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Michael H. Rieber, M.D.
Orthopaedics Unlimited

Unique Expertise in the Most Current Techniques to Restore
Function and Quality of Life

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By Iris Goldberg

It is unquestionable that advances in technology have revolutionized the practice of medicine in virtually all areas. One specialty which has enjoyed a significantly dramatic evolution in what can now be offered to patients as compared to what was available only a few short decades ago is orthopaedics. Today, it is possible to help patients regain the level of movement and function they had before aging or injury caused them to experience pain and/or a diminished capacity to enjoy an active lifestyle. When choosing an orthopaedist, it is important to select a practice that incorporates the most current and innovative procedures available, while at the same time embracing a conservative approach which allows each patient to be evaluated on an individual basis to ascertain the best possible course of treatment for that patient.

With offices in Springfield and Newark, Orthopaedics Unlimited, under the direction of Michael H. Rieber, M.D., FACS, offers patients state-of-the-art comprehensive care and is committed to devoting quality time to evaluate each individual patient with the goal of restoring health and preventing future problems. At Orthopaedics Unlimited, Dr. Rieber and staff are dedicated to the care and treat-

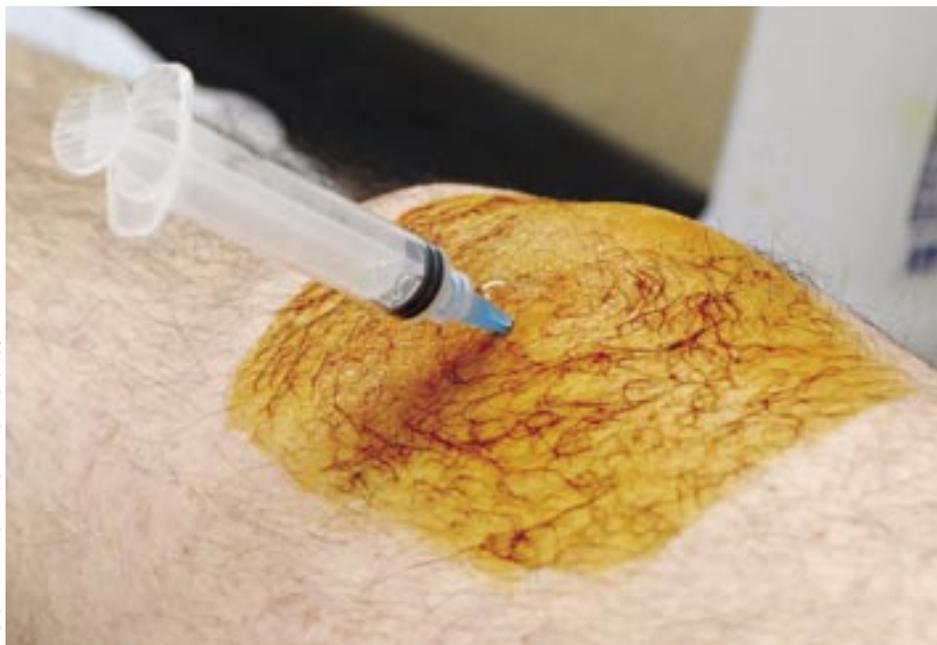
ment of the musculoskeletal system, including the bones, joints, ligaments, muscles and nerves, as well as arthritis. With expertise in sports medicine, joint replacement, arthroscopic surgery and all knee and shoulder disorders, Dr. Rieber provides his patients with the most personal level of attention. Being a sole practitioner affords Dr. Rieber, who is extraordinarily vivacious and upbeat, the opportunity to become quite well acquainted with each patient. He and his staff pride themselves on the warm, family-like atmosphere for which Orthopaedics Unlimited has become known over the years.

Although Dr. Rieber is experienced in the treatment of the entire spectrum of orthopaedic disorders, he has developed unique expertise in certain of the most current and “cutting edge” procedures being performed today. In fact, he is one of only a few physicians in the area who has so extensively studied and subsequently incorporated some of the newer and most innovative modalities with which to treat the most common conditions causing pain and dysfunction. An example of this is the minimally invasive total knee replacement. Traditional knee replacement surgery requires a 3- to 5-day hospital stay, 3- to 4-month recovery period and an 8- to 12-inch incision. Minimally

invasive knee joint replacement surgery requires only a small incision, which is not as traumatic to the soft tissues. Additionally, with minimally invasive surgery, there is less blood loss, a shorter hospital stay, increased range of motion and half the recovery time. Of course, before knee replacement surgery is considered, Dr. Rieber explores more conservative methods of treatment with his patients. Physical therapy, anti-inflammatory medications and/or injections of cortisone or hyaluronic acid can be used to reduce discomfort without surgery. When these do not provide adequate relief to enable patients to enjoy a good quality of life, Dr. Rieber will suggest a knee replacement.

Knee replacement surgery has been performed in the United States since the 1960s. During this procedure, a diseased or damaged joint is replaced with an artificial joint or prosthesis. This is made of metal alloys and

Dr. Rieber offers patients conservative treatments prior to suggesting replacement surgery, such as injections of hyaluronic acid or cortisone.





high-grade plastics and is designed to mimic the function of bone and cartilage, enabling the prosthesis to move like a healthy human joint. Historically, it was offered primarily to the elderly with severe pain and disability. Short-term goals included the correction of deformity, restoration of stability and relief of pain. Today, the average age of the arthroplasty patient is decreasing and the goals of reconstruction now include the expectation of the early return to normal, full and unrestricted activities. Dr. Rieber shares that in order for these expectations to be met, the implant chosen must have an excellent fit. While modern implant systems have many sizes available, implant fit — especially in women — is often imperfect, even though over 60% of total knee replacements are performed on women. Too large of an implant with medial, lateral, anterior or posterior

Left: Dr. Rieber is shown administering a cortisone injection to the publisher of *M.D. News* to alleviate arthritic knee pain, and to improve function.

Below: Dr. Rieber prepares to perform a knee replacement with an incision much smaller than was previously feasible, enabling much quicker recovery.





The knee joint must be removed prior to fitting the artificial knee.

overhang can lead to stuffing of the joint, causing decrease in range of motion and stiffness. Overhang of the implant can be a source of pain due to impingement on the soft tissues. An implant that is too small causes problems as well. Bone surfaces that have been cut but not covered with the implant will bleed, causing pain, swelling and hemarthrosis. Dr. Rieber has had excellent results with a polyethylene insert that is specifically designed to address these issues, using anthropomorphic sizing that takes into account the gender-specific variable aspect ratio for a better fit. It utilizes the latest in knee technology to help increase the extent to which knee motion can be restored after surgery. Patients who have undergone a minimally invasive knee replacement with this technologically advanced prosthesis report a high degree of satisfaction with excellent range of motion and an early return to desired functional activities. Many things, including patient weight, activity level as well as the implant's bearing surface technology, can affect the longevity of the implant. The bearing surface is defined as the two parts of the knee that glide together throughout motion. This higher grade plastic implant with advanced bearing technology actually has a greater lifespan than earlier implants, which is particularly important to the many younger patients who are currently having total knee replacement surgery.

Another procedure that Dr. Rieber has taken to the most current and technologically innovative level is the total hip replacement. Hip replacement is one of the most important surgical advances of this

century, with more than 300,000 Americans undergoing this procedure annually. It involves the removal of arthritic bone ends and damaged cartilage and replacing them with prosthetic implants that replicate the hip joint. Like knee replacement, hip replacement surgery is considered when arthritis or trauma limits one's everyday activities such as walking or bending and when persistent pain interferes with the ability to enjoy a good quality of life. This may happen to patients in later life or as early age 40 or 45. Many younger patients, who for a variety of reasons are suffering with chronic pain and an inability to perform daily activities, are told by some physicians they are too young for joint replacement surgery. Dr. Rieber has a different philosophy. "I live for today," he says. "And when a patient comes in at age 45, living in constant pain and can't get up out of a chair, walk long distances or bend down to tie his shoelaces, I won't tell him to wait another 20 years." Dr. Rieber believes that one's 40s and 50s are a wonderful time when life should be enjoyed to its fullest. Therefore, as with the knee, when conservative treatments such as physical therapy and medication do not adequately restore function and alleviate discomfort, Dr. Rieber will offer patients the option of total hip replacement surgery, regardless of age. Whenever possible, Dr. Rieber utilizes a minimally invasive hip replacement procedure, requiring a smaller incision, thereby causing decreased disturbance to muscles and tendons in the hip area. This allows for a more natural reconstruction after the prosthesis is in place and the possibility of a faster return to normal function and activity.

Conventional hip replacement surgeries utilize a metal-on-metal or metal-on-plastic prosthetic implant. Dr. Rieber has participated in a clinical investigation of a newer and potentially superior ceramic-on-ceramic implant. Use of this type of implant was actually approved in 2004 and Dr. Rieber is one of a small number of surgeons in the area who is currently very familiar with this implant and uses it in many of his hip replacement surgeries. There are several advantages

The patient's joint is removed by Dr. Rieber.



of ceramic-on-ceramic over metal implants. Ceramic-on-ceramic implants show less wear than metal implants in laboratory testing. Also, a phenomenon known as “runaway” wear, which is an unexplained wear pattern that results in increased volume of wear debris, has been noted in many cases with metal implants in laboratory studies. A ceramic implant, however, can possibly last for a patient’s lifetime, regardless of his or her age at the time of surgery. Additionally, ceramic is an inert material that does not raise the concerns of future biological consequences. There is no conclusive evidence that metal implants will lead to long-term effects that will negatively impact on the patient but there are concerns raised with respect to how the body will respond to the systemic introduction of these metal particles over time. Current research

suggests that ceramic-on-ceramic hip replacements have superior wear characteristics versus metal and do not present the same potential biological concerns as metal-on-metal or metal-on-plastic designs. For the younger patient, especially, ceramic-on-ceramic implants offer a longer lasting, more durable and potentially safer alternative to conventional metal implants.

In addition to innovative, technologically advanced joint replacement surgery, Dr. Rieber, who completed a fellowship program in sports medicine, has expertise in the most current procedures for the repair of injured joints as well. One of the most common sports injuries is a tear of the anterior cruciate ligament (ACL). The knee is stabilized by four main ligaments: 2 collateral ligaments (medial and lateral) and 2 cruciate ligaments, both anterior and posterior. The cruciate ligaments attach to the femur and travel within the knee joint to the upper surface of the tibia. The ligaments pass each other in the middle of the joint forming a cross shape, hence the name “cruciate.” The ACL prevents the tibia from shifting forwards below the femur. The posterior ligament prevents backwards displacement of the tibia. Both ligaments are vital for the stability of the knee, particularly in sports that require a lot of twisting and changing of direction as in football. Most ACL injuries occur from twisting of the knee when the foot is firmly planted on the ground, deceleration or landing from a jump. If the ligament is completely torn, it will not heal. Some individuals elect to leave the knee without an ACL. If the individual has a deficient ACL, he or she relies on the other 3 ligaments (as well as the inherent stability of the joint and surrounding muscles) to stabilize the joint. This is often insufficient and leads to recurrent episodes of instability — a sensation that the knee may buckle or “give out.” ACL reconstruction surgery should be considered for all individuals who wish to return to sports or activities that require lateral pivoting of the knee, or those who experience recurrent knee instability because of an ACL deficiency.

Conventional ACL reconstruction entails using the central 1/3 of the patellar tendon connecting the knee cap to the shin bone to fashion a new ligament. When the graft is harvested, a piece of the bone of the

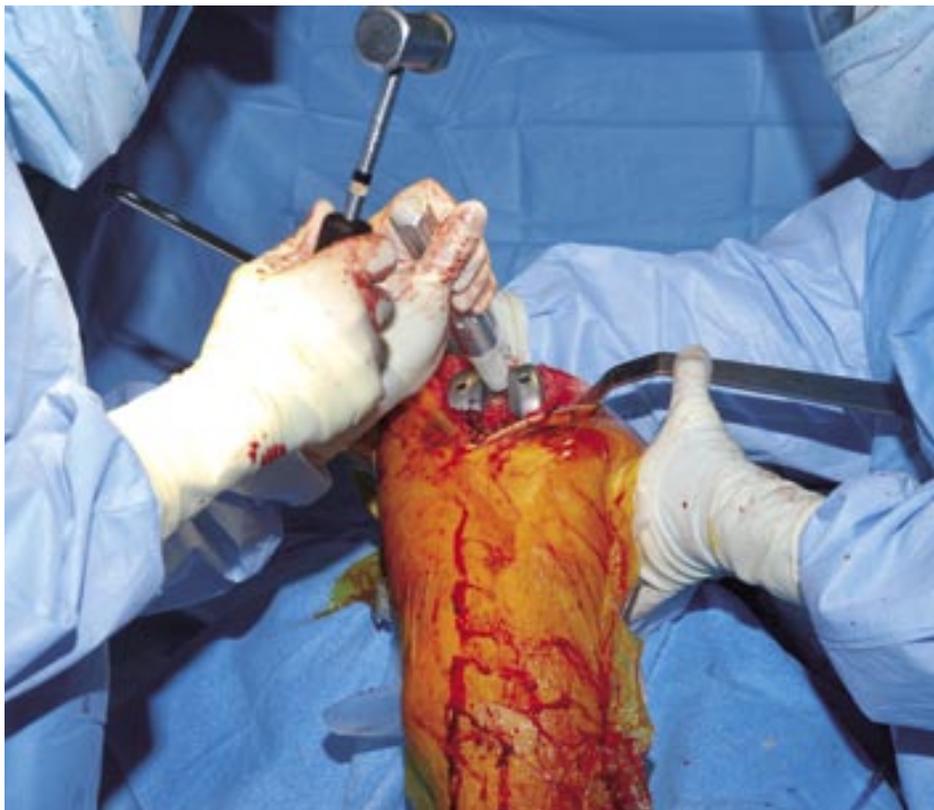


The cut ends of the tibia and femur are shaped to accept the artificial knee.

patella and tibia is also taken. Thus, the attachments of the tendon to the bone are not disturbed. When the graft is placed into the knee, this allows for bone to bone healing. While many surgeons feel this to be the method of choice, the primary disadvantage of this is knee pain following the surgery which may persist for years.

At Orthopaedics Unlimited, Dr. Rieber reconstructs many ACLs with a portion of the hamstring tendon. The hamstring muscle group (in the back of the thigh) has tendon to spare. Some of the tendon can be harvested to create a graft. For this procedure, the gracilis and semitendinosus tendons from the hamstring of the injured knee are the source of the graft. A long piece is removed from each of the two tendons. The tendon segments are then folded and braided together to form a quadruple thickness strand for the replacement graft. The braided segment is passed through tunnels made in the tibia and femur and its ends are fixated on the opposite sides of the two bones. Recently, some new fixation materials and techniques have evolved which Dr. Rieber now incorporates that result in the strongest hamstring fixation available. The advantage of the hamstring tendon is that there is not as much disturbance harvesting the graft and a much lower incidence of knee pain after the surgery. This main surgical wound is over the upper proximal shin, which would avoid the typical pain sensation when one kneels down. Also, the wound is typically smaller than the patellar tendon graft and therefore causes less post-surgical pain. As a result, patients who undergo this procedure may typically do so on an outpatient basis, without the need for a hospital stay.

Although most ACL reconstructions involve taking tendon grafts from the patient’s own body (autograft), another alternative available, for those patients who are willing, is to use tissue from a cadaver (allograft). Hamstring tendon allografts can be used as ACL graft tissues and are inserted with the same techniques that are used for autografts. Dr. Rieber explains the advantages of using cadaver graft. There are no risks, pain or scars from the donor site. Also, surgical time is quicker and because there is considerably less discomfort postoperatively, the incidence of joint stiffness and atrophy of the quadriceps muscle is



A jig is used to ensure correct alignment of the replacement knee.

greatly reduced. “I recently had a patient who had a cadaver hamstring ACL reconstruction and was feeling great after four days. She was up on her crutches and wasn’t even taking pain killers,” Dr. Rieber shares.

As a sole practitioner, Dr. Rieber relies strongly on his most capable staff to help him provide each patient with a standard of care that equals and even exceeds what is available at other orthopaedic practices. Physician Assistant Douglas W. Robinson works closely with Dr. Rieber, providing pre- and post-operative care and is Dr. Rieber’s first assist in surgery. Mary Pat Cardinale is the Practice Administrator. She and Matilda Colon, Anne Gentile and part-timers Lisa Gress and Linda Pawluk make it a priority to assist patients in every way possible. It is not surprising that so many patients who have been treated at Orthopaedics Unlimited recommend Dr. Rieber to friends and relatives.

Dr. Rieber, who in May was voted among the top 10% of Saint Barnabas physicians in terms of providing exemplary patient care while controlling costs and minimizing the length of hospital stays, is very eager to discuss the exciting things that can be accomplished for patients today. In fact, he

was interviewed on ABC, CBS and NBC news programs, not too long ago, to discuss the latest developments in total knee and ceramic hip replacement surgeries. Also, TV camera crews observed Dr. Rieber in the operating room as he performed surgery. At orthopaedic meetings, Dr. Rieber has served as faculty, teaching other surgeons some of the latest technologies he has perfected. In addition, he serves on the Advisory Board of NJSCREF (New Jersey Stem Cell Research and Education Foundation). Dr. Rieber becomes quite animated when sharing his primary goal at Orthopaedics Unlimited, which is to help patients get back to the quality of life they enjoyed before the pain and dysfunction caused by disease or injury interfered. “Life is motion. Motion is life,” is Dr. Rieber’s favorite quotation. “To live you’ve got to move and that’s what it’s all about for me,” he says.

Orthopaedics Unlimited is located at 609 Morris Avenue, Springfield, NJ and at 41 Wilson Avenue, Newark, NJ. (973) 467-3000 ■

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Diplomate, American Academy of Orthopaedic Surgeons

Diplomate, National Board of Medical Examiners

Medical Degree

New York Medical College, Valhalla, NY

Orthopaedic Surgery Residency

Albany Medical Center, Albany, NY

Sports Medicine Fellowship

Penn State University, Hershey Medical Center

Academic Appointments

Assistant Professor, Seton Hall University

School of Sport Sciences

Organizations

- Orthopaedic Surgeons of NJ, NJ Orthopaedic Society
- Arthroscopy Association of North America
- American College of Sports Medicine
- American Academy of Orthopaedic Surgeons
- American Orthopaedic Rugby Football Association

Professional Experience

- Team Physician for Major League Soccer NYNJ Metrostars
- Team Physician for Newark High School Football
- Assistant Team Physician for Penn State University Football Team and Varsity Athletes
- Assistant Team Physician for Hershey Bears Professional Hockey Team
- Assistant Team Physician for the Hershey Wildcats Mens Soccer Team
- AO/ASIF Course Instructor/Faculty ORP Basic Course