents the ever-present shift towards minimally invasive procedures. Not only does the therapy broaden the scope of patients who are eligible for treatment, but in many cases, outcomes are even better than with traditional care. TAVR has gone from a relatively little-known therapy 10 years ago to now gaining widespread global acceptance as the standard of care for many patients with aortic stenosis.

—Amir Behi Rabbani, MD



that aortic stenosis is underrecognized in the population,” says Dr. Grossman. “For patients who present for their primary care physician or cardiologist with a heart murmur, we should be doing echocardiograms to understand what is going on and to get an idea of the severity of the aortic stenosis, if that’s indeed what the patient has.”

Identifying aortic stenosis early before it becomes severe is key. “[For] patients who may have moderate aortic stenosis, [we know] that valve disease is going to progress over time, so patients need to be aware of the symptoms,” remarks Dr. Grossman. “As clinicians, we need to follow [up with] these patients on a regular basis, with a visit at least [annually] and potentially with an echocardiogram every one to two years.”

Of course, a range of factors could contribute to undertreatment of aortic stenosis. “There is a large group of patients who have a diagnosis of severe aortic stenosis and for one reason or another don’t get treatment or referred for a conversation about the possibilities and options for treatment,” notes Dr. Grossman. “This may be because patients are reluctant to see a physician, cardiologist, or heart surgeon or more appropriately be seen at a multidisciplinary valve clinic, where they can discuss the treatment options with cardiologists and surgeons and make an informed decision.”

The nature of aortic stenosis can also complicate the challenges involved in improving diagnosis and access to treatment. “I think one of the main issues is the insidious onset

of symptoms that can occur over years and decades,” says Amir Behi Rabbani, MD, an interventional cardiologist and associate clinical director of medicine at the David Geffen School of Medicine at the University of California, Los Angeles. “Aortic stenosis can be asymptomatic, or symptoms can be subtle in its early stages, and many patients may not experience noticeable symptoms until the condition has progressed significantly. Given that aortic stenosis is more common in older adults, symptoms are often attributable to aging. We need to raise awareness among health care professionals and the general public about the potential signs of aortic stenosis that can lead to earlier detection, as we are still seeing many patients at the point where replacing their valves may be futile. Also, we don’t have routine screening for aortic stenosis, so educating institutions to consider screening higher-risk populations for aortic stenosis might be helpful.”

Experts also recognize that social determinants of health—such as racial, ethnic, and economic disparities—are among the factors that may further contribute to the undertreatment of cardiovascular disease, including aortic stenosis.⁸ On this point, Dr. Rabbani agrees that a lack of outreach harms underserved communities. “Only a very small percentage of TAVRs are performed in non-white patients,” he observes. “We don’t yet fully understand why this barrier exists; however, we should make every effort in the future to reach out to our

underserved communities where I believe severe aortic stenosis is often overlooked and vastly undertreated.”

FINGER ON THE PULSE

For many patients, the route to treatment often begins with a physician referral to cardiology. Accordingly, primary care providers and staff can help facilitate timely access to care for individuals with aortic stenosis and other cardiovascular issues.

“The advice I would give primary care providers and staff would be to emphasize the importance of routine cardiovascular screening,” says Dr. Rabbani. “The most powerful tool in a physician’s tool kit can be the stethoscope. Looking out for aortic stenosis murmurs and referring patients with murmurs to a cardiologist or for an echocardiogram can be lifesaving. Validated risk assessment tools can be used by institutions to identify individuals who may be at increased risk as well. Making sure patients undergo regular follow-ups is key as well, as symptoms may not be evident and may be subtle, so knowing patients well can lead to early detection based on small changes in functional status.”

Effective communication and collaboration among a patient’s providers is also essential, adds Dr. Rabbani: “Make sure there are open lines of communication between primary care providers and specialists such as cardiologists, [because] often taking care of these patients can become complicated. Finally, I would advocate that primary care providers refer patients to programs with a strong track record of success that facilitate shared decision-making through a Heart Team model, which we know has been shown to improve outcomes.”

The Heart Team model is an approach to cardiovascular care that involves a coordinated team approach involving cardiac surgeons, interventional cardiologists, and primary cardiologists. For patients undergoing TAVR, it may also include imaging specialists, neurologists, cardiac anesthesiologists, and other team members.⁹

For many patients with aortic stenosis, the condition has often progressed at

the time of their cardiology referral, note experts. “By the time [most of the patients with aortic stenosis] get to our clinic, the murmur’s not subtle,” notes Dr. Grossman. “Older patients are at risk for significant cardiovascular disease, so taking a good history is quite important. This includes history about chest discomfort, shortness of breath, [and] decline in exercise tolerance and asking questions in a way that uncovers or digs out some of the symptoms that many patients either don’t recognize they have or don’t want to admit. We need to [ask] questions in the right way to uncover

some of [the] signs and symptoms of aortic stenosis and, more broadly, cardiovascular disease. When possible, we also need to [talk] to the spouse or the family of these patients to make sure that we recognize when something’s going on.”

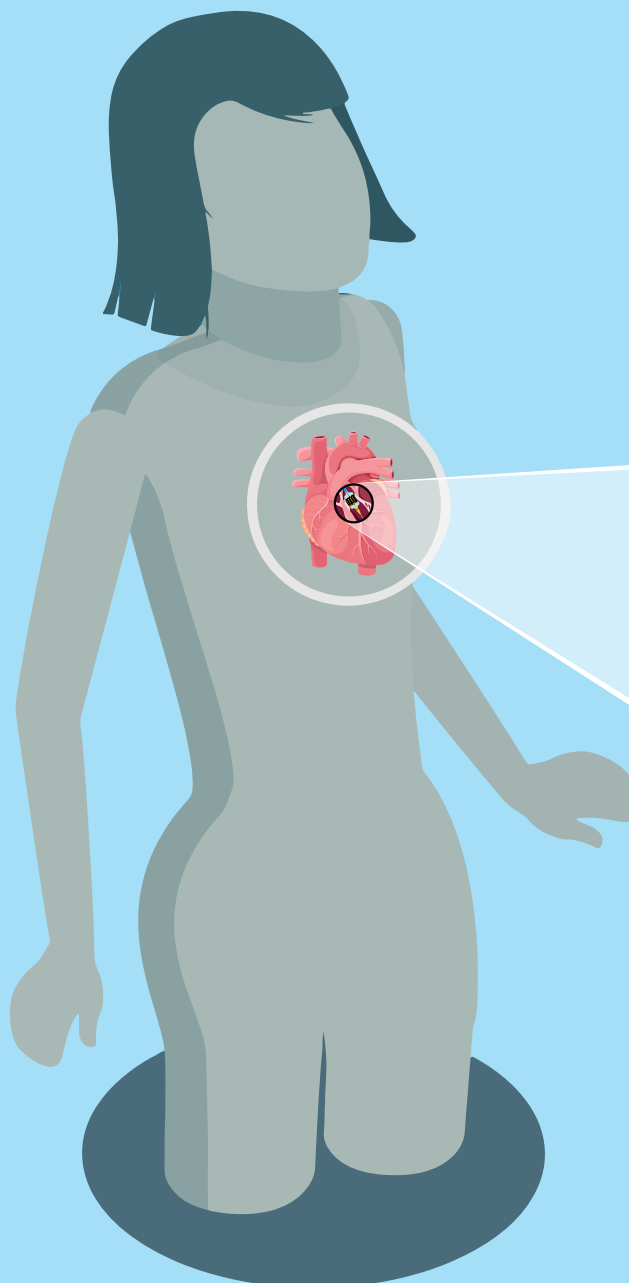
FEELING UPBEAT

For many cardiology patients, the TAVR procedure offers a vital heart valve repair with minimal intervention. Those who undergo TAVR say its benefits are often quickly apparent in recovery.

“You have no idea how bad you feel until

you wake up with a new, working valve, and all of a sudden, you feel wonderful,” says Larry Haffner, a TAVR recipient and patient advocate for Mended Hearts, a nonprofit peer-support program for patients with cardiovascular disease.

A resident of suburban St. Louis, Haffner had already undergone heart bypass surgery (sternotomy) twice when, in 2013, the stenosis in his aortic valve began to worsen. “I was suddenly feeling terrible and was always tired and out of breath,” recalls Haffner. “I had spoken to my cardiologist before about TAVR, which was pretty new at



the time. Because it was still new, he thought, 'Let's wait and see.' But then my aortic stenosis went from moderate to severe in a very short period of time."

In May 2014, the then-63-year-old Haffner underwent TAVR at Barnes-Jewish Hospital in St. Louis. He reports that the valve replacement was successful, and he continues to do well a decade later.

Today, as a patient advocate for Mended Hearts, Haffner is often asked to speak to other prospective TAVR patients. He finds having concerns or worries about TAVR is common for those with little or no experi-



We've seen an explosion in growth in TAVR as the now preferred way to treat many forms of severe aortic stenosis for many of our patients. Clearly, patients recover and get back to independent living much more quickly than they would with surgical aortic valve replacement, and the outcomes have overall been fantastic. So far, the durability of the TAVR valves has been at least as good as [that of] the surgical valves. For many patients, a minimally invasive valve replacement is better than open aortic surgical valve replacement.

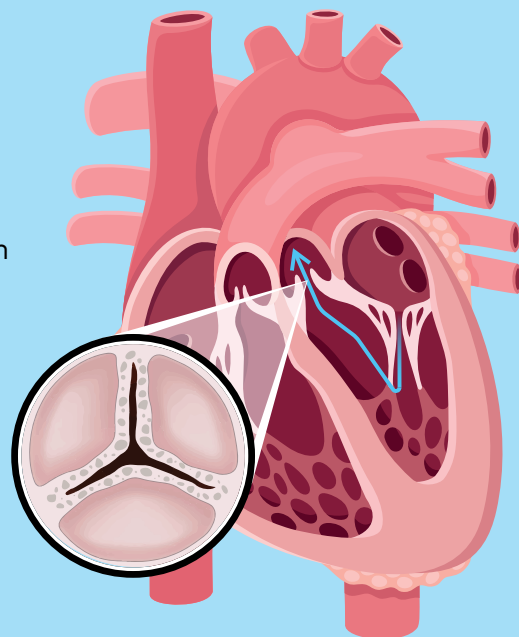
—Paul Michael Grossman, MD



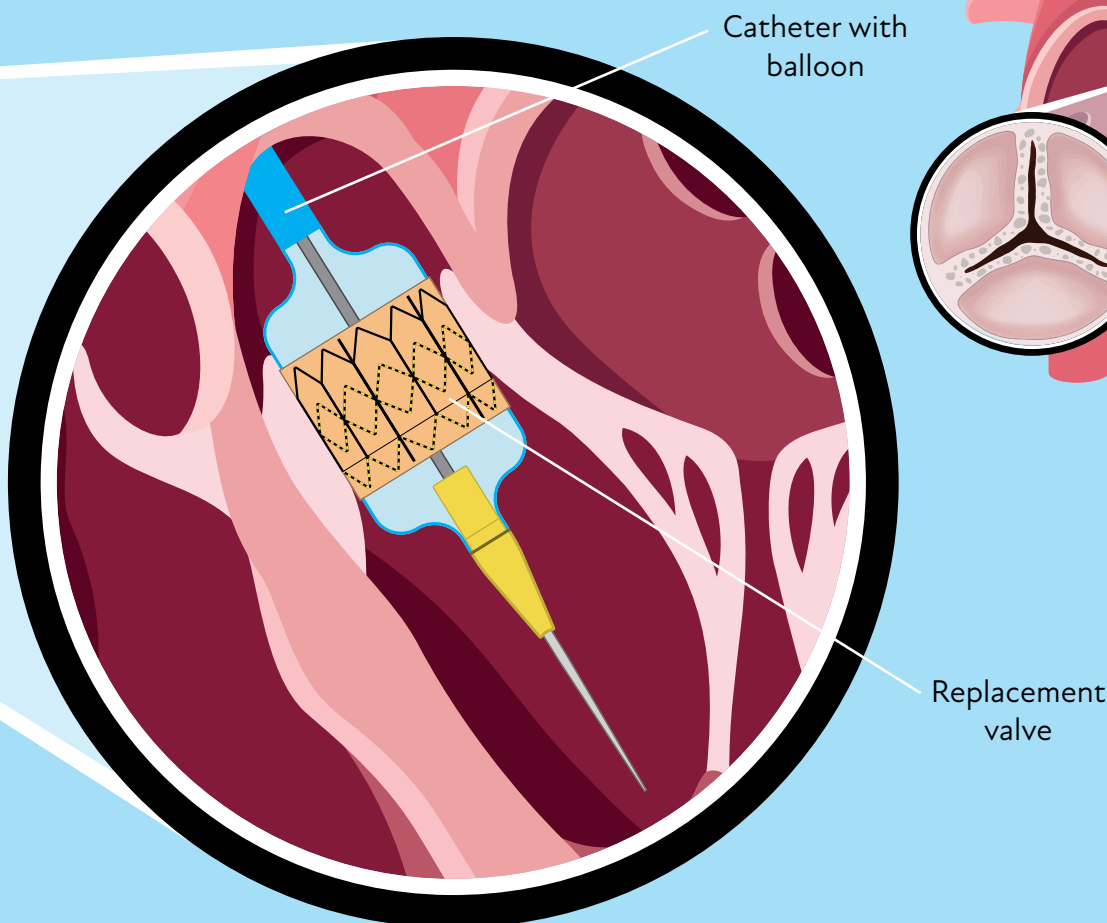
ence with heart-related health issues. In his conversations, Haffner emphasizes not only the procedure's benefits but also its necessity.

"First, I try to assure other patients that the valve's going to last a while and

Aortic valve stenosis



Transcatheter aortic valve replacement (TAVR)



AORTIC STENOSIS SYMPTOMS

Many people with aortic stenosis do not experience evident symptoms until the restricted blood flow is greatly reduced.

Symptoms of aortic stenosis may include the following:

- Chest pain
- Rapid, fluttering heartbeat
- Trouble breathing or feeling short of breath
- Feeling dizzy or light-headed, even fainting
- Difficulty walking short distances
- Swollen ankles or feet
- Difficulty sleeping or needing to sleep sitting up
- Decline in activity level or reduced ability to do normal activities⁴

they're going to feel better," he says. "But the most important thing I stress about severe aortic stenosis is that you have to have it fixed. The option of not fixing it is not good."

As someone with a long and complex history with heart disease—which also includes a diagnosis of atrial fibrillation—the TAVR option was a welcome alternative to SAVR for Haffner. "For any of us that have had the chest opened up or open-heart surgery, TAVR is just wonderful," he says. "To have it done via the catheter—it's just remarkable. Instead of a six-month recovery time, it's a week or so. When I woke up after my procedure, I felt like I could get down off the bed and walk right away. I felt great."

At the time of his procedure, most patients were expected to spend at least a couple of days or so in the hospital, according to Haffner. Today, most patients go home the next day. "It's not much different now than getting a [coronary] stent," he remarks. While Haffner already participated in regular cardiac check-ups before the TAVR procedure, as an early TAVR recipient, he also participated in a long-term clinical research study that involved periodic comprehensive cardiology evaluations. Now, as part of his ongoing care, he continues to have an echocardiogram and clinical examination about annually.

As a result of his experiences, Haffner urges older adults not to ignore physical symptoms that could indicate underlying heart disease. "I think older people in their 70s and 80s often just write off how they're

feeling," he observes. "They'll think, 'Well, I'm getting older, so I'm just tired and get out of breath.' But with aortic stenosis, that valve is causing the problem. This can be true even in people [who] don't have a lot of symptoms. It's also a problem that can be fixed. They can replace that valve, and you can live [for] a long time. You can feel better."

Others who have undergone TAVR report similar positive experiences. "The TAVR procedure is a remarkable one for which I was so thankful to have qualified for and received," says Denise Sullivan, CMA (AAMA), ABC-AHE, an onboard educator in human resources for Northern Light Health in the Bangor area of Maine. "The invasiveness of it versus open-heart surgery is like night and day. The restrictions afterward are also so minimal by comparison."

As a TAVR recipient, Sullivan was also familiar with heart disease prior to the procedure. "My first cardiac procedure was a quadruple bypass in 2007 at the age of 47,"

says Sullivan. "Since that time, I have had a total of eight stents placed on three different occasions. I have also had many diagnostic cardiac tests and procedures and participated in two drug trials. ... I am currently enrolled in a trial for a research medication for those with familial hypercholesterolemia. Genetic testing has identified [high] markers for lipoprotein (a)."

At age 57, Sullivan underwent the TAVR procedure at Central Maine Heart and Vascular Institute in Lewiston, Maine. Afterward, she quickly noticed her improved breathing. Indeed, Sullivan was encouraged enough to make a post-operation video of herself exercising for the first time. "Before, I couldn't even exercise on the treadmill for five minutes," she recalls. "We know that exercise is so important in our cardiac wellness, yet when it's something you physically cannot do, that's very hard. It felt so good to be able to do that again. ... That was within 10 days of my procedure."

Sullivan's patient experiences and excellent medical care now motivate a desire to help others with similar health challenges. Today, she is an active volunteer in WomenHeart, a peer support group for women with heart disease. As a WomenHeart Champion, Sullivan has completed the group's patient advocate and educator training in collaboration with the Mayo Clinic in Rochester, Minnesota.

As an advocate for heart disease awareness, Sullivan wants women to know that TAVR is safe. "If it's necessary to take care of and replace your aortic valve, I wouldn't hesitate to do it," she says. Her message also stresses the importance of heart disease prevention and not ignoring potential early



There have been numerous studies and clinical trials that have compared TAVR with open-heart surgery. While there have been trends for lower mortality with TAVR compared to open-heart surgery in lower-risk patients, overall, statistically TAVR is non-inferior, or equivalent, in terms of patient survival. Therefore, given a multitude of benefits—including shorter hospital stays, improved quality of life, comparable efficacy, and good long-term durability—TAVR has quickly become the first choice for most patients with severe aortic stenosis, with open surgery for patients who don't qualify for TAVR.

—Amir Behi Rabbani, MD



signs of aortic stenosis.

“The first time I was told I had a heart murmur was back in 1979 when I was pregnant with my first child,” she recalls. “We knew that my aortic valve was going to need some care, but I didn’t have my surgery until 2017. Aortic stenosis is often so subtle that we can grow into our stenosis. But then it comes to a point where suddenly there’s that red light that something’s wrong. In my case, I noticed a huge change in the winter of 2016. I was having difficulty breathing with some chest pain. When I had an echocardiogram, we knew it was time.”

When a diagnosis of aortic stenosis is confirmed, careful long-term monitoring of the disease’s progression is necessary. “As my cardiologist explained, there is a ‘sweet zone’ when a valve should be replaced,” says Sullivan. “Before, you’re not ready for it. But there is a point where the heart begins to get thicker because [it has] to work harder. And so, you will get into that sweet zone where you want to do the surgery before the damage to the heart muscle is irreversible.”

HEARTS WILL GO ON

As a relatively new treatment option, TAVR offers many patients with severe aortic stenosis a safe and promising alternative to open-heart surgery. Indeed, as clinical experience with the procedure grows, experts expect TAVR’s role in treating aortic stenosis will continue to evolve.

Certainly, the medical management of aortic stenosis poses complex clinical and treatment considerations for cardiologists

and their patients. Every patient’s unique clinical profile—including their age, medical history, comorbidities, nuances of anatomy, and other factors—will help determine the best treatment approach.

As TAVR eligibility has expanded to include younger, low-risk surgical patients, the durability of the replacement valve and the prospect of patients outliving their new valve must be considered. This raises discussions about long-term medical management for these patients, who may require repeat procedures or surgical interventions in the future.

“The focus for us now is trying to identify which patients could or should have TAVR as a first choice versus which patients ... should have a surgical aortic valve replacement as their first aortic valve replacement procedure,” notes Dr. Grossman. “So, we’re still learning, the technology’s improving, and we’re thinking now about lifetime management of these patients.”

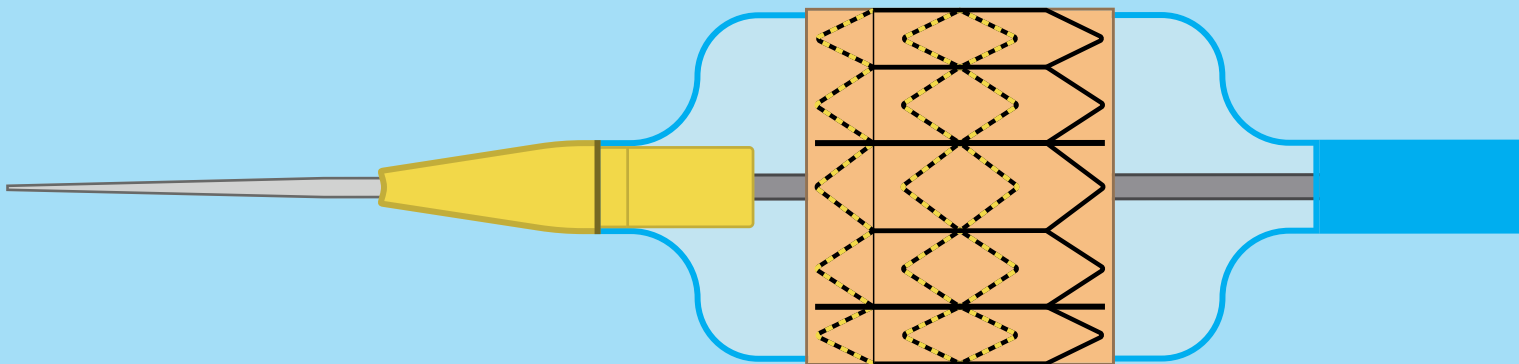
For such a serious health condition that requires ongoing medical management over time, patients with aortic stenosis must work closely with their cardiologist and health care team to determine the most appropriate form of treatment. As Dr. Grossman and other cardiologists advise, allowing patients to fully consider all their available treatment options is paramount.

Today, the future of medical treatment for aortic stenosis looks promising, as refinements in the TAVR procedure, evolving device technologies, and advances in managing the disease’s long-term challenges inform

cardiovascular patient care. ♦

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Directions: Determine the correct answer to each of the following, based on information derived from the article.

T F

- ☐ ☐ 1. Aortic stenosis is a disease that progresses in severity over time.
- ☐ ☐ 2. A disadvantage of transcatheter aortic valve replacement (TAVR) is that it requires strong sedation, resulting in a longer recovery time than with surgical aortic valve replacement (SAVR).
- ☐ ☐ 3. Severe aortic stenosis is underdiagnosed and undertreated in underserved communities.
- ☐ ☐ 4. Replacement valves are made from human tissue.
- ☐ ☐ 5. The symptoms associated with aortic stenosis are obvious and easy to identify early.
- ☐ ☐ 6. The Heart Team model is an approach to cardiovascular care that involves a team of cardiac surgeons, interventional cardiologists, and primary cardiologists.
- ☐ ☐ 7. TAVR is a new and significant open-heart surgery technique.
- ☐ ☐ 8. Surgical aortic valve replacement continues to be a recommended procedure for certain cases of aortic stenosis.
- ☐ ☐ 9. TAVR is an alternative to surgical aortic valve replacement.
- ☐ ☐ 10. Survival of patients with severe symptomatic aortic stenosis is only about 50% at four to five years.
- ☐ ☐ 11. The durability of the replacement valves has become a more prominent consideration for younger patients who have TAVR.
- ☐ ☐ 12. The current medical recommendation is for patients to take a prescription blood thinner and low-dose aspirin after the TAVR procedure to prevent blood clots.
- ☐ ☐ 13. Good and open communication between primary

Electronic bonus! This test is available on the e-Learning Center at learning.aama-ntl.org. Miss the postmark deadline? Take the test online instead!

T F

- ☐ ☐ 14. Patients born with a bicuspid aortic valve experience a wearing out of their heart valves, usually at age 80 or older.
- ☐ ☐ 15. Aortic stenosis is the narrowing of an opening in the aortic valve that limits blood flow from the left ventricle to the aorta.
- ☐ ☐ 16. Echocardiograms can help determine the severity of aortic stenosis in patients with a heart murmur.
- ☐ ☐ 17. All patients undergo routine screenings for aortic stenosis.
- ☐ ☐ 18. Aortic stenosis often leads to a thinning of the muscles in the wall of the left ventricle because the heart must work harder to pump blood.

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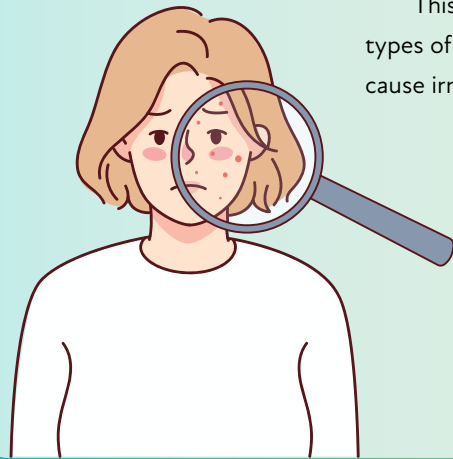
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Skin-Deep Solutions for Acne

Taking off makeup before bed is a well-known way to ward off clogged pores, acne, and other skin problems. However, if you wear makeup throughout the day—including during your workout—it may affect your complexion, according to a new study published in the *Journal of Cosmetic Dermatology*.

Healthy college students applied foundation to part of their faces while they exercised for 20 minutes on a treadmill. At the end of the workout, researchers found that pores remained the same size and oil levels dropped on the side of the face with makeup. These results suggest that wearing makeup while exercising can interfere with the skin's ability to maintain proper oil levels during exercise, causing dry skin, clogged pores, and acne.



This study focused only on foundation, which may cause more of an issue than other types of makeup that are not applied to the entire face. However, even eye makeup can cause irritation and acne and make you more prone to styes, according to LIVESTRONG.com.

If you prefer to wear makeup while working out, healthier options are available, such as beauty balm or color-correcting cream, according to Everyday Health. Look for noncomedogenic products that are less likely to clog your pores, and keep your makeup as light as possible. When you complete your workout, remove your makeup, and cleanse your face and body of excess oil as soon as possible.

Ultimately, do what you need to feel your best during your workout. Just make sure to nourish your skin by keeping it as clean as possible and use sun protection if you exercise outdoors.

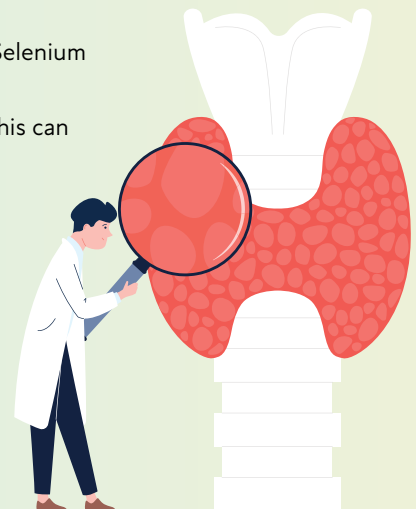
Natural Remedies for Hypothyroidism

Hypothyroidism, a condition resulting from the decreased production of thyroid hormones, can cause symptoms such as fatigue, constipation, dry skin, weight gain, and muscle and joint pain, according to GoodRx.

While natural remedies should not be considered a replacement for medications, they can sometimes cause fewer side effects and suit a patient's lifestyle. They may also treat the root of the thyroid problem, which can sometimes result from poor diet, stress, and a lack of nutrients, according to Healthline.

Speak with your health care provider to determine whether these natural remedies can safely fit your treatment plan and help you manage your symptoms:

- **Selenium:** Selenium is a trace element that affects thyroid hormone metabolism. Selenium can be found in tuna, turkey, grass-fed beef, and Brazil nuts.
- **Sugar-free diet:** Processed foods and sugar can cause inflammation in the body. This can worsen symptoms of thyroid disease.
- **Vitamin B:** Since low thyroid hormones can affect the body's vitamin B₁₂ levels, taking a supplement can help repair some of the damage caused by hypothyroidism and fatigue. B vitamins are in foods such as beans, asparagus, tuna, cheese, milk, and eggs.
- **Probiotics:** Hypothyroidism is now known to be linked with gastrointestinal problems. Probiotics contain helpful bacteria that can help keep the stomach and intestines healthy. They can be taken in supplement form or consumed through kefir, kombucha, some cheeses, and yogurt.





Plant Power

Vegans and vegetarians are in luck—a new study by the Harvard T.H. Chan School of Public Health and Tufts University suggests that women who eat more plant protein in midlife may age healthier.

In data from more than 48,000 women over 30 years of age, researchers discovered a compelling link between plant protein consumption and healthy aging in women, which was defined as fewer or no chronic diseases, better physical mobility, and little cognitive decline.

While any form of protein at midlife promotes healthy aging, plant protein from foods like beans, nuts, and vegetables was associated with healthy aging in terms of physical and cognitive health. High consumption of animal protein was associated with better physical mobility but increased risk of chronic diseases.

Compared to women who consumed low quantities of protein, those who ate more plant protein were nearly 50% more likely to healthily age. In comparison, those who got more protein from animal products were 6% less likely to remain healthy as they aged, according to Medical News Today.

The study's authors suggest that some of the benefits observed in those whose diets consisted of more plant protein may be partially attributable to other dietary components of plants, such as fiber, micronutrients, and antioxidants.

However, not all plant protein sources are created equal. Avoid relying on ultra-processed plant-based food products high in sodium, refined oils, and added sugars. Instead, choose fruits, vegetables, nuts, seeds, legumes, tofu, and low-processed whole grains.

Prime Time for Exercise

Have you ever wondered whether the time of day you exercise makes a difference? Some research suggests that starting the day with a workout is the most beneficial, according to *Health*.

However, whether you enjoy a burst of energy in the morning, an afternoon screen break, or an evening winddown, exercise at any time of day has its advantages. Ultimately, the best time to work out depends on your personal goals and schedule.

Consider the unique benefits of working out at various times of day, according to Cleveland Clinic:

- **Morning:** Early workouts are associated with lower blood pressure, better sleep, and greater weight loss due to improved fat-burning and appetite suppression. People also tend to be more consistent with morning exercise due to fewer distractions.
- **Afternoon:** In the middle of the day, you can relieve stress and capitalize on peak body temperature and flexibility for intense sessions to improve aerobic performance and strength.
- **Evening:** Unwind and de-stress from the day while capitalizing on peak body temperature and maximizing aerobic performance and strength. Make sure you finish a few hours before bedtime to avoid sleep disruption.

While a morning workout can help you make healthy choices all day and get your workout out of the way, ultimately, everyone should listen to their body, adjust movement as needed, and consider their specific goals or health considerations. Whether it's morning, afternoon, or evening, consistency is key.



BEHIND THE SCREENS

Unveiling Best Practices for Radiation Safety

By Brian Justice

Numerous examination and treatment protocols use radiation therapies. More than 70 million chest X-rays¹ and 80 million computed tomography scans are performed annually in the United States alone.² Scanning, X-rays, and nuclear imaging have revolutionized diagnosis and treatment, and the benefits far outweigh radiation-associated risks.

Still, radiation is a relevant concern for ambulatory care centers, and mishaps can occur for various reasons. The impact on patients varies widely, from minor exposures that result in additional doses that are usually harmless to overexposures with serious complications.

“I’ve encountered cases involving radiation emergencies in medical settings,” says Jonathan Rosenfeld, a personal injury lawyer in Chicago, Illinois. “These incidents often arise due to equipment malfunctions, errors in radiation therapy delivery, or mishandling of radioactive materials during medical procedures.”

Fortunately, he adds, “I’ve also observed that many of these emergencies are highly preventable.”

Tune In

Taking organized measures to reduce radiation exposure can mitigate the potential for harm. When an examination or treatment involves radiation, health care staff must ensure that patients receive the least amount of radiation necessary to achieve high-quality results.³

Reducing radiation exposure has become increasingly crucial as its use has grown across practices—including radiology, interventional cardiology, and surgery—where the radiation emitted during fluoroscopic procedures can subject medical staff to significant exposure. Diagnostic imaging—like computed tomography, mammography, and nuclear imaging—involves lower levels of exposure, but any level of radiation carries potential risks for patients as well as health care workers.⁴

Most radiation exposure in ambulatory care settings comes from fluoroscopic imaging. However, strict compliance with radiation safety guidelines can unintentionally become a lower priority outside radiology departments. Still, radiation exposure deserves attention across relevant health care specialties. The increased use of fluo-

roscopy in numerous specialties, including orthopedics, urology, and gastroenterology, underscores the need for comprehensive education on radiation exposure risks and dose reduction techniques.⁴

Watch and Learn

Adopting internal procedures can help prevent accidental exposures in radiotherapy. These may include careful examination of the causes, contributing factors, and circumstances around accidents when they happen. Health care settings can avoid future incidents by creating a culture of heightened awareness, establishing detailed procedures and checks, providing pertinent training, and establishing clearly defined responsibilities around safety-critical tasks.

“Conduct simulation exercises that replicate real-life scenarios involving radiation emergencies,” suggests Rosenfeld. “This allows staff to practice their response skills in a controlled environment and identify strengths and areas for improvement. By establishing robust protocols and procedures for handling radiation-emitting equipment and materials, health care facilities can sig-

nificantly reduce the risk of emergencies and mitigate potential harm.”

Best practices start with providing personal protective equipment (PPE) for staff. Notably, PPE requires regular inspection, proper storage, and prompt replacement when needed. X-ray equipment maintenance, repair, and replacement are also crucial for operational efficiency. Regularly scheduled inspections can identify potential problems and resolve issues before disruptive and dangerous breakdowns occur. These measures support a patient-centric approach that improves imaging outcomes, patient comfort and satisfaction, and stronger patient-practice relationships.⁵

“Strict protocols for the proper handling, storage, and disposal of radioactive materials, including secure storage facilities with appropriate shielding and labeling, can minimize the risk of contamination,” adds Rosenfeld.

Preparation also includes having accessible and up-to-date contact information for health authorities and radiation protective services. Collaboration with these entities helps implement their recommendations effectively and enhances safety protocols.⁶

“It helps to designate individuals within the practice who are responsible for coordinating communication with external agencies, such as local authorities and hospitals,” says Rosenfeld. “Clear lines of communication streamline information flow and decision-making.”

Picture Perfect

Given radiation’s role in modern health care, fostering a safe and efficient clinical environment and workflow is imperative for all clinicians and staff. Ongoing changes in the health care system drive the need to enhance efficiency without compromising safety.⁷

Daily briefings to review upcoming clinical activities are another initiative that preempts potential issues and fosters teamwork and a culture of safety. For instance, morning huddles allow clinical teams to anticipate challenges and coordinate efforts to ensure smooth clinic operations. Morning huddles not only aid in managing the clinic’s daily workflow but also promote an environment

Speaking Volumes

Awareness around radiation safety is clearly stated and defined by the ALARA (i.e., “as low as reasonably achievable”) principle. This straightforward approach is easily understood and implemented and underscores working practices to minimize radiation exposure. The approach is designed to support the quality and efficacy of health care delivery by clinicians and staff to benefit the most crucial stakeholders: patients. Effective application of the ALARA principle involves three fundamental protective strategies⁸:

- Time awareness emphasizes reducing one’s time spent near radiation sources. All health care workers should be encouraged to limit their presence in high-radiation areas to the shortest time possible to accomplish their tasks.
- Distance means increasing the space between oneself and the radiation source. Achieving greater distance lowers the intensity of exposure.
- Shielding means using barriers that absorb or deflect radiation, made of materials best suited to the types of radiation used.

Health care settings can easily implement these three protective measures. This integrated approach to radiation safety ensures that medical procedures involving radiation are conducted within the safest possible parameters and in full alignment with one overarching goal: safeguarding patients and workers while maintaining the highest levels of diagnostic and therapeutic integrity.

that encourages open communication and robust collaboration among team members.⁷

Health care workers must strike a critical balance between leveraging radiation’s undeniable benefits and reducing the inherent risks associated with its use. As radiographic and nuclear imaging techniques continue to evolve and become more integral to modern medicine, the responsibility to safeguard patients and health care workers from potential radiation exposure has never been more pertinent. Fortunately, the risks posed by radiation emergencies are characterized by the preventable nature of many such incidents through rigorous equipment maintenance, thorough staff training, and adherence to established safety protocols.

Preemptive measures are essential components of a comprehensive radiation safety strategy. Implementing these practices and cultivating a safety culture within health care settings can reduce the likelihood of radiation-related incidents. Keeping patients and health care professionals safe improves patient outcomes while upholding the highest standards of care in the health care environment. ♦

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How Educators Can Teach Problem-Solving Skills inside the Classroom

by John McCormack

Teaching a medical assisting student how to draw blood is a simple three-step process, according to Christine Dzoga, BS, CMA (AAMA), the medical assisting program director at Malcolm X College, a part of City Colleges of Chicago. However, teaching a student how to handle a patient who arrives 15 minutes late for an appointment is much more challenging because it requires critical thinking and problem-solving skills.

In that situation, the medical assistant needs to make a choice: Should the patient be held to a practice policy that clearly states that patients who arrive more than 10 minutes late must reschedule appointments? Or should the medical assistant try to accommodate the patient?

“The medical assistant needs to think through these situations before responding with answers that might result in an unwanted consequence such as a disgruntled patient who doesn’t get care or disgruntled staff who need to rush to accommodate the late patient,” says Dzoga.

This scenario is just one example illustrating why medical assistants must develop problem-solving skills. Of course, problem-solving also comes into play “when

bad stuff starts happening, like a patient stops breathing or somebody’s unexpectedly bleeding or passes out ... but it can be very simple things too, [like] when it’s time for a medication to be administered and it’s [unavailable] or available in the wrong form,” says Jeanne Carey, MEd, RN, CHSE-A, an instructional design specialist at the University of Texas Southwestern Simulation Center in Dallas, Texas.

With so much unpredictability in health care, educators must have plans and strategies to teach students much-needed problem-solving skills before they enter the workplace.

“The health care setting is very dynamic and complex with lots of moving parts [and] people,” says Carey. “So, you can’t really memorize how to be a nurse, medical assistant, or physician. You have to understand the fundamentals and then be able to apply all this wonderful knowledge in a variety of situations.”

Practicing Lines

The challenge for educators is finding effective ways to teach problem-solving. Simulation, specifically role-playing, has emerged as an effective strategy. “I’ve spent the last 14 years using simulation as a teach-

ing strategy,” says Carey. “And over those 14 years, [I] have come to appreciate it more and more every day for the value it brings to the learning process.”

Role-play is an experimental pedagogical method that is used in a variety of contexts and content areas, according to Carey.¹ It involves multiple people acting out roles in a particular scenario to build experience.

Role-play helps students do the following:

- **Explore various perspectives to increase self-awareness.** Role-play makes it possible to understand personal perception and builds empathy and appreciation for other perspectives.¹
- **Bring learning to life.** When students put the skills they learned in theory into practice, it creates a deeper cognitive link to the material.²
- **Develop good listening skills.** In addition to understanding the words another person is saying, participants learn to pay attention to body language and nonverbal clues when role-playing.³
- **Practice in a simple and safe envi-**

Environment. Role-playing provides a safe and supportive environment¹ for students to encounter situations for the first time.

- **Build confidence.** By preparing for a situation using role-play, students build up experience and self-confidence in handling the situation and are more able to react quickly and instinctively to situations on the job.⁴

By effectively leveraging role-play and other strategies, educators can prepare students to become the quick thinkers many health care organizations need.

All Shapes and Sizes

While role-play is commonly used to encourage quick thinking among students, educators have many more tools up their sleeves. Here are just some of the strategies that educators are using:

Present real-world scenarios. Sandra Alexander, MPA, BAS, CMA (AAMA), a professor for the medical assisting program at Dallas College, often presents case studies of various patient diagnoses and then requires students to determine the patient's needs. "It may not necessarily be medication; it may be just that the patient needs instructions for their diet, or they may need to see a social worker," says Alexander.

Teach students to gather information up front. "The best way to teach problem-solving skills is to first take time to lay the groundwork with solid patient interviewing skills. We can learn so much by asking open-ended questions when appropriate," says Jessica Blessinger, CMA

(AAMA), the clinical preceptor lead at Hancock Health in Greenfield, Indiana.

Integrate problem-solving across the curriculum. "Every lesson within a medical assisting program offers an opportunity to practice problem-solving through critical thinking," says Pamela Giannone, CMA (AAMA), RMA(AMT), RT (R), a retired medical assisting program director who worked at Indian River State College in Fort Pierce, Florida. "I integrate problem-solving into every class and create problem-solving lessons within each course."

Introduce disruption. "Students can get caught up with moving according to a sequence and will get stuck if that sequence is disrupted," says Latanya Edwards, CMA (AAMA), CPC, a community allied health educator at Hawaii Pacific Health in Honolulu. "I will purposely disrupt that sequence to show that a step may be missing, but you still have to get the job done while being safe and compliant. I accomplish this by removing items from the room, purposely not giving them or the 'patient' all the information for the scenario, becoming the angry patient, etc. I also have assignments that have very little instruction. The goal is for them to get out of their comfort zones, find the answers, and filter those answers."

Make it personal. "[Educators can] tell stories of when we were in the office and have students tell stories of what they have seen as a patient in a provider's office. We have great discussions that lead to problem-solving strategies," says Melody Gibson, CMA (AAMA), CPT (ASPT), BS, RPSGT, the medical assisting program director at Gaston College in Dallas, North

Carolina.

Get social. "I have my students look on TikTok or other social media to find something that is health-related and then have them look to see if it is peer-reviewed and [whether it is] helpful or harmful," says Julayne Masterman-Thomas, MS, BSBA, CMA (AAMA), an associate professor at Ivy Tech Community College in East Chicago, Indiana. "I also teach dementia care, and we use YouTube and TikTok to find actual interactions with patients or health care professionals, and we discuss why it was a good or bad interaction. I have had students have that aha moment when we discuss this."

A Competitive Edge

Gibson points out that focusing on problem-solving in the classroom can empower students to succeed once they enter the workforce.

"A lot of the health care organizations we partner with tell us the number one thing they look for as an employer is flexibility. That is where problem-solving skills come into play," concludes Gibson. "So, teaching students how to react to the unexpected is a great employability skill." ♦

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Circling Back to Basics

Share strategies that students can use to continue to expand their problem-solving skills once they leave the classroom:

Be patient. Allow yourself time to develop problem-solving skills and make mistakes.

Practice thinking aloud. Grow more comfortable with your problem-solving skills by vocalizing your thought process as you consider a problem.

Participate in training opportunities. Use training opportunities offered by employers to learn new techniques and advance your existing skills.

Seek out challenges. Test your problem-solving skills by seeking out challenging situations at work and taking a moment to think through the problem before acting.

Follow the Leader

CMA (AAMA) Educates Students, Staff, and Local Chapter Members



By Cathy Cassata

Angela Liffel, CMA (AAMA), exudes medical assisting expertise. After graduating from Carrington College in 2011, she landed a job in family practice at Kootenai Health in Idaho.

"I became a lead medical assistant very quickly, and for several years, I helped with onboarding and training new medical assistants," she says. As a lead medical assistant, Liffel wore many hats, including acting as the vaccine coordinator for the practice.

In 2016 and 2018, she was named Immunization Champion by the Idaho Immunization Program. Her peers nominated her for the award because of her work educating staff and parents on vaccinations. "I was the voice for vaccines," she says. "I would assist the providers in determining appropriate vaccine timeframes and help train staff in proper storage and handling to reduce errors in the clinic."

Today, she is the clinic supervisor for the plastic and reconstructive surgery and dermatology clinics at Kootenai Health, where she continues to lead by example.

"I still assist in the back office with rooming patients, performing blood draws, and assisting with minor procedures," says Liffel. "I like being a well-rounded supervisor who can relate to both front- and back-office responsibilities. It is important to know the roles of each member you are leading."

Helping staff excel in their roles brings her the most job satisfaction. "I have lived up to being a well-rounded medical assistant. I love learning about every part of the job and sharing that knowledge with other medical assistants," says Liffel.

Her passion for teaching also extends to medical assistants outside of her workplace. Since 2023, Liffel has been a medical assisting educator for the apprentice program at North Idaho Workforce Training Center. The program places aspiring medical assistants at clinics for paid on-the-job training and offers two nights of classroom instruction per week.

"While the job allows them to room patients and learn the skills on the job, in the classroom I teach them a little bit more

because not everyone gets to see everything in [the] clinic," she says.

She also uses her leadership skills to spread knowledge and awareness about the medical assisting profession with the North Idaho Panhandle AAMA chapter. From 2020 to 2021, she served as treasurer, and in 2023, she was elected president.

Since becoming president, her local chapter has hosted several events for continuing education and networking opportunities. Liffel also puts a lot of focus on membership and has helped the chapter gain 70 new members since October 2023. "I think that speaks a lot to the things we're doing, [the] direction we're going, and how we're getting [the] word out that medical assistants are important and we're here to support them," she says.

She hopes others continue to promote the value of the profession. "I've advanced so much because I truly believe medical assistants are important," says Liffel. "You can lead by example at any point in your medical assisting career. Strive to lead; strive to educate. It's a very rewarding career, and I hope [there are] more medical assistants out there who help lead and continue to prove this." ♦



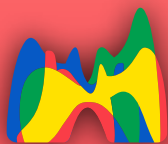
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It is with a heavy heart that we announce the passing of our beloved AAMA staff member, Grace Hale. Grace was the voice of the AAMA for over 45 years, answering phone calls of our cherished members and warmly greeting visitors at the executive office. Her dedication and kindness have left an indelible mark on our organization and everyone who had the privilege of interacting with her.

Grace's unwavering commitment to the AAMA made her an integral part of our family, and her absence will be deeply felt. Her genuine warmth, patience, and care created a welcoming atmosphere for everyone who reached out or walked through our doors. May her memory continue to inspire kindness and compassion in all of us.