Dr. Wiesel, chief of shoulder services at MedStar Orthopaedic Institute at MedStar Georgetown University Hospital, specializes in the disorders of the shoulder joint, one of the most complex joints in the body. It is the source of persistent pain for thousands of people of every age and description.

Any part of the ball and socket joint can be damaged, including the bone or the group of muscles, tendons and cartilage that stabilize it. And the bone itself can wear away. Among the most vulnerable parts of the shoulder is the rotator cuff that can be injured from a fall or over time with constant use. A problematic rotator cuff is a common complaint of seniors and athletes alike.

No matter the cause, everyone—and every problem—is unique and Dr. Wiesel’s "treatment tool box" contains a full-spectrum of options. Dr. Wiesel, who completed a
Continued from page 1

Specialty Services at MedStar NRH Rehabilitation Network, McLean

Brent Wiesel, MD

year-long fellowship in shoulder problems and their repair, notes that orthopaedists are becoming increasingly specialized. “Patients should seek out a surgeon who has the specific experience and training that they require,” he says.

For most patients, physical therapy to improve range of motion is effective in reducing pain and improving function. “We work collaboratively with the MedStar NRH rehabilitation team and sports medicine experts at the McLean outpatient center to develop an effective plan of care for each patient,” Dr. Wiesel says. “When surgery is the best option, whenever possible we perform minimally invasive procedures utilizing advanced arthroscopic techniques that result in faster recovery.”

Small Incisions, Big Results

Arthroscopic surgery has become the norm for most ligament, tendon, cartilage and joint repair. “We have been performing shoulder arthroscopy for more than 20 years. Refinements in video technology and instrumentation have improved the procedure. Patients experience less blood loss and fewer complications, and can often go home the same day,” Dr. Wiesel adds.

“Rehab is critical to recovery after all shoulder surgery. We typically start therapy between 10 days to a month after surgery,” he says. “And patients often need four to six months of therapy one to two times a week. The good news is that patients have the convenience of receiving therapy and seeing me for follow-up appointments at the MedStar NRH McLean center. It’s a great advantage that patients really appreciate.”

BATTLING HIP AND KNEE PAIN

William Postma, MD, is also one of a number of orthopaedic experts serving patients at the McLean center. Dr. Postma, specializing in problems of the hip and knee, is a professor at Georgetown University School of Medicine and a sports medicine expert. He serves as associate team surgeon for Georgetown University’s athletic department.

While aching hips and knees can plague the student, professional—and weekend warrior—athlete, these debilitating pain problems can also be the result of trauma, overuse, or arthritis. Some problems are years in the making—an injury in adolescence may present a real problem in early adulthood. Repetitive injuries, even a micro tear in a ligament, may overtime require treatment.

“Whatever the origin, my focus is to identify each person’s best treatment option and eliminate pain. The vast majority of injuries will be managed with rehabilitation,” Dr. Postma explains.

Knee and Hip Arthroscopic Surgery

When surgery is needed to repair the injury or joint many patients are candidates for arthroscopic procedures. “We’ve developed techniques in the last decade that have really revolutionized these surgeries,” he adds.

“These procedures can be used to stitch together tears and remove damaged tissue, and repair one of the most common injuries—tears of the anterior cruciate ligament or ACL in the knee.”

One of the most exciting advances in the field is arthroscopic surgery for tears of the cartilage and labrum in the hip, the fibrous rim of cartilage around the socket that gives the hip stability. “Smaller incisions combined with advanced arthroscopic techniques now allow us to treat problems that previously had no solution.”

MedStar NRH Rehab Partners

No matter the surgery, physical therapy is important for the best possible recovery. “We work closely with the MedStar NRH team to develop a rehab protocol for patients undergoing repairs in the knee and the hip, as well as for patients who don’t require surgery, but who can benefit from therapy,” he adds.

Dr. Postma also collaborates with MedStar NRH Sports Medicine experts at the center to help athletes prevent injury—especially damage to the ACL. “We see lots of these injuries, and it’s far more common in girls and women—particularly those who play soccer,” Dr. Postma says.

“Whether you are an athlete or not, keeping your body moving and building muscle strength and flexibility are the best ways to avoid injury. But when pain makes everyday life a struggle, there is a treatment available to help,” he adds.
First Center in Delaware Opens,
New Waterfront Site in Baltimore

A new MedStar NRH Rehabilitation Network outpatient center has opened in Millsboro, Delaware—the network’s first venture outside of the Maryland, D.C., and Northern Virginia region. The center, located minutes from the busy Delaware beach area, is a collaborative venture with Peninsula Regional Medical Center, which is also a MedStar NRH partner in an outpatient center in Salisbury, Maryland.

“We are delighted to work with Peninsula to grow services and bring our first-class rehabilitation care to Delaware,” says John Brickley, vice president for ambulatory operations & network development. “We are co-located with Peninsula orthopaedic surgeons, and provide physical therapy to patients with orthopaedic and musculoskeletal problems, and offer sports medicine services, as well,” he adds.

In addition, a new Baltimore area outpatient location opened in Federal Hill this past summer. MedStar NRH Rehabilitation Network at Federal Hill provides orthopaedic, musculoskeletal and sports medicine-based physical and occupational therapy services, including specialized hand therapy.

“The Federal Hill team works closely with MedStar orthopaedic, sports medicine and primary care physicians in this multi-specialty MedStar Health Center,” says Brickley. The Federal Hill center is located on the city’s waterfront and boasts a harbor view and plenty of free parking.

Marymount University Partnership

Another new collaboration brings MedStar NRH physical therapists together with Marymount University physical therapy students, Brickley says. The university’s physical therapy (PT) education program is now located off its main Glebe Road, Arlington, campus in a Ballston, Virginia, office building, where MedStar NRH has opened its sixth Northern Virginia outpatient center.

“The PT program, and additional school offices, are housed at the location, and our center is on the building’s main floor,” Brickley explains. “Our therapists are not only caring for patients, but providing Marymount University’s physical therapy program faculty and students critical exposure to the very diverse and advanced therapy services we’re providing at the site.”

“We are delighted to continue and to expand our very successful collaboration with Marymount,” says John Rockwood, MedStar NRH president. “With this new partnership, students will have dedicated clinical time at the center for observation and hands-on experiences that will greatly enhance their education.

“MedStar NRH has a long history of partnership with Marymount,” he adds. “Together we’re training the next generation of physical therapists, whose services are in great demand today. No doubt this need will continue to grow as our population ages.

“We’ve also established a scholarship program for PT students at the University,” Rockwood adds. “In addition, our sports medicine experts are serving Marymount’s athletic teams, and MedStar Health physicians will be staffing Marymount’s student health services.”

“The new Ballston location represents a significant growth spurt for MedStar NRH in Northern Virginia, where we had only one center less than two years ago.”

– John Brickley, Vice President, Ambulatory Operations & Network Development

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Phone: 302-934-1783
Fax: 302-934-1792

MedStar NRH Rehabilitation Network, Federal Hill
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Phone: 410-230-7831
Fax: 410-230-7831

MedStar NRH Rehabilitation Network at Marymount
4040 North Fairfax Drive, Suite 120
Arlington, VA 22203
Phone: 703-292-4060

MedStar NRH Rehabilitation Network, Ballston
3833 North Fairfax Drive, Suite 300
Arlington, Virginia 22203
Phone: 703-717-6900
Fax: 703-717-6909

To learn more about outpatient center locations and services, visit MedStarNRH.org.
**MedStar NRH Docs Author “Pocket EMG”**

Eric Wisotzky, MD, director of cancer rehabilitation, and former residents Victor Tseng, DO, and Dane Pohlman, DO, have written a handy, practical guide to performing nerve conduction tests and needle electromyography.

“This is the book I always wanted while I was training,” says Dr. Wisotzky. “It’s small enough to fit in your pocket to refer to. While I learned to do EMGs from a reference book, it would have made learning so much easier to have a pocket book to carry with me.”

The guide provides technical details and photos for quick reference of the full-range of EMG tests. It is written for both physiatrists-in-training, and the more experienced practitioner.

“Many physiatrists perform these procedures,” Dr. Wisotzky adds. “While there are many parts of the tests that are commonly performed and easy to remember, I have found that having the guide handy is great for a quick refresher for less commonly performed parts.”

*Pocket EMG* is available at Amazon.com.

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**MedStar NRH Offers LSVT BIG/LOUD Program for Parkinson’s Patients**

Six outpatient centers in the MedStar NRH Rehabilitation Network are providing the very successful BIG/LOUD therapy program to help people with Parkinson’s improve both movement and speech, which are affected by the neurological disease. LSVT certified physical and occupational therapists and speech-language pathologists conduct intensive therapy—four days a week for four weeks for each portion of the program.

“The BIG program provides an evidence-based focus on changing movement patterns,” explains Kristen Patterson, DPT. “During therapy, we practice a series of exercises to amplify the shuffling movements some people with Parkinson’s make, focusing on large, full range of motion to retrain the brain,” she says. “They also have to supplement their hour-long sessions with at-home exercises twice per day.”

The LOUD portion of the therapy is focused on improving speech affected by the disease. “LOUD is a well-researched therapy that helps recalibrate the loudness of a person’s voice,” says Suzanne Redmond, SLP. “For four days a week over a month-long period, we use exercises to improve volume, endurance and breath support so that they can produce a louder voice with clearer speech,” she explains. Exercises performed at their home are also required for the LOUD therapy. Patients can participate at any time after their diagnosis, and engage in both BIG and LOUD at the same time or separately if they wish.

*BIG/LOUD is offered at outpatient centers in McLean, and Ballston, Va., Irving St., and Olney, Leisure World, Montrose and Bel Air, Md.*

*For more information, visit MedStarNRH.org/locations*

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**Rehab Physician Now at Outpatient Center at Leisure World**

MedStar NRH Outpatient Center at Leisure World has expanded services with the addition of Lori Nelson, MD, board certified in PM&R with fellowship training in interventional spine and pain.

Dr. Nelson provides evaluation of issues that cause debilitating pain, including arthritis, injury and spinal disc issues, and develops individualized treatment plans to help improve patients’ ability to function day-to-day. Treatment options include physical therapy at the Leisure World site, and injections of anesthetics and anti-inflammatory drugs near structures in the spine. Patients who require surgery can continue their recoveries at the Leisure World site, which is also staffed with MedStar NRH physical and occupational therapists.

Dr. Nelson provides services every Wednesday from 7 a.m. to 3 p.m. The outpatient center is open Monday through Friday, 8 a.m. to 5 p.m. The center provides care to Leisure World residents.
Grant Funds SCI Peer Mentor and Wellness Program

The Gordon and Marilyn Macklin Foundation has provided a generous matching gift to MedStar NRH to fund a Peer Mentor program for people with spinal cord injury (SCI), and a Wellness Program for people with physical disabilities, especially those with SCI. The funding has allowed MedStar NRH to offer weekly adaptive exercise classes that feature open accessible gym time, circuit training, sports conditioning and boxing-based fitness to help people with physical disabilities stay physically active, which is critical to preventing secondary conditions, such as heart disease, diabetes, respiratory illness and pressure ulcers.

The four-year grant will also allow MedStar NRH to expand its SCI Peer Mentor Program. With this support, six additional volunteer peer mentors who have successfully adapted to their injuries will be trained to provide quality support and education to mentees. The grant has also allowed MedStar NRH to hire Program Coordinator Harsh Thakkar to head the effort.

For more information, email harsh.v.thakkar@medstar.net or call 202-877-1859. To make a matching gift, call Robert Marsteller, director of philanthropy, at 202-877-1772.

In Memoriam: PM&R Pioneer Ernie Johnson

Ernest Johnson, MD, one of the PM&R pioneers, died November 2014. Dr. Johnson established Ohio State University's Department of Physical Medicine and Rehabilitation in 1963. He was a leader in the use of clinical electrodiagnosis (EMG), and trained hundreds of physicians during 50 years of service. Known as “Ernie’s Boys,” these men—and women—have gone on to practice and teach rehabilitation medicine all across the country.

MedStar NRH’s own John Aseff, MD, director of electrodiagnostic services and medical director of the post-polio program and admissions, was one of Ernie’s Boys, and remembers his mentor fondly.

“He was very popular among medical students and residents and known for his incredible clinical knowledge and outspoken approach. He would give you ‘pearls of wisdom’ and force you to look at care from the patient’s perspective. Every one of us in the training program had to learn to maneuver a wheelchair, and perform ‘wheelies’.”

Dr. Johnson co-founded Creative Living, an apartment complex near the university that promoted accessibility. His ideas were critical to the growth and success of disability rights in the U.S.
PRP: Harnessing the Body’s Regenerative Powers

Platelet Rich Plasma therapy (PRP), first used to speed post-surgical healing, is now utilized fairly routinely in treatment of damage to soft tissue, which accounts for nearly 50 percent of all musculoskeletal injury. Studies focused on broader use of the therapy are revving up, as researchers explore PRP’s healing power beyond tendons, muscles and ligaments.

“Treatments to boost the body’s own ability to heal injury is attractive, not only to physicians, but to patients, as well,” says Bryan Murtaugh, MD, sports medicine and interventional spine expert at MedStar NRH. Platelet-rich plasma is filled with the body’s own super vitamins—growth factors that produce a number of positive effects: reduction of inflammation, increased blood perfusion, enhanced collagen synthesis—and increased tissue production and bone growth.

Low Complexity, No Side Effects

“It’s a relatively simple, outpatient procedure, with no significant side effects,” Dr. Murtaugh explains. “A small vial of a patient’s blood is spun to separate components to produce a high concentration of platelets. Using dynamic ultrasound guidance for precise delivery, these platelets are injected at the site of the patient’s injury to facilitate tissue healing.” At MedStar NRH, PRP is used to treat a variety of sports injuries, work-related injuries, as well as overuse injuries, including common ligament, cartilage, tendon and muscle tears or strains. “When more conventional treatments aren’t effective, PRP can be a good alternative option,” Dr. Murtaugh adds.

Dr. Murtaugh and Jason De Luigi, DO, director of sports medicine, are also utilizing the treatment to relieve chronic pain as a result of joint osteoarthritis. “Cartilage breaks down in osteoarthritis along with inflammation in the joint fluid,” Dr. Murtaugh says. “PRP can have an anti-inflammatory effect and improve the environment for cartilage health.”

While one injection may suffice for many injuries, some patients will require additional injections given over time. “Improving a patient’s functional abilities is the goal and we rely on their self-reporting about the level of pain as well as their functional abilities to measure success.”

Expanding PRP Use

“The regulatory and proliferative effects of platelets make it an attractive potential therapy for a number of other conditions,” Dr. Murtaugh adds. Research is ongoing across the country, including a large national trial to test its effectiveness in degenerative disc disease. At MedStar NRH, Dr. De Luigi is conducting research on the use of PRP to treat hip labral tears to reduce pain and improve function. “Most hip labral tear repairs are performed with an open surgical procedure similar to a joint replacement, which is not in the best interest of young athletes,” Dr. De Luigi says. “Few surgeons are trained in minimal invasive arthroscopic repair, and most insurance companies don’t cover these procedures. Instead of paying thousands of dollars out of pocket for surgery, many patients have come to me for PRP,” he adds.

“I’ve had excellent success with individual patients, and recently completed a pilot study to track outcomes,” he explains. “Study participants had very good improvement in pain and function as early as two weeks post-injection. And we continue to see progress at eight weeks following completion of physical therapy.”

Dr. De Luigi will be presenting this research at the March 2015 Association of Academic Physiatrists conference, where it was identified as a finalist for Top Research Award.

To refer patients to Jason De Luigi, DO, or Bryan Murtaugh, MD, call 202-877-1621.

The MedStar NRH Sports Medicine-Wizards Connection

Jason De Luigi, DO, has been named Head Team Physician, Primary Care Sports Medicine for the Washington Wizards, and Bryan Murtaugh, MD, is now serving as Team Physician for the Wizards through an agreement between MedStar Health and Monumental Sports. MedStar Sports Medicine now provides medical care to more than 55 sports organizations.

“As the Wizards’ team physicians, we are responsible for the team’s medical care, helping players recover from injury or illness so they can get back on the court,” says Dr. Murtaugh.

Drs. De Luigi and Murtaugh are sharing coverage of all of the games, sitting at the sidelines, checking on the team in the locker room, and working with the team’s trainers when needed.

Dr. De Luigi, an internationally recognized leader in sports medicine, also serves as the Team Physician for the U.S. Adaptive Alpine Ski Team, the Washington Nationals, the Washington Spirit Women’s Pro Soccer team, and Catholic University.
Update from the
Christoph Ruesch Research Center at MedStar NRH

Strobe Eyewear: Potential Avenue for Stroke Recovery?

Stroboscopic training is making a leap from sports’ performance to rehabilitation. The technique, in which participants use eyewear that mimics a strobe-like experience, has previously been investigated as a method to improve athletic performance and visual-motor skills in general. Stephen Mitroff, PhD, MedStar NRH neuroscience researcher and associate professor of psychology & neuroscience at Duke University, is developing a pilot program to test its use in patients recovering from stroke who have visual impairments.

“In research we conducted at Duke we tested stroboscopic training in both athletes and other Duke undergraduates,” Dr. Mitroff explains. “The studies compared a control group with a group who wore the strobe eyewear during training. We assessed their visual and attentional abilities before and after training using a variety of cognitive measures, including a test of working memory and a test of motion sensitivity,” he explains.

Lasting Power in Snapshots

The strobe eyewear, developed by Nike, Inc., creates temporary disruptions of vision in which users see only glimpses of the environment around them. The user has to adjust their visual perception in order to perform tasks normally.

“Anticipatory timing—the ability to sense where a moving stimulus will be at a specific point in time—is an important skill for athletes. It means that they can imagine and act on what may happen next—what direction the puck may be coming from or where the ball may land, for example.”

Pilot Stroke Study

Now Dr. Mitroff is undertaking a first-of-its-kind pilot study at MedStar NRH to test the concept in rehabilitation. “During the last several months, Occupational Therapist Neepa Shah has been coordinating a pre-pilot testing period in the hospital, working with volunteers from among our inpatient stroke population. These patients performed regular training in skills of daily living with and without the strobe eyewear.

“What they have been reporting to us about their experience is helping to inform our pilot study, which will soon get underway,” Dr. Mitroff says. Twenty stroke inpatients will be recruited in the first phase of the study—10 controls and 10 who will wear the strobe eyewear for brief time periods during occupational therapy.

“They will receive their normal therapy and we will assess a variety of performance measures before and after the training, including typical visual measures used by occupational therapists and neuro-optometrists,” he explains.

Dr. Mitroff believes that the stroke patients will benefit from the technique. “It will hopefully help to improve their ability to perform tasks when faced with the visual distractions of day-to-day life,” he says.

“This is a preliminary investigation, but I’m optimistic that use of strobe eyewear will prove its value—and the method may ultimately be effective when used in conjunction with other rehabilitation therapies and for patients with other neurological problems.”
Several themes run through this issue of New Dimensions—and each represents a linchpin of our mission and our strategic direction for the future.

A key component of our plan for the next five years is the accelerated expansion of our regional outpatient network. This expansion is part of a larger strategy of our parent organization, MedStar Health. In many instances, our critical rehabilitation services are being co-located with MedStar Health physicians.

At our first-ever center in Delaware, our team of physical therapists and sports medicine experts are working hand-in-hand with orthopaedic surgeons. At our busy McLean, Virginia, site, MedStar NRH rehab physicians and therapists provide integrated services working collaboratively with a number of MedStar Health medical specialists.

But we aren’t simply expanding our geographic reach; we’re bringing the field’s most current evidence-based practices to these community locations. This includes the BIG and LOUD program for patients with Parkinson’s, now available at seven of our centers. This program is well-researched in helping patients with movement and speech impairments make functional improvements.

Of course, all new therapeutic interventions are the result of vigorous research, and at MedStar NRH maintaining a robust research program is critical. Our patients understand the benefit of receiving care from an academic medical center where the speedy translation of ideas from bench to bedside is routine.

In this issue of the newsletter, we’ve highlighted one intriguing study now underway to test the value of stroboscopic training for stroke patients. What Dr. Steve Mitroff has learned about the effect on performance of athletes who train while wearing strobe eyewear may ultimately prove true for patients who have suffered stroke. This is often the case in research: When collaboration is encouraged and investigators freely reach across disciplines and fields there is real potential for innovation. This is the kind of environment we have worked hard to create at MedStar NRH. Front line clinicians and basic, clinical and translational researchers share ideas and work in partnership with one another. The result is more rapid development of improved treatments—and the speedy translation of results into practice.