CENTER FOR ADVANCED ORTHOPEDICS



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When the **Body's** Largest Joint Needs Replacing

Prior to his knee replacement four months ago, Seaford resident Michael Wise was already familiar with South Nassau Hospital.

"I have had prior procedures at South Nassau and am more than happy with the staff," said the 54-year old retiree. "I was thrilled that Dr. Lementowski was affiliated with South Nassau; his reputation precedes him."

After physical therapy and a series of viscosupplementation, hyaluronic joint fluid therapy injections, failed to alleviate his knee pain, Mr. Wise's daughter, a physical therapist, recommended that he discuss a possible knee replacement with Peter Lementowski, M.D., orthopedic surgeon at the Long Island Joint Replacement Institute at South Nassau.

"Mr. Wise had a long-standing history of chronic knee pain that had significantly progressed over the past five years. After several conventional attempts to control it had failed, it was clearly time to review his surgery options," said Dr. Lementowski. "He had developed progressive degenerative

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Center for Advanced Orthopedics Physicians



Craig Levitz, M.D.

Dr. Levitz is chair of orthopedics at South Nassau Hospital, director of orthopedic surgery and the head of the Shoulder Center. He is one of a few physicians nationwide who is board-certified and fellowship-trained in sports medicine and he is nationally renowned for his use of minimally invasive arthroscopic procedures for repair of knee and shoulder injuries.

Dr. Levitz was recently listed for the sixth consecutive year in New York's "Top Doctors" in orthopedic surgery published by Castle Connolly. He has also been recognized by Castle Connolly as one of the top surgeons in the U.S. and by *Long Island Business News* as the top orthopedic surgeon on Long Island.



Kenneth A. Kearns, M.D.

Dr. Kearns is a board-eligible, fellowship-trained shoulder and elbow surgeon who specializes in arthroscopic surgery, minimally invasive surgery, joint replacement and fracture care. He earned a medical degree from University of Toledo College of Medicine in Toledo, Ohio. Dr. Kearns completed a residency in orthopedic surgery at Thomas Jefferson University Hospital in Philadelphia, Penn. and a fellowship in shoulder and elbow surgery at Thomas Jefferson University Hospital/Rothman Institute. Dr. Kearns is an award-winning researcher who has published and presented extensively in the areas of the shoulder and elbow surgery as well as adult reconstruction. He is a candidate member of the American Academy of Orthopaedic Surgeons.



Eric P. Keefer, M.D.

Dr. Keefer is a board-certified, fellowship-trained physician who focuses on sports medicine injuries, specifically related to treatment of the shoulder, knee and elbow. Dr. Keefer's goal as a physician is to help his patients maintain an active, pain-free lifestyle, so they can participate in their favorite activities.



Peter Lementowski, M.D.

Dr. Lementowski is a fellowship-trained, board-certified hip and knee orthopedic specialist with diverse expertise ranging from conservative treatments to hip and knee arthroscopy and traditional and minimally invasive approaches to total joint replacement. He earned a medical degree from Georgetown University School of Medicine in Washington, D.C. Dr. Lementowski completed a residency in orthopedic surgery at Westchester Medical Center, New York Medical College in Valhalla, N.Y. and a fellowship in adult reconstructive surgery at Presbyterian Medical Center at the University of Pennsylvania in Philadelphia, Penn. A noted and respected researcher, he is a member of the American Academy of Orthopaedic Surgeons, is a diplomate of the American Board of Orthopedic Surgery and a fellow in the American Association of Hip and Knee Surgeons.

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"Terrible Triad"

Elbow Surgery Repairs Fractures, Dislocation, Offers Functional Range of Motion

On a cold Sunday morning in November 2012, as Carmela Salvatore stumbled on the sidewalk, little did she know how fateful a simple misstep would be.

"I was in front of church, just walking, when my heel got stuck in a groove... I landed on my left elbow," said the 49-year old Franklin Square resident. She was rushed to a hospital emergency room, where she was diagnosed with a dislocated elbow. The next day, she followed up with her orthopedist, whose diagnosis was much more grim.

"Ms. Salvatore was suffering with what is known as the 'Terrible Triad,'" said Kenneth A. Kearns, M.D., shoulder and elbow specialist. "It's an injury that consists of not only a dislocation of the elbow joint, but also a fracture of the elbow's radial head and coronoid process (a sharp triangular projection from the bone). It was not just a simple dislocation; hence the term, 'Terrible Triad.'"

Dr. Kearns stressed that the surgery is complicated, with many components. Not only did he need to repair her ligament and stabilize the elbow joint, but he also had to

X-ray of Ms. Salvatore's elbow with new radial head replacement.

replace the radial head of her elbow, since it could not be repaired. "Her radial head was in four or five fragments, each having to be removed from her elbow and substituted with new radial head replacement," said Dr. Kearns.

It's been just over three months since Ms. Salvatore's surgery and she couldn't be happier.

"The one thing I always tell my patients with this type of surgery is that I will give them back functional range of motion in their elbow," said Dr. Kearns "It may not be full range, but the elbow will be able to function at least 90 percent."

For Ms. Salvatore, the change is like the difference between day and night. "Before, I couldn't do anything for myself; I was totally dependent on my daughter. Now I have no pain, can perform my daily responsibilities and couldn't be happier with Dr. Kearns and South Nassau," said the Hofstra University undergrad secretary.

For more information on Dr. Kearns or South Nassau's Long Island Joint Replacement Institute, call 866-32-ORTHO or visit **southnassau.org.**

Orthobiologics:

the Art & Science of Using the Human Anatomy to Heal Orthopedic Injuries

On the first play of the second half of a football game against the Washington Redskins on December 24, 2011, record-setting running back Adrian Peterson of the Minnesota Vikings suffered a complete tear of his anterior cruciate (ACL) and medial collateral ligaments (MCL) and a major tear of his meniscus cartilage.

In May during a National Hockey League playoff game, Marian Gaborik of the New York Rangers suffered a torn rotator cuff, as well as a torn labrum.

Had these world-class athletes suffered their injuries just three or four years ago, they would have been unable to compete for at least a full season and most likely would require another four to six months just to be cleared to return to non-contact training.

Instead, the Vikings' Peterson was on the field for the first game of the 2012 National Football League season, rushing for 2,097 yards; he was named MVP of the league. Gaborik, one the most prolific goal scorers in professional hockey, was on the ice for the first practice of the 2013 season and so far, is one of the Rangers top scorers.

The driving force behind these athletes' accelerated recoveries, and of many others with orthopedic injuries, is the art and science of *orthobiologics*. Many of the world's foremost orthopedic and sports medicine specialists, including Craig Levitz, M.D., chair of orthopedics at South Nassau Communities Hospital, are turning to such treatments to complement surgery or as the sole option to repair orthopedic injuries.

Orthobiologics combines the body's natural ability to heal itself with the use of stem cells and advanced medical technologies to repair and heal orthopedic injuries. By definition, orthobiologics is the inclusion of biology and biochemistry in the development of bone and soft tissue replacement materials for skeletal and tissue healing. Some of the orthobiolgic treatment options available are Platelet-Rich Plasma therapy (PRP), the bio-patch and Carticel therapy.

PRP is credited with inducing exceptionally speedy and full recoveries from orthopedic injuries and surgeries. The treatment speeds the regeneration and healing of ligament, tendon and muscular injuries, reducing recovery time by using the patient's own stem cells retrieved during a simple blood draw and separated into plasma and platelets and then injected into the surgical site to assist in healing.



Dr. Levitz was one of the first orthopedic surgeons and sports medicine specialists in the United States to use the bio-patch and Carticel Therapy.

The bio-patch harnesses the healing power of the human body to repair painful, debilitating shoulder rotator cuff tears. Commonly referred to as the biologic rotator cuff implant, the patch relies on the body's natural biological agents to jumpstart healing, even as surgery is in progress. The bio-patch is used most often for severe rotator cuff tears. Surgeons use an arthroscope and minor incisions to implant the patch.

"The [bio-]patch is the ideal solution for a patient with a large or chronic tear," said Craig Levitz, M.D., chair of orthopedic surgery and the department of orthopedics at South Nassau Communities Hospital. "This is a revolutionary approach to what is an otherwise hopeless, irreparable and painful shoulder injury."

Carticel Therapy is a minimally invasive surgical approach that uses patients' cloned cartilage cells

(chondrocytes) to correct recurring articular knee cartilage injuries. When implanted into a cartilage injury, the patients' cells can form new cartilage, which is very similar to the original cartilage. The Carticel implantation procedure, called Autologous Chondrocyte Implantation, is a four-step process:

- **Step 1:** take a tiny piece of healthy cartilage from the damaged knee during an arthroscopic procedure;
- **Step 2**: send cartilage to biosurgery lab for processing and culturing, about 5 weeks time. These cells are returned to Dr. Levitz for implantation;
- **Step 3:** to prepare for implantation, Dr. Levitz makes a tiny incision to expose the knee injury and damaged cartilage is removed. He harvests Periosteum (which is tissue that covers the bone) from the shin and sutures the tissue over the injury site to create a watertight compartment.
- **Step 4:** After ensuring that the injury site is watertight, the Carticel is implanted beneath the periosteum. Here the cells may continue to multiply, integrate with surrounding cartilage and fill in the injury site with a firm, durable tissue.

For patients who have undergone unsuccessful knee surgery to repair damaged meniscus cartilage and facing osteoarthritis and eventually a knee replacement, there is meniscal cartilage transplantation. This minimally invasive surgical technique called meniscal allograft transplant, hinders degeneration of the knee joint and eliminates the constant pain caused by the damaged cartilage.

Orthobiologics has also been used to improve the healing of broken bones and injured muscles and tendons in the foot and ankle and spine. "Regardless of the cause of the injury, the field of orthobiologics is very promising" said Dr. Levitz. "I look forward to bringing the latest advances and options to the communities we serve."

For more information on Dr. Levitz or South Nassau's Center for Advanced Orthopedics, call 866-32-ORTHO or visit **southnassau.org.**

Rotator Cuff Surgery

Oceanside Resident's Mobility is Restored

A ccording to the American Academy of Orthopedic Surgeons, approximately 200,000 Americans require shoulder surgery related to rotator cuff repair every year. Vicki Spielberg, of Oceanside, never thought she would be one of them.

"It got to the point where I couldn't even lift my arm to brush my own teeth," said Ms. Spielberg. "I didn't think I'd be able to move my shoulder ever again; the pain was unbearable."

After undergoing physical therapy, cortisone injections and taking anti-inflammatory medication, the 50-year-old homemaker knew she needed a more permanent solution.

She was referred to Eric P. Keefer, M.D., of South Nassau's Shoulder Center at the Center for Advanced Orthopedics. "When I first saw Ms. Spielberg, she was unable to raise her arm more than half way. She could not move it past 90 degrees," said Dr. Keefer. "And the strange thing was, she had no recollection of how she suffered the injury."

Dr. Keefer surmised from his consultation with Ms. Spielberg that either she had a previous injury or that she had recently torn the rotator cuff lifting something heavy. "She said she had possibly felt a 'tug' in her shoulder, but didn't think it was anything serious," he said. He sent Ms. Spielberg for an MRI, which revealed a rotator cuff that would require arthroscopic surgery. Unlike traditional open surgery, this minimally invasive procedure promotes a quick recovery and reduces trauma to the surrounding tissues, resulting in less blood loss and post-operative pain.

"Within three months of undergoing the procedure she was moving the shoulder well," said Dr. Keefer. And now, more than a year after the surgery, she has resumed all of her activities and has no limitations.

"South Nassau and Dr. Keefer were wonderful; he's a hands-on doctor and assured me everything would be fine post-op," said Ms. Spielberg. "I was so reassured that when both of my sons needed to have elbow surgery due to over-use syndrome, I brought them directly to Dr. Keefer. Both of them are now back on the ballfield and playing better than ever!"

For more information on Dr. Keefer or South Nassau's Shoulder Center, call 866-32-ORTHO or **visit southnassau.org.**

When the **Body's** Largest Joint Needs Replacing

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joint disease and, after several discussions, we determined that his best option was an MRIbased, patient-specific total knee replacement."

In an MRI-based, patient-specific total knee replacement, the physician sends the patient's MRI to the surgical knee replacement manufacturer, who in turn fabricates custom cutting guides that are used during the surgery to allow for improved component positioning. "This approach allows me to perform a less invasive surgery, as well as implant components that have the potential to increase the longevity of the knee prosthesis," explained Dr. Lementowski.



Now, four months later, Mr. Wise's pain has subsided, his workouts are more strenuous and his knee grows stronger by the day. The severe pain that plagued him is now distant memory. This summer he is looking forward to boating and playing with his grandson.

For more information on Dr. Lementowski or the Long Island Joint Replacement Institute, call 866-32-ORTHO or visit southnassau.org.



Congratulations! Alpesh Shah, M.D.

South Nassau would like to congratulate Alpesh Shah, M.D., on winning Best Orthopedist in the Best of Long Island 2013 Awards presented by the *Long Island Press*.

Dr. Shah is board-certified in orthopedic sports medicine and specializes in sports injuries, knee and shoulder arthroscopy, fractures and total joint replacement. He is also a fellow in the American Academy of Orthopaedic Surgeons.

To contact Dr. Shah or any of the physicians in the Center for Advanced Orthopedics at South Nassau, call 866-32-ORTHO.



Alpesh Shah, M.D.

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Pre-Surgery Joint Replacement Education Classes

Offered throughout 2013, every other Thursday, from 12:00 - 1:30 p.m.

Classes are free of charge and free parking is available.

- Apr. 11 Conference room B Apr. 25 Conference room B May 9...... Conference room B May 23 Conference room B Jun. 6 Conference room B Jun. 20 Conference room B Jul. 11* Conference room B Aug. 1 Conference room B
- Aug. 29 Conference room B Sep. 12 Conference room B Sep. 26 Conference room B Oct.10 Conference room B Oct. 24 Conference room B Nov.14 Conference room B Dec. 5* Conference room B Dec. 19* Conference room B

To register, please call 516-632-3924 or online: www.southnassau.org/orthopedics/onlineapp.cfm