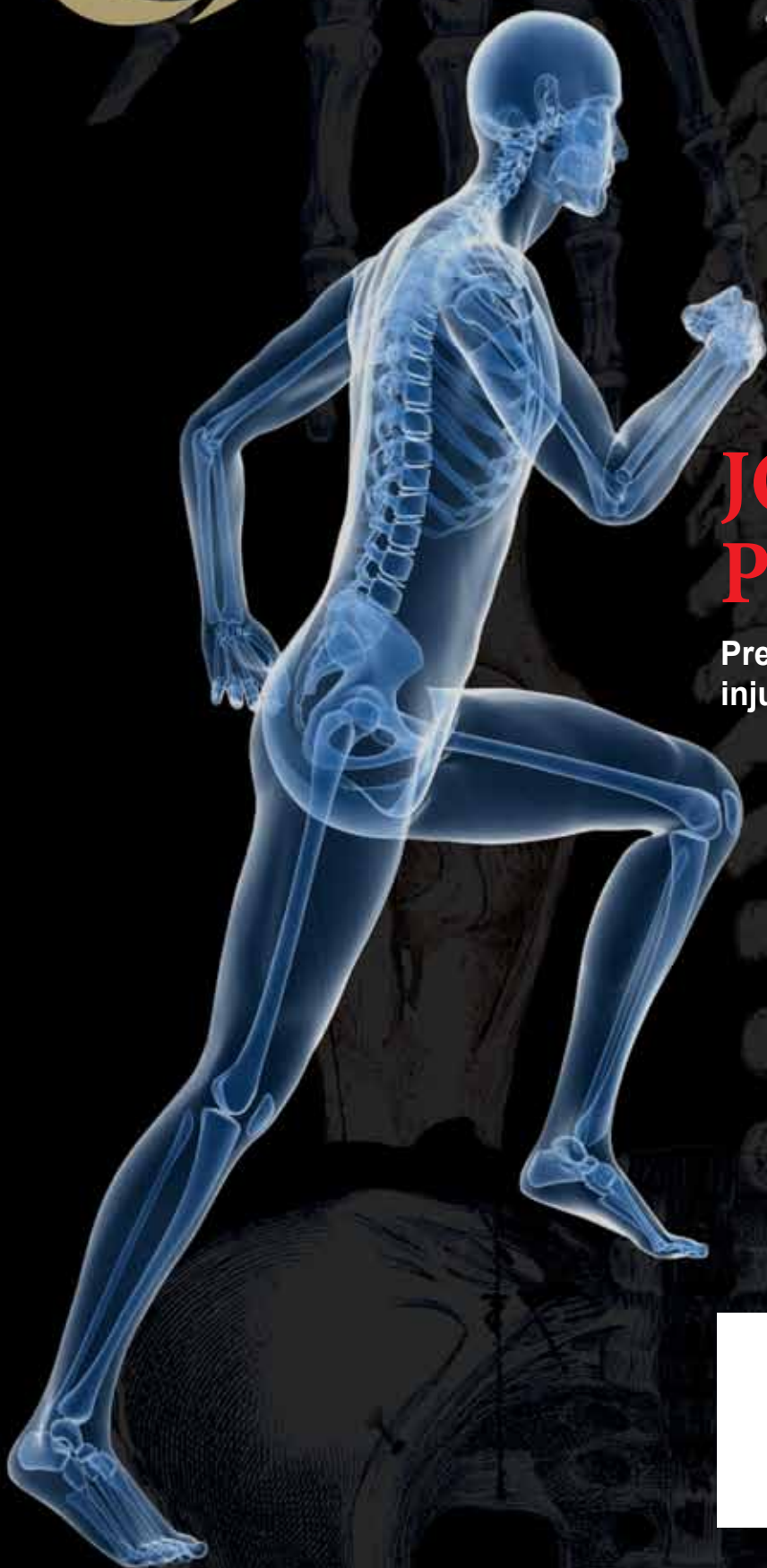


Orthopaedics:

A Tidewater Update



JOINT PRESERVATION

Preserve – (pri-serv) – to keep safe from injury or harm; to keep intact/maintain

ALSO INSIDE:

- Articular Cartilage Injuries and Treatment Options
- Direct Anterior Approach Hip Replacement
- Total Knee Replacement



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Joint Preservation: What does it mean?

By Loel Z. Payne, MD

There are a lot of buzz words and catch phrases currently used to describe orthopaedics. Joint sparing, minimally invasive and “bloodless” are some of the common descriptors seen in many advertisements. But what do these terms actually mean?

Both patients and physicians desire a surgery that is short in duration, performed through a small incision and has a rapid recovery. Our society today wants everything fast: we have come to expect our technology, such as smart phones, to deliver immediate results. Unfortunately, these surgical descriptions are usually not quantifiable and are only relative as compared to the previous method of performing the operation. Often lost in the discussion are very important questions such as: how successful is the operation in relieving pain or improving function? How durable will the operation be in 5 or 10 years or even longer? What is the complication rate? These questions must be answered before we can advocate the latest, greatest, quick recovery operation.

I recently saw a patient who requested a “minimally invasive” knee replacement. I asked her what she thought that meant. In her mind, it would be a surgery done through a small incision (she made a “c” with her thumb and index finger about 2 inches apart); she would walk out of the hospital the same day; and she’d be “back to normal” in a few weeks. After I showed her an actual knee replacement implant that was larger than the 2-inch incision through which she wanted it inserted, explained the process of cutting the bone to make the implant fit, and reviewed the potential complications, she shouted, “There’s no such thing as a minimally invasive knee replacement!” As can be seen in Dr. Kingston’s article on knee replacements, our current technique is much less invasive and has a significantly more rapid recovery than traditional knee replacements. However, everyone has a per-

sonal definition of “minimally invasive. We are proud to say this technique has also answered the equally important questions of a reduced complication rate, improved pain relief

and lasting durability. Dr. Higgins has found similar success with the anterior approach for hip replacements, as discussed in his article. There were initial concerns about increased complications or malposition of the replacement with this less invasive approach; however, in experienced hands, those concerns have been answered.

Joint preservation is a concept where there is uniform consensus. The ideal scenario is to keep our own joints as long as possible. Arthritis has many causes and is a progressive, unrelenting, destructive process. Fortunately, newer advances and research are

identifying ways to help us stay active longer, while preserving the joints with which we were born. We see arthritis in many younger patients today, due to their more active sports participation. Complete joint replacement in this age group is not the best option. If we can maintain the joint and make it last longer by reducing the arthritic progression, we are able to delay a replacement for many years. Dr. Sablan’s article on cartilage restoration is one of many we plan to bring to you in upcoming issues which outlines our approach to preserving your joints as long as possible.

Once again, thank you for taking the time to read this publication. I hope it answers your questions about orthopaedics. Moreover, I hope it stimulates a conversation with your surgeon so that we share the same expectations. Your comments are always welcome.



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■ Preparing the Careplex Orthopaedic Ambulatory Surgery Center for its First Patient

For the surgeons of Tidewater Ortho, the opening of the CarePlex Orthopaedic Ambulatory Surgery Center (COASC) in late Spring 2011 was the much anticipated culmination of a long, arduous process. Dr. Kingston, who performed the first procedure at the COASC, explains Tidewater Ortho's enthusiasm: "What's special about this is that in a facility dedicated solely to the care of an orthopaedic patient with a musculoskeletal ailment, we're able to pace the level of care at a much higher level," he says. "The concept was based on the Sentara Heart Hospital on the southside: when there's a dedicated hospital in the community, everybody knows it. People who have serious cardiovascular problems go to that hospital. That's what we're establishing here for orthopaedic patients. For our patients who require or elect

to have surgery, ensuring the ultimate surgical experience is always the goal."

Fellow surgeon and COASC medical director Dr. Robert Campolattaro agrees: "In most surgical centers, the staff is multidisciplinary. They might be doing orthopaedic surgery on Monday, ENT on Tuesday, OB/GYN on Wednesday and so on. That center has to be able to accommodate all of those different specialties – whereas at COASC, we have an entire center and an entire staff exclusively devoted to our orthopaedic patients."

If the process of opening the center was arduous, it was made less so by the meticulous planning and dedicated work of another member of the COASC team: Clinical Director Hope Gayle, RN, recalls "When I came on board last December, it was essentially an empty building. We



had to research and purchase everything, from paperclips to ceiling lights for the OR, and then make sure everything was properly in place. There was an enormous amount of planning.”

An important part of that planning consisted of interviewing and hiring the members of the COASC team: “six nurses – two pre-op, two post-op and two OR,” Gayle says, along with “four scrub techs, a materials manager, a Sterile Processing Department manager, the business office and a receptionist.” And there

were inspections to be passed before anything could happen – “we passed the State and Medicare inspections with zero deficiencies,” Gayle says proudly.

The preparation for “opening day” was no less exhaustive. “We reviewed everything and then reviewed everything again, making sure all the machinery, all the equipment was in place and in pristine working order,” Dr. Kingston says, “making sure we were exquisitely prepared for any situation that might arise.” Inventory is a large part of advance preparation, even down to the smallest detail: even something as simple as ensuring that there are booties for the team members’ shoes, or that they have the right masks or hats – all the little things that can happen in the absence of exquisite preparation.

Getting all of that set up beforehand, they all agree, “was really unique,” and even included performing a mock surgery – a dress rehearsal of sorts – to make sure that the first procedure performed at the COASC would go off without a hitch.

AND ON JUNE 2, 2011, IT DID.

Hannibal Russell is a long-standing patient of Tidewater Ortho. A hard-working man, Mr. Russell has a history of intense on-the-job physical activity and injury. In 2001, he was working as a printer with a large company in Maryland – a position that required a great deal of bending, stooping and lifting, ultimately resulting in what he describes as a knot in his shoulder. He saw his physician in Maryland in 2002, and was given an injection that helped for a while.

After moving to Hampton, he first saw Dr. Kingston in



Dr. Kingston (right), who performed the first surgical procedure at the COASC, examines its first patient, Hannibal Russell.

2004 for another job-related condition, a meniscus tear in his right knee. In 2006, when the knot in his shoulder returned, Mr. Russell again visited Dr. Kingston. “He took it out and sent it to Baltimore,” Russell remembers, “because he wanted to be sure it wasn’t cancer. Thank God it wasn’t.”



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(L-R) Brandyn Hawley - PT tech, Robin Kozlowski - LPTA, Hannibal Russell - patient, Katie Bull - PT tech, Darlene Whitley - PT tech

He returned to Dr. Kingston again in 2008 for an on-the-job injury involving a meniscus tear in his other knee, the left one this time, and was again successfully treated, although he was no longer able to work as a printer because of persistent difficulty bending and stooping. He began working at Hampton Inn as part of the catering staff, where he was often required to set up for various events, including lifting and moving heavy tables and other hotel equipment.

And then in 2011, Mr. Russell went to work one morning, and “someone had spilled something on the floor, and I slipped.” He fell forward and slammed into a refrigerator, sustaining a high-grade partial rotator cuff tear of his left shoulder, with impingement, a painful and often debilitating injury. It was this injury that sent him back to Dr. Kingston’s office, and on which all the work of preparation at COASC was focused on the morning of June 2nd.

That the surgery went off without a hitch surprised no one, given the expertise of the surgeon, and the level of preparation that went into establishing the COASC and the planning that went into opening the doors to its surgical suite. And certainly Mr. Russell had every reason to anticipate that it would go well.

But surgery itself is only part of a patient’s overall experience, and in anticipation of opening the Ambulatory Surgery Center, Tidewater Ortho had spent a considerable amount of time putting policies and practices in place to ensure patient satisfaction with every aspect of care. They talked with several focus groups consisting of former and current patients, asking questions and encouraging them to talk candidly about their past experiences, good and bad, with surgery. The surgeons listened and they paid attention. “We wanted to find out what we needed to do to give them the ultimate surgical experience, both including and beyond the procedure itself,” Dr. Kingston says.

From Mr. Russell’s standpoint, all that work paid off handsomely. “I can’t really say it felt like I was in a hospital,” he says. “The people were all so nice. I remember Ms. Gayle, the head nurse, met me at the door and immediately put me at ease. The staff even joked with me and made me feel so comfortable. It just didn’t seem like a hospital at all. I tell everybody about it.”

Clearly good humor and a friendly staff do not make a good hospital – but for a patient like Mr. Russell, who can appreciate without fully comprehending all the state-of-the-art equipment and all of the current technology

brought to bear in his case, it was comforting and important.

"I went home the same day," he remembers, satisfied with his surgery and with his surgical experience at COASC as well. He's quick to say that he's already recommended the Ambulatory Surgery Center to friends and colleagues. He's even sent his sister-in-law to see Dr. Kingston, for a knee replacement. "If I know somebody who's having orthopaedic problems, I tell them where to go," Mr. Russell says, "I tell them, 'go see Dr. Kingston.' He's just great. He's the man."

Today, four months post-surgery, Mr. Russell has completed his regimen of monitored physical therapy, but still does his exercises at home. He's eagerly awaiting the day—soon—when Dr. Kingston releases him to return to full-time employment.

Orthopaedic injuries can be debilitating, but as Hannibal Russell will tell you, the care and attention to detail that patients receive at the CarePlex Orthopaedic Ambulatory Surgery Center under the direction of Dr. Campolattaro and his colleagues at Tidewater Ortho can offer a quick and pleasant resolution and a return to a fulfilling, productive life.



Robert M. Campolattaro, MD



Colin M. Kingston, MD

Both Dr. Campolattaro and Dr. Kingston have been honored recently in Hampton Roads Magazine, the area's premier lifestyle and city magazine covering the entire Hampton Roads region. Hampton Roads Magazine debuted in November 2000 and has quickly become a leading resource for arts and entertainment, fine dining, local issue and interests.

In Dr. Campolattaro's case, he was included as one of the area's Super Doctors® - a distinction from Key Professional Media, Inc., which surveyed more than 20,000 physicians who were asked to nominate colleagues they'd trust with their own medical care.

As for Dr. Kingston, Hampton Roads Magazine conducted an online poll so its readers could register their own trusted favorites. In this "Top Docs" survey, Dr. Kingston was recognized as Best Orthopaedic Doctor.



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result in suboptimal results and even death. Death is almost certainly due to complications of medical issues that have arisen with age and inactivity. Many studies suggest that too many patients wait too long to have their knee replaced. The adage “motion is life” holds true. As one becomes more inactive, diseases such as diabetes, sleep apnea, morbid obesity, coronary artery disease, etc. become more prevalent. Staying active and exercising prevent many of these disease states and can often keep these diseases in check with the right regimen.

Cartilage deterioration in the knee has many causes, including trauma, genetic, inflammatory arthritis such as gout and rheumatoid arthritis, and the most common osteoarthritis also known as degenerative joint disease (DJD for short). People with mild to moderate cartilage deterioration may benefit from anti-inflammatory medications, aquatic and physical therapy, bracing, intra-articular injections such as cortisone or lubricants (also known as visco supplements), topical medications, low impact exercise, weight loss and motion. Recent studies have shown that oral supplements like glucosamine and chondroitin sulfate and injectables like platelet-rich plasma (PRP) do not work. Cartilage gets its nutrition predominantly from synovial fluid. Synovial fluid is produced by cells that line our joints. These cells are called synoviocytes, which are stimulated to make this lubricating, nutritious fluid by motion of the joint. Inactivity makes arthritis worse. However, high

impact activity may overload already damaged cartilage and make it worse, so there is a fine line between too much and too little activity. Almost all patients can benefit from low impact activities such as water aerobics, elliptical trainers, walking, yoga, etc.

The indications for knee replacement are clear. There must be existing radiographic evidence of severe arthritis (bone on bone) and the symptoms in the knee are interfering with the quality of one's life. Patients who have bone on bone arthritis may benefit from transient interventions such as cortisone injections, topical medications, aquatic and physical therapy, as well

It is estimated that only one out of five persons who are in need of a knee replacement actually gets one. There are many reasons for this and certainly with today's economy, socioeconomic reasons play a large role. But often enough, it is fear of having a surgery that may



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as bracing for short periods of time. However, many times people wait too long to be evaluated by the surgeon and start to gain an excessive amount of weight leading to a deterioration of overall well-being. Also, deformity of the joint and flexion contractures start to ensue and the muscles weaken (atrophy), bone weakens (osteoporosis) making surgery technically more challenging and riskier for complications. I have at least 20 patients a year who come into my clinic having been wheelchair bound for several years, “now ready” to have their knee replaced. For these patients, preoperative strengthening and endurance therapy are mandatory prior to the contemplation of surgical intervention, as well as necessitating medical and dental clearances. Unfortunately, less than half are eventually cleared. Those who are not cleared still can benefit from cortisone injections as a means to cope with their pain.

Fear of both the known and unknown plays the greatest role in delaying orthopaedic evaluation for someone with severe arthritis. It seems that everyone knows of someone who had a terrible outcome from knee replacement surgery. Knee replacement surgery has been around for more than 40 years. The indications for surgery back then were for people who had severe arthritis in latter stages of life, to allow them to walk short distances and maintain minimum function. People would often be



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admitted several days before their surgery and spend more than a week in the hospital recovering. Now expectations are much greater, with goals including low impact sporting events, dancing, swimming and cycling with newer prosthetics and newer techniques. The risks associated with the procedure continue to improve with newer protocols, better techniques and better implants. Studies have shown that institutions that have protocols in place and a higher volume of cases tend to have fewer complications and better patient outcomes.

At the only dedicated orthopaedic hospital in the region, the Orthopaedic Hospital at Sentara Careplex (some call it Orthoplex for short), protocols for performing total knee replacements exist to lower the risks and improve outcomes. For instance, the national average for total knee replacement infection is between 1-2%, a potentially devastating and costly complication. We have a “no infection allowed into the hospital” policy. A MRSA (methicillin resistant staph aureus, aka really bad bacteria) screening program for carriers with treatment eradication has been implemented. All patients receive medical and dental screening. The need for blood transfusions, usually 30-40% of patients and a known cause for increase infection, has been less than 5% with the use of computer navigation, which all of the surgeons utilize. Additionally, laminar air flow operating



rooms and use of space suits may also be contributing to a lower infection rate that approaches 0%.

People have heard that a total knee replacement is the most painful operation ever created. Yes, that may have been true. However, preoperative analgesia by giving pain medications and a nerve block PRIOR to surgery have significantly changed patients’ perception of pain and have enabled shorter hospital stays with quicker recovery. Also, physical therapy initiated the day of surgery has

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Surgical Outcome System (SOS)

Surgeons at Tidewater Orthopaedic Associates recently began participating in an international web based orthopedic and sports medicine registry research study called the OrthoIllustrated Surgical Outcome System. Using pre and post surgical information collected from their patients regarding pain, function and well being, Dr. Payne and Dr. Kingston can track and analyze their patient outcomes, and use this information to compare the effectiveness of different surgical procedures and implants. Using the System’s Internet technology, Dr. Kingston and Dr. Payne can analyze combined data from US and international surgeons in order to determine the best methods for treating patients, using evidence based data.



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contributed to speedier recoveries, motion and function leading to better outcomes.

Total knee replacements are not for everyone. Studies, however, would suggest that most people with severe arthritis are waiting too long for an evaluation and/or allowing their inactivity to interfere with their well-being. If you have a painful knee, please see your primary care physician, rheumatologist or an orthopaedic surgeon. If you are contemplating a total knee replacement, here are 10 questions you should ask your surgeon:

1) How many total knee replacements do you perform per year and what are your results?

2) What are your complications, what are the potential complications and can they be rectified?

3) What is your preoperative protocol for lowering my risk for a medical complication?

4) How do you manage my pain and postoperative course?

5) What implant do you use and why?

6) Are you a consultant with the implant manufacturer or have any financial disclosure?

7) What can I do after my knee replacement?

8) What don't you want me doing after my knee replacement?

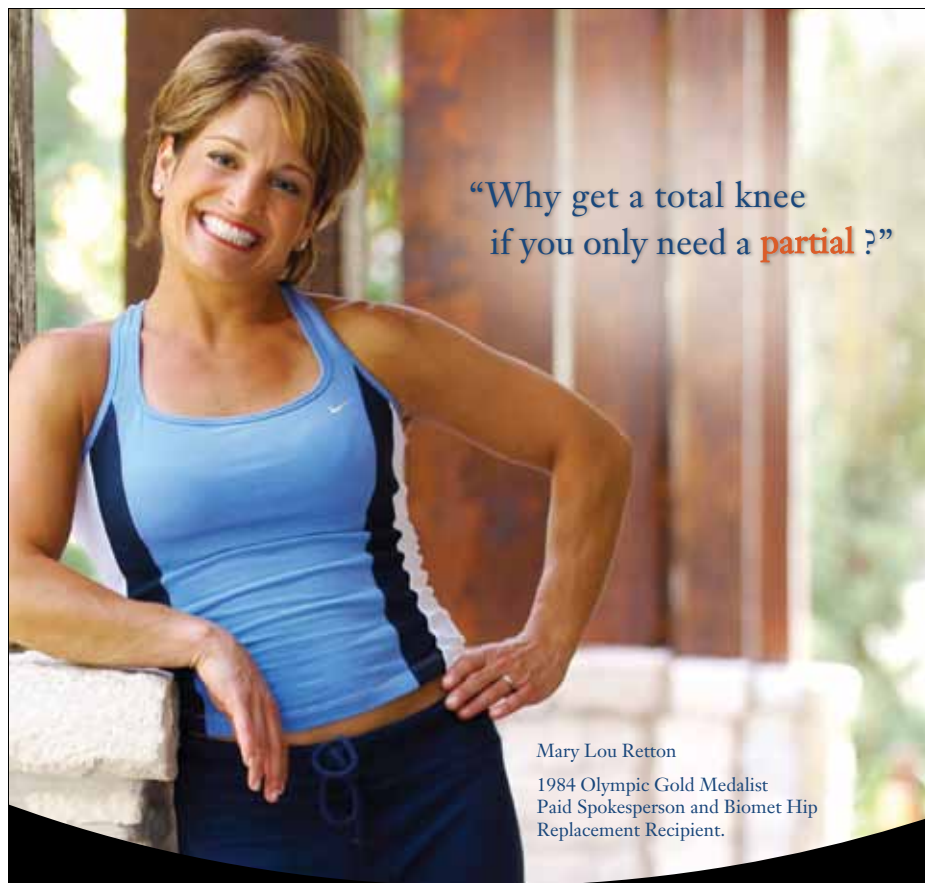
9) Do you have any preoperative teaching classes that can give me more information?

10) Does the hospital where you do surgery offer tours of the facility?

If you have persistent knee pain, discomfort and/or stiffness, please call 757-827-2480 to schedule an appointment.



Colin Kingston, MD, is a Board-certified, orthopaedic surgeon with Tidewater Ortho. He completed medical school and his residency while serving in the United States Air Force. He has served in both gulf wars in Operation Southern Watch, Operation Enduring Freedom and Iraqi Freedom. Dr. Kingston has written a chapter for a review course for orthopaedic surgeons to become Board-certified and currently serves as the Orthopaedic Medical Director of the region's only dedicated orthopaedic hospital.



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■ Articular Cartilage Injuries and Treatment Options

When you listen to the news about injuries to professional athletes, the reporters often talk about cartilage damage. There are really two kinds of cartilage they're talking about. The first is the meniscal cartilage. Those are the shock pads in the knee that help distribute the load. Then there is the articular cartilage, which is the smooth, white tissue that covers the ends of bones where they come together to form joints.

Healthy articular cartilage in our joints makes it easier to move. It allows the bones to glide over each other with very little friction. Articular cartilage is a unique tissue that is able to withstand tremendous loads and usually lasts a lifetime, but in sports injuries and other types of injuries, you can actually knock pieces of this cartilage off or damage it in a way that it no longer functions.

Cartilage is a very interesting tissue, but what makes it interesting sometimes works against the body's efforts to repair injuries. Cartilage basically does not heal, unlike other tissues like bone and tendons that have a good healing potential. It becomes really critical to minimize the amount of cartilage loss that occurs after an injury by fixing the ligaments that stabilize the knee.

Because cartilage does not heal itself well, doctors have developed surgical techniques to stimulate the growth of new cartilage. Restoring articular cartilage can relieve pain and allow better function. Most importantly, it can delay or prevent the onset of arthritis. Surgical techniques to repair damaged cartilage are still evolving. It is hoped that as more is learned about cartilage and the healing response, surgeons will be better able to restore an injured joint.

Most candidates for articular cartilage restoration are young adults with a single injury or lesion. Older patients, or those with many lesions in one joint, are less likely to benefit from the surgery. The knee is the most common area for cartilage restoration, although hip, ankle, elbow and shoulder problems may also be treated.

Many procedures to restore articular cartilage are done arthroscopically. During arthroscopy, small puncture incisions are made around the joint using an arthroscope.



Some procedures require the surgeon to have more direct access to the affected area. Longer, open incisions are required. Sometimes it is necessary to address other problems in the joint, such as meniscal or ligament tears, when cartilage surgery is done.

In general, recovery from an arthroscopic procedure is quicker and less painful than a traditional, open surgery. Your doctor will discuss the options with you to determine what kind of procedure is right for you.

The most common procedures for cartilage restoration are:

- Microfracture
- Autologous Chondrocyte Implantation
- Osteochondral Autograft Transplantation
- Osteochondral Allograft Transplantation

MICROFRACTURE

The goal of microfracture is to stimulate the growth of new cartilage by creating a new blood supply. A sharp tool called an awl is used to make multiple holes in the joint surface. The holes are made in the bone beneath the cartilage, called subchondral bone. This action creates a healing response. New blood supply can reach the joint surface, bringing with it new cells that will form the new cartilage.

Microfracture can be done with an arthroscope. The best candidates are young patients with single lesions and healthy subchondral bone

AUTOLOGOUS CHONDROCYTE IMPLANTATION (ACI)

ACI is a two-step procedure that attempts to recreate the normal articular cartilage. Special training and certification are required for surgeons to perform this procedure. New cartilage cells are grown and then implanted in the cartilage defect.

First, healthy cartilage tissue is removed from a non-weight bearing area of the bone. This step is done as an arthroscopic procedure. The tissue, which contains healthy cartilage cells, or chondrocytes, is then sent to the laboratory. The cells are cultured and increase in number over a 3- to 5-week period.

An open surgical procedure, or arthrotomy, is then done to implant the newly grown cells. The cartilage defect is prepared. A special patch is sewn over the area. This cover is sealed with fibrin glue. The newly grown cells are then injected into the defect under the patch.

ACI is most useful for younger patients who have single defects larger than 2 cm in diameter. ACI has the advantage of using the patient's own cells, so there is no danger of the patient rejecting the tissue. It does have the disadvantage of being a two-stage procedure that requires an open incision. It also takes several weeks to complete.

OSTEOCHONDRAL AUTOGRAFT

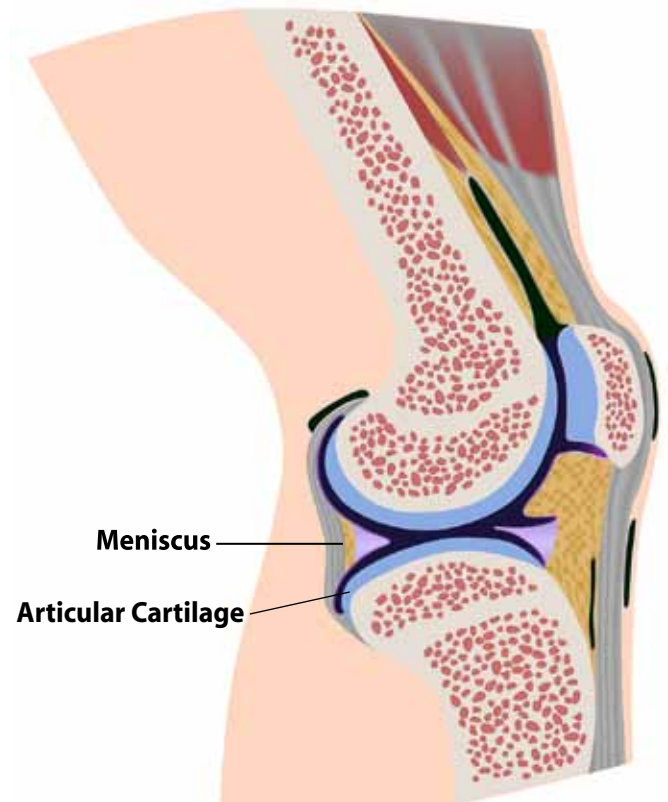
In osteochondral autograft transplantation, cartilage is transferred from one part of the joint to another. Healthy cartilage tissue – a graft – is taken from an area of the bone that does not carry weight (non-weight bearing). The graft is taken as a cylindrical plug of cartilage and subchondral bone. It is then matched to the surface area of the defect and impacted into place. This leaves a smooth cartilage surface in the joint. A single plug of cartilage may be taken or a procedure using multiple plugs, called mosaicplasty, may be performed.

Osteochondral autograft is used for smaller cartilage defects. This is because the healthy graft tissue can only be taken from a limited area of the same joint. It can be done with an arthroscope and limited open arthrotomy.

OSTEOCHONDRAL ALLOGRAFT

If a cartilage defect is too large for an autograft, an allograft may be considered. An allograft is a tissue graft taken from a cadaver donor. Like an autograft, it is a block of cartilage and bone. In the laboratory it is sterilized and prepared. It is tested for any possible disease transmission. An allograft is typically larger than an autograft. It can be shaped to fit the exact contour of the defect and then press fit into place. Allografts are typically done through an open incision.

Anatomy of the Knee Joint



FUTURE OPTIONS

Current research focuses on new ways to make the body grow healthy cartilage tissue. This is called tissue engineering. Growth factors that stimulate new tissue may be isolated and used to induce new cartilage formation. The use of mesenchymal stem cells is also being investigated. Mesenchymal stem cells are basic human cells obtained from living human tissue, such as bone marrow. When stem cells are placed in a specific environment, they can give rise to cells that are similar to the host tissue.

The hope is that stem cells placed near a damaged joint surface will stimulate hyaline cartilage growth. Tissue engineering procedures are still at an experimental stage. Most tissue engineering is performed at research centers as part of clinical trials.



Nicholas Sablan, MD is an orthopaedic surgeon who completed a fellowship in orthopaedic sports medicine at Kerlan Jobe Clinic in Los Angeles, and has served as the assistant team physician for the Los Angeles Lakers, the LA Dodgers, the LA Angels, the PGA Tour, among others. He is the author of published multimedia, peer-reviewed publications and a book chapter on arthroscopy of the hip. He has experience in all forms of cartilage restoration and joint preservation.

■ Carpal Tunnel Syndrome



Carpal tunnel syndrome is a combination of symptoms that may include numbness, tingling and pain in the arm, hand and fingers due to compression of the median nerve at the wrist.

The median nerve provides feeling and movement to the “thumb side” of the hand. The area at the base of the palm where the nerve enters the hand is the carpal tunnel. If swelling builds in the tunnel, pressure develops on the nerve and disturbs its function. “Idiopathic” carpal tunnel syndrome occurs when no identifiable systemic or local factors develop the pressure on the median nerve.

The cause continues to be debated and the source of controversy. Scientific evidence implicates structural, genetic and biological factors in the development of carpal tunnel syndrome, while environmental and occupational factors lack such evidence and play a more minor, debatable role.

The symptoms of carpal tunnel syndrome include sensory and motor dysfunction. Numbness or tingling most often occurs in the thumb, index, middle and ring fingers and is frequently noticed at night, but may develop during daily activities such as driving or reading a newspaper. Sometimes a weaker grip or even clumsiness develops with a tendency to drop objects. In severe cases, sensation may be permanently lost and the muscles at the base of the thumb slowly shrink, resulting in difficulty with pinch.

The diagnosis of carpal tunnel syndrome remains a clinical diagnosis, and the role of diagnostic testing remains unclear. The clinical criteria for the diagnosis include the following: numbness and tingling in the median nerve distribution; nighttime numbness; weakness and/or atrophy of the thumb muscles; tinell’s sign (tapping over nerve results in “pins and needles” in fingers); phalen’s test (forced wrist flexion results in “pins and needles” in fingers); loss of 2-point discrimination. If clinical testing is positive and surgery is being considered, electrodiagnostic tests may be obtained to confirm carpal tunnel syndrome and check for other possibilities of nerve problems.

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◀ Wrist splints help reduce pressure on the nerve and relieve symptoms, especially at night.

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Nicholas Smerlis, MD is a board-certified hand surgeon with Tidewater Ortho. His practice solely focuses on conditions of the hand, wrist, and elbow. He completed a fellowship in hand and upper extremity at Wake Forest University Baptist Medical Center and has a practice that focuses solely on the treatment of hand, wrist and elbow conditions.

Treatment of carpal tunnel syndrome usually begins without surgery. Wrist splints help reduce pressure on the nerve and relieve symptoms, especially at night. Steroid injections into the carpal tunnel reduce swelling around the nerve to relieve symptoms. Oral steroids, mobilization exercises and ultrasound are also options.

When symptoms are severe or do not improve, surgery may be needed to make more room for the nerve by releasing the ligament that forms the roof of the tunnel on the palm side of the hand. Incisions for surgery may vary, but the goal is the same... enlarge the tunnel and decrease pressure on the nerve. Following surgery, numbness and tingling may disappear quickly or slowly, and strength of the hand and wrist may take several months to return. Sometimes the symptoms of carpal tunnel syndrome may not completely go away, especially in severe cases. As well, soreness around the incisions may linger for several weeks or months with a small subset persisting long-term. Overall, after carpal tunnel surgery, patient satisfaction and improvement in symptoms and functional outcome remain quite high.



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■ Direct Anterior Approach Hip Replacement

By Michael E. Higgins, MD



and stiffness in the affected leg. As the arthritic disease progresses, pain - even while resting - is often experienced, making those affected prisoners of their painful hip. Simple activities like getting in the car, or out of a chair, or walking through the store that were previously taken for granted are now dreaded painful tasks. Hip arthritis can be a devastating problem, but there is an excellent treatment available for those who suffer: total hip replacement.

Total hip replacement is one of the most successful surgeries performed today, with a proven track record of improving quality of life, relieving pain and restoring function. This procedure allows hip arthritis sufferers to regain their prior activity level and get back to life without the pain of hip arthritis. Currently, 200,000 hip replacements are performed each year in the United States, and this number is growing as the baby boomers age.

Direct anterior approach hip replacement (some times referred to as the “Jiffy Hip”) is a surgical technique that

Hip arthritis affects hundreds of thousands of Americans and can severely impact the quality of life of those affected. Hip arthritis can be disabling, making simple tasks very painful and often causing weakness

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allows for quicker recovery, often with less pain than is associated with traditional hip replacement. This is a muscle sparing procedure, meaning that the surgery is performed working between the muscles without splitting and detaching muscle from bone, as is necessary with traditional approaches. It is the preservation of the musculature around the hip with direct anterior hip replacement that allows for a quicker recovery with fewer restrictions.

With traditional hip replacement, the hip joint is approached through a 6- to 12-inch incision on the side of the thigh. The gluteus maximus (the large muscle around the buttock) is split, and muscles are then taken off the front or back of the femur to reach the hip joint. This muscle trauma causes pain and weakness after surgery, generally prolonging the time a walker or cane is needed – and for some patients causing a pronounced limp as they recover. Extensive physical therapy is required for most patients to regain strength after surgery, often lasting 6-8 weeks. Hip dislocation precautions are necessary with traditional approach hip replacement because more of the tissues around the hip that help hold the ball in the socket have been violated. The hip can dislocate (the ball can pop out of the socket) if the hip is placed in certain positions while these tissues heal, so patients are restricted from bending more than 90 degrees at the waist or sitting in low chairs; and they will need a pillow wedge between their legs when they sleep to prevent dislocation.

With Direct Anterior hip replacement, a 3 - or 4-inch incision is made over the front of the thigh and the hip joint

Direct anterior hip replacement takes between 1 to 2 hours to perform. The actual hip implant is the same as is used in traditional hip replacement. Most patients get out of bed with therapy the day of surgery and go home the second day after surgery.

is accessed working between the muscles of the upper thigh. There generally is soreness in the thigh afterwards but because the muscles around the hip are left intact, the pain is less intense and there is little weakness. Patients commonly can walk without a cane within 2-3 weeks after surgery. Hip dislocation precautions do not apply to patients who have direct anterior hip replacement because the muscles and tissue that hold the hip in place are still intact, making the joint much more stable and less likely to dislocate. This means patients can sleep in any position they like, sit in any chair, put on their socks and tie their shoes by themselves. Physical therapy is usually very limited for these patients because the surgery has not weakened their hip. Most of these patients in my personal experience are not interested in spending the time and money on therapy since they are having little to no pain and walking with little to no limp just a few weeks after surgery.

Direct anterior hip replacement is performed on a special table that allows exposure of the hip joint adequate for performing a total hip replacement through a relatively small incision. The patient lies on his or her back with the feet in boots similar to ski boots that are attached to spars that allow the leg to be extended to the floor.



Photo courtesy on Mizuho OSI

hana® Orthopedic Surgery table is Manufactured by Mizuho OSI, Union City, CA 94587

Total hip replacement is one of the most successful surgeries performed today, with a proven track record of improving quality of life, relieving pain and restoring function.

While the table may look like a torture tool of the Spanish Inquisition, it is what makes the procedure reliable and reproducible. Imaging with a portable x-ray machine called a C-arm fluoroscope is easily incorporated into the procedure using this table. C-arm imaging gives instant feedback on component position allowing for more precise positioning and sizing of implants. Changes in leg length are often planned during hip replacement and these changes can be objectively monitored throughout the procedure with C-arm, perhaps more importantly, undesired changes can be more easily detected and avoided in most circumstances.

Direct anterior hip replacement takes between 1 to 2 hours to perform. The actual hip implant is the same as is used in traditional hip replacement. Most patients get out of bed with therapy the day of surgery and go home the second day after surgery.



Direct anterior hip replacement is relatively new and the majority of hip replacements in the US are still performed with traditional approaches. The number of direct anterior hip replacements is increasing each year due to patient demand. Many patients travel long distances to have the procedure performed. If you or a loved one is suffering from hip arthritis, direct anterior hip replacement is an option available to you right here in Hampton Virginia that I encourage you to explore.

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Aron Ralston, author of *Between Rock and a Hard Place*, mountaineer and below-elbow amputee.
Photo courtesy of Malcopto Daily, BK and...



Michael Higgins, MD, is a Board-certified, orthopaedic surgeon with Tidewater Ortho. He completed a fellowship in joint replacement and reconstruction at the Roanoke Orthopaedic Center. He has written articles and lectured on hip and knee replacement. He has been named a Top Doctor by U.S. News and World Report.



The Specialists Group

Tidewater Ortho

**James L. Phillips*, MD / Trauma**

James Phillips, MD, FAAOS, is a Board-certified orthopaedic surgeon. He completed his residency at the Johns Hopkins School and served with the U.S. Navy Staff at the Naval Medical Center in Bethesda, Maryland. Dr. Phillips was co-founder of Tidewater Ortho and is a member of the Orthopaedic Trauma Association.

**Loel Z. Payne*, MD / Shoulder and Knee**

Loel Payne, MD, FAAOS, is a Board-certified, orthopaedic surgeon. He completed a fellowship in shoulder surgery and sports medicine at the Hospital for Special Surgery in New York. He has written multiple articles and book chapters and lectured nationally on shoulder conditions.

**Colin M. Kingston*, MD / Sports Medicine and Joint Replacements**

Colin Kingston, MD, FAAOS, is a Board-certified, orthopaedic surgeon. He completed medical school and his residency while serving in the United States Air Force. He has served in both gulf wars in Operation Southern Watch, Operation Enduring Freedom and Iraqi Freedom. Dr. Kingston serves as the Orthopaedic Medical Director of the region's only dedicated orthopaedic hospital.

**Robert M. Campolattaro*, MD / Hand, Wrist and Elbow**

Robert Campolattaro, MD, FAAOS, CAQSH, is a Board-certified, orthopaedic surgeon. He completed a fellowship in hand and upper extremity at Wake Forest University Baptist Medical Center and has a practice that solely focuses on the treatment of hand, wrist, and elbow conditions.

**Paul E. Savas*, MD / Spine**

Paul Savas, MD, FAAOS, is a Board-certified orthopaedic surgeon. He completed a fellowship in spine surgery at Jefferson Medical College of Thomas Jefferson University and has written and presented numerous articles on the spine and treatment of spine-related conditions. His practice focuses on the treatment of the spine.

**Michael E. Higgins*, MD / Joint Replacements and Reconstruction**

Michael Higgins, MD, FAAOS, is a Board-certified, orthopaedic surgeon. He completed a fellowship in joint replacement and reconstruction at the Roanoke Orthopaedic Center. He has written articles and lectured on hip and knee replacement. He has been named a Top Doctor by U.S. News and World Report.

**Nicholas A. Smerlis*, MD / Hand, Wrist and Elbow**

Nicholas Smerlis, MD, FAAOS, CAQSH, is a Board-certified, orthopaedic surgeon with subspecialty certification in surgery of the hand. He completed a fellowship in hand and upper extremity at Wake Forest University Baptist Medical Center and has a practice that solely focuses on the treatment of hand, wrist, and elbow conditions.

**John J. McCarthy III*, MD / Joint Replacement and General Orthopaedics**

John McCarthy, MD, FAAOS, is a Board-certified orthopaedic surgeon. He specializes in hip and knee replacements and has an interest in hand surgery as he completed a fellowship in this at the Hand Rehabilitation Center—in Philadelphia, PA. While practicing in Pittsburgh, PA, he served as a team physician for the Pittsburgh Penguins professional hockey team.

**Sara M. Bouraee, DPM / Foot and Ankle**

Sara Bouraee, DPM, AACFAS is a Board-qualified podiatric surgeon (foot and rear foot/ankle). She completed her residency at Drexel University College of Medicine/Hahnemann University Hospital where she also served as Chief Resident (Foot and Ankle Surgery).

**Nick Sablan, MD / Sports Medicine**

Nick Sablan, MD, an orthopaedic surgeon who completed a fellowship in orthopaedic sports medicine at Kerlan Jobe Clinic in Los Angeles, and has served as assistant team physician for the Los Angeles Lakers, the LA Dodgers, the LA Angels, the PGA Tour, among others. He is the author of published multimedia, peer-reviewed publications and a book chapter on arthroplasty of the hip.

* Board Certified Orthopaedic Surgeon | FAAOS - Fellow of the American Academy of Orthopaedic Surgeons

CAQSH - Certificate of Added Qualifications in Surgery of the Hand

AACFAS - Associate of the American College of Foot and Ankle Surgery

DAAOS - Diplomate of the American Academy of Orthopaedic Surgeons

Michael Higgins, MD Named Top Doctor by U.S. News and World Report

By Bobbie Fisher

Tidewater Orthopaedic Associates is proud to announce that Michael Higgins, MD, a member of the practice since 2006, who specializes in hip and knee replacement, has been named a Top Doctor by U.S. News and World Report.

A 2000 graduate of the Upstate Medical University in Syracuse, New York, Dr. Higgins did both his internship and residency in the Department of Surgery at State University of New York at Buffalo; this was followed by a Total Joint Replacement Fellowship at Roanoke Orthopaedic Center. He's board certified by the American Board of Orthopaedic Surgery, a fellow of the American Academy of Orthopaedic Surgeons and the American Association of Hip and Knee Surgeons, and an Associate Fellow of the American College of Surgeons and the Virginia Orthopaedic Society.

U.S. News Top Doctors was developed in collaboration with Castle Connolly Medical Ltd., publisher of America's Top Doctors® and other guides, and was built upon data from Castle Connolly's Top Doctors™. According to U.S.



News and World Report's website, the goals of the new project are twofold: to help consumers find the doctors who can best address their needs, and to enlist doctors across the country in sharing their awareness of who among their peers are the most worthy of referral.

The collective wisdom of these physicians, available at usnews.com, will contribute to a growing knowledge base that extends and complements doctors' longstanding tradition of seeking recommendations from a convenient sample of their trusted colleagues.

Previously, Castle Connolly obtained nominations by conducting geographically targeted outreach – for example, to doctors in private practice and the medical leadership at more than 1,500 hospitals in many cities. Today, all licensed doctors in the country can make up to ten nominations in their own specialties; and in addition, can nominate as many as three colleagues in other specialties.

The one caveat: doctors may not nominate themselves – this honor is a strictly peer nomination process, and as such, carries great weight in the medical community.

Dr. Higgins was caught off guard when he learned of the honor. "I was at home on a Saturday," he remembers, "and Dr. Phillips called to tell me my name was in the paper. I had no idea why, I was unaware of the Top Doctor Listing."

Once he recovered from the surprise, Dr. Higgins remembers, "It was such a gratifying experience. So many of my mentors are on this list I was humbled to be named as well. It's a real honor to be recognized by my colleagues."

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