Fall 2017 Fall 2017

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7 Savvy Weight-Loss Tips

What That Knee Pop May Mean

For Love of Country

A story of an unlikely friendship



Lehigh Valley Health Network



Healthy

Fall 2017 | Lehigh Valley Edition

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Achieving Highest Levels of Independence

Lehigh Valley Health Network's Inpatient Rehabilitation Centers provide intensive care designed to bring you back to your highest level of independence after injury or illness.

- → 24-hour inpatient care
- → 3 hours (or more) of therapy per day
- → Therapy at least 5 days per week
- Multidisciplinary team, including rehab physicians, rehab nurses, therapists, and more

LVHN recently opened two more Inpatient Rehabilitation Centers, one at Lehigh Valley Hospital-Muhlenberg and one at LVH-Pocono. With five locations across the region, you don't need to travel far to receive LVHN care.

→ Visit LVHN.org/inpatient-rehab.

Need a Refill?

We've Got an App for that

Health Spectrum Pharmacy Services, our hospitalbased retail pharmacy, works exclusively with mobileRx®, an app that lets you order refills from your Android™ or Apple® mobile device.

- → Go to Apple App Store or Google Play.
- Search for mobileRx.
- Download.
- Open the app.



You will need the phone number of your Health Spectrum Pharmacy Services location.

- → Lehigh Valley Hospital-Cedar Crest: 610-402-8444
- → Lehigh Valley Hospital-17th Street: 610-969-2780
- → Lehigh Valley Hospital-Muhlenberg: 484-884-7004
- → Lehigh Valley Hospital-Pocono: 272-762-6337

How a Lactation Consultant Can Help

How you plan to feed your new baby is an important decision only you can make. At Lehigh Valley Children's Hospital, we provide information on infant nutrition and the benefits of breastfeeding, then support you no matter what feeding method you choose.

Before baby is born

While you are expecting, you will learn about the benefits of breastfeeding at your prenatal appointments. You also may attend a Breastfeeding Baby class.

In the hospital

After your baby is born, your bedside nurse will help you with basic breastfeeding positioning and latching of your infant. If further help is needed, a lactation consultant may assist.

At home

Women who breastfeed can find support at weekly breastfeeding support group meetings (Monday Morning Moms) or a Lehigh Valley Physician Group (LVPG) Breastfeeding Support group.

Newborn care visit

You also may request to see a lactation consultant or counselor at your primary care provider's office or schedule a time to have your questions answered by phone.

Need help breastfeeding?

Lactation consultants assist with:

- → Latching on
- Reducing pain
- → Milk supply
- → Feeding issues
- Pumping
- → Supplemental feeding
- → Emotional support

MOMMY

SUPPORT

Meet our lactation consultants.

→ Visit LVHN.org/breastfeeding.

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When a Heart Attack Is Severe

Lifesaving treatment options include the world's smallest heart pump

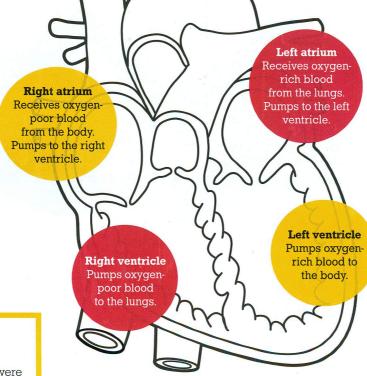
Your heart is complex. When it's in distress from a heart attack, you need specialists who understand its complexities and have the resources to provide necessary care. Here's a look at two lifesaving treatments Lehigh Valley Health Network (LVHN) can use to help people following a severe heart attack.



Ronald Freudenberger, MD Cardiology

Your heart needs blood too

Heart muscles need oxygen-rich blood to pump. A heart attack occurs when one or more regions of heart muscle experience lack of oxygen caused by blocked blood flow. "Although a heart attack most commonly affects the left ventricle, it also can affect the heart's right side," says cardiologist Ronald Freudenberger, MD, with LVPG Cardiology.



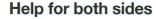
A unique program

LVHN has one of the largest heart attack programs in the nation. It includes a team of specialists available 24/7 board-certified advanced heart failure specialists, surgeons, cardiologists, respiratory therapists, registered nurses and others - to care for people suffering cardiogenic shock. "We have the technology and experts to save lives, help people begin rehabilitation earlier and get better faster," Freudenberger says. "That's what makes LVHN unique." 🔌



Severity varies

All heart attacks are serious. However, a severe heart attack may result in cardiogenic shock, a condition in which your heart can't pump enough blood to meet your body's needs. Without proper treatment, cardiogenic shock is often fatal.



Impella® is the world's smallest heart pump. It's used to temporarily support a weak heart following cardiogenic shock. Impella is implanted with a catheter through an artery in the leg and placed in the heart. "LVHN is among only a few hospitals nationwide that implants Impella in the heart's left and right sides," Freudenberger says. "Previously, patients who needed right heart support required open-heart surgery."



Impella can sustain your heart for up to seven days, giving it a chance to rest and recover. Extracorporeal membrane oxygenation (ECMO) is another technology that can give the heart a break. With ECMO, blood is drawn from the body, oxygenated and returned to the body.



-RICK MARTUSCELLI



Learn more about heart attack care.

→ Visit LVHN.org/heart.



Tranell Johnson-Suarez was 24 weeks pregnant with her first child when she started to feel pain and cramping.

She called her doctor as a precaution. Within minutes, she and her wife, Liana, were on their way to Lehigh Valley Hospital-Cedar Crest where they learned Tranell was 3 centimeters dilated.

Tranell got medication for pain and to stop the contractions. She also received a steroid injection to develop her baby's lungs. At 6 a.m., the baby's heart rate dropped, and doctors began preparing for an emergency cesarean section. At 7:06 a.m., baby Sydney was born.

Sydney was born a micro preemie (1 pound, 9 ounces and 13 1/2 inches long). While every baby's journey is different, all preemies benefit from specialized care in a neonatal intensive care unit (NICU). Recently, the NICU at Lehigh Valley Children's Hospital was designated Level IV - the highest level of care for fragile babies.

Here's what happened next when Sydney went to the NICU.

→ A specialty-trained physician examined Sydney. Neonatologists, like Nachammai Chinnakaruppan, MD, with Lehigh Valley Children's Hospital, looked for common problems of prematurity including immature lungs, brain, eyes and other systems. Neonatologists are fellowship-trained physicians who specialize in care of premature or ill newborns.



Chinnakaruppan, MD Neonatology

→ Sydney was intubated and placed on a ventilator for breathing assistance. When she wasn't improving in mid-December, doctors put her on a stronger ventilator and eventually recommended a nine-day course of steroids to reduce inflammation.

"Dr. Chinnakaruppan wanted to see if steroids would help," Liana says. "She





She came off the ventilator on Christmas Eve, the same day a hospital chaplain held an emotional baptism in the NICU.

broke down all the benefits and said it may take 48-72 hours to see improvement." Within 12 hours Sydney was starting to improve. She came off the ventilator on Christmas Eve, the same day a hospital chaplain held an emotional baptism in the NICU.

- → An incubator stabilized her temperature. Sydney couldn't regulate her temperature on her own. Nurses adjusted the heat until she was slowly weaned off the incubator.
- → She was closely monitored for signs of infection. Sydney was born before infection-fighting antibodies could develop during the third trimester. Her care team watched for early signs of infection and gave antibiotics as needed.
- → Sydney developed retinopathy.
 Babies born before 31 weeks and weighing less than 2 pounds, 12 ounces, are at high risk. Bleeding and scarring can cause the retina to detach and lead to blindness.
- → She was fed breast milk. Tranell pumped breast milk every three hours to establish her milk supply. Sydney received breast milk through a nose tube while also receiving IV fluids that contained liquid protein, fats, minerals and vitamins.

"A preterm baby's gut can't process food properly," Chinnakaruppan says.
"Breast milk is best because it offers antibodies and easy-to-digest protein.

It also protects against necrotizing enterocolitis, which causes inflammation of the intestines."

→ Sydney got help from a speech therapist. After eight weeks in the NICU, she was strong enough to work with a speech therapist who taught her the suck/swallow reflex and introduced bottle-feeding. Later, a nurse helped Sydney latch on so breast-feeding could begin.

"She was so excited at her first taste of breast milk dropped on top of a pacifier," Tranell says. "It took some time, but Sydney eventually latched on to the breast for feedings."

Going home

After 98 days in the NICU, Sydney went home. The retinopathy and breathing issues she experienced in her first several months are now gone. Her only lingering problem is acid reflux – common in preemies – which is being managed with a special infant formula.

"She is doing amazing," Liana says.
"Our care team was unbelievably caring. They explained everything so we always knew what to expect. When we finally went home, our nurse Vicky (Vicky Fellenz, RN) said, 'Call me, text me with questions, I'm here for you.' She was part of our support system then and still is now."

- SHEILA CABALLERO



Having a Baby at LVHN

Our Family Birth and Newborn
Centers – which include
locations at Lehigh Valley
Hospital (LVH)–Cedar Crest,
LVH–Hazleton, LVH–Schuylkill
and our newest at LVH–
Muhlenberg – provide families
with the most personalized
birth experience in our regions.

- → Shared decision making with your doctor
- → Lactation support for breastfeeding mothers
- Parenting education classes, online videos and demonstrations
- → Quick transport for at-risk newborns to LVH-Cedar Crest's Level IV NICU for the highest level of care delivered by a multidisciplinary team

It's all the care your growing family needs. Between before and after, and throughout childhood. We are here for you.



Is a baby in your future?

- → Lehigh Valley region: LVHN.org/hyfamily.
- → Northeast PA region: LVHN.org/pregnancy.



X-ray Reveals **More Than** a Broken Rib

Ken Staber's medical journey with interventional radiology



Larry Braunstein, MD Interventional radiology

On Dec. 16, 2016, while Ken Staber, 77, and wife Marie, 73, were at their "snowbird" home in Englewood, Fla., Ken fell in the kitchen. "It was a Friday afternoon," Marie says. "On Monday he was in so much pain that he had me call the doctor." The next day, after examining Ken, the doctor determined he had likely broken a rib.

Not satisfied with the recommendation to go home, take an over-thecounter pain reliever and rest, Ken said, "I want a chest X-ray. I want to know if I broke a rib." The doctor obliged, and by 5 p.m. that day, they had the results. While the X-ray confirmed that Ken had, indeed,

broken three ribs, it also uncovered something else - a suspicious mass in his left lung.

A few days later Ken went for a computed tomography (CT) scan. "On Dec. 23 the nurse called with the results," Marie recalls, "She said, 'I'm very sorry to have to tell you this, but your husband has cancer.' I almost passed out." After Christmas Ken had a positron emission tomography (PET) scan, after which the couple determined that they needed to get back to their home in Sugarloaf, Pa., so Ken could receive treatment there.

"We left Jan. 10. It took us three days to drive," Marie says. "It was the worst trip of our lives."

Confirming the diagnosis

The next step for Ken was a biopsy. For that he saw interventional radiologist Larry Braunstein, MD, with Medical Imaging of Lehigh Valley, at Lehigh Valley Hospital (LVH)-Hazleton. His biopsy was done using interventional radiology techniques.

"With interventional radiology, we use all imaging modalities from X-ray to magnetic resonance imaging (MRI) - to diagnose various diseases," explains Braunstein. "We subsequently can confirm a diagnosis utilizing image-quidance to biopsy the identified area."

In Ken's case, Braunstein obtained a biopsy under CT scan guidance. That tissue showed that he had non-small-cell lung cancer, which, much to the family's relief, was not as aggressive as small-cell lung cancer.

Ken's oncologist determined the best treatment for him was chemotherapy, which he started in late January.

Beyond diagnosing disease

While Ken's interaction with Braunstein ended after his biopsy, this isn't always the case with some patients. In addition to being a diagnostic tool, interventional radiology is used for treatment.

"We also can treat various entities using the imaging tools we have," says Braunstein, "including X-ray all the way up to MRI and ultrasound."

He explains that with interventional radiology, imaging helps surgeons perform minimally invasive procedures that could replace surgery or be used in conjunction with surgery. "We work with all of the specialists, from family practice to oncology and urology. It's the full spectrum."

Caring communities here and afar

Nichole Ditzler, RN, interventional radiology nurse supervisor at LVH-Hazleton, who works closely with Braunstein, recently saw Ken and Marie out for breakfast in the community. "He is doing well, responding to treatment, and he looks great," Ditzler says.

While it might sound strange, Ken and Marie are thankful for his fall and rib injury last year. "The doctors told us that in about two years, we would have seen signs of the cancer," Marie says of her husband, who started smoking at age 15 before quitting at age 65. "By then it would have been too late."

"The key thing here is community," Braunstein says. "The people treating them are the same people they will see in the community. We really care about them as individuals."

After chemo is over. Ken and Marie are heading back to Florida and look forward to rejoining the bocce league in the 55-and-over community where they live. This time, instead of facing a long drive, the snowbirds are flying back. 👌

- LEAH INGRAM



Has your doctor ordered a test or imaging study?

→ Visit LVHN.org/testing.

Watch featured doctor video: LVHN.org/Braunstein.









What **Influences** Your Cholesterol?

Influencers like diet, exercise and your family tree can all affect your cholesterol readings







HDL: Good cholesterolKeeps arteries from clogging **Goal:** 60 mg/dL or higher

LDL: Bad cholesterol

Builds up and clogs arteries Goal: Less than 100 mg/dL if high risk for heart disease; less than 130 mg/dL normal risk

Cholesterol is a soft, waxy substance found in the bloodstream and your body's cells. It helps produce cell membranes and hormones. There are two types of cholesterol: good cholesterol – high-density lipoprotein or HDL, and bad cholesterol – low-density lipoprotein or LDL. Too much of one type, and not enough of the other, puts you at risk for heart disease and stroke.

"Despite more public awareness and better screening tools, less than 50 percent of those with high cholesterol actually receive treatment," says Lehigh Valley Hospital-Schuylkill surgeon Ivor F. Lewis, MD, with LVPG Family Medicine. "Of those that are in treatment, only about one-third have reached the recommended goal for good cholesterol."

Good influencers

- → High-fiber foods like fruits, vegetables, whole grains
- → Omega-3 fatty acid-rich fish like salmon, tuna and trout
- → Nuts
- → Healthy weight
- → Regular exercise

Bad influencers

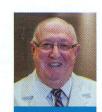
- → Fatty, high-cholesterol foods like fatty meats, cheese
- → Sedentary lifestyle
- → Obesity
- → High LDL (bad) cholesterol
- → Smoking

Do you need a checkup?

→ Make an appointment. Call 888-402-LVHN.

Is it your genes?

A rare condition called familial hypercholesterolemia allows cholesterol to build up regardless of weight, diet and exercise. But people without this genetic condition can still inherit a predisposition for high cholesterol or developing risk factors for it. "It's up to your physician to determine if early screening for cholesterol is appropriate," Lewis says.

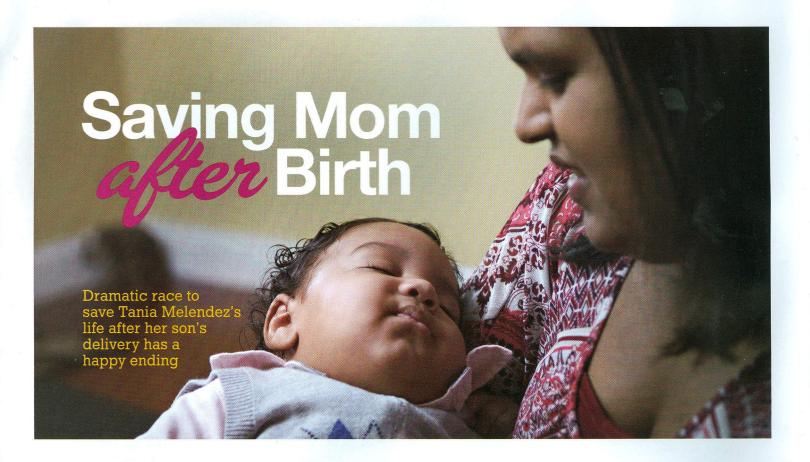


Ivor F. Lewis, MD Family medicine

Prescription help

Along with diet and exercise, your doctor may recommend an LDL-lowering drug, like a statin or a bile acid sequestrant. Other medications may raise HDL levels - the good cholesterol - such as niacin or fibrates. "Treatment recommendations for high cholesterol continue to evolve, so stay tuned," Lewis says.

- LESLIE FELDMAN





Sanjay Mehta, MD Cardiothoracic surgery



Robin Bohanan, CRNP Family medicine

The night before she was scheduled to have an elective cesarean section, Tania Melendez went out to eat with her family to celebrate. The 37-year-old Hazleton woman had noticed swelling in her feet and legs and shortness of breath, but she'd experienced these common pregnancy symptoms before with her first two children

"I wasn't worried because I've always been healthy with no chronic conditions," Melendez says.

That evening, Jan. 8, 2017, her water broke, and her sister-inlaw rushed her to Lehigh Valley Hospital (LVH)-Hazleton to have her C-section. The baby - a boy named Eudez - was born healthy.

Everything seemed normal, but afterward, while Melendez was still in the operating room (OR), she began having trouble breathing and quickly went into cardiac arrest. She remembers nothing after that.

Code blue

Brenda Noonan, RN, and Amanda

Kalinowski, RN, rushed to the OR as soon as they heard the emergency announcement and began CPR (cardiopulmonary resuscitation). Once a patient's heart and breathing has stopped, every second counts. It's crucial to keep enough oxygen-rich blood circulating through the body to prevent brain damage or death before a heartbeat can be reestablished.

"We didn't know what was wrong, but I started chest compressions, and the team gave her oxygen and medications to restore blood circulation," Noonan says. "It was traumatic wondering if her beautiful baby would grow up without a mother."

The team worked frantically and revived a slight pulse, but Melendez's blood pressure remained so low they knew she required additional help. "The decision was made to airlift her to Lehigh Valley Hospital-Cedar Crest for special life-support called extracorporeal membrane oxygenation (ECMO) that works like an artificial heart and lung," Kalinowski says.

Lifesaving resuscitation

Cardiothoracic surgeon Sanjay Mehta, MD, with LVPG Cardiac and Thoracic Surgery, was in the intensive care unit in the early-morning hours of Jan. 9 when Melendez arrived by MedEvac helicopter. "The team did a wonderful job keeping her functioning on the journey here," he says.

Mehta and his staff first believed Melendez had a rare lung condition called amniotic fluid embolism that affects women during delivery. They quickly put her on the ECMO machine to support just her lungs, hoping her heart would start beating again automatically. But when it failed to respond, they concluded Melendez had peripartum cardiomyopathy, a type of heart failure that can occur during pregnancy or after delivery. Common symptoms include water retention and shortness of breath. Mehta upgraded ECMO to take over her heart function too.

For three days, Melendez remained on ECMO under sedation to

▶ Watch our featured provider videos: LVHN.org/SMehta and LVHN.org/Bohanan.

keep her comfortable and eliminate accidentally pulling out her tubes. No one knew if she would recover, or what disabilities she might face afterward.

Miraculously, Melendez's heart began beating again by itself. She was removed from ECMO after three days, but remained on a ventilator for nearly two more weeks to ensure she was breathing properly. She returned home on Jan. 25.

"This was a real team effort," Mehta says. "Many people deserve credit for getting her through this."

Remarkable recovery

Today, Melendez is walking and talking, and suffers only lingering effects from her traumatic experience. Baby Eudez is also thriving, and her two daughters and husband are thrilled to have her back.

"Tania's blood pressure is slightly elevated, and recently she developed a thrombosis (blood clot) in her right arm that affects her hand function, but she's a walking miracle," says nurse practitioner Robin Bohanan, CRNP. with LVPG Family Medicine, Bohanan is treating her with a blood thinner. plus Melendez sees hematologist Harvey Hotchner MD, with LVPG Hematology Oncology, cardiologist Thomas Ciotola, MD, with LVPG Cardiology, and to help strengthen her hand, she sees an occupational therapist with the Health & Wellness Center at Hazleton.

Melendez still feels emotionally shaky sometimes, but she's beyond grateful for the care she received from LVHN's regional team.

"I'm astonished I'm alive when I hear what happened and what everyone had to do to save me," she says.

- SIDNEY STEVENS



Learn how ECMO saves lives.

→ Visit LVHN.org/ECMO.

Under Pressure

Hyperbaric oxygen therapy helps heal wounds

You might think pressure is something to avoid. But if you're dealing with a stubborn wound, pressure can help promote healing when delivered in a hyperbaric oxygen chamber

"With hyperbaric oxygen therapy, you breathe 100 percent oxygen," says Scott Stephenson, program director at Lehigh Valley Hospital—Schuylkill E. Norwegian Street's Advanced Wound Center. "Receiving it in a pressurized chamber enhances oxygen delivery to injured areas through the blood, which helps fight infection, improves generation of blood vessels and results in better outcomes such as higher quality of life and less time in the hospital."

Deep-water pressure

Therapy recipients recline in a tubelike chamber that creates pressure equivalent to being 33 feet underwater. "It feels no different than lying on a sofa except your ears may crackle like they do when you fly in a plane," says Cathy Cruz, RN, clinical nurse manager at the Advanced Wound Center. "We teach you how to swallow, yawn, or hold your nose and blow to open your ears."

The chamber is not confining like some MRI machines. "It is clear acrylic all the way around so you can see out," says Gail Zerby, LPN, hyperbaric technician at the Advanced Wound Center. Zerby is one of the specially educated clinicians who deliver and monitor the therapy. "You can watch TV or a movie during the two hours of treatment," she says. Think of it like flying nonstop between the Lehigh Valley and Orlando (but with more legroom).

Healing is enhanced

The therapy is especially beneficial for slow-to-heal wounds or ulcers caused by diabetes, surgery, trauma, amputation or grafts. "It's an adjunct to other therapies that have failed to provide adequate healing," Cruz says.

And although hyperbaric therapy is not a wound cure-all, the Advanced Wound Center achieves a 95 percent healing rate, with patients healing on average in 28 days – well ahead of the center's benchmark healing rate. Following 30 to 60 days of daily Monday-to-Friday hyperbaric therapy you may see a bonus effect. "It can enhance wound healing for weeks after you complete treatment," Cruz says.

- RICHARD LALIBERTE

Hyperbaric therapy locations

- → Lehigh Valley Hospital-Muhlenberg
- → Lehigh Valley Hospital-Pocono
- → Lehigh Valley Hospital-Schuylkill

Therapy recipients recline in a tube-like chamber that creates pressure equivalent to being

33 FEET UNDERWATER

Are you concerned about a slow-healing wound?

Visit LVHN.org/hyperbaric.

New Prostate Cancer Treatment Protects Organs at Risk

With SpaceOAR, prostate cancer patients have stronger radiation treatments while also protecting sensitive organs from radiation

Most men being treated for prostate cancer need daily radiation therapy over nine weeks. "That's a huge inconvenience," says Charles Andrews, MD, director of radiation oncology at Lehigh Valley Hospital (LVH)-Pocono. "We're trying to shorten courses of treatment down to five or five-and-a-half weeks."

But how? By increasing the radiation dosage with stereotactic body radiotherapy or SBRT. However, higher radiation comes with possible complications, simply due to human anatomy. "The prostate sits between the rectum and the bladder - and the rectum is probably the most sensitive organ to radiation," Andrews says. "Too high a dose, and the patient can have long-term issues like pain or bleeding that might require medical intervention, so we need to prevent that from happening."

Creating protective space

Enter SpaceOAR® or the Spacing Organs at Risk system. It protects the rectum from radiation, in the way a dentist protects your neck and chest when you get dental X-rays.

Instead of a lead blanket, SpaceOAR is an injectable gel that solidifies on contact. It is delivered during a procedure similar to the way a prostate biopsy is done. "Often during that same procedure, we're inserting markers into the

prostate that our machine uses to track the target tissue during treatment," Andrews explains. Those markers are like an internal GPS system so the treatment precisely finds the prostate. The SpaceOAR material forms a barrier between the prostate and rectum keeping the rectum outside the treatment zone. Over time, after the treatment is finished, SpaceOAR dissolves.

SBRT significantly shortens treatment time frame

Board-certified radiation oncologist Dennis Sopka, MD, with Allentown Radiation Oncology Associates, says SBRT provides the same type of treatment some seek from Cyberknife® - with an important difference. "This system allows us to deliver the same type of treatment one would expect from that system, with equal or greater expected efficacy, but in a significantly shorter treatment time." With the SpaceOAR barrier, SBRT can eradicate cancer, without harming nearby organs.

Lehigh Valley Health Network (LVHN) is the first health system locally to offer SpaceOAR to patients. It's already in use at LVH-Pocono and will be available starting in the fall at LVH-Cedar Crest. "It's more convenient and much more timesensitive for patients to be able to do this here at LVHN," Sopka says. 🔌

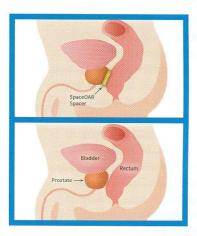
- LEAH INGRAM



Charles Andrews, MD Radiation oncology



Dennis Sopka, MD Radiation oncology



LVHN is the first health care system locally to offer SpaceOAR to patients.

Behindthe-Scenes Disease **Detectives** When you are diagnosed with a disease, it may seem like your doctor is making all the treatment decisions. But, in fact, a team including pathologists and radiologists is often working in the background to help pinpoint what you have. Here's why these doctors are so crucial to your care.

What is pathology?

In short, it is the study of disease. Pathologists are doctors who study tissue and cell samples under a microscope to accurately diagnose diseases, like muscular dystrophy and cancer, and assure you receive the best treatment possible.

How are pathologists different from radiologists?

Radiologists specialize in diagnosing and treating diseases and injury using medical imaging, such as X-rays, computed tomography (CT) scans, magnetic resonance imaging (MRI), nuclear medicine, positron emission tomography (PET) and ultrasound.

Where are radiology and pathology services offered at Lehigh Valley Health Network?

Lehigh Valley Health Network (LVHN) offers more imaging locations than any hospital in the region, featuring state-of-the-art radiology technologies – CT scans, PET/CT scans, MRI, X-ray, ultrasound, DEXA scans (bone densitometry) and fluoroscopy. Services are provided by Medical Imaging of the Lehigh Valley, P.C., with more than 75 board-certified and subspecialized radiologists in the areas of neuroradiology, body imaging, interventional and neurointerventional radiology, and cardiac, breast and pediatric imaging.

LVHN's pathology services are provided by the Center for Anatomic Pathology, part of Health Network Laboratories. The department includes 24 board-certified pathologists with expertise in several subspecialties including hematopathology (blood), dermatopathology (skin), and molecular and genetic pathology.

How are pathologists and radiologists part of your care team?

You may never meet your pathologist or radiologist, but they are actively involved in your care. For example, your regular doctor may suspect cancer and ask a radiologist to perform imaging tests and a pathologist to study tissue samples (from a biopsy) to confirm there is a tumor, its size, location, and whether it has spread. Pathology tests also can detect gene mutations, viral infections and other microscopic abnormalities.

Together, this data determines your tumor's exact stage (how advanced it is). Pathologists and radiologists then play a role on your care team to design the most-targeted treatment plan.

As new genetic and molecular therapies are developed, pathologists in particular are also increasingly important in identifying good candidates for these leading-edge individualized treatments.

- SIDNEY STEVENS

K

Often pathologists and radiologists contribute expertise to a tumor board.

→ Read along at LVHN.org/tumorboard.



For more than two hours she could only sit. She finally maneuvered herself to lie on the kitchen floor, accompanied by her worried cat. When her husband, Kenneth Roth, came home, he tried to move her. "I told him to please call 911," Getz says.

Vertebral compression fracture

After being evaluated at Lehigh Valley Hospital (LVH)-Hazleton, she transferred to LVH-Cedar Crest, where a computed tomography (CT) scan revealed a vertebra in her lower back had a compression fracture. "The injury was in a transitional juncture between the thoracic and lumbar spine," says Efkan Colpan, MD, a neurosurgeon with LVPG Neurosurgery. "It's the most common area for fractures of this type."

Both the compression injury and protrusion of bone into the bundle of nerves that runs through the spine contributed to Getz's severe pain. "The nerves were damaged but not destroyed," says physiatrist Jeffrey Perkins, MD, medical director at Gunderson Center for Inpatient Rehabilitation. "That meant we could fix the injury and she could heal."

Steps toward healing

The first step was to see if noninvasive, conservative care at the Gunderson Center could help stabilize Getz's back and relieve the pain. "I tried wearing a back brace made especially for me, but the pain was so bad I couldn't wear it," Getz says. Perkins also noticed Getz was getting weaker and less mobile. "I thought it was prudent for her to go back to see a neurosurgeon," he says.

In early August, Colpan performed a minimally invasive proce-

dure called kyphoplasty in which a balloon aligns the spine before an injection of cement fixes bones into place and helps stabilize the back.

Hope and encouragement during rehab

At Gunderson and later the Health & Wellness Center at Hazleton, Getz dedicated herself to physical and occupational therapy to help her return to daily activities. "I could walk, but only with a walker," she says. "There were days in therapy where the pain was still so bad I could only lie there and cry." But clinicians and therapists kept Getz's hope alive. "People at Gunderson and the Health & Wellness Center were absolutely amazing," she says. "They really cared about my recovery."

Eventually Getz was able to walk and go about daily activities like climbing stairs with minimal assistance. But it became clear that her fall also had injured ligaments in her back, contributing to further instability that caused vertebrae above and below the fracture to impinge on nerves.

Easing Linda's pain

"I recommended fusion to address the instability in Linda's spine," Colpan says. The procedure, which took place Oct. 31, uses rods and screws to add structural stability to the spine along with bone grafting to support bone healing.

"Day by day I could feel the pain subsiding until one morning I woke up and it was just gone," Getz says. "It took probably two or three weeks. I was shocked the surgery helped that fast."

"It's a remarkable recovery," Perkins says. "She's remarkable, and



Watch our featured doctor video: LVHN.org/Perkins.

everyone involved in her care was remarkable. We did not give up on her."

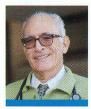
Back to her everyday routine

After more than five months away. Getz returned to her job as an LVH-Hazleton receptionist in early January. "Nobody could believe it when I came back to work full time," Getz says. Some days her back can still throb. "But other days I don't even need a cane," she says. "I can walk, sit, drive, pick up a 25-pound container of cat litter, do housework - there are really no restrictions." And she can bake again, she says - "but I'm a lot more careful about cords." 🔌

- LEAH INGRAM



Efkan Colpan, MD Neurosurgery



Jeffrey Perkins, MD Physiatry

Learn more about inpatient rehabilitation.

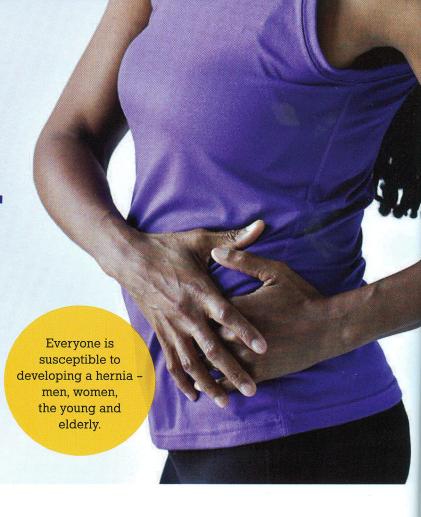
→ Visit LVHN.org/inpatient-rehab.

Hernia 101



Jayme Lieberman, MD General and trauma surgery

When you hear that someone has a hernia, what do you think? If you think that they may have lifted something heavy and injured their groin, you have a basic idea, says Lehigh Valley Hospital-Hazleton surgeon Jayme Lieberman, MD, with LVPG General and Trauma Surgery. "If you pick up something too heavy – and in an improper manner – that can cause a hernia," he says. "The most common location for a hernia is the groin. We also often see them in the bellybutton."



A hernia is technically a hole in the abdominal wall.

"The bulge most people equate with a hernia is tissue protruding through the hole or the hernia. Sometimes this tissue is part of your intestine," Lieberman says.

Who's at risk for hernia?

Everyone is susceptible to developing a hernia – men, women, the young and elderly. Lieberman says that in infants and young children, a congenital defect could cause a hernia.

Have a hernia?

>>> Talk to a surgeon

Unlike a broken finger that you might have set and you'll be good to go, you can't push a hernia back in. "Hernias do not heal on their own," Lieberman says. "Surgery is the only way to repair them. Surgery for hernias is most often done with traditional techniques, but can be done laparoscopically in a case-by-case basis." This is considered an outpatient procedure so you will typically go home the same day.

Don't delay

>>> Get hernia repaired ASAP

You don't want to push off surgery for too long, especially if you are in pain. "Hernias can become blocked," Lieberman explains, "which means the blood supply is cut off. This can cause a need for emergency surgery."

Oh no!

>>> I think I have a hernia

If you think you might have a hernia, call your primary care provider (PCP) so you can be seen as soon as possible. Lieberman says if a hernia is diagnosed, your PCP will refer you to see a Lehigh Valley Health Network surgeon.

- LEAH INGRAM



Make an appointment with your primary care provider.

→ Call 888-402-LVHN.



Experiencing a hernia complication?

- → Severe pain and redness
- → Pressure or pain that keeps getting worse
- Fever
- → Rapid heart rate
- → Poor appetite, nausea and vomiting
- → Seek immediate medical help.

Eyebrow Saving time on your evebrow beauty routine is as easy as this

Anthropologists believe the main function of the eyebrow is to guard the eye from sweat droplets and other eyeirritating matter. Artists, psychologists and even poker players know brows play a starring role in facial expressions. But beyond their practical functions, brows have become a key feature of beauty for many people.

"Creating the perfect eyebrow is often a daily task - brow pencils, tweezers, tints and powders," says Emily Doster, medical esthetician with LVPG Plastic and Reconstructive Surgery. "Permanent makeup is a solution that not only repairs damaged, overtweezed brows, it also serves as a huge timesaver for those of us who can't dedicate time every day to our eyebrows."

Creating no-smudge evebrows

This permanent tattoo technique creates the appearance of hair in the brow line. Eyebrows are tattooed and/ or micro-bladed in place to whatever fullness you prefer. Size, shape and color are determined and agreed upon by both patient and provider. After the procedure there's no need for additional makeup. You can swim, sweat and wipe off your face without having to worry about them smearing, smudging or coming off.

"It's something that originated to provide eyebrows for people who had lost their eyebrows due to medication or disease such as chemotherapy patients and people with alopecia," Doster says. "Through the years, the technique has been perfected and become very popular."



A (mostly) permanent solution

Following an initial consultation to determine client preferences, eyebrows are put in place over two sessions. The first lasts from two to four hours and includes the tattooing process and/or micro-blading of color to give the brow fullness. After about six weeks of healing, clients return for a touch-up to ensure color and fullness are correct.

"We instruct women on eyebrow care during the healing process," she says. "There are a few things to avoid chemical peels, spending a lot of time in the sun without sunscreen or in chlorinated water."

Permanent makeup requires occasional touch-ups, Doster says. "Depending on your complexion and how well you care for your brows, a touch-up is only needed once a year, sometimes less."

- TED WILLIAMS



Emily Doster Medical esthetician

Don't wait, treat yourself.

Permanent eyeliner and rejuvenating facials also are available to refresh your look.

→ Make an appointment. Call 888-402-LVHN.







The Miracle of **Noninvasive Brain Surgery**

Specialized team treats Rick Franzo's brain tumor nonsurgically using the new Gamma Knife® Icon™

In July 2016, Rick Franzo noticed some hearing loss in his right ear, but assumed it was related to an ear cleaning his doctor had just performed. By December his balance was becoming unsteady, but he chalked it up to his earlier ear problems.

It never occurred to him that his symptoms might be connected to two previous noncancerous brain tumors called meningiomas diagnosed years earlier. One was surgically removed in 2009, and doctors were monitoring the other one discovered in 2011.

"If I hadn't been to my ear doctor, I would have immediately thought, 'brain tumor.' But you get lulled into

a sense of complacency," says the 51-year-old from Cresco, Monroe County.

Tumor déjà vu

In February 2017, during Franzo's annual brain MRI to look for any changes to the meningioma, doctors coincidentally discovered what was wrong: a new noncancerous tumor called an acoustic neuroma was growing on his eighth cranial nerve leading from his inner right ear to his brain. Pressure from the growing mass was causing his hearing loss and balance problems.

It was not good news, but Franzo vowed to face it head on like he had with his other tumors. Those expe-



Stefano Camici, MD Neurosurgery





Robert Prosnitz, MD Radiation oncology

Download Gamma Knife Guide

→ Visit LVHN.org/hygamma.

riences had actually transformed his life, leading him to write a book for brain tumor survivors and start a support group and radio show (braintumortalk.com).

Franzo and his wife met with Lehigh Valley Health Network (LVHN) neurosurgeon Stefano Camici, MD, with LVPG Neurosurgery, to discuss treatment options. When Camici mentioned surgery, Franzo's heart sank. His prior brain surgery had required removing part of his skull to cut out the tumor. The 10 1/2-hour procedure left him paralyzed from the waist down, and it took months of rehab to regain use of his legs.

But Franzo soon discovered Camici had something less intensive in mind. Because the tumor was small, he suggested treating it noninvasively using LVHN's new Gamma Knife® Icon™ to deliver a single dose of highly targeted radiation. Best of all, Franzo could take advantage of the Icon's comfortable frameless treatment system instead of wearing an attached headframe (which is still required for patients undergoing lengthy treatment or treatment near sensitive brain areas).

"Rick's tumor was only a few centimeters, so he was a good candidate for this type of state-of-the-art surgery and the frameless technology," Camici says. "Gamma Knife Icon is really the 'gold standard' for nonsurgical treatment of cancerous and noncancerous conditions of the brain, including acoustic neuromas, meningiomas, arteriovenous malformations (AVMs), brain metastases and trigeminal neuralgia."

Precision teamwork

On surgery day, Franzo arrived at 7 a.m. and learned he would be the first LVHN patient to wear the frameless thermoplastic face mask. The technology uses an infrared monitoring system to shut off the Gamma Knife if a patient moves even a millimeter.

Next, Franzo's surgical team including Camici and radiation oncologist Robert Prosnitz, MD, with Allentown Radiation Oncology Associates at Lehigh Valley Hospital-Cedar Crest, calibrated the Gamma Knife to deliver 192 highly focused radiation beams into the tumor in a single session, without hurting surrounding healthy tissue.

Treatment lasted 20 minutes, and Franzo returned home that afternoon. "I felt nothing," he says. "I didn't need pain medication afterward and returned to work a few days later."

Hope for the future

Prosnitz is hopeful that Franzo's treatment will prevent further tumor growth and hearing loss.

"Acoustic neuromas stop growing about 95 percent of the time after Gamma Knife treatment," he says. "Most patients also have a 50 to 60 percent chance of retaining serviceable hearing afterward."

Since surgery, Franzo has continued working with brain tumor survivors and now enthusiastically recommends Gamma Knife. "I never imagined brain surgery could be this easy," he says. "It gives people real hope, and it's incredible that we have a hospital so close with this type of top technology." 👌

- SIDNEY STEVENS

"Icon is really the 'gold standard' for nonsurgical treatment of cancerous and noncancerous conditions of the brain."

- Stefano Camici, MD





There's only one big problem with being 91 years old as far as William Bakes is concerned. "All my friends are gone," says the proud World War II veteran from Allentown. "Outside of my family, there aren't many people I can call a friend anymore."

Maybe that's what brought about Bakes' friend request a few years back of his orthopedic specialist, Eric Lebby, MD, Chief, Division of Orthopedic Surgery at Lehigh Valley Health Network, Bakes made his request the old-fashioned way.

"I've been treating Bill for about three years for arthritis in both knees." Lebby says. "I see him every few months, and it's always great to see him. One day, he just asked me if I would be his friend. I told him absolutely, that I would be honored."

Reverence for 'Old Glory'

From the first moment Bakes met the 47-year-old Lebby, he knew he would like him. He noticed an American flag pin attached to the doctor's lapel. That told Bakes this was somebody who shared his sense of patriotism.

"He talked to me like an ordinary person, not like a doctor to a patient," Bakes says. "I told him I was a veteran, and we just hit it off. We talk about a lot of things. My appointments with him go by fast."

Service to country and humanity

Bakes is especially proud of serving his country during World War II, as did his three brothers. He did his U.S. Army training at Fort Benning, Ga., with John Eisenhower, son of Gen. Dwight Eisenhower, supreme commander of the Allied forces in Europe and future U.S. president. When he arrived as a corporal at the European theater in 1944, he became part of Gen. George Patton's Third Army and fought the Germans at the famed Maginot Line - concrete fortifications on the borders of France, Switzerland, Germany and Luxembourg - leading to the liberation of the nearby city of Bitche, France.





>>> U.S. Army Cpl. William Bakes during World War II (left) and Bakes today.

As Allied forces moved into Germany, Bakes joined in the liberation of a series of Austrian concentration camps. "Prisoners at Gunskirchen were left in the forest to die," Bakes says. "These walking skeletons were running up to us, hugging us and kissing our boots. We had to help bury those that didn't survive. What we saw there, it's not something you can forget."

Living a content, full life

Following a stay in Europe to help with the reoccupation of liberated countries, Bakes returned to Allentown in 1946 and almost immediately met his wife, Teresa. "She saw me walking down the street and knew I was for her," he says. "At least that's how I remember it. We got married right away." They would be married for more than 50 years until her death in 1998.

Bakes worked as a garage mechanic and eventually joined the Allentown School District in the late 1960s, staying until he retired at age 65. Today, he lives in Allentown with his daughter, Lynette, and her husband, Tony Messenlehner. Bakes spends a lot of his time doting on his granddaughter, Kristi Gases, his grandson, Doug Genovese, and his great-grandson, Maxwell Genovese. And he enjoys his visits and phone calls with his friend, Eric Lebby.

The heroic generation

"My grandfather and great uncle fought in World War II," Lebby says. "I think they had a lot of influence on my support of our military. Bill reminds me of them in many ways. Many times we get to talking, and his appointments run over a little bit."

Bakes earned 12 medals and various other military honors, including the Bronze Star, for his World War II service.

"People called us heroes, and sometimes the way we were treated it felt that way," Bakes says.
"We were able to help a lot of people who needed our help. If that's being a hero, I'll take it."

Veteran Care and Awareness at LVHN

Lehigh Valley Health Network (LVHN) counts many military veterans on its staff. To help improve health care for veterans:

- → Veterans Affairs (VA)
 recognizes LVHN as a Veterans
 Choice Program provider. This
 allows veterans to receive
 health care at LVHN when
 VA medical services may be
 unavailable or delayed.
- → LVHN has increased staff awareness of the unique cultural experiences and medical needs of military men and women, including posttraumatic stress symptoms.
- → LVHN also provides referral coordination and navigation for veterans with complex medical and social needs through an onsite veteran health liaison.
- → LVHN, in collaboration with the Lehigh Valley Military Affairs Council (LVMAC), now screens patients to capture their veteran status in their electronic medical record.

-TED WILLIAMS



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Weight-Loss Tips

What weight-loss surgery candidates learn before their procedure can help most of us achieve and sustain weight loss

Before weight-loss surgery, many patients prepare and lose weight by following these suggestions from the team at Lehigh Valley Health Network's Weight Management Center. "Good nutrition and habits are the basis for anyone's success," says registered dietitian Cheryl Rutkauskas, with the Weight Management Center.



Cheryl Rutkauskas Weight management



Sandra Carwell, RN Weight management

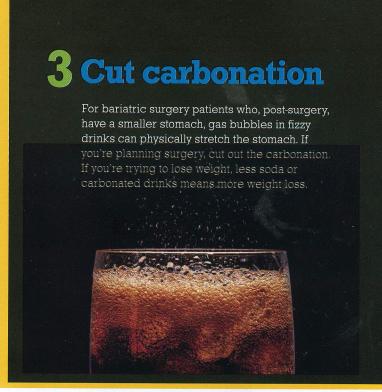


protein

Start any meal with lean protein such as low-fat Greek yogurt, lean meat or a hard-boiled egg. "Protein fills you up, helps prevent loss of lean muscle and helps burn fat," says Sandra Carwell, RN, patient navigator with the Weight Management Center. "Follow protein with a nonstarch vegetable and then if you have room - a starch."

Eat more often

It's called interval eating. A daily rhythm of five to six small meals and snacks every two to three hours not only wards off hunger, it can give you energy. "Metabolism should keep burning like a fire you don't put out," Carwell says.





Eating slowly lets you chew food to an easy-to-absorb paste. "That's especially important after surgery because the stomach no longer grinds food using wave-like muscle action," Rutkauskas says. In people who haven't had surgery, slowing down gives the stomach more time to generate signals that you're satisfied or full.

Control portions

Invest in some inexpensive containers to help you measure your food. Pre-packing your meals also helps you make better decisions and stick to your weight-loss plan.





Behavioral health specialists say we often eat because we're bored or stressed. Write down when you eat and what you are feeling at the time. It can help identify times when eating behavior is driven by emotions not hunger.

If you know you'll have limited or no healthy food options, plan ahead. "The world often doesn't provide the food options we'd prefer," Rutkauskas says. "Planning helps you navigate your new lifestyle. 🔌

PLAN AHEAD



Join us!

Learn more at a free Weight Loss Info Session in Allentown, Bangor, Berwick, Bethlehem, Hazleton, Mountain Top, Palmer Township, Pottsville and Wilkes-Barre. For dates and times, visit:

- → Lehigh Valley region: LVHN.org/LVbariatrics
- → Northeast PA region: LVHN.org/NEPAbariatrics

- RICHARD LALIBERTE



Nicole Purcell, DO, uses teleneurology connection from LVH–Cedar Crest to perform a neurological exam at LVH–Hazleton.



Nicole Purcell, DO Neurology

Bringing the Neurologist to You

Teleneurology provides access to specialized care

Traveling to another hospital while you are experiencing neurological symptoms is a hardship for people. It is particularly difficult for older people or people who suffer from chronic conditions.

Telemedicine can resolve many of those challenges. "The concept is to bring care to where the patient is," says neurologist Nicole Purcell, DO, with LVPG Neurology. "Technology allows me to be in more than one physical space at a time to deliver specialized neurology services."

Telemedicine brings specialty care to you

With TeleNeuroSciences (TeleNS), remote locations are furnished with a high-definition camera, monitor and portable computer all placed

on a wheeled unit that can easily be brought to your bedside or examination room. The unit also has the ability to attach diagnostic tools such as a stethoscope or otoscope (used for ear exams). At all times, a clinician, such as a nurse, assists with the exam as an extension of the physician.

"On my end I have a cameraequipped laptop," Purcell says. "I can see patients, and they can see me. But I can physically be anywhere as long as I have a secure Wi-Fi connection that supports the system."

Almost like an in-person appointment

Using TeleNS, Purcell can glean most of the information she would get from an in-person consultation. "I can talk to you, get a history, talk about medical problems and medications you take at home, and answer questions," she says. "The only thing I can't do is touch you, but a clinician on the other side helps facilitate a sensory exam."

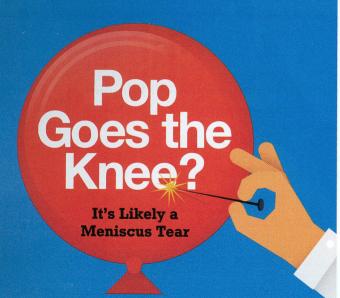
Purcell also has access to medical records and can dictate notes that are entered into your home facility's medical record system.

LVHN grows its telemedicine program

Purcell provides TeleNS care to Lehigh Valley Hospital-Hazleton, Lehigh Valley Hospital-Pocono [by fall], and Lehigh Valley Health Network partner locations.

"People like TeleNS because they can stay right at their home hospital," Purcell says. "For some, that means having access to specialized care they might not otherwise receive."

-RICHARD LALIBERTE



It's a dreaded sound for basketball and football players – a popping noise and then ensuing knee pain. Many times that telltale "pop" is meniscal cartilage tearing.

"It's one of the more common problems we see in our office," says orthopedic surgeon Rupam Das, MD, with LVPG Orthopedics and Sports Medicine.

The meniscal cartilage consists of two wedge-shape disks behind the knee that act as shock absorbers between the two large bones of the leg. Sometimes a quick or awkward pivot along with an immediate start or stop is all it takes to tear the cartilage.

An X-ray and most likely magnetic resonance imaging (MRI) scan are needed to make a conclusive diagnosis."Time can matter for traumatic meniscal tears if they are repairable," says primary care sports medicine physician Chelsea Evans, DO, of LVPG Orthopedics and Sports Medicine. "It is important for primary care physicians to refer patients with suspected traumatic tear to an orthopedist for a potential repair or resection."

Meniscus surgical options

- → Resection: Remove torn cartilage
- → Repair: Cartilage is sutured
- → **Transplant:** Option if resection or repair isn't successful

"Resection makes up about 75-85 percent of surgical procedures,"

Das says. "The goal is to leave as much meniscal tissue as possible to act as that

shock absorber."

Nonsurgical options

Lesser tears, particularly those along the lateral – or outer – layers of the meniscus where there is greater blood supply, are often treated with rest, anti-inflammatories and physical therapy until the area heals on its own.

"We'll work with someone for six to eight weeks in physical therapy with the hope of seeing the irritation improve," Evans says. "If the patient has underlying arthritis, surgery may not be a good option. It becomes more about managing the discomfort."

Rehab after surgery

Bouncing back from a surgical resection of the meniscus depends on where the tear is located.

"I've seen patients come to their first postoperative visit without their crutches," Das says. "Stitches can come out in about a week, and if you have a job that doesn't demand a lot of walking around, you can be back at work in a matter of days after that. However, if it's a lateral tear (on the outside of the knee as opposed to medial, or inside of the knee) it will likely take longer for the discomfort and pain to fully recover."

- TED WILLIAMS



Rupam Das, MD Orthopedics and sports medicine



Chelsea Evans, DO Orthopedics and sports medicine

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Did you know?

→ We have 42 convenient locations for physical therapy. Learn more at LVHN.org/rehab.



For the **22nd consecutive year**, Lehigh Valley Hospital (LVH) ranks as one of the nation's **top hospitals** on U.S. News & World Report's Best Hospitals list. **LVH is ranked the No. 5 hospital** among the top hospitals in Pennsylvania according to the magazine's annual rankings.





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