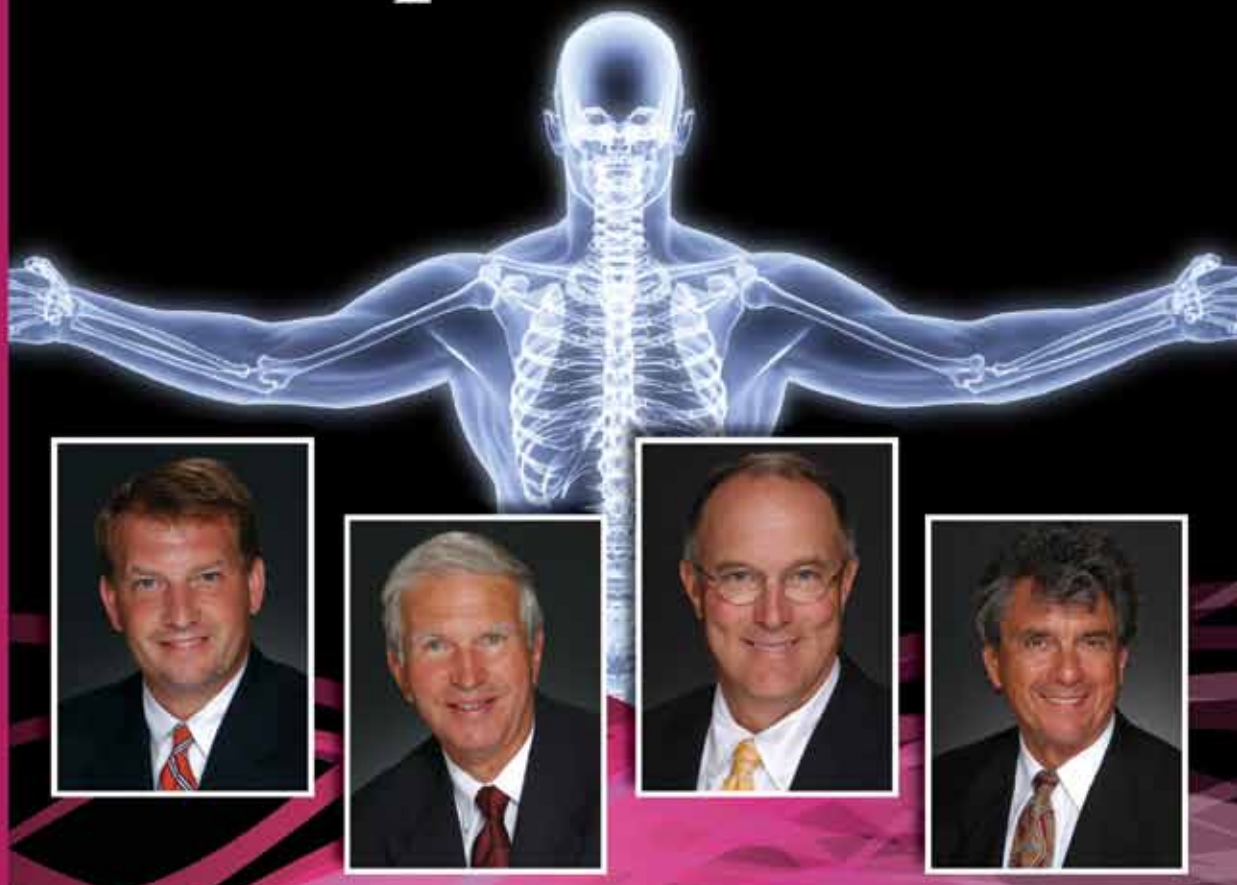
Louisville Orthopaedic Clinic



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Greetings from

THE ADMINISTRATOR OF LOUISVILLE ORTHOPAEDIC CLINIC

We are privileged to bring you the sixth edition of the Louisville Orthopaedic Clinic Magazine. As always, we look forward to providing our patients with information and advancements in orthopaedic medicine. The Louisville Orthopaedic Clinic and Sports Rehabilitation Center's mission is to provide comprehensive orthopaedic care, in a caring and friendly atmosphere.

The group began in 1974 with three orthopaedic surgeons. Today our facility includes ten orthopaedic surgeons. The physicians work in collaboration with certified physician assistants and nurse practitioners to enhance the treatment process. Our surgeons are board certified in orthopaedic surgery and have completed fellowship training in custom total joint replacement; arthroscopic procedures of the knee, shoulder and ankle; surgery of the spine; foot and ankle disorders and sports medicine. We offer onsite conveniences of an open MRI, outpatient surgery suites and a physical therapy department.

Our patients experience the latest technology and concepts available in healthcare. As early adopters of the electronic medical record in 2001, we improved patient care by eliminating the paper chart and streamlining the treatment process. Louisville Orthopaedic Clinic continues to advance our technology as healthcare reform is implemented to meet meaningful use requirements. Digital X-ray equipment and registered technicians ensure the highest quality images possible to aid in the diagnosis and treatment of our patients.

Our website at www.louortho.com offers a wide range of features to include general office information, detailed educational background on physicians, educational resources to better understand your medical condition and a patient portal. Our interactive patient portal allows patients to communicate with our office via the Internet or mobile device. The patient portal is a secure method of exchanging information between the patient and facility. Patients can register, update information, request medical records, complete online payments, request refills on medication and send non-urgent medical requests. Our physicians participate in research studies and contribute to medical journals and publications, all accessible on our website.

As part of our sports medicine program, we are team physicians for Ballard, Manual, North Oldham, Sacred Heart and St. Xavier High Schools along with Spaulding University providing sports physicals and urgent care. We are dedicated to providing education and treatment to the community.

We look forward to meeting your orthopaedic needs.

Deborah Martin
Administrator

LOUISVILLE ORTHOPAEDIC CLINIC

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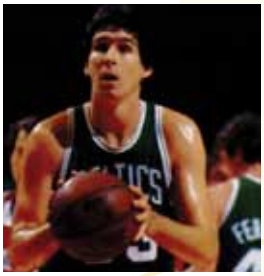

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ERNEST A. EGGERS, M.D.

Athletes and Joint Replacement Featuring 3 Former Pro Athletes

There is no question that professional athletics, and frequently college sports, lead to an earlier demise of the hip and knee. Multiple factors may be involved, including injury, prior surgery, body weight, and duration of involvement. I have treated many in the past, including Rick Robey, Paul Hornung, Enoch "Bud" Olsen, and Pee Wee Reese, along with a host of others who did not follow the usual hereditary timeline for degenerative disease.

Most of them had no preexisting surgery or definitive injury to explain their degenerative disease. Symptoms of pain and stiffness often began in the 30s and 40s. Many of the athletes had disabling problems earlier than expected.

Because degenerative arthritis in the weight bearing joints has been established as a chemical breakdown of the articular surface or "cushion" of the joints with gradual wear, the underlying bone is exposed and symptoms of pain, stiffness, and swelling occur. The usual treatment of exercise, anti-inflammatory drugs, injections, and restriction of activity eventually fail. Twenty to thirty years ago, age was a significant factor in determining replacement surgery. Now, expected longevity of artificial joints has given both the patient and the surgeon more flexibility.

Frequently the professional and college athlete is larger than the average population, and possesses increased bone dimensions. I found that a good percentage required customizing of their hip or knee implants for appropriate fit, both in the hip and knee.

There are many runners on the streets today who tend to equate their sport with increased joint deterioration. Two Harvard studies years ago revealed that over 20 years of running, averaging 18 to 25 miles a week, resulted in lower than expected arthritic problems in the knees and hip. Average body weight, however, was 180 pounds or less. It would seem that the distance runner, whether recreational or mini-marathon, would take size and weight into consideration for their long-term efforts.

The Knee

Many years ago, customizing the knee required MRI or CT scan measurement at the company for installation in a patient. This was quite accurate and necessary for those athletes with bone that did not fit the usual shelf sizes in the hospital. Now patients in the more active age groups, and even into the 70s, can enjoy customizing of their joints with the pre-navigation technology that also involves MRI or CT scan formation of instruments for their particular joint size and shape. I have performed these since its inception four or five years ago, and it is available in traditional, rotating platform, or gender knee implants.

The hemi or uni knee replacement, available for over 30 years now, has very restricted indications. However, when necessary, there is improved instrumentation and now pre-surgical computer accuracy, which will reduce surgeon inaccuracy. An MRI or CT scan of the patient's knee before surgery will customize the device to the bone.

There are robotic procedures for implanting hemi knees in several cities around the country, and while these are very precise, the technique is time consuming, expensive, and will not likely offer a better end result than the present customizing approach.

Very tall basketball players and large-boned football players have enjoyed great success with customized joints. This, in turn, over the last decade has led to more precision with all patients.

The Hip

Customizing the hip joint was started 30 years ago with younger patients. Variety of sizes of implants was not available yet, and bone fixation was not a given with a number of prosthetics. Thigh pain was also a more common complaint with cementless fixation.

Digitized X-ray or CT scan calibration has given some patients a perfect fit, where "off the shelf" joints would have been insufficient. Rick Robey at 6'11" and bone size that exceeds the largest parameters has enjoyed both hip and knee customizing. A number of other basketball players over 6'9" have had the same surgical approach.

Re-establishing normal hip mechanics and anatomy can only be accomplished with a device that compares the size of the individual with many implants of hip and knee joints. All orthopedic companies now have multiple sizes for a more precise fit. This works well with the average individual. Some companies, however, have had vastly more experience with customizing joints.

Smaller or mini incisions are still performed, but will of course be larger in the more obese patient. The debate over posterior (back incision) or anterior (front) approach continues today. It has really started a marketing frenzy. The anterior approach through the front of the hip has been done for over 40 years. It certainly does have some advantages, although perfect placement of components may be more difficult due to exposure. Frequently, a shorter stem on the femur or thigh bone is necessary.

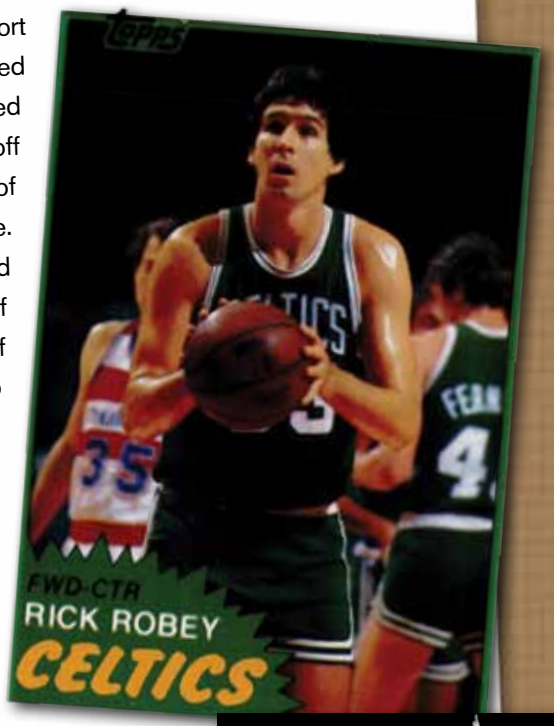
After two to three weeks, there are no differences in the outcome of the two approaches to the hip. It is extremely important that the prosthesis be implanted properly. There is no hip-for-life guarantee by any company or surgeon, but if implanted correctly and the bone grows solidly onto the device, it may well last the remainder of one's life. The ball and liner could possibly need to be changed at 20 to 30 years, but this is minor compared to a complete revision.

Conclusion

Customizing of joints began in the mid 1980s with a small society, the International Custom Society, involving the United States and Europe. It started with 60 members in alternated meetings between the U.S. and Europe for the next 20 years. Methodology from this group of physicians and engineers led to many more sizes of implants, and improved surfaces for bony ingrowth. Research from this society led to our ability to customize for larger patients and to improve the longevity of implants. This group of orthopedic surgeons and expert engineers from around the world enhanced our knowledge of joint replacement and certainly added to some of the success we enjoy today. I learned a great deal from membership over a 20-year span, starting in the '80s.

Rick Robey

In the early years, Robey found himself getting involved in just about every sport offered, including basketball, football, baseball, and track. Although he continued to participate in each through his freshman year in high school, he realized "basketball was going to be my focus." His concentration in basketball paid off as he made it to two Final Four Tournaments, while playing for the University of Kentucky, with a highlight of winning the championship game against Duke. In addition, Robey went on to play for three NBA teams and was inducted into the Kentucky Athletic Hall of Fame in 2012. The toll countless hours of practice and play took on Robey' s body, along with the medical field's lack of knowledge at the time on the long-term effects of joint pain treatments, led to a premature need for joint replacement.

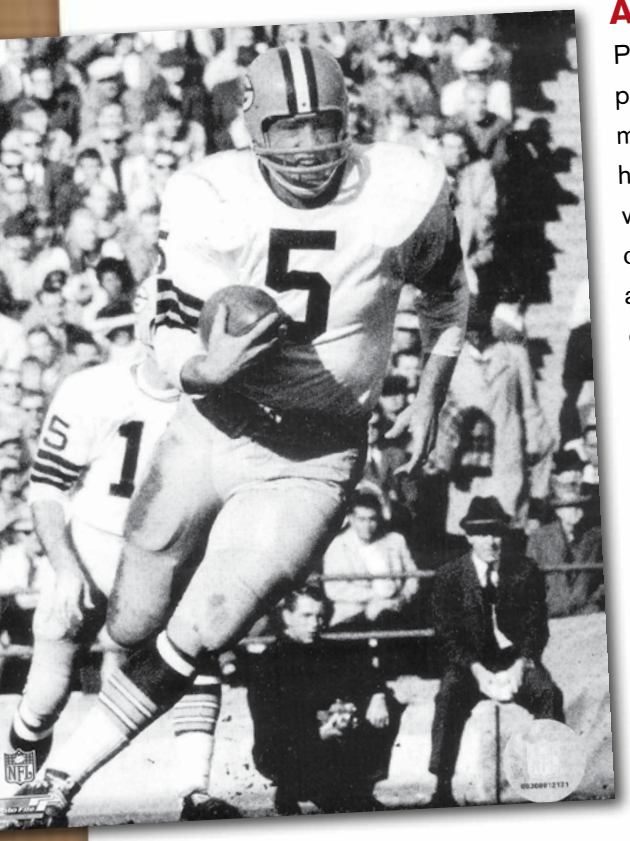


"In my sophomore season during college, I hyperextended my knee. I went to the Cleveland Clinic, where they put me in a brace that immobilized my knee. After about a four- to six- week period of wearing the brace I never had any more trouble." Although there were no further issues with his knees, Robey experienced recurring hip pain during his NBA career. At the time, cortisone injections were given on a fairly unlimited basis to get players the relief they needed to get back out on the court. We now know that unlimited use of cortisone injections can lead to the early deterioration of a joint. While cortisone injections are still considered to be one of the best options available for conservative joint pain treatment, there are now guidelines for how often a patient should receive this treatment. When proper guidelines are followed, a patient should not experience a premature deterioration of the joint due to the injection.

Following his basketball career, Robey continued to live a very active lifestyle, which included playing golf two to three times per week. Due to discomfort, he reached a point where he could no longer fully enjoy being active and started to research treatment options, meeting with several different orthopedists. "I felt confident and comfortable with Dr. Eggers and wanted to make sure I went with the best. I was just 39 years old when he replaced my hip." Robey is 6'11" and obviously needed a hip implant customized for his size. Wanting to be sure that the implant would be perfectly customized for his size, Dr. Eggers postponed the original surgery, having a computerized measurement sent to Germany for a second opinion on his joint.

"It's been 17 years since that replacement and it's functioning just as good today as it did back then. I've been able to return to a great quality of life and have continued playing golf on a regular basis." To this day, Robey has had his right hip and left knee replaced with custom devices. "It's the best thing I ever did; I only wish I had had the knee done sooner knowing now how much better it feels".

Paul V. Hornung

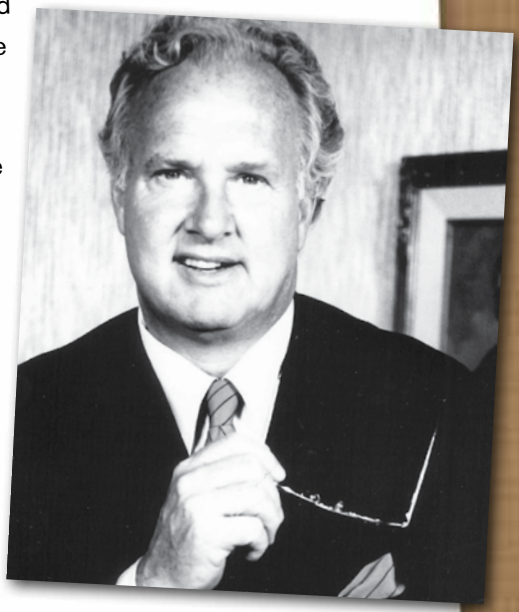


A LIFETIME OF WEAR AND TEAR

Paul Hornung is probably most well-known for his athletic career while playing football at Notre Dame in addition to playing professionally, most notably for the Green Bay Packers. Though many of you know him as one of the greatest football players to ever play the game, he was actually quite the baseball and basketball player, having played college basketball for Notre Dame as well. Having countless honors and awards to his credit, Hornung is no stranger to the effect a lifetime of playing sports at the highest levels can have on your body.

Many athletes typically focus their efforts into one sport, naturally allowing for an off-season in which the body has a chance to rest and recover before conditioning and practice start up again. Hornung spent most of his life, starting as a young boy, playing several sports, constantly pushing his body to its limit. This consistent overuse leads to injury, as well as an increased pace at which the body succumbs to the effects of degenerative disease.

During Paul Hornung's athletic career he measured 6'2" in height, weighing approximately 215lbs, considerably larger than the average male at that time. Hornung states that aside from a pinched nerve that sidelined him, he sustained no other serious injuries, although he mentions his legs getting "pretty banged up" on the field. The stress Hornung's body endured finally caught up to him when "about 7 or 8 years ago" he started experiencing significant joint pain and stiffness in his knees and hips. Several years back a friend, Donald T. McAllister, M.D.referred Hornung to Dr. Eggers, and Hornung says, "he's very glad he did." At this time, Hornung has had both hips and one knee replaced at the hands of Ernest A. Eggers, M.D.

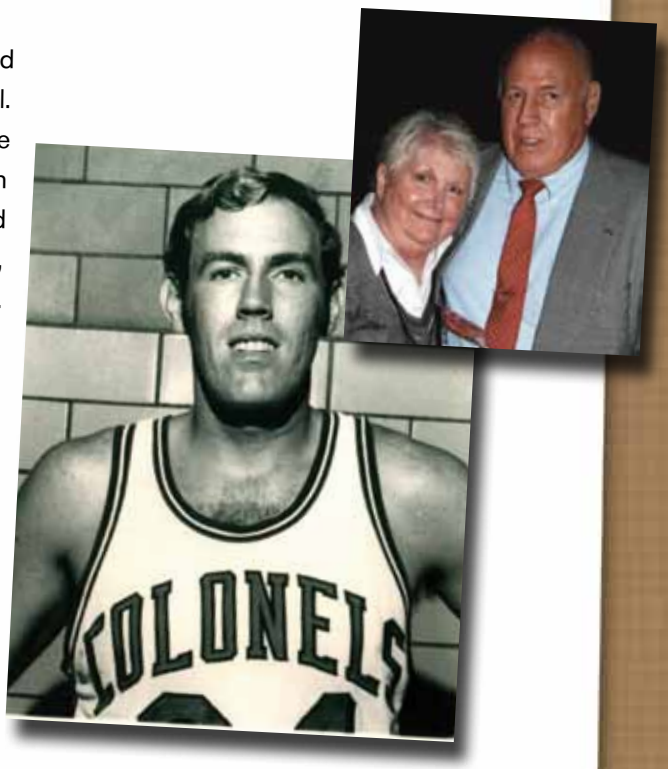


Today, Hornung enjoys spending time with friends and family and making the occasional appearance for events, typically honoring his storied career. Hornung credits Dr. Eggers with helping to restore a quality of life he enjoyed before seeking treatment for knee and hip pain and stiffness. A combination of Dr. Egger's skill, with the use of devices that were customized to Hornung's size, helped him to return to a life he can enjoy without pain and restrictions to activity. When asked if he has any advice for athletes today in reference to injury and the afteraffects he says "No, they don't think about what they're putting their bodies through now, they just want to go out and play the game." As expected, when I asked whether it was all worth it, he replied without hesitance, "Absolutely."

Enoch "Bud" Olsen

Although he was inducted into the Ohio Basketball Hall of Fame in May 2012 you'd never know by his humble demeanor, the accomplishments Bud Olsen has made throughout his life. After an impressive career playing as center on the UofL basketball team from '59-'62, he went on to play for six different pro teams for a span of eight years. As with many outstanding athletes, Olsen was also a talented football and baseball player, lettering four years playing college baseball. Although Olsen didn't experience any major injuries, there were a few bumps along the way. Bud's father was very influential in getting him into playing sports and was there to help him make some important decisions that would have a lasting effect on his athletic career.

Growing up in Indiana, around the age of 10, Bud immersed himself into playing all kinds of sports, including, football, basketball, and baseball, all of which he continued until he was a high school freshman. At this time Bud states, "My family didn't have a lot of money, but my dad made the financial sacrifice to get me braces. He didn't want me to continue playing football for fear that I would have my braces knocked out. I continued playing basketball and baseball, but much to my dismay, I got them knocked out while playing basketball and I felt terrible about it."



Aside from a few sprained ankles and some stitches to his eye, Bud recalls one of his knees swelling pretty badly while in high school. "The first doctor we went to looked at my knee and wanted to operate immediately. My dad suggested that we get a second opinion, which we did. The second doctor said that the swelling was due to my rapid growth, for which there was no suggested treatment. After a little time, the swelling went down and I never experienced any further problems. Had my dad not suggested we get a second opinion, who knows how the rest of my athletic career could have been affected?"

Olsen continued to play basketball for fun up until around the age of 44. Continuing an active lifestyle, Bud began playing racquetball, tennis, and golf until it became uncomfortable to play due to his joints. His wife, as well as several friends, suggested he go see an orthopedic surgeon, Dr. Ernest Eggers. Once Bud met Dr. Eggers, he really liked what he had to say and has now had both hips and both knees replaced. Bud says, "I was really impressed that even as early as 6am, Dr. Eggers came to check on me in the hospital instead of sending someone else. I couldn't be happier with the work he has done." As a former UofL basketball player he says, "The only thing I don't like about Eggers is that he's a UofK fan." When asked if being a former athlete helped him get through the rehab process he said, "Yes, I was used to being goal oriented. I'd ask each time what my goal was that day, and I'd work towards it until I reached where I needed to be."

The only thing Olsen would change about the entire process is that he wishes he would have lost some weight before the surgeries. Bud's wife, Betty, had never seen him play basketball before they got married, and admitted to typically being attracted to football players. Over the years, Olsen put on a few extra pounds due to Betty's great cooking. He says that the extra weight put added pressure on his joints and that the rehab process probably would have been a bit easier had he been more fit. Now, he feels that he could do just about anything physically that he feels inclined to do. At 6'8" Olsen says he's grateful for the option to have custom implants. He had the second largest implant Dr. Eggers has ever used, second to Rick Robey, which Olsen admits makes him a little jealous.

Important Product Information

XIAFLEX® (Zï a flex)
(collagenase clostridium histolyticum)

What is the most important information I should know about XIAFLEX?

XIAFLEX can cause serious side effects, including:

1. **Tendon rupture or ligament damage.** Receiving an injection of XIAFLEX may cause damage to a tendon or ligament in your hand and cause it to break or weaken. This could require surgery to fix the damaged tendon or ligament. Call your healthcare provider right away if you have trouble bending your injected finger (towards the wrist) after the swelling goes down or you have problems using your treated hand after your follow-up visit.
2. **Nerve injury or other serious injury of the hand. Call your healthcare provider right away** if you get numbness, tingling, or increased pain in your treated finger or hand after your injection or after your follow-up visit.
3. **Allergic Reactions.** Allergic reactions can happen in people who take XIAFLEX because it contains foreign proteins.

Call your healthcare provider right away if you have any of these symptoms of an allergic reaction after an injection of XIAFLEX:

- hives
- swollen face
- breathing trouble
- chest pain

What is XIAFLEX?

XIAFLEX is a prescription medicine used to treat adults with Dupuytren's contracture when a "cord" can be felt.

In people with Dupuytren's contracture, there is thickening of the skin and tissue in the palm of your hand that is not normal. Over time, this thickened tissue can form a cord in your palm. This causes one or more of your fingers to bend toward the palm, so you can not straighten them.

XIAFLEX should be injected into a cord by a healthcare provider who is skilled in injection procedures of the hand and treating people with Dupuytren's contracture. The proteins in XIAFLEX help to "break" the cord of tissue that is causing the finger to be bent.

It is not known if XIAFLEX is safe and effective in children under the age of 18.

What should I tell my healthcare provider before starting treatment with XIAFLEX?

XIAFLEX may not be right for you. Before receiving XIAFLEX, tell your healthcare provider if you:

- have had an allergic reaction to a previous XIAFLEX injection.
- have a bleeding problem.
- have any other medical conditions.
- are pregnant or plan to become pregnant. It is not known if XIAFLEX will harm your unborn baby.
- are breastfeeding. It is not known if XIAFLEX passes into your breast-milk. Talk to your healthcare provider about the best way to feed your baby if you receive XIAFLEX.

Tell your healthcare provider about all the medicines you take, including prescription and non-prescription medicines, vitamins, and herbal supplements.

Especially tell your healthcare provider if you use:

a blood thinner medicine such as aspirin, clopidogrel (PLAVIX®), prasugrel hydrochloride (EFFIENT®), or warfarin sodium (COUMADIN®). If you are told to stop taking a blood thinner before your XIAFLEX injection, your healthcare provider should tell you when to restart the blood thinner.

How will I receive XIAFLEX?

Your healthcare provider will inject XIAFLEX into the cord that is causing your finger to bend.

After an injection of XIAFLEX, your affected hand will be wrapped with a bandage. You should limit moving and using the treated finger after the injection.

Do not bend or straighten the fingers of the injected hand until your healthcare provider says it is okay. This will help prevent the medicine from leaking out of the cord.

Do not try to straighten the treated finger yourself.

Keep the injected hand elevated until bedtime.

Call your healthcare provider right away if you have:

- signs of infection after your injection, such as fever, chills, increased redness, or swelling
- numbness or tingling in the treated finger
- trouble bending the injected finger after the swelling goes down

Return to your healthcare provider's office as directed on the day after your injection. During this first follow-up visit, if you still have the cord, your healthcare provider may try to extend the treated finger to "break" the cord and try to straighten your finger.

Your healthcare provider will provide you with a splint to wear on the treated finger. Wear the splint as instructed by your healthcare provider at bedtime to keep your finger straight.

Do finger exercises each day, as instructed by your healthcare provider.

Follow your healthcare provider's instructions about when you can start doing your normal activities with the injected hand.

What are the possible side effects of XIAFLEX?

XIAFLEX can cause serious side effects. See "What is the most important information I should know about XIAFLEX?".

Common side effects with XIAFLEX include:

- swelling of the injection site or the hand
- bleeding or bruising at the injection site
- pain or tenderness of the injection site or the hand
- swelling of the lymph nodes (glands) in the elbow or underarm
- itching
- breaks in the skin
- redness or warmth of the skin
- pain in the underarm

These are not all of the possible side effects with XIAFLEX. Tell your healthcare provider about any side effect that bothers you or does not go away.

Call your doctor for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.

General information about XIAFLEX

Medicines are sometimes prescribed for purposes other than those listed here. This is a summary of the most important information about XIAFLEX. If you would like more information, talk to your healthcare provider. You can ask your healthcare provider for information about XIAFLEX that is written for health professionals.

For more information visit www.XIAFLEX.com or call 1-877-663-0412.

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Supporting Our Local Schools' Athletic Teams

Check out our "Health N' Sports" feature on Catholicsports.com/louisville. Each week our physical therapists submit an article with helpful tips and information related to sports and exercise. Through our feature, we also work with local Catholic school coaches, often sharing their comments on specific sports related topics. Occasionally, you can also catch features highlighting student athletes chronicling their experiences in working with our physicians and physical therapists following an injury.

Ty E. Richardson, M.D.,
Thomas Chapman, Defensive Tackle

DuPont Manual High School

At left, a photo taken of Dr. Richardson, team physician for DuPont Manual HS athletics, and Thomas Chapman, defensive tackle, during his days playing for Dupont Manual's Football Team. While playing for Manual, Chapman sustained an ACL tear requiring surgery, which was performed by Dr. Richardson. During Chapman's senior year of high school he was considered to be a top recruit by many sports media outlets. Chapman is currently a redshirt freshman for the University of Kentucky Football Team.

Ballard High School

Dr. Smith, team physician for Ballard HS athletics, runs to the field to assess a player's condition during a game against the Eastern Eagles.

Saint Xavier High School

Dr. Kuiper, team physician for St. X, is seen here with Dr. McAllister and some of the St. X staff and athletic trainers. At the far right, Dr. Kuiper helps an injured player off the field during a St. X football game.

2nd from left, Donald McAllister, M.D., farthest right, Scott Kuiper, M.D., with St. X coaching staff

Photos courtesy of Tim Porco of ©Sweet Spot Photos

Baptist Health Sports Medicine: Results Are Unbeatable

BAPTIST HEALTH SPORTS MEDICINE IS ON THE BALL

The recently opened clinic serves athletes of all ages, banking on Baptist's tradition of excellent orthopedic care and a team of experienced physicians and therapists.

Baptist Health Louisville is the state's leader in performing total joint replacement surgery and is ranked eighth nationally. Baptist Health La Grange has provided athletic training to Oldham County school teams for a dozen years.

ON THE TEAM

Staff from each combine to support Baptist Health Sports Medicine at Baptist Health Eastpoint, located between the two hospitals. Baptist Health Eastpoint, in the Eastpoint Business Centre near Anchorage, sports an urgent care center and an established physical therapy clinic for adults and children.

"We already had all the elements for a strong sports medicine program," said John Wortley, executive director of Baptist Community Health Services, which includes the clinic. "We just needed the right mix of experienced physicians and therapists."

Leading the physician team is Medical Director J. Steve Smith, M.D., of Louisville Orthopaedic Clinic, a former college baseball player who attended the University of Kentucky College of Medicine. While pursuing an orthopedic sports medicine fellowship at the Kerlan-Jobe Orthopaedic Clinic in Los Angeles, Dr. Smith served on the medical staff of several sports teams, including the LA Lakers, the LA Dodgers and the University of Southern California (USC) football team.

The Lawrenceburg, KY, native is part of a trio of fellowship-trained sports medicine physicians from Louisville Orthopaedic who are on the Baptist Health Sports Medicine roster of 12 physicians. Dr. Smith is the team physician for Ballard and North Oldham high schools.

Fellow Louisville Orthopaedic physicians Ty E. Richardson, M.D., and Scott D. Kuiper, M.D., pitch in with treating athletic injuries at Baptist, along with their work as team physicians for such Louisville area powerhouses as St. Xavier High School, Sacred Heart Academy, Jeffersontown High School and duPont Manual High School.

Dr. Kuiper also has cared for athletes at Auburn University – plus several National Football League, National Basketball League, and National Hockey League athletes during a fellowship training program in Birmingham, AL.

Dr. Richardson received many awards during his orthopedic residency at the University of Louisville

and has done extensive research in orthopedic trauma. He served as a team physician for a Cincinnati Reds baseball farm team and a Western League hockey team during his fellowship.

The three are independent physicians; some of the other physicians at the clinic are employed by Baptist. This mix reflects Baptist Health's philosophy of partnering with physicians in ways that most benefit patients.

The sports medicine clinic is staffed by two to three primary care/sports medicine physicians with rotating coverage from orthopedic surgeons who are fellowship-trained in sports medicine.

IN DEMAND

Demand for sports medicine has been brisk – both nationally and locally.

The subspecialty is exploding in popularity. It is estimated that more than one million young adults a year are injured playing sports. In addition, more seasoned athletes – amateur and pro – find themselves with creaks and cracks in need of repair. Even casual exercisers and retirees who spend time on the golf or tennis court can find themselves in need of therapy or even surgery.

MOST COMMON "WEEKEND WARRIOR" SPORTS INJURIES

- Fractures
- Contusions
- Lacerations
- Pulled muscles
- Sprains
- Strains

RISKIEST SPORTS*

- Basketball
- Football
- Bicycling

** According to the Consumer Product Safety Commission. Other risky sports are ice hockey, sky diving, scuba diving, cheerleading, and gymnastics.*

MOST INJURY-PRONE SPORT FOR WOMEN

- Cheerleading

DEADLIEST SPORT

- Riding in an all-terrain vehicle

Not long after its June 18 opening, Baptist Health Sports Medicine hired another physical therapist to ensure patients receive individual attention.

The emphasis on individual attention – and indeed the genesis for the clinic itself – springs from the Baptist Health La Grange athletic training program, founded

by Baptist Health La Grange Rehabilitation and Sports Medicine Director Gary Costelle, also program director of Baptist Health Sports Medicine. That program serves four local high schools – Oldham County, South Oldham, North Oldham and Henry County.

The reputation Baptist has gained in athletic training has already paid off for the new clinic: the Kentucky Stickhorses professional lacrosse team is a client, along with Javanon soccer and the Kentucky Fire Juniors soccer club. And, several Jefferson County high schools and local collegiate programs are seeking the clinic's services.

Baptist Health Sports Medicine also is designed to care for members of recreational leagues, club sports, and even pick-up games.

Services available through the clinic range from injury evaluation and diagnosis to treatment, surgery, rehab, prevention, and performance improvement. A wide variety of equipment at the Eastpoint location makes that possible: physical therapy gym, indoor turf field, portable pitching mound, rubberized running lane, and even a rock climbing wall.

Diagnosis is aided by on-site digital X-ray, plus other imaging services in the Baptist Health Eastpoint building, including MRI. Some potential patients may limp in via the Baptist Urgent Care location, which is just a few steps away.

Treatment for many conditions begins with options such as physical therapy, injections, and anti-inflammatory

VITAL STATISTICS
BAPTIST HEALTH SPORTS MEDICINE FACILITIES

- Located at Baptist Health Eastpoint,
  2400 Eastpoint Parkway
  (502) 253-6699
  (502) 253-6689, physical therapy
- 11,000 square feet
- Private treatment rooms
- Digital X-rays
- Cast/brace room
- Extensive physical therapy gym
- Indoor turf field
- Portable pitching mound
- Rubberized running lane
- Climbing wall and more

SPORTS MEDICINE EXPERTISE/STAFF

- Fellowship-trained physicians and orthopedic surgeons
  - Student sports physicals
  - Sports injury treatment, including arthroscopic and minimally invasive orthopedic surgery
  - Neurology/concussion management
- Sports-medicine trained physical therapists and athletic trainers
  - Physical therapy
  - Sports performance training, including performance improvement
  - Strength training and conditioning
  - Exercises tailored to your sport
  - Specialized training – core, speed and agility, cardiovascular, strength and power
  - Event coverage

medicines to relieve pain and improve function. But, when those treatments fall short, surgery may be the next option.

ON THE CUTTING EDGE

When it comes to surgery, arthroscopy is the key word. This minimally invasive outpatient surgery uses a small camera and instruments to make a couple of small incisions that are less than an inch long. Success rates for this type of surgery are high, plus the patient is in less pain and bounces back more quickly.

Common sports injuries, such as the pain of a torn rotator cuff, may be treated arthroscopically. Dr. Smith performs this procedure, along with a number of other arthroscopic procedures such as complex shoulder, knee and elbow reconstruction for all sports-related injuries (rotator cuff, labral tears, ligament reconstruction, cartilage restoration and others). One of his specialties is reverse total shoulder replacement for patients with both arthritis and rotator cuff tear.

Dr. Kuiper specializes in shoulder, knee, and elbow arthroscopy and has helped to develop the latest implant devices for rotator cuff and labral repair.

Dr. Richardson specializes in sports injuries, fractures and arthritis of the shoulder, and ligament injuries of the knee.

Surgery can be performed at Baptist Health Eastpoint, Baptist Health Louisville, Baptist Health La Grange or even in operating rooms at Louisville Orthopaedic.

UPPING YOUR GAME

What sets Baptist Health Sports Medicine apart from the pack is its sports performance program, headed by Nick Sarantis, MS, ATC, CSCS. Sarantis, a certified athletic trainer and strength conditioning specialist, says performance training emphasizes flexibility, core stability, mobility, strength, speed, and power.

Special conditioning camps place athletes in small groups for performance enhancement. Still, each person receives individual attention, Sarantis said. Semi-private training allows athletes to train in small groups, yet works from their own individualized strength and conditioning program built from a specialized testing and assessment process.

"This is not a facility where athletes come in and all work from one generalized program. Athletes train in small groups but still have personalized attention from their strength coach and training program that focuses on their individual strengths, weaknesses, sport, and any injury concerns. Personal training but with a group atmosphere and group cost," said Sarantis.

Another tack is special programs focusing on a certain sport, or topic. Recently, it was a full house for an "Injuries in Cycling: Prevention and Performance" seminar. The event drew cycling enthusiasts and physicians -– even professional cyclists.

"Being able to prevent an injury and increase performance is usually the missing link in sports medicine models. We are proud that we are able to provide the complete continuum of care, and will continue to provide premier strength and conditioning programs to athletes of all ages and skill levels," said Sarantis.

To learn more about Baptist Health Sports Medicine, go to
BaptistSportsMedKy.com Facebook.com/BaptistSportsKy

RICHARD A. SWEET, M.D.

Knee Replacement for the Recreational Athlete

In the early development of knee replacement surgery, the goal of the procedure was to provide a knee that allowed an elderly patient disabled with arthritis of the knee to walk comfortably for the purpose of pursuing activities of daily living. Over the last three decades, these modest goals have dramatically changed. As the knees and hips of active baby boomers start to show signs of arthritic wear and tear, solutions have been sought to allow them to maintain their active lifestyles. Implant manufacturers have developed knee replacements with improved function and durability. Surgeons have improved knee replacement operative techniques. The result is that it is now possible for patients receiving knee (and hip) replacements to lead active lifestyles and to continue participation in recreational sports and relatively vigorous exercise programs.

LIGAMENT ISSUES IN TKR SURGERY FOR THE ATHLETIC PATIENT

Unique challenges are faced by the surgeon in providing a knee that will respond to peak demands of athletics. These include:

1. LOSS OF THE ANTERIOR CRUCIATE LIGAMENT (ACL): In all total knee replacement designs, the anterior cruciate ligament (ACL) is sacrificed. Loss of the ACL creates the potential for post-op knee ligament laxity. This laxity can make participating in recreational sports, exercise programs, and aggressive daily / work activities difficult.
2. MAINTAINANCE OF "PERFECT" POSTERIOR CRUCIATE LIGAMENT (PCL) FUNCTION: Posterior knee stability (prevention of the tibia's sliding back under the femur) is crucial to the function of the knee in all active knee replacement patients. Maintaining ideal posterior stability is the cornerstone of the replacement surgical strategy. In the normal knee the PCL (located in the center back of the knee) performs this function. Posterior stability is critical for daily / work activities such as going up and down stairs, climbing, stooping, and kneeling. Proper PCL function is also essential for athletic movements such as jumping, pivoting, and quick stopping and starting. As opposed to the ACL, the PCL does not necessarily have to be removed in knee replacement surgery. Implant designs that preserve the PCL are called Posterior Cruciate Ligament Retaining implants. Those that sacrifice the PCL are called Posterior Cruciate Ligament Sacrificing implants. There are advantages and disadvantages to each design. In PCL Retaining implants, stability is dependent on the surgeon's experience and skill in properly preserving, tensioning, and balancing the PCL. In PCL Sacrificing implants, posterior stability is an inherent part of the design of the implant but at the cost of sacrificing / removing more bone from the femur and possibly placing more stress on the cement bond of the implants to the bone.

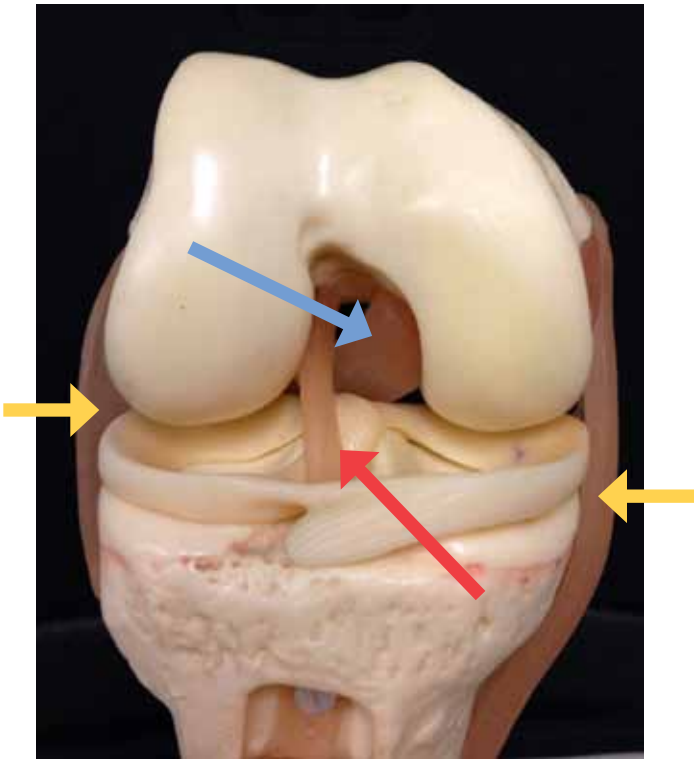

FIGURE 1. LIGAMENTS OF THE NORMAL KNEE: The Medial & Lateral Collateral ligaments (yellow arrows) of the knee must be balanced. The ACL (red arrow) is always sacrificed in TKR surgery. The PCL (blue arrow) may be sacrificed or preserved.

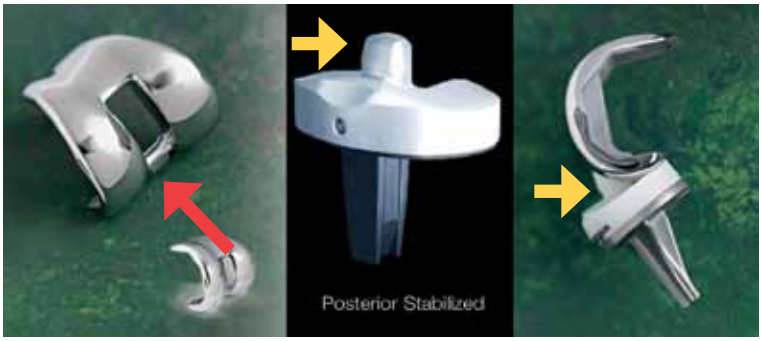

FIGURE 2. PCL SACRIFICING TKR: The PCL Sacrificing Implant removes more bone in the center of the femur. The plastic tibial insert has a "post" (yellow arrows) that abuts against the posterior metal bar (red arrow) of the femoral implant to provide posterior stability.

SURGICAL GOALS IN THE RECREATIONAL ATHLETE

In order for a patient with a knee replacement to be able to participate in recreational sporting activities the following must occur:

1. ANATOMY RESTORED: The knee replacement implants must be anatomically positioned on the femur, tibia, and patella three dimensionally to restore proper overall leg alignment.

2. COLLATERAL LIGAMENTS BALANCED: The medial and lateral collateral ligaments on the inside and outside of the knee must be evenly balanced to provide side-to-side stability to the knee. In the process, preoperative mal-alignment such as a "bowed" or "knock-kneed" deformity must be corrected.

3. POSTERIOR STABILITY ACHIEVED: As noted above, posterior stability of the tibia on the femur must be achieved by either preserving the PCL or by substituting for it with a PCL sacrificing implant design.

RAPID RECOVERY TIMELINE FOR THE ATHLETIC PATIENT

IMPROVEMENTS IN REHAB TIMELINE DUE TO:

1. The "Quadriceps Sparing" or "Minimally Invasive" surgical approach avoids cutting into the quadriceps muscle. Operative protection of the quad muscle has allowed for the return of early quadriceps function to the point where many patients can perform a straight leg raise immediately after the effects of the "numbing" blocks have subsided.

2. Better initial pain management (the most effective of which are the use of femoral and sciatic nerve blocks to "numb" the leg for 12 – 24 hours post-op) allows for more effective early therapy.

RECOVERY TIMELINE FOR THE ATHLETIC PATIENT:

1. Hospital stay: two to three nights.
2. CPM machine for early motion used night of surgery.
3. Twice-daily in-hospital therapy starts the day after surgery.
4. Full weight bearing is allowed as soon as the effects of the sciatic and femoral nerve blocks (administered pre-operatively as a part of the initial pain management program) have receded.
5. Patients are permitted to get off the walker / crutches as soon as tolerated. In the athlete this usually occurs in less than one or two weeks.
6. Physical therapy (home and outpatient) is required for four to six weeks post-operatively.
7. Independent exercise program to maintain quad and hamstring strength recommended indefinitely.
8. Light recreational sports allowed at six weeks post-op (golf, walking, fitness program).
9. Vigorous exercise program expected at three to four months (i.e. tennis).

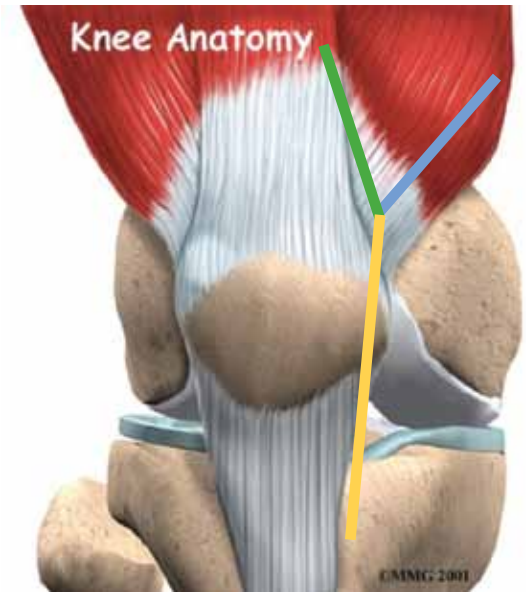

FIGURE 3. QUADRICEPS SPARING "MINIMALLY INVASIVE" SURGERY: The YELLOW line represents the deep incision (not the skin incision) common to all surgical approaches of the knee. The GREEN proximal extension of this yellow line represents the standard surgical approach into the joint that cuts into the quadriceps tendon and muscle. Cutting into the quad tendon and muscle in this manner delays healing and slows rehab. The BLUE extension of the incision represents the Quadriceps Sparing "Minimally Invasive" approach that allows for immediate return of quadriceps function speeding rehab for the athletic patient.

The life goal after a knee replacement: stay fit, have fun in life, and choose activities that will allow enjoyment of the new knee for many years to come.

UNIQUE POSTOPERATIVE ISSUES FACED BY THE ATHLETE

An uncommon problem seen in a small percentage of athletic patients is a gradual stretching of the capsular or collateral ligaments of the knee (MCL and LCL). This stretching is due to the high demand load athletes place on these ligaments and the absence of the ACL and / or PCL that were sacrificed at the time of surgery. A knee with excellent immediate postoperative stability can in some cases become "loose" by 12 months post-op. A second operation 6 – 18 months after the initial replacement surgery may be required to exchange the plastic insert for a thicker one of greater contour to "tighten" the knee and re-establish sufficient stability so that the patient can continue participating in high demand sports. The recovery time for a "plastic insert exchange" procedure is relatively short. For emphasis, this postoperative "stretching" phenomenon of the capsular ligaments is uncommon even in rigorously athletic patients.

RECREATIONAL SPORTS AND EXERCISE OPTIONS FOR TKR PATIENTS

GENERAL INSTRUCTIONS: Most adult recreational athletic activities and exercise programs are possible in knee replacement patients. Activities that subject the knee to excess wear, impact, or risk of injury that can shorten the goal of a knee lasting 20 years or more should be avoided. Though a patient with a knee replacement can run, choosing a running program for routine aerobic exercise would expose the knee to excessive wear and impact. Brisk walking, exercise bikes, elliptical trainers, and treadmills are good aerobic substitutes. Stair climbing machines and the use of excessive weight on leg press or knee extension machines can create soreness and swelling in the knee due to exposure of the patella to peak stresses. Any resistive leg exercises program should be of a low weight – high repetition (30 reps or more) strategy. Most fitness class exercise programs are well tolerated, though step classes and those that use the "lunge" position repetitively can cause patellar issues. The routine use of ice after exercising to minimize swelling and soreness during the first year is recommended.

SPORT SPECIFIC INSTRUCTIONS: With regard to participation in specific recreational sports, judgment should be employed. Basketball, with all the inherent running, jumping, and torque is not recommended. Tennis, particularly doubles, is well tolerated, as are most other racquet sports. Biking, even competitively, is also well tolerated. An experienced snow skier or water skier can resume their sport, keeping in mind, though, that a fall and subsequent ligament injury to the knee could have significant impact on the function and stability of the knee and possibly lead to revision surgery. A golfer can often start hitting balls, chipping and putting as soon as four to six weeks after surgery. After complete healing, a golfer should be able to walk the course if desired. Horseback riding is permissible.

Knee replacements, because of improvements in implant designs and surgical techniques, have progressed to the point where a return to most recreational sporting activities and reasonable exercise programs is possible. The life goal after a knee replacement: stay fit, have fun in life, and choose activities that will allow enjoyment of the new knee for many years to come.

Could You Retire Now?

Four questions to help you tell if your retirement plan is ready

By William J. Hunter

If you're five to 10 years away from retirement, you're probably asking yourself, "Will I be financially ready when the time comes?" Answering these questions can help you figure that out.

1. How Do I Want to Spend My Retirement?

If you haven't already done so, now is the time to start figuring out what you want your retirement to look like. You may want to keep working part-time, start a business, or spend the next five years sailing around the Caribbean. Once you know where you want to go, you can put a plan in place and begin firming up the necessary finances. If you want to start your own business, for example, you'll need to figure out how much seed money the new enterprise will require and how that will affect your retirement budget, factoring in the effects of a changed tax picture. Even a plan to kick back at home has financial implications, particularly if you have philanthropic goals or want to pass wealth along to your heirs.

2. Do I Have a Retirement Plan That Can Provide Me with Income for Life?

As your retirement date grows nearer, you'll have to put a plan in place to help you translate your savings into an income stream that fits your immediate needs yet allows your investments to continue to grow. The Merrill Lynch Retirement Income Framework offers a good example of how to do this. It's a strategic retirement income planning approach that asks you to think of your portfolio as three different portfolios—short, medium and long term — each with a specific objective in mind. The short-term portfolio should include high-quality, fixed-income assets that may generate consistent income and liquidity to meet immediate expenses — say, two to seven years' worth. The intermediate-term assets should seek to generate growth over a longer period to help you keep pace with inflation. You can use these assets to replenish your short-term holdings, if necessary, to avoid selling your longer-term, higher-growth assets when markets are down. (It's important to remember that investments are not FDIC-insured, are not bank guaranteed, and may lose value.)

3. Am I Prepared for the Cost of Long-Term Care in the Event That I Need It?

Expenses for long-term care rose at nearly twice the rate of overall inflation during the five-year period from 2004 to 2008,[1] and Medicare typically doesn't cover these costs. One possibility is to set aside money to pay for

care. Another option is to buy a long-term care insurance policy. A third alternative is taking advantage of a change in IRS regulations and use a non-qualified annuity to fund long-term care insurance: As of January 1, 2010, money withdrawn from an annuity that goes to pay for a long-term care policy is no longer subject to federal income tax.

4. Are My Spouse and I on the Same Page?

If you've worked for 40 years, you may want to take time to play golf and relax at home, whereas your spouse could be just hitting her stride in her career. The key is to open a dialogue early and have frank discussions about how each of you wants to spend your later years. Getting together on these important decisions now will definitely make you both happier in the long run.

William J. Hunter is a Director, IRA Product Management, at Merrill Lynch Wealth Management.

For more information, contact Merrill Lynch Financial Advisor Christopher L. Sprenkle in the Cincinnati office at (800) 919-3618.

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1 Overall inflation, 2004 — 2008, annualized: 2.7%, Ibbotson SBBI 2009 Classic Yearbook; LTC inflation data from Genworth 2009 Cost of Care Survey. PDF available at http://www.genworth.com/content/genworth/us/en/products/long_term_care/long_term_care/cost_of_care.html; inflation figures on page 3.
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Annuities are long-term investments designed to help meet retirement needs. An annuity is a contractual agreement where a client makes payments to an insurance company, which, in turn, agrees to pay out an income stream or a lump sum amount at a later date. Early withdrawals may be subject to surrender charges, and taxed as ordinary income, and in addition, if taken prior to age 59 1/2, an additional 10% federal income tax penalty may apply.

All guarantees and benefits of an insurance policy are backed by the claims-paying ability of the issuing insurance company. All annuity contract and rider guarantees, including optional benefits and any fixed subaccount crediting rates or annuity payout rates, are backed by the claims paying ability of the issuing insurance company. They are not backed by Merrill Lynch or its affiliates, nor do Merrill Lynch or its affiliates make any representations or guarantees regarding the claims-paying ability of the issuing insurance company.

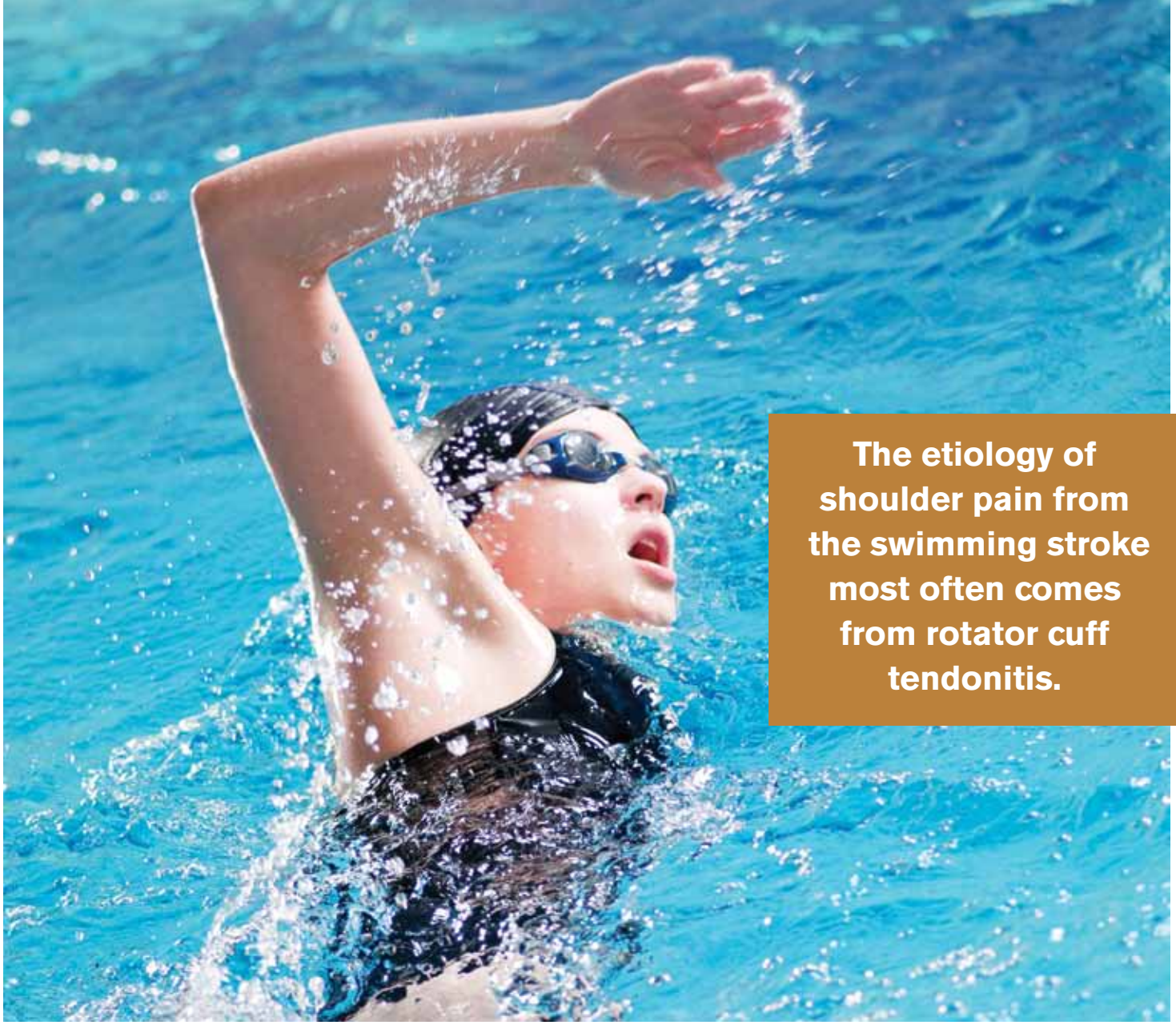
J. STEVE SMITH, M.D.

Swimming-Associated Shoulder Injuries

As a general rule, it is difficult to find a sport or exercise that is healthier than swimming. This athletic activity is outstanding for cardiopulmonary fitness, muscle strength, joint preservation, and stress relief. It's actually pretty rare for an athlete to suffer an injury from everyday swimming. However, as with any endurance sport, overuse injuries do occur, and they are almost always related to competitive swimming events (e.g., the Ironman). Young athletes are also prone to this type of shoulder injury because they swim in multiple venues, such as high school, club teams, and private lessons. In fact, studies showed some swimmers have as many as 16,000 shoulder revolutions in a week, with the potential of one million shoulder revolutions per year. By comparison, a baseball or tennis player will have 1,000 shoulder revolutions per week. Thus, there is a tremendous strain placed on a swimmer's shoulder.

Any overhead sport can lead to a myriad of common shoulder complaints and symptoms, and swimming is no different. The etiology of shoulder pain from the swimming stroke most often comes from rotator cuff tendonitis. This condition, sometimes referred to as tendinopathy, is usually a result of impingement of one of the four rotator cuff tendons on the bones within the shoulder. The progression of this condition to significant rotator cuff tear is possible, but unlikely from this athletic activity. This is important because full thickness rotator cuff tears often require surgical intervention, especially in active, healthy individuals, regardless of age. If a patient is diagnosed with cuff tendonitis, then anti-inflammatories (e.g. Naprosyn or Ibuprofen), physical therapy, and ice are usually prescribed. A corticosteroid injection is often given in the shoulder as well. If these non-operative treatment regimens do not alleviate the discomfort, then time off from swimming will be required. Depending on the patient's physical exam, a MRI might be necessary to further diagnose or rule out a significant injury.

All of the above mentioned modalities aid in recovery, but physical therapy is often the most important because the swimming stroke has a tendency to overdevelop certain shoulder girdle muscles while, at the same time, underdevelop other muscles. In fact, there are 18 muscles that attach to the scapula (shoulder blade) and they all coordinate shoulder joint movements precisely. Abnormal scapular motion, known as scapular dyskinesis, is a common result of multiple shoulder revolutions. This condition can cause shoulder pain and functional loss because the shoulder "ball and socket"



The etiology of shoulder pain from the swimming stroke most often comes from rotator cuff tendonitis.

joint is malpositioned. The glenoid (socket) is formed from the scapula and if the glenoid is not positioned correctly in space, then shoulder symptoms will occur. Scapular dyskinesis is readily treated with physical therapy and time off.

The labrum is a ring of fibrocartilage that surrounds the glenoid and has several important shoulder functions such as deepening the socket and providing attachments for muscles and ligaments that give the shoulder some stability. Overhead athletics, such as baseball, volleyball, tennis, and certainly swimming can injure this cartilage, especially if scapular dyskinesis is present. A MRI is often necessary to confirm a labral tear, but if present, surgery is not a predetermined destiny. Often physical therapy, NSAIDs, and time away from swimming will eliminate the discomfort. Surgery may eventually become necessary, but not until all non-operative options are exhausted.

Overall, swimming is full of many more positives than negatives. Any pain or injury as a result of this activity can usually be treated and eliminated with attention to proper swimming technique, changing up the swimming stroke (rotate freestyle, backstroke, and breast stroke), and cross training. Endurance athletes relentlessly push themselves to achieve goals that many consider insurmountable. I have a tremendous amount of admiration for their dedication, determination, and athleticism. On the other hand, it is important for these competitors to remember that their sport, when taken to extremes, can lead to body breakdown. Unfortunately, swimming is no exception.

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SCOTT D. KUIPER, M.D.

Clavicle Fracture Surgery

Featuring Rob Bush, USA Cycling National Champion

The pro peloton is a dangerous place to hang out. Just ask Rob Bush, member of the Garmin Slipstream professional cycling team. Even highly skilled professional racers have accidents. High speeds and close proximity can spell disaster especially when riders take chances to win a race. Prior to securing a position with the Garmin team, Bush was racing at the elite collegiate level when he was driven into barriers at over 30 miles per hour during a race at Notre Dame. While the shoulder is built to withstand a lot of force a direct blow to the shoulder after a hard fall on pavement can frequently lead to a severe break in the midshaft of the collarbone. This is exactly what he sustained. With just eight weeks until the USA Cycling National championships this put the rest of his season in jeopardy. Needless to say, he was looking for treatment that would allow for a swift and safe return to training and eventually full competition.

The clavicle is an S-shaped bone that functions as a support between the chest and the shoulder. It's commonly broken, accounting for 4-10% of all adult fractures. The most common mechanism of injury is a direct blow to the shoulder. Motor vehicular trauma causes 70% of all clavicle fractures. The remainder are frequently associated with sports injuries like cycling accidents, falls while skiing, or playing team sports such as football and hockey. Almost 75% of all clavicle fractures occur in the middle third. This portion of the clavicle is thinner and less supported than the rest of the bone. Lateral (outer) third fractures occur 25-30% of the time and medial (inner) third fractures only 2% of the time. Fractures often lead to a shortening of the distance between the shoulder and chest. This can ultimately affect function of the arm and leave an obvious deformity with tenting of the skin.

Nonoperative treatment has been the standard of care for midshaft clavicle fractures for years, as a majority of these fractures heal in a figure eight brace or sling. Recently, however, new studies are exposing some of the problems associated with nonoperative treatment of certain clavicle fracture patterns. Certain fracture patterns have a high chance of delayed union or nonunion prolonging the recovery process and sometimes leading to additional complex surgery. In 2007 the Canadian Orthopedic Trauma Society reported on a multicenter prospective trial of 132 patients who had midshaft clavicle fractures treated either nonoperatively or with plate fixation. Healing was quicker (16 weeks versus 28 weeks) and functional scores were higher in patients who were treated

surgically with a plate to hold the break versus those treated nonoperatively. Additionally, the nonunion rate was three times higher in the nonoperative group. These results were supported by another prospective study that found nearly one out of three patients developed a nonunion and 36% reported a symptomatic malunion in the nonsurgical group while the surgical group did much better. Surgery is not without risk, however. Patients can develop hardware irritation, incisional numbness, and have at least some risk of infection. One study reported a 12% reoperation rate after clavicular plating.

Advances in technology have led to significant improvements in the fixation devices available for clavicle fracture fixation. Years ago, surgeons had to bend pelvic reconstruction plates to try and make them fit the collarbone. This was time consuming and had the potential for weakening the plate. Now there are a number of companies that offer anatomic precontoured plates with the ability to use locking and non-locking screws to fix the bone. This makes the surgery both safer and more efficient to perform. These plates also have a lower profile. This feature decreases the likelihood of local irritation from the plate and need for subsequent plate removal. This new technology allows for an earlier return to activities and higher patient satisfaction rates.

Before any decision is made the surgeon must consider the patient's activity level, location of the injury, degree of displacement, shortening, and comminution (number of bone fragments). Minimally displaced or shortened fractures will likely do well with nonsurgical treatment. The studies above suggest patients with displaced fractures that have 2cm (approximately ¾ - 1 inch) of shortening have surgery to correct the problem. If a patient has an open fracture or associated neurovascular injury requiring exploration, surgery is recommended as well. Other indications include multiple extremity injuries, seizure disorder, and extreme tenting of the skin, and high-demand athletes looking to minimize their downtime while the fracture heals.

Bush's fracture demonstrated significant displacement and shortening. He also wanted to be able to safely train on an indoor trainer to keep his fitness up while the fracture healed. He underwent successful surgical repair with a specialized clavicle plate and screws to hold the bones in an anatomic position.

With the fracture stabilized he was able to return to the two to six hours of riding a day required to regain competitive form. He quickly regained his shoulder motion and arm strength. Follow-up X-rays confirmed healing and he was released to race eight weeks after repair. Bush then traveled out west to compete in USA Cycling's Elite U23 Championships. With no expectations beyond simply competing, Bush found himself in a breakaway from the main group with only a few laps to go. When the time was right he made his move and outsprinted the competition at speeds close to 40 MPH to secure the first of his two national championship wins! Talent, dedication, and hard work along with some modern technology got Bush back to top form!

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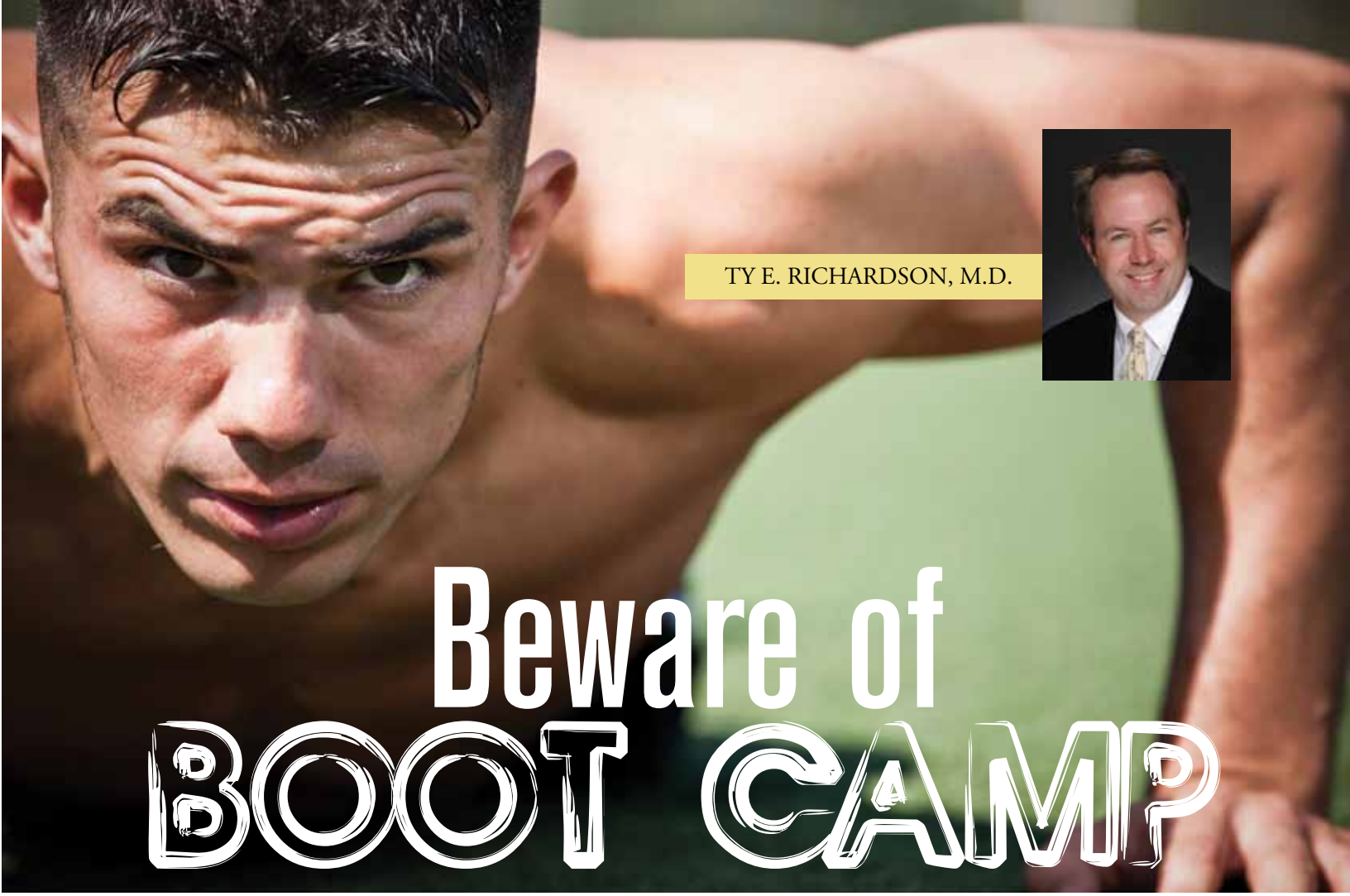

Beware of BOOT CAMP

TY E. RICHARDSON, M.D.

A couple of years ago, I was driving through Seneca Park to go mountain biking in Cherokee. I looked out over one of the soccer fields and saw the strangest sight. Huge, four-feet tall tractor tires, sections of anchor rope about a foot thick and 10 feet long, rectangular blocks of wood a couple of feet tall, and some kettle bell weights were arranged in a circle in the grass. I thought the military recruits were doing some training in the park. A couple of hours later when I rode by on my bike I realized that it wasn't soldiers flipping those truck tires over and jumping off of wooden blocks, it was a bunch of 30- to 40-year old suburbanites in cotton T-shirts. I watched for a minute and wondered how many of the "less fit" participants dragging around the sections of anchor rope would be in my office the next week with something torn, strained, or just plain hurting. This was my introduction to the so called Boot Camp.

Advantages

The boot camp style of exercise class has been exploding in popularity. These classes have many advantages over traditional exercise. The classes are relatively cheap, require little equipment, are often held outdoors, and have a very social atmosphere. The exercises themselves blend military style calisthenics with other body-weight exercises such as lunges, squats, sprints, push-ups, and every Marine's favorite, the squat-thrust. Many are attracted to the unconventional nature of these boot camps in a desire to break up the tedium of their gym routine or home-based exercise.

Injury

Unfortunately, along with the explosion in popularity of the boot camps, there have also been a growing number of injuries associated with these classes. Even in the military, the incidence of injuries in real boot camp is high. The Pentagon reported in a study of all recruits from 2004-2010 a 28% injury rate. Recruits are typically in the age range of teens to early 20s. How do you think 45-year-old bankers and secretaries will fare doing jumping jacks, push-ups, sit-ups, and sprints on Saturday morning? The problem is that exercise needs to be personalized to the needs, goals, and abilities of the individual. Putting a group of 20-30 people with vastly differing levels of fitness through the

same program will result in some of them being extremely bored, and some of them heading to the doctor. Most of these classes have the following problems:

- No screening process
- No health review
- No medical history

You simply sign a waiver and start throwing around some truck tires.

Dr. Richardson is shown simulating an exercise of balancing on a trampoline while working with resistance bands. While we may be making light of some of the more unconventional exercises you may see these days, engaging in such exercises without experience or proper instruction can lead to serious injury.

Dr. Richardson is shown balancing on all fours, distributed between four separate balance and stability exercise balls.

In the last couple of years, I have cared for dozens of patients with boot camp related injuries. The worst was a 30-year-old woman who fell off a wood block while doing jump up/jump downs. It's a great quad exercise, but requires excellent balance skills. She suffered a severe fracture of her elbow that required surgery, leaving her with loss of motion and strength in that arm. I have also seen meniscal tears, rotator cuff tears, achilles tendon ruptures, lumbar strains, wrist fractures, and stress fractures of the foot. Many of these injuries occur with exercises that require advanced motor skills to execute properly and when done poorly, result in injury.

Use Caution

I don't want to leave the impression that all boot camps are dangerous and should be stopped. On the contrary, I believe they are an exciting new format that may bring many new people into exercise and fitness. I simply believe that caution must be used before signing up, especially for people who are in poor shape and are just beginning to exercise. Please ask the following before signing up:

1. **Is there a screening process for individuals to determine their fitness baseline?**
2. **What is the goal of the class? Is the class heavy on cardio or strength? Is the class heavy on core strength or plyometrics? Know what you are getting into before starting a new workout.**
3. **What is the target age range for this class?**
4. **Is this class appropriate for beginner, intermediate, and/or advanced levels?**
5. **How many trainers will be present to provide individualized instruction?**
6. **Will modifications be taught for more difficult exercises?**

Find a class that is safe, well supervised, and takes into account your fitness level and you should be able to improve your health with little chance of injury. You just have to be selective and do the research.

Ramping Up Recovery After Orthopedic Surgery or Injury

After an orthopedic injury or surgery, many people are unsure of what to expect during their recovery. Receiving additional care before returning home from the hospital can help many people have a smoother recovery, and there are steps you can take to make sure that you feel prepared before your rehabilitation.

Plan ahead

If you are undergoing a planned surgery, you should have ample time to research rehabilitation facilities. Skilled nursing facilities that focus on orthopedic recovery, like the Orthopedic Center of Excellence at Hillcreek, are great choices for those who are recovering from an orthopedic surgery. Patients are able to receive the nursing care they need as well as receive inpatient physical and occupational therapy to help regain strength, range of motion and function, and ultimately return to their normal activities.

Even if your hospital stay is unplanned, there is usually time to do some research before being discharged. You or your family should discuss rehabilitation options with your caregivers as soon as you begin recovering. Ask your doctor about rehabilitation facilities in the area that focus specifically on your needs, such as the Orthopedic Center of Excellence at Hillcreek.

Find the right fit

It's always good to have a few options in mind when deciding on a rehab facility. If possible, you should visit the facilities yourself so that you are able to get a feel for the environment and meet some of the caregivers. If you are unable to visit, ask one of your family members to visit for you.

At the facility, ask questions about the care and other things that are important to you. Some questions to consider are:

- How many days a week is therapy offered?
- Do the therapists at the facility have experience helping people with your specific problem?
- Is the medical director a physiatrist or a physician with specialized knowledge of orthopedic rehab?
- What does their rehabilitation outcome data look like for patients with your condition?
- Will the facility educate you and your family about how to continue your recovery once you leave the facility?
- Do they have private rooms, wireless Internet, or other amenities that are important to you?

You should choose a facility that has a knowledgeable therapy team and a history of positive outcomes. Most importantly, you should choose a place where you'll receive the level of care you need while still being comfortable during your recovery.

Your Road to Recovery

At Golden LivingCenter – Hillcreek, we help people recover after surgery in Louisville area's only dedicated orthopedic recovery unit. We've been providing exceptional rehab services for over six years with nurses and therapists trained and certified in orthopedic recovery and rehabilitation.

Our 40 spacious private suites are tastefully appointed, have wireless Internet and are located just steps from our more than 4,000 square feet of state-of-the-art rehab space for physical, occupational and speech therapies. **We have physiatrist Dr. Robert Tommy Thompson on staff and use Nautilus® rehabilitation equipment in our therapy programs seven days a week, so you can get the most out of your inpatient recovery time.** We even offer pre-registration for peace of mind prior to your elective surgery.

Helping you recover and regain confidence is our ultimate goal. We invite you to come and visit us soon.

What People Are Saying:

"OT and PT staff had great attitudes and very cheerful personalities. They made you want to go to therapy and changed my whole attitude on being here."

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ERIN E. FIDLER, MPT

Who Needs Orthotics?

With all of the fancy shoe choices out there, not to mention the "barefoot" craze, we are often questioned in our clinic about the benefits of orthotics, or arch supports. Who needs them and how can they help? In short, problems with alignment of the foot and ankle can not only cause foot and ankle issues but also knee, hip, and even back problems. Often a doctor will recommend orthotics to correct some biomechanical problems (i.e. overpronation, oversupination, or "flat feet") in order to treat certain conditions. Orthotics are often called arch supports and are simply placed in the shoe. They resemble the insert that comes in many athletic shoes but have more structure and support to alleviate problems and increase comfort with weight bearing activities.

Over the counter vs. custom

Many shoe stores sell over the counter (OTC) orthotics, which range in price from $20-$50. These inserts can provide necessary support and shock absorption and fit easily in most shoes. They can be very effective in treating minor injuries or mild biomechanical abnormalities.

Custom orthotics, often prescribed by a doctor, will be made according to an imprint of your foot with appropriate accommodations to treat certain abnormalities. Custom orthotics are much more expensive than OTC inserts ($200-$500), but can be beneficial if there is a significant alignment issue or if the OTC method has failed.

Many patients express concern about having to wear or stop wearing certain shoes after obtaining orthotics. You do not need to buy a bigger shoe to accommodate an insert. They should be made or purchased to fit your size, and often replace the lining or insole that comes with most athletic shoes. Casual and dress shoes will often accommodate orthotics, though you may benefit from a shorter length insert, which does not extend all the way to the toes. Very narrow shoes or stiletto heels will most likely not accommodate an insert. At this point the patient will have to make the choice between comfort and fashion.

Types of custom orthotics

Many different types of orthotics exist depending on who is making them. Orthotics can be made of very rigid plastic material or a more shock absorbing material. Some will be one rigid layer, and others provide layers to combine rigidity and support with cushion and shock absorption. Custom orthotics can be made with a variety of accommodations based on patient need. For instance, someone with pain at the ball of the foot, often diagnosed as metatarsalgia, may benefit from a pad in the midfoot called a metatarsal pad, which will redistribute the weight to relieve the painful metatarsal heads. Patients with a painful heel, which could be anything from soft tissue

inflammation such as plantar fasciitis to a stress fracture, will often benefit from extra heel cushion built into the insert. There are numerous accommodations available to treat certain patients and conditions. This is one reason customizing a pair of orthotics can be so beneficial.

COMMON PATHOLOGIES AND HOW ORTHOTICS CAN HELP

Plantar fasciitis

Plantar fasciitis is the inflammation of the tissue that attaches to your calcaneus, or heel bone and runs along the bottom of the foot along the arch up to the metatarsal heads, or the ball of the foot. It acts as a stabilizer of the arch. This condition often presents itself as pain right on the bottom of the heel, and occasionally feels as if you're walking on a bruised heel. Pain is often worse in the morning and after long periods of immobility. There are a number of different causes for plantar fasciitis. One common cause is overpronation, which is where the ankle turns in and can often be associated with low arches or flat feet ("pes planus"). This biomechanical issue can be corrected with an orthotic that corrects the angle of the hindfoot and supports the arch to avoid overstressing the plantar fascia.

Patellofemoral pain

Patellofemoral pain is a generalized term for knee pain with an origin at or around the kneecap. Again there can be many factors contributing to this condition. Patellar tracking problems arise when the kneecap does not sit in or glide properly in its groove on the femur. This condition can occur due to muscular imbalances or soft tissue/bony injury, but also from abnormal alignment at the foot and ankle, which can affect the alignment of the knee during weight bearing activities such as running.

Posterior tibialis tear/tendinitis

The posterior tibialis tendon (PTT) is located on the inner ankle and foot and is an important ankle and foot stabilizer. This tendon also supports the medial arch of the foot. A tear of this tendon can result in a loss of arch support, or flat feet, which can be helped with proper support from orthotics. A preexisting state of low arches or overpronation can lead to problems with the PTT, such as weakness, tendinitis, or partial tears. Orthotics are often implemented to correct the alignment at the ankle so the PTT can function more normally, thus relieving the patient's symptoms.

Hallux valgus/bunion

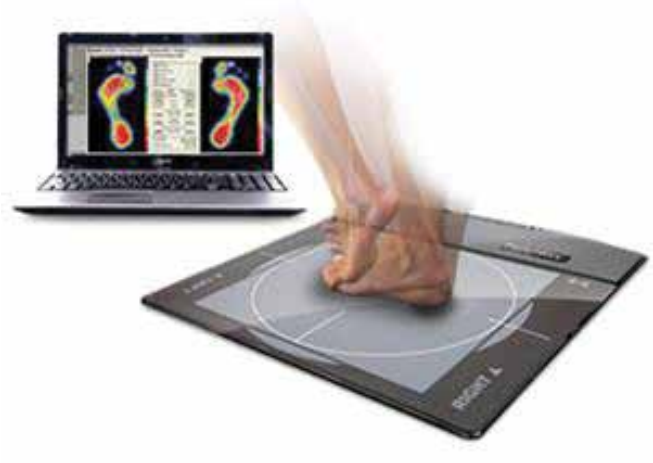
A bunion involves the deviation of the big toe medially towards the rest of the toes, which is called hallux valgus. The joint becomes inflamed and painful, as the joint capsule is often damaged depending on the severity of the displacement. This condition often results from overpronation, as the excess stress on the first joint during the push-off phase of gait can damage the joint capsule and surrounding soft tissue. While a severe bunion cannot be reversed with the use of orthotics, correcting overpronation with orthotics will correct the underlying problem, thus inhibiting or slowing further damage. Often a patient will need surgery to correct severe hallux valgus, and post-operative orthotic intervention is important to maintain the alignment corrected by surgery.

Above is a short list of common complaints and pathologies that can be helped with the use of orthotics. Various other conditions exist, including arthritis of the foot and ankle, Achilles tendinitis, leg length discrepancies, low back pain, and congenital abnormalities, which can benefit from orthotics as an adjunct to any other necessary medical intervention.

Custom Orthotics

Scanning vs. casting

Orthotics can be made with a variety of technologies. Formerly a type of casting or molding was the standard method. This involves a therapist or orthotist using plaster strips to obtain a mold of the foot. The orthotic is made by filling in the mold and correcting any abnormalities necessary. Another popular method is the foam box. The patient steps into a box of foam-like substance, similar to a memory foam mattress or pillow, and leaves an impression of the feet. More recently 3D computer images have been implemented to assess abnormalities and guide the manufacturing of a customized orthotics.



In our clinic we use Footmaax® which uses software designed to analyze digital pressure on a mat and translate the information obtained from these computer images into a customized orthotic. One advantage of this method is the fact that often these images are created while the patient is walking, creating a more functional image of the pressure distribution. Other advantages to our method include the time required to assess the patient (about five minutes to scan) and the ease of sending the scans to the manufacturer over the Internet versus the mail.

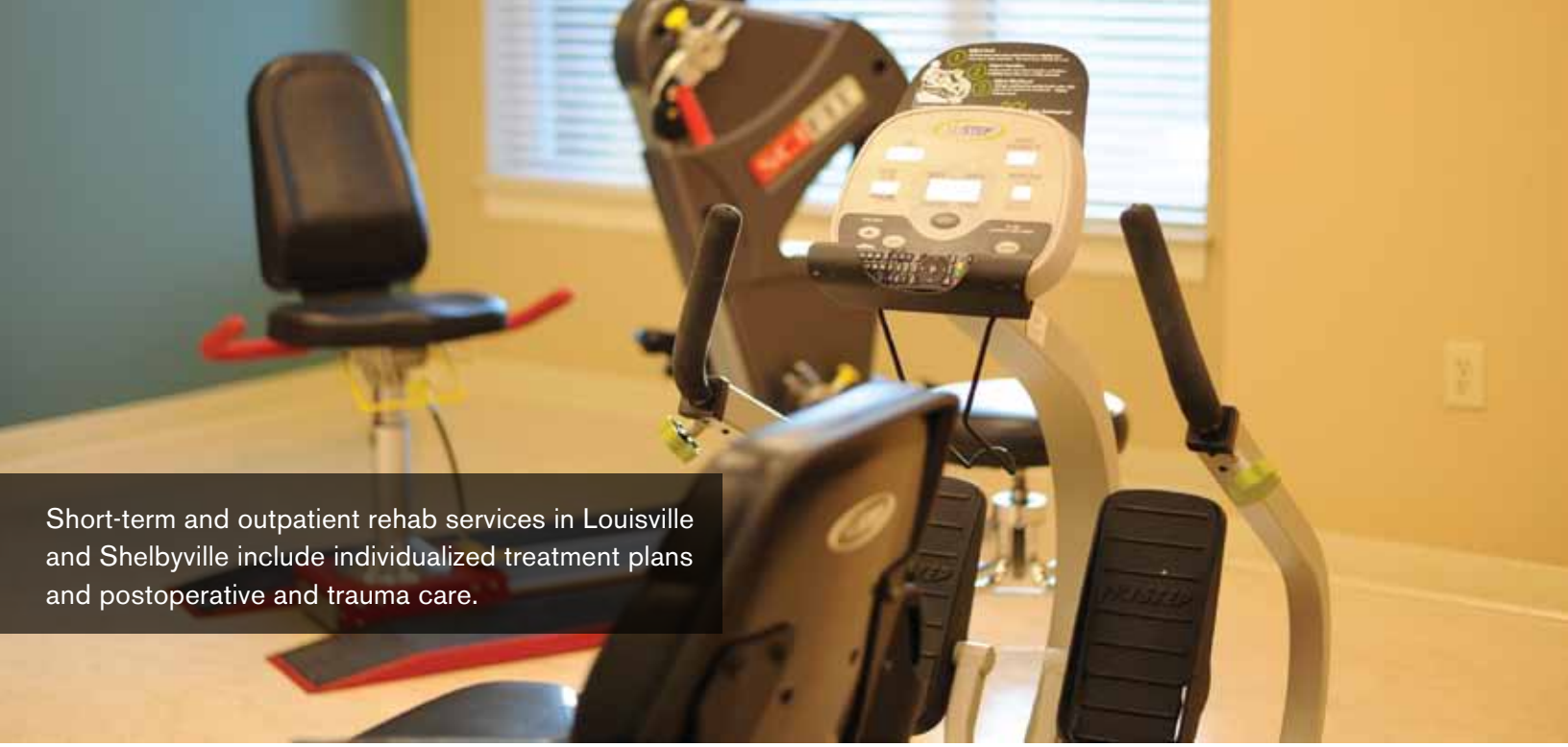
Wear schedule

Once a patient is fitted for orthotics, it is important to break them in over a period of time. We suggest wearing the new inserts for about an hour the first day and then removing them, adding about an hour on subsequent days until it is very comfortable to have them in for a full day. If you do not take the time to break in the orthotics slowly, you could end up with different pains in the foot, ankle, or hip from altering your alignment too suddenly. Usually it takes between one and two weeks to break a pair in, but depending on the rigidity of the insert or the problem being addressed, that time could be even longer. It is important to listen to your body and only do what is comfortable.

Life expectancy

Generally a good pair of custom orthotics should last at least one to two years. Someone who wears them only part of the time for a minor problem will find they last longer than somebody who runs 40 miles per week. Signs to look for include an obvious breakdown of the orthotic and/or a return of the symptoms for which you received the orthotics in the first place.

Not all injuries can be fixed with the simple placement of an arch support in the shoe. However, orthotics do have a place in the treatment of many lower extremity pathologies, especially those of the foot and ankle. If you have a nagging injury or have noticed a change in your arches over the years, it is important to contact your doctor to receive the appropriate care. Orthotics may be indicated along with an appropriate activity modification, exercise program, or surgery if indicated for certain conditions.



Short-term and outpatient rehab services in Louisville and Shelbyville include individualized treatment plans and postoperative and trauma care.

Short-Stay Rehab Improves Recovery

Few of us anticipate an injury or surgery that can require weeks, or even months, of rehabilitation after a trip to the hospital. But every year, millions of Americans experience a fall or require rehabilitation after a scheduled joint replacement.

In the same way that no one would ever prepare for an athletic competition with equipment and training that's less than the best, Masonic Homes of Kentucky has gone to extraordinary lengths to ensure rehab guests have both the finest facilities and the premier rehab staff to help them get on their feet and back to their lives as quickly as possible. On both the Louisville and Shelbyville campuses, rehab plans are completely customized to the needs of each person entrusted to their care.

Accessibility to enhance mobility

"We embrace the philosophy that you should never 'skimp' on any part of recovery because we share your goal of getting you back to the business of living as quickly as possible," says Mike Truax, vice president of therapy services for Masonic Homes of Kentucky. "The reason we've invested in the best people and exceptional therapy equipment is to maximize each person's time in rehab. We want to give the best opportunity for the most positive results, whether it's someone who needs support after an injury or surgery."

Of initial concern should be dealing with the challenge of getting around if a patient elects to return home too soon. "Most people's homes simply lack the basics in terms of accessibility," Truax said. "However, whether you choose to stay at Sam Swope Care Center or Masonic Home of Shelbyville, both are completely accessible for any kind of injury, which encourages mobility and promotes a speedy recovery."

Masonic Homes offers customized therapies, an award-winning staff and state-of-the-art rehab facilities to help you transition from hospital to home.

Masonic Homes' fully equipped rehab centers allow guests to build strength and increase mobility at a pace that suits them individually, allowing them to advance more rapidly toward getting back home. "The physical limitations of typical residential construction create barriers to building strength and getting around," Truax said. "We know that a brief stay in rehab improves nearly every outcome."

Focus on "the whole person"

After joint replacement in particular, the importance of an inpatient stay can be critical in how well a person heals and gets back to full range of motion. And the benefits of a short rehabilitation under the care of a multidisciplinary team can have lasting impact in ways that are not immediately obvious.

"Many rehab patients who come to us benefit from being treated holistically. This means we look at everything that affects their recovery," says Amanda Pruitt, rehab manager of Masonic Home of Shelbyville.

A key factor to short- and long-term rehab success happens at meal time. "We offer meals that are balanced in both proportion and preparation," according to Masonic Home of Shelbyville Dining Services Manager Linda Wagner. "Patients who eat an appropriate diet while in rehab may avoid weight gain that's commonly associated with in-home rehab, and some even lose weight. That aids in the recovery process. Instead of eating junk food, our guests are served tasty, nutritious meals, and that can be a turning point for them."

Managing meds

When recovering from an injury or surgery, patients can also struggle with regulating their medications. Typically, this situation falls into one of two challenges, the first of which is learning to correctly manage pain without overmedicating or developing a dependence on prescription drugs.

The other scenario is sometimes more complicated, and it involves keeping track of any other medications and supplements while on pain medication. In addition, nursing staff can carefully evaluate whether a patient may have prescriptions that may cause adverse effects on them.

So guests can practice routine activities, Masonic Homes' rehab centers feature a model bedroom, bath, and ADL kitchen.

"Getting the medication you need beyond pain meds helps you recover fully and rapidly," says Kim Gibbs, assistant director of nursing at Sam Swope Care Center. "Careful monitoring by nursing staff is important in this regard. We watch for chronic conditions that can hamper progress in rehab. That includes everything from decreased circulation and sensation to dizziness or slowed reflexes. If a patient takes medication for high blood pressure, muscle relaxers, or a heart condition, we know what we're looking for, and well-meaning friends and family members usually don't. And the person being medicated should be focused on getting better rather than wondering about possible drug interactions."

Also not to be overlooked is the potential for post-surgical depression that is far more common in a home setting than if a patient is in rehabilitation. "Isolation is a real threat to recovery, but interaction with staff and socialization with other people who are recovering from similar surgeries or injuries can mitigate that possibility," adds Gibbs.

Getting started

Masonic Homes of Kentucky works with hospital discharge planners, social workers, and physicians to ensure everything is handled for a rehab guest. Reservations for short-stay or outpatient rehab following a planned surgery can be made online at MasonicHomesKy.com. "Short-stay rehab has become incredibly commonplace and we believe there will be a time, because of the extraordinary advances in physical and occupational therapies, when it's more the norm than not," says Truax.

Turn a FAST BREAK into a quick recovery.

From sports injuries and broken bones to automobile accidents and hip replacements, professional short-stay rehabilitation is crucial to getting you back on your feet. With locations in Louisville and Shelbyville, Masonic Homes' expert staff offers customized therapies in state-of-the-art rehab facilities to help you transition from hospital to home – and back on the court.

Schedule a reservation today by calling *866.764.6631* or visiting *MasonicHomesKY.com/rehab*.

MASONIC HOMES of KENTUCKY

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HEAR WHAT OUR PATIENTS HAVE TO SAY...

Joe Hitchel

After being misdiagnosed by another orthopedic surgeon, and living with shoulder pain for another six months, I was eager to get a second opinion. I had been an athlete when I was younger and continued to live a very active lifestyle until the pain in my shoulder would not allow it. All it took was one look at my MRI for Dr. Smith to determine that I had a torn rotator cuff that needed immediate repair. In fact, by the time I saw Dr. Smith, he said that my rotator cuff tear was so severe that it was almost non-repairable. I'll admit I was a little scared considering what I had been through with the original orthopedist, but the way Dr. Smith handled himself, his bedside manner, and the confidence he exuded won over my trust. Dr. Smith worked his magic and completely repaired my rotator cuff, allowing me to return to the active lifestyle I enjoy today, which includes working out at the gym four or five days a week. I feel like a new man! He made a believer out of me and I absolutely love him. I tell anyone who needs orthopedic care to go to Louisville Orthopaedic Clinic.

Marian Simcox

I have been a patient of Louisville Orthopaedic Clinic since 1998, when Dr. Ernest Eggers replaced one of my hips. I am a severe arthritic, and my 14-year-old hip is by far the best joint I have! I still come in for periodic check-ups, and the wait time, if any, is very reasonable for a doctor who gives me as much time as I need from him. The staff is always pleasant and the accommodations are quite comfortable.

My husband had the same exceptional experience when he had arthroscopic knee surgery by Dr. Norman Lewis. I highly recommend this group of outstanding surgeons and am grateful that they were there when we needed them.

Dale Crossman

One of the things that has stuck in my mind about being in the office is the warmth and sensitivity of the whole office staff. When you're worried about having to get a knee replacement, the atmosphere and the way people treat you make a big difference. Dr. Eggers gives the utmost attention to making sure that his post-op patients are doing what they need to do to be on the most effective and efficient path to rehabilitation. In my immediate follow-up with Dr. Eggers following my surgery, he was extremely helpful and showed concern for how I was doing and was extremely involved with how my post-op recovery was going.

Mitzi Root

My name is Mitzi Root and I am a patient of Dr. Ty Richardson. I began experiencing issues with stability, mobility, and pain in my left shoulder during late summer 2011. I went to a chiropractor with no improvement. In December, after a cortisone injection and an MRI, I was diagnosed with a subacromial bone spur, some arthritis, and possible tearing of the labrum and rotator cuff. I saw Dr. Richardson, who was very attentive to my concerns and took a conservative approach by recommending physical therapy initially for three weeks and follow-up. At the follow-up, without significant improvement with physical therapy, only then did Dr. Richardson recommend arthroscopic surgery.

I was concerned about undergoing surgery because I am very active and practice yoga three to four times per week. Dr. Richardson explained the procedure thoroughly, answered my questions patiently, and let me decide what I would like to do. I agreed that surgery was the only option. My surgery was performed on February 28, 2012 and I was back in yoga four weeks after surgery!!! I attribute this great outcome to the surgical skills of Dr. Richardson and the knowledge of the physical therapy staff. Now, seven months after surgery, I am still practicing yoga three to four times per week and have enrolled in yoga teacher training, with the anticipation of earning my RYT (Registered Yoga Teacher) 200 hour certification in June 2013. Due to the degenerative nature of my condition, I will probably have to have additional treatment down the road, but I know who I will call when I cross that bridge!

Peter David Pavkovich

I am currently working in Kandahar, Afghanistan. My knee replacement has been virtually miraculous. This is a high threat theater of war, and I have no issues whatsoever. I can keep pace with men half my age. I would never have believed the result could be this good. I just wanted to provide feedback and give Dr. Goodin a rousing endorsement. Thank you for making my life less painful and more enjoyable.

Cheryl White

I injured my knee at work by slipping on a marble floor. The next day my knee had swelled and I went to see my doctor. They wrapped the knee, gave me some meds, and told me to go home and ice it, but to come back in 10 days if it wasn't better. The knee improved, however on the 10th day, it completely gave way while I was walking. I was in so much pain and tears. I went back to my doctor immediately, and it was discovered that I had a torn ACL. I was told that surgery was my only option.

I was afraid and depressed. I had just moved here with no family and I was going to face surgery by myself. I made an appointment to see Dr. Richardson. I was a bit relieved when I met him because he was so nice and caring. The staff, especially Shannon, his assistant, was so attentive to my needs and feelings. Dr. Richardson sent me to physical therapy prior to my surgery. I didn't understand why I would participate in therapy before surgery; I always heard of people doing therapy after surgery.

Dr. Richardson explained that therapy before surgery would strengthen my quads and other muscles and help in a speedy recovery. I did therapy for three weeks then had my surgery. Day of the surgery, Dr. Richardson said he would take care of me and he did. That evening, after surgery, I did not experience any pain. I left the hospital the next day and the days following my recovery I experienced no pain. It was a miracle. I resumed my physical therapy and today, six months later, I'm almost back to my old self. Thank you Dr. Richardson!

David Bennett

I have been a patient of Louisville Orthopaedic since I was in college, 1972. My first surgery was a shoulder AC separation from a football injury that Dr. Egger's repaired in 1975. I am an avid cyclist now and gym rat as well. I love working out and working on my 110-year-old highlands home. For the last 15 years my knees have begun to regress. Kuiper kept me working out and riding my bike successfully for 13 years with surgeries and injections. Amazing really!!

Three years ago, Dr. Sweet did a total knee replacement on my right knee. The success I have had with that surgery prompted me to get the other knee replaced a year later. That is the best decision I have ever made medically. I now have a full activity level back without pain. Three days ago I qualified for the nationals in cycling racing. None of that would have ever happened without bi-lateral knee replacements. Louisville Ortho has always been very responsive to my needs. I refer everyone who is in need of orthopedic work to you guys!!! I can ride (completed two century rides), work on the house, walk on the beach, and pretty much do whatever I want now without pain. I feel very indebted to your clinic for what you have done for me and the quality of service you have given me. Thank you so much!

Penny Curry

At the age of 65, getting a knee replacement was my first major surgery; so naturally I experienced a lot of anxiety prior to my procedure. However, my knee pain had become so debilitating that I realized I had no other choice. Dr. Sweet and his staff were very encouraging and gave me the confidence I needed to follow through. After my procedure, I realized what a traumatic effect this kind of surgery has on one's body. Not being a very patient person, I found the first couple of months very frustrating even though Dr. Sweet assured me that my recovery was right on schedule. I had spent two weeks at a rehabilitation center but felt like I needed more "one on one" therapy. I went through a series of visits at a local therapy center. Gradually, my strength returned and now I can honestly say, my knee is pain free and functions perfectly. Sometime, during those sessions, I told my therapist that I was pleasantly surprised that I was able to actually bend down on that knee to get in and out of my bathtub. She said she wasn't surprised "you have a Sweet knee."

Becky Milliner

I went to Louisville Orthopaedic to see Katherine Hamilton, P.A. for Dr. Sweet, on a referral from a friend. I'm only 56 years old but was having some major knee pain. After they confirmed a diagnosis via X-rays, I was given a few options to choose from for treatment possibilities. I had a lot of questions about the procedures/outcomes/side effects, all of which they listened to patiently and answered without being condescending in the least, which was refreshing in itself. The procedure that I opted for (and no, it wasn't surgery) was very successful on me as I was getting ready to move again and was standing on my feet, moving boxes, etc. and don't think I could have gotten through it without the treatment that I had. The next time I need specialized care for issues with my joint problems, I'll know where to go – Louisville Orthopaedic. I was extremely pleased with everyone, from the front office staff to Ms. Hamilton. They have a caring demeanor and are efficient and knowledgeable in their fields. I'd highly recommend them to someone who needed the assistance of an orthopedic clinic in their medical care. Thanks, L.O.

Wanda Wilkerson

I had a reverse total shoulder replacement on April 3, 2012, performed by Dr. Ty Richardson. The pain before surgery was tremendous but was gone after surgery. After going through a period of physical therapy, I have good use of my shoulder. Having never heard of a shoulder replacement, I was skeptical about it, but am very glad I did it. Dr. Richardson is a very caring doctor and I would recommend him to anyone.

Pam Tabor

I suffered for years with my knees that were bone on bone. I had gone to another orthopedic surgeon who said he would not do surgery because I was too young. After being treated with cortisone and Synvisc injections, my primary care doctor asked me if I was ready to see someone else. Of course I said "YES." I was referred to Dr. Richard Sweet and had my first knee replaced in 2008. I just had my second knee replaced this past June. I am doing great and had some wonderful physical therapists at Baptist Worx. I am now able to walk normally for the first time in over six years. People can't believe it when they see me without my Hugo (wheeled walker)! I have recommended others to Dr. Sweet and will continue to do so. I am in the process of trying to get a co-worker to have her surgery this summer! My SWEET KNEES are doing great

Richard Ryan

I have been suffering with a staph infection in my elbow for about three weeks. I called for an appointment on Monday, and Kate Hamilton, PA-C treated me. Since she knew I had a vacation planned, she saw to it that I had an appointment with Dr. Sweet on the following Friday. Dr. Sweet knew that I had plans for a vacation trip on the following Friday. He made every effort to see that I was treated immediately at Baptist Hospital East with antibodies infusions. Since Dr. Sweet was also leaving on a trip, Dr. Goodin attended me for the four days that I was in the hospital. They must have made the nurses and aides aware of my pending vacation plans because everyone made mention of my going on a trip. I was out of the hospital on Monday and plan to leave on vacation Friday. The only reason I am going on vacation is because of the extra effort of Dr. Sweet, Kate Hamilton, PA-C, and Dr. Goodin. Thanks guys.

John Begley

For several months, I experienced significant pain in my left shoulder. I kept thinking it would get better, but it didn't. I was in Florida at the time, and was encouraged to try physical therapy. I did that for a month, and instead of getting better, the pain increased. I then went to Louisville Orthopaedic Clinic and learned I had a rotator cuff tear. After consultation, it was clear to me that surgery was the way to go.

Successful surgery is a wonderful thing. I am convinced that going to Louisville Orthopaedic Clinic was the best first step. Surgery is never a pleasant experience, but having a highly professional staff and surgeon made the surgery an experience far better than I anticipated. Dr. Scott Kuiper, Physician Assistant Melissa Parshall, and everyone at the Clinic gave me excellent care.

A little over a year prior to my surgery, my wife had a knee replacement. Her doctors were Drs. Richard A. Sweet and J. Steve Smith. She shares my feelings that Louisville Orthopaedic Clinic is the place to go when you have any type of orthopaedic concerns.

Patriena Craft

I have had problems with my feet for years due to wearing high heels. I had seen a podiatrist 20 years ago and knew one day I would have to correct the problem. I kept putting it off because I didn't have time to be off my feet for a month or more. Finally, walking became so painful that it interfered with activities with my granddaughter. I sought out Dr. George Quill, Jr. after learning that two of my friends had been patients and highly recommended him.

At the initial appointment Dr. Quill's office staff was efficient and friendly. Dr. Quill reviewed my X-rays with me and suggested it was time for toe fusion. I was not surprised, as the podiatrist warned me that it would become necessary if I failed to have treatment sooner. Dr. Quill answered my questions and prepared me for what was involved with the toe fusion. After the appointment I called Dr. Quill's assistant with a few questions. Those questions were answered the next day.

I had minimal discomfort after the surgery, but did take pain medication as prescribed. I was pain free two days later. I have had two follow-up visits with Dr. Quill and have progressed extremely well. Due to the professional quality of care I received from Dr. Quill and staff, I will & have been recommending him to others. I will be having a less invasive surgery on my other foot in a few months for which Dr. Quill will be my surgeon.

Comprehensive Orthopaedic Care

To serve your needs our facility consists of ten orthopaedic surgeons, three physician assistants, and two nurse practitioners. Our surgeons are board certified in orthopaedic surgery and have completed specialized training in custom total joint replacement; arthroscopic procedures of the knee, shoulder, and ankle; surgery of the spine; foot and ankle disorders; and sports medicine. To better accommodate the needs of our patients, we have an open MRI, outpatient surgery suites, and a physical therapy department. Digital X-ray equipment and registered technicians ensure the highest quality images possible to aid in the diagnosis and treatment of our patients.

ERNEST A. EGGERS, M.D.

Dr. Eggers is the area's first physician to perform knee and hip replacement surgery. He is considered a foremost expert in the study of joint reconstruction, with nearly 14,000 hip and knee replacements. His counsel has been sought by manufacturers of joint implants from many companies and has taken him to Germany, England, Belgium, France, and Canada. Another symposium was held in Johannesburg, South Africa, for the orthopaedic congress of that country.

Dr. Eggers has particularly specialized in the treatment of younger hip and knee patients with improvement in cementless fixation and metal articulation. He was one of the first in the country 13 years ago to perform an FDA study on metal/metal hip replacement.

Dr. Eggers was regarded a top orthopaedist in joint replacement by the Consumer Research Counsel of America, beginning 15 years ago and recently in 2010. His specialty also includes partial knee replacement for over 30 years, and minimally invasive incision of both hip and knee.

Dr. Eggers is a native of Indiana and served in the United States Navy. He completed his internship and residency at the University of Louisville. He has studied hip surgery where it started in England and Switzerland. He is a member of many local and state societies, The National Society for Arthritic Joint Surgery, Association of Hip and Knee Society, and the Academy of Orthopaedic Surgeons. He is board certified in orthopaedic surgery.

NORMAN V. LEWIS, M.D.

Specializes in surgery of the knee and is accomplished in ligament reconstruction.

Dr. Lewis specializes in the treatment of knee problems, including injuries and arthritis. He has performed over 15,000 knee surgeries since 1976. This includes total knee replacements and arthroscopic procedures. He has also treated numerous patients with the use of RF Wand technology to perform percutaneous discectomy for herniated disc. He attends study groups and seminars all over the country to seek the most current and innovative surgical techniques.

Dr. Lewis is a Kentucky native and is a graduate of the University of Kentucky Medical School, where he earned his medical degree and also completed his residency. He served in the United States Navy after his internship. He is board certified in orthopaedic surgery, and is a member the Kentucky Medical Association, Jefferson County Medical Society, and Kentucky Orthopaedic Society, as well as American Medical Association and American Academy of Orthopaedic Surgeons.

THOMAS R. LEHMANN, M.D.

Dr. Lehmann is nationally recognized for his research and expertise on diseases of the spine and has received many prestigious awards, including the coveted Volvo Award presented by the International Society for Study of the Lumbar Spine. The acclaimed Acromed Award, presented by the North American Spine Society, was bestowed on him twice. He has published numerous abstracts, chapters in books, and research papers, and has made many presentations relating to the area of the back. He is an associate editor of the journal SPINE.

Dr. Lehmann attended Flaget High School in Louisville and received his B.S. from the University of Notre Dame. He earned his medical degree at the University of Louisville and completed his residency at the University of Texas. He completed a fellowship in spine surgery at Tulane University prior to assuming his reaching responsibilities as a professor at the University of Iowa. He is board certified in orthopaedic surgery.

DONALD T. MCALLISTER, M.D.

Dr. McAllister's love of and participation in sports provided the stimulus that led him to specialize in treating sports-related injuries. His major areas of concentration are the shoulder, hip, and knee. His work, therefore, commonly includes arthroscopy, ligament reconstruction, and joint replacement. He is a member of the Jefferson County Medical Society, the Kentucky Medical Association, and the American Medical Association. He is board certified in orthopaedic surgery by the American Board of Orthopaedic Surgery, and is a member of the American Academy of Orthopaedic Surgeons, American College of Surgeons, American Orthopaedic Society of Sports Medicine, and the Arthroscopy Association of North America.

Dr. McAllister was born in Chicago, Illinois, but spent most of his early years in Kentucky. He is a graduate of the University of Notre Dame and the University of Kentucky Medical School. He completed his orthopaedic residency at Yale University in New Haven, Connecticut, and a fellowship in Los Angeles.

RICHARD A. SWEET, M.D.

Dr. Sweet specializes in the area of total joint replacement. He completed the Aufrank Reconstruction Fellowship in joint replacement surgery at the New England Baptist Hospital in Boston. He has been involved in both clinical and scientific research in this field, which has included implant and instrument development for hip and knee replacement surgery. These research and development efforts have focused particularly on minimal incision techniques. An avid teacher, he often conducts seminars on the subject of total joint replacement for both medical personnel and the community at large. This includes physician cadaver lab teaching of minimal incision total knee replacement and total hip replacement surgery. He has a special interest in sports medicine and particular expertise in knee reconstructive surgery.

Dr. Sweet was born in Kentucky and earned his undergraduate and medical degrees at the University of Kentucky. He served his residency at the University of Louisville. He belongs to all the state and local medical societies and is board certified in orthopaedic surgery.

GEORGE E. QUILL, JR., M.D.

Dr. Quill is one of the region's first fellowship-trained orthopaedic surgeons sub-specializing in disorders of the foot and ankle. His academic appointments are quite numerous, and many awards and honors have been bestowed on him. His research and writings on the subject of the foot and ankle have been extensive, including seventeen published articles, five book chapters, and Academy-sponsored instructional videotapes and DVDs.

He gives many scientific presentations each year on the subject of foot and ankle disorders, and is a member of the clinical faculty at the University of Louisville School of Medicine. Current interests are in foot and ankle reconstruction and orthopaedic device development. Dr. Quill is a consultant to numerous orthopedic implant manufacturers, and he maintains an interest in implant design and orthobiologic research.

Dr. Quill was born in Chicago, Illinois. He attended the University of Notre Dame, earned his medical degree at Northwestern University, and completed his residency at Chicago's Rush-Presbyterian-St. Luke's Medical Center. His fellowship was completed in Baltimore at Union Memorial Hospital. He is board certified and voluntarily re-certified in orthopaedic surgery.

SCOTT D. KUIPER, M.D.

Dr. Kuiper specializes in shoulder, knee, and elbow arthroscopy, as well as the treatment of athletic-related injuries. He completed his fellowship training at the world-renown American Sports Medicine Institute in Birmingham, Alabama. He participated in the care of Auburn athletics and cared for numerous NFL, NBA, and NHL athletes with his mentors James R. Andrews, M.D. and William Clancey, M.D. Dr. Kuiper has published basic science research on ACL reconstruction, book chapters on PCL reconstruction, and a number of peer-reviewed papers on shoulder surgery. He has helped to develop state-of-the-art implant devices for rotator cuff and labral repair. He has been voted a *Louisville Magazine* "Top Doc" for orthopaedic surgery several times, most recently in 2010.

Dr. Kuiper earned his undergraduate degree at DePauw University and attended the University of Louisville School of Medicine. He completed his residency, as well as an Orthopaedic Research Fellowship at the University of California, San Diego. He then completed an Orthopaedic Sports Medicine Fellowship under the direction of Drs. James R. Andrews and William Clancey in Birmingham, Alabama. He is board certified in orthopaedic surgery, and is a fellow of the American Academy of Orthopedic Surgeons and a member of the American Orthopedic Sports Medicine Society, as well as other national, state and local medical societies.

Dr. Kuiper is the team physician for St. Xavier High School and Sacred Heart Academy. He is a consultant for Spalding University and Indiana University Southeast baseball teams.

ROBERT A. GOODIN, M.D.

Dr. Goodin is a Louisville native earning his medical degree and completing his orthopaedic residency at the University of Louisville, where he received numerous honors and awards. He has done extensive research and presentations in hip and knee techniques. He also completed the Adult Reconstruction Fellowship at Indiana University Medical Center.

Dr. Goodin became board certified by the American Board of Orthopaedic Surgery in July 2004. He is a member of local and state medical and orthopaedic societies, as well as the American Academy of Orthopaedic Surgery.

TY E. RICHARDSON, M.D.

Dr. Richardson specializes in orthopaedic sports medicine and athletic injuries. He attended Baylor University and earned his medical degree at the University of Texas Medical Branch. He completed his orthopaedic residency at the University of Louisville, receiving numerous honors and awards. He has done extensive research and presentations in orthopaedic trauma.

Dr. Richardson attended an Orthopaedic Sports Medicine Fellowship at the Hughston Clinic in Columbus, Georgia. He is board certified in orthopaedic surgery. He is currently the team physician for Manual High School.

J. STEVE SMITH, M.D.

Dr. Smith is the Medical Director of Baptist Sports Medicine. He is also the team physician for Ballard High School and North Oldham High School. In addition, he was on the medical staff of the LA Lakers, LA Dodgers, USC Football Trojans and numerous other collegiate and high school sports teams. He has published numerous research papers, abstracts, and has made presentations relating to the advancement of arthroscopic surgery in sports medicine.

He was on the medical staff of the LA Lakers, LA Dodgers, USC Football Trojans and numerous other collegiate and high school sports teams. He has published numerous research papers and abstracts, and has made presentations relating to the advancement of arthroscopic surgery in sports medicine. He is the team physician for Ballard High School and North Oldham High School.

Dr. Smith is a native of Kentucky earning his undergraduate degree at Western Kentucky University and attending the University of Kentucky College of Medicine. He completed his internship and residency at the University of Rochester in New York, and then completed his orthopaedic sports medicine fellowship. He is board certified in orthopaedic surgery and is a member of many national, state, and local medical societies.

LOUISVILLE ORTHOPAEDIC CLINIC

LORI L. EDMONDS, APRN

Lori is a nurse practitioner working in collaboration with George E. Quill, Jr., M.D., specializing in disorders of the foot and ankle. She graduated magna cum laude from the University of Louisville with a Master's of Science in Nursing in 2005. She also received a Bachelor's of Science in Nursing from the University of Louisville in 1997.

Lori became board certified by the American Academy of Nurse Practitioners in 2005. She is a member of the American Academy of Nurse Practitioners, The Kentucky Coalition of Nurse Practitioners and Nurse Midwives, and Sigma Theta Tau.

KATE S. HAMILTON, PA-C

Kate is a certified physician assistant specializing in orthopaedics under the supervision of Richard A Sweet, M.D. She is from Northern Kentucky, graduating from the University of Kentucky with a B.S. in Dietetics and Physician Assistant Studies.

Prior to her employment with Louisville Orthopaedic Clinic, she had extensive training in the orthopaedic clinic at Fort Knox, Kentucky.

She is a member of the American Academy of Physician Assistants, Kentucky Academy of Physician Assistants, and National Commission on Certification of Physician Assistants.

CHRISTINA L. FIELDS, APRN

Christina is a nurse practitioner working in partnership with Norman V. Lewis, M.D., specializing in surgery of the knee. She graduated from the University of Louisville with a Master of Science degree in Nursing in 2002. She also graduated cum laude with a Bachelor of Science in Nursing from the University of Kentucky in 1997.

Christina is board certified as a family nurse practitioner by the American Academy of Nurse Practitioners in 2003. She is a member of the American Academy of Nurse Practitioners and the Kentucky Coalition of Nurse Practitioners and Nurse Midwives.

MELISSA T. PARSHALL, MS, PA-C

Melissa is a certified physician assistant specializing in orthopaedics under the supervision of Scott D. Kuiper. She was an athletic trainer during her four years at Hanover College and graduated with a bachelor's degree in Sports Medicine. She worked as research assistant/athletic trainer at Methodist Sports Medicine Clinic in Indianapolis for three years. She then traveled to New Jersey, where she attended Seton Hall University and received her master's degree in Physician Assistant Studies.

Melissa became board certified by the National Commission of Certification of Physician Assistants in 2005 and has been practicing in orthopaedics. She is a member of the American Academy of Physician Assistants and the Kentucky Academy of Physician Assistants.

CARLY BELL, PA-C

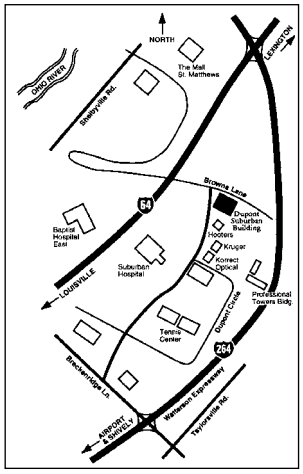
Carly is a certified physician assistant specializing in orthopaedics under the supervision of Robert A. Goodin, M.D. A former player on the University of Kentucky women's basketball team, Carly served as team captain during the 2009 basketball season. She graduated from the University of Kentucky with a B.S. in Biology and a M.S. in Physician Assistant Studies with cum laude honors.

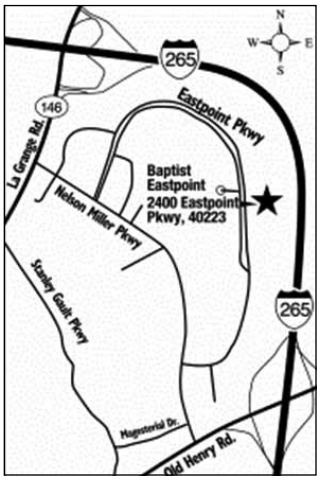
Previous to her employment at Louisville Orthopaedic Clinic Carly gained experience through her numerous clinical clerkships within the inpatient and outpatient settings. Throughout her athletic and academic career, she received a number of awards for her community service projects, as well as serving as a leader for many university and athletic committee activities.

Carly is a member of the Kentucky Academy of Physicians Assistants (KAPA).

MAIN OFFICE LOCATION:
4130 Dutchmans Lane
Louisville, KY 40207
502-897-1794

SPORTS MEDICINE SATELLITE OFFICE:
Baptist Eastpoint Sports Center
2400 Eastpoint Parkway, Suite 110
Louisville, KY 40223





www.louortho.com • www.facebook.com/LouisvilleOrthopaedicClinic

DIRECTIONS

From I-71: Take Watterson Expressway, I-264 West to Breckenridge Lane North, Exit 18B. Turn right onto the first street, Dutchman's Lane. Proceed to end of street.

From I-64: Take Watterson Expressway, I-264 East to Breckenridge Lane North, Exit 18B. Turn right onto the first street, Dutchman's Lane. Proceed to end of street.

From I-65: Take Watterson Expressway, I-264 East to Breckenridge Lane North, Exit 18B. Turn right onto the first street, Dutchman's Lane. Proceed to end of street.

4130 Dutchman's Lane is the last building on the right, the Dupont Suburban Building. Main office is in suite 300. We occupy the entire third floor. Handicapped accessible parking is available in both front and back parking lots. Automatic door entrance is available from the back parking lot.

On Top of the Tech Curve

Why Register With Our Secure Patient Portal?

If you haven't already heard, the Federal Government has issued new guidelines regarding a set of criteria that must be met in using Electronic Health Records (EHR) referred to as "Meaningful Use." In short, the purpose of an EHR is to "provide for the electronic exchange of health information to improve the quality of care". By registering with our patient portal, you are not only benefitting from convenience, but you are helping us to meet our "meaningful use" requirements.

Current Portal Features:

- Pre-Register: Paperwork can be filled out at your convenience, which will save you from coming in 45 minutes prior to your appointment time. It is now required that you update your information with us every year.
- **Update Information**: Any changes such as billing, address, email communication preferences, etc. that need to be made can be made through the portal at any time.
- Payments: Payments can be made online through your portal account. You can also call our office to place a request for an itemized statement to be uploaded to your portal account.
- Medical Records: Medical records can be uploaded to your portal account as an alternative to picking them up in our office. You can place the request by calling our office.

Features To Come:

Appointment Requests: Select from a list, the provider & timeframe in which you'd like to be scheduled. A staff member will follow-up to make and confirm the appointment.

Prescription Renewal: Send prescription refill requests through your portal account.

Ask A Staff: Ask a question, and have it directed to a specified destination by selecting from a categorized drop down box.

Patient Messaging: Send, receive, and reply to messages through our practice's general email box.

How Do I Register?

If you are an existing patient but have not signed up for the patient portal:

1. go to louortho.com
2. Click on "***patient portal***" on the homepage
3. You will be directed to the secure patient portal where you will create a password and username
4. go to "custom forms" & then "pre-***registration*** forms" to fill out demographic, insurance, and emergency contact information
5. You are now ready to start utilizing the many services available & can input more information at your convenience such as payment information, preferences, etc.

If you are a new patient and have supplied us with an email address, then you will receive an invitation in your inbox

Announcing Our New Mobile Site

We are excited to announce the launch of our mobile site as of February 1, 2013. Now you can access all of the features available on our patient portal through a more user friendly version while on the go.

Scan the QR code at right to try it out. You can also download the *GoPatient* app to access the mobile version or type: www.intuithealth.com/smartphone/ into your mobile browser.

GEORGE E. QUILL, JR., M.D.

Use of Large Allografts for Hindfoot and Ankle Fusion

Allografts, or tissues transplanted between different members of the same species, actually have their historical background in antiquity. Cosmas and Damian are considered the patron saints of allograft surgery. They were twin brothers and physicians credited with the third-century grafting of a deceased Ethiopian's leg to one of their patients whose leg had ulcerated. Lexer, in 1908, published on 23 whole- and 11 hemi-joint transplants. Herndon and Chase, in 1954, discovered that the immunogenicity of allografts could be diminished by a freezing process.

Mankin and others published in 1983 the results of their study using fresh frozen osteoarticular and intercalary allografts for transplantation. The reader may find it surprising that the first scientific article I ever published, in Clinical Orthopaedics and Related Research in 1987, was entitled "The Use of Large Allografts for Tumor Reconstruction and Salvage of the Failed Total Hip Arthroplasty." So you can see, while I am pretty old and have been writing on this subject for a long time, I am not quite as old as Saints Cosmas and Damian.

The indications for the use of large allografts for the reconstruction of the ankle and hindfoot include avascular necrosis of the talus, neuroarthropathy, infection, and tumor. Commonly today, large allografts are used in salvage of the failed total ankle arthroplasty or failed ankle arthrodesis, as well as in the treatment of primary osteoarthrosis and rheumatoid and inflammatory arthritis.

We really only have a few viable alternatives as reconstructive options for cases of massive bone loss about the foot and ankle (figure 1). Take for example, the case of a 62-year-old hairdresser with idiopathic avascular necrosis of the talus. She was left with a very large bony defect in her hindfoot and ankle after the excision of this completely nonviable talar body (figure 2). Viable reconstructive options included tibiocalcaneal versus tibiotalocalcaneal arthrodesis with allograft (figure 3). In this particular case, the patient was reconstructed with tibiocalcaneal arthrodesis, retaining the talar head and neck and using a local autograft. Medullary nail and screw fixation was used for reconstruction and achieving arthrodesis in a plantigrade, viable, stable foot (figure 4).

Fig. 1 Talar bone loss

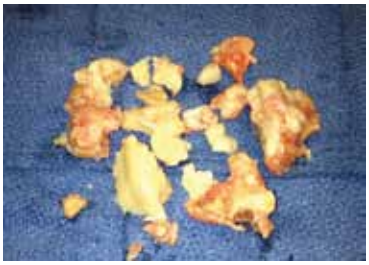


Fig. 2 Fractured & Non-Viable Talus (ankle bone)

Fig. 3 Tibiocalcaneal (TC) Tibiotalocalcaneal (TTC)

Fig. 4 Medullary nail and screw fixation

The advantages of having a tibiocalcaneal fusion in this patient included the fact that all the tissues were autogenous and not foreign; therefore, the patient had a lower nonunion risk than if a large bulk allograft had been transplanted. This also became a more expedient procedure with a quicker recovery. Disadvantages of a tibiocalcaneal fusion in cases such as hers include a shorter limb and altered biomechanics and gait. There is also a certain amount of soft tissue redundancy when the skeletal mass is foreshortened relative to the soft tissues.

Fig. 5 Failed total ankle

One can make the case for large allografts in transplantation when considering the case of a 69-year-old female who had a revision total ankle replacement as far back as 2008 that went on to prosthetic loosening, subsidence, and failure (figure 5). This patient's ankle and hindfoot were salvaged with tibiotalocalcaneal fusion using a large femoral head allograft. The surgical technique for a TTC fusion using a large femoral head allograft is as follows. In the operating room, the patient is positioned prone, general or spinal anesthesia is administered, and a regional nerve block is given for postoperative pain relief. A posterior Achilles-splitting approach is used, and the failed ankle replacement components are removed (figure 6). Acetabular reamers are used to prepare the fusion surfaces, and the slurry of bone harvested is saved to be used as part of the graft (figure 7). The femoral head allograft is prepared outside the wound, and it often helps to use the reverse concave reamers to get an absolute spherical fit. Multiple drill holes and fenestrations are made to encourage bony ingrowth and healing (figures 8&9). An infusion of iliac crest aspirate is added to this, and the femoral head allograft is placed in the bony defect in the patient's hindfoot and ankle (figure 10). A press fit is obtained with the foot in a plantigrade, neutral posture before internal fixation, in this case with a medullary ankle fusion nail and locking screws (figures 11 and 12).

Fig. 6


Fig. 7


Fig. 8

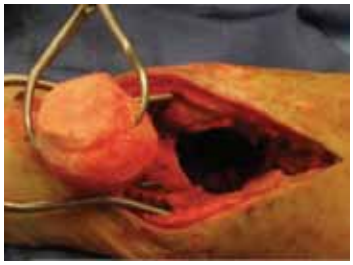


Fig. 9


Fig. 10

The advantage of using a large allograft for a TTC fusion is that limb length is maintained and the biomechanics are improved. This technique has been used to salvage many limbs, which heretofore was only possible with amputation. The disadvantage of using a large allograft for tibiotalocalcaneal fusion includes the very slight potential for disease transmission from the donating host and the fact that this is a technically demanding procedure. Bulk allograft does require a very long time for consolidation within the recipient.



Fig. 11 Fig. 12
Medullary ankle fusion nail and locking screws

In summary, it is an exciting time to be involved in orthobiologic research and, while allograft bone and soft tissue transplantation does date to antiquity, most of the practical advances in the use of this for foot and ankle reconstruction have taken place over the last decade or two.

Building a Better Practice with the United States Olympic Committee Medical Center

With a patient population that is in perpetual motion—both on the playing field and off—the United States Olympic Committee's (USOC) medical information needs are among the most demanding imaginable. On any given day, Olympic athletes are spread all around the world, training, conditioning, competing, and, occasionally, getting injured or falling ill. When that happens, effective treatment and fast recovery can mean the difference between silver and gold.

Fortunately for Team USA, the USOC Sports Medicine staff is a world-class, interdisciplinary team keenly attuned to the needs of a high-performing athlete. However, their method of recordkeeping was not up to the standards of today's interconnected, global enterprise. The staff and their network of supporting physicians need to access athletes' data on a moment's notice, anywhere. They need simple, intuitive forms and workflow tools to communicate with a care team that may include dozens of clinicians for a single patient. And they need a steady partner who is as committed to their success as they are to Team USA's.

For these reasons, USOC Sports Medicine is implementing Centricity Practice Solution starting at the 2012 London Olympic Games.

An Olympic-sized challenge

High-performing athletes need a high-performing EMR

Team USA athletes spend their entire lives focused on one goal: winning an Olympic Gold Medal. In their quest, one of the most important factors for success is communicating accurately about medical issues with multiple trainers, coaches, chiropractors, physical therapists and physicians from every medical discipline. Not only are their caregivers not all in one facility, they might not even be on the same continent. For an individual who has dedicated their life to pushing their body to the absolute limit of human possibility, this can be a major obstacle.

"In a given week, one of our athletes might be on Germany Tuesday, South Korea Thursday, and on their way home Friday," says Dr. Bill Moreau, Managing Director of Sports Medicine for the USOC. "In each place they may receive care from a different medical professional, and it's our job to make sure that person has the most complete, current information about that athlete's health."

In addition to this need for access to detailed medical records, the USOC Sports Medicine team faces another operational challenge: training the some 140 volunteer healthcare professionals across multiple disciplines who offer their services to Team USA on a two-week basis. Training and maintaining consistency across a constantly shifting provider population is a full-time job in itself.

As the USOC decided to implement a robust EMR platform to address these challenges, one other important factor arose: timing. In order to ensure they would be online in time for the 2012 Olympic Games in London, it would require a record-breaking pace for installation, implementation and training. Teamwork—and a reliable partner—would be critical.

EMR access around the globe

Centricity Practice Solution must keep up with Team USA's demanding travel schedules

"We have the world's most mobile patient population," says Dr. Moreau. Keeping athletes medical records current as they travel the world will fundamentally transform the way his team will be able to administer care. Centricity Practice Solution (CPS) gives the USOC the access needed to drive that transformation.

"With CPS, within seconds, any doctor anywhere in the world would be able to look at an athlete's medical record," says Dr. Dustin Nabhan, Manager of Multidisciplinary Care for the USOC. "I may communicate on the phone with someone while I'm working with an athlete. And if that information can be in front of me and in front of another provider, it totally changes what we can do for the athlete."

From the athlete's perspective, in addition to the assurance that their global care team is all in sync, CPS means less paperwork, thanks to the patient portal. "They're constantly asked to fill out documentation forms everywhere they travel for the Games world events," says Heather Linden, a USOC Doctor of Physical Therapy. "Once they can utilize the patient portal and see how much access they have and how much ability they have to pull their own charts and documents to the medical providers that are traveling with them, I think they'll be really excited."

Building best-practice workflow

Intuitive interfaces and customized forms make the difference in multidisciplinary teamwork

The user interface for CPS was designed with the heavy influence of practicing physicians, an approach that yields an intuitive user experience and speeds adoption. For the USOC, this was even more important than for the average practice, as Jenna Street, coordinator of sports medicine clinic operations explains.

"Our volunteer program brings in approximately 140 healthcare providers to do a two-week rotation." she says. "Once CPS is live, the on-boarding process will be a lot smoother and a lot more streamlined for us because we will have one system that will not only include the record keeping and the documentation of patient care, but it will also track metrics and capture the numbers of our patient visits."

> "Within seconds, any doctor anywhere in the world would be able to look at an athlete's medical record."
>
> Dr. Dustin Nabhan
> Manager of Multidisciplinary Care
> United States Olympic Committee

In order to keep this process as simple and intuitive as possible, the USOC is using customized forms in CPS tailored to their practice's unique sports medicine and orthopedic needs. "We have three customized forms we're utilizing for the London Games," says Dr. Linden. "One's an injury form, one's an illness form, and one's a treatment form. We've made them very simple so that providers traveling with us don't have to undergo extensive training to learn the program."

Beyond the training and on-boarding, the improvement to the USOC team's workflow will be substantial. For instance, the customized treatment form offers simple drop-downs that will enable real-time treatment analysis. "Sometimes we end up treating our athletes throughout the day, and then doing all of our documentation at night," Dr. Linden says. "CPS allows us to get things done throughout the day, and also lets us to do different data analysis on what we do each day."

"GE has kept the pace with us. They've been great partners to help us be quick and efficient in the installation."

Dr. Bill Moreau
Managing Director of Sports Medicine
United States Olympic Committee

Setting a new record

GE Healthcare and the USOC are working together to deliver the world's fastest EMR implementation of its kind

Like the athletes training for the London 2012 Olympic Games, the USOC Medical Center has to be ready and in its peak condition by the time Opening Ceremonies begin. This calls for a spirit of teamwork and partnership that GE Healthcare could provide. As a Worldwide Olympic Sponsor, GE understands the demands and sense of urgency that surround competitors and care providers performing at their best.

When the USOC decided to implement CPS, time was already of the essence. What would normally be a six-month installation needed to be done in just over 90 days. In other words, the GE Healthcare and the USOC implementation team wound have to set a world-record pace.

"We have a lot of pressure on us to have this EMR in place for the first time at an Olympic games in London," says Dr. Moreau. "GE has kept the pace with us. They've been great partners to help us be quick and efficient in the installation."

Dr. Linden concurs. "I would say the biggest surprise about implementing CPS has been the ease of everything and how great GE and the USOC have worked together in their partnership. It's made our lives very easy, and it has made all of our providers nothing but excited to work with CPS."

Beyond the Games

Robust tools offer the USOC Medical Team deep analytic insight

Beyond supporting athletes and medical staff during the Olympic Games, Centricity Practice Solution has the potential to dramatically change the long-term approach Team USA takes to data interpretation.

"For us to catch the leading edge, we have to be able to identify trends in injury and also in illness," says Dr. Moreau, "We can use the analytic capabilities of Centricity Practice Solution to perform analysis to help us keep these athletes healthy and be able to provide them with that opportunity to compete at the top."

From the USOC Medical Staff's perspective, identifying trends in illness or stress injuries within a given sport may help the team better protect athletes and prevent those things from happening.

"So maybe we find that somebody is a gold medalist. And then in the future you find there's a specific thing—maybe it's chest expansion or such—that helps determine if a person can be competitive," Dr. Moreau explains. "CPS has the potential to help us find out, 'Why did that person physically and physiologically compete at the top of the game?'"

These capabilities will help inform everything from staffing decisions to benchmarking guidance for Olympic sports' National Governing Bodies. So not only is CPS helping the USOC Medical Staff build their best practice now, it promises to help shape the performance of Team USA for years to come.

LOUISVILLE ORTHOPAEDIC CLINIC PHYSICIANS

Give Back

SCOTT D. KUIPER, M.D.

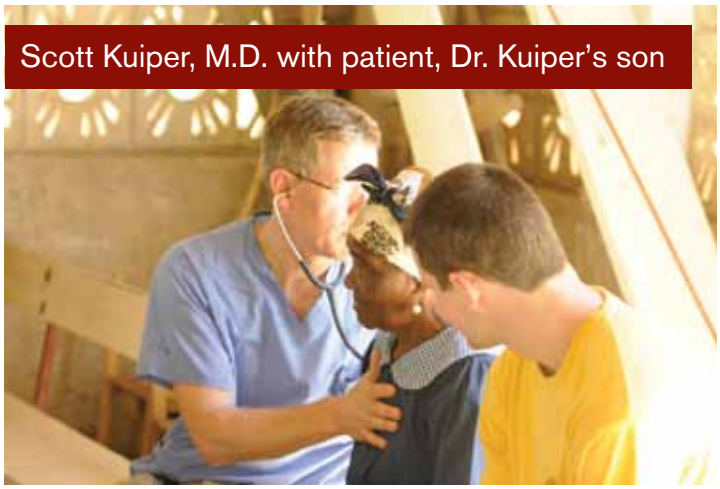
Traveling to Haiti, for the first time in 2010 to provide medical care following a devastating earthquake, Dr. Kuiper lent his time and expertise yet again in 2011. In his return, Dr. Kuiper focused on treating Haitians in desperate need of help with their orthopaedic-related injuries and conditions. While traveling down a road by truck, "Dr. Scott" was alerted by other passengers of this little girl's need for medical attention, pictured at right. He was able to provide relief by treating her for a broken humerus.

Haitian Christian Outreach works to build generations of new believers through: church planting; ministering through meeting educational, physical, and spiritual needs; providing healthcare and supporting community development projects to help transform the local economy. This organization depends on networks of relationships through locally planted churches, short-term missionaries, partner churches, and individuals who provide financial support and other resources.

For more information about this ministry, go to: www.haitianchristian.org.

Volunteer living quarters

Scott Kuiper, M.D. with patient



Scott Kuiper, M.D. with patient, Dr. Kuiper's son

People waiting to see a doctor

GEORGE E. QUILL, JR., M.D.

CHILDREN OF THE AMERICAS

Dr. Quill is traveling to Guatemala in 2013 with dozens of other volunteers in a group called Children of the Americas (COTA). He's performing orthopedic surgery on children who otherwise could not afford these procedures. He will also train other local surgeons in these techniques and the appropriate aftercare.

Children of the Americas is a non-profit organization that provides medical and surgical services and supplies to indigent children and their families in rural Guatemala. The all-volunteer teams also work with local Guatemalan administrators and physicians to educate and share knowledge between cultures.

© Children of the Americas • www.childrenoftheamericas.org

The Arthritis Foundation

A gifted surgeon and artist, Dr. Quill generously donated one of his paintings to auction off to raise money for The Arthritis Foundation. The painting was auctioned for $200, and combined with the generous donations of our patients, we were able to donate close to $1200.

Many Louisville Orthopaedic Clinic employees, including Kate S. Hamilton, PA-C, showed their support for the foundation by participating in the Let's Move Together arthritis walk in September 2012.

The Arthritis Foundation is the largest national non-profit organization that supports more than 100 arthritis types and related conditions. Their goal is to provide information and tools to help people with arthritis live a better life, as well as raise funds for research which they hope will lead to a cure.

ARTHRITIS FOUNDATION® Take Control. We Can Help.™

www.arthritis.org

SOLES 4 SOULS

George Quill, Jr., M.D., his daughters, Lori Edmonds, APRN, and her husband, Curtis, carried out their sixth annual foot screening and shoe giveaway, Soles4Souls, at The Healing Place on Nov. 21, 2012. They were able to provide help in selecting a pair of properly fitting shoes for those in need.

Soles 4 Souls

THE HEALING PLACE
Where hope is found.

Despite some legislative relief, many individuals will see higher taxes in 2013

By: Bonnie K. Ciresi, CPA

The American Taxpayer Relief Act of 2012 (ATRA) does, as its name implies, provide substantial tax relief to many taxpayers. But while higher-income taxpayers will enjoy some benefits, they'll also see some tax increases. Here's a closer look at ATRA's most important changes for individuals, along with the tax planning implications.

Ordinary income tax rates

ATRA makes 2012 rates permanent for most taxpayers. But, beginning in 2013, taxpayers with taxable income that exceeds $400,000 (singles), $425,000 (heads of households) or $450,000 (married couples filing jointly) will be subject to a returning top rate of 39.6% on taxable income in excess of the applicable threshold. These thresholds will be indexed for inflation in future years.

Because the tax rates are permanent, for 2013 you can employ the traditional timing strategies of accelerating deductible expenses into the current year and deferring income to the next year, where possible, to defer tax (assuming you don't expect to be in a higher tax bracket in 2014). If you're facing the 39.6% rate, however, you may want to see if there are additional strategies you can employ to help minimize the impact of the higher rate.

Long-term capital gains rates

ATRA makes the 15% rate permanent. However, it brings back the 20% rate for higher-income taxpayers. The 20% rate also kicks in when taxable income exceeds $400,000 (singles), $425,000 (heads of households) or $450,000 (married filing jointly) — indexed for inflation in future years.

ATRA also makes permanent the 0% rate for taxpayers in the bottom two brackets. If you have children or other loved ones in these brackets, consider transferring appreciated assets to them. They can sell the assets and pay no tax on the capital gain. You may find this strategy particularly powerful if you'd pay tax at the 20% rate if you sold the assets. But before gifting any assets, if the recipients are under age 24, make sure they won't be subject to the "kiddie tax." And regardless of their age, consider the gift tax consequences.

Qualified dividend tax rates

ATRA makes permanent the long-term capital gains treatment of qualified dividends. So most taxpayers will continue to enjoy a 15% rate (0% for those in the bottom two brackets). But taxpayers with taxable incomes exceeding the applicable income thresholds will face a rate increase to 20% on qualified dividends. Nevertheless, without ATRA, they would have paid a much higher rate, because dividends would have gone back to being taxed at ordinary income rates in 2013, with a top rate of 39.6%.

If you hold dividend-producing investments and will face the 20% rate, consider whether you should make adjustments to your portfolio in light of their potentially higher tax cost. Keep in mind, however, that qualified dividends will remain more attractive from a tax perspective than other income investments. For example, interest from CDs, money market accounts and taxable bonds will continue to be taxed at ordinary-income rates.

Itemized deduction reduction and personal exemption phaseout

For 2010 through 2012, the income-based reduction on itemized deductions and phaseout of personal exemptions were eliminated. ATRA allows both limits to return in 2013 and sets thresholds for them of $250,000 (singles), $275,000 (heads of households) and $300,000 (married filing jointly).

This actually provides some tax savings over what would have occurred without ATRA, because the thresholds would have been significantly lower. For future years, the thresholds will be indexed for inflation.

AMT

Before ATRA, unlike the regular tax system, the alternative minimum tax (AMT) system wasn't regularly adjusted for inflation. Instead, Congress legislated adjustments in the form of a "patch" — an increase in the AMT exemption. And the last patch had expired Dec. 31, 2011. So millions more taxpayers could have been subject to the AMT on their 2012 tax returns.

ATRA makes the patch permanent by increasing the exemptions for 2012 and indexing them for inflation for future years. ATRA also makes permanent the ability to offset your AMT liability with certain nonrefundable personal credits.

You may be able to time income and deductions to avoid the AMT or reduce its impact. Now that AMT relief is permanent, AMT planning will be a little easier.

Deduction for state and local sales taxes

For the last several years, taxpayers have been allowed to take an itemized deduction for state and local sales taxes in lieu of state and local income taxes. ATRA extends this break for 2012 and 2013.

The break can be valuable to those residing in states with no or low income tax rates or who purchase major items, such as a car or boat. If you're contemplating a major purchase, you may want to make it in 2013 to ensure the sales tax deduction is available.

Breaks related to children and education

Many child- and education-related breaks that had expired (generally on Dec. 31, 2012) have been made permanent by ATRA, while others have been temporarily extended:

- The $1,000 child credit and other enhancements of the credit have been made permanent.
- The higher adoption credit and income exclusion for employer-provided adoption assistance have been made permanent.
- The higher dependent care credit has been made permanent.
- The American Opportunity education credit has been extended through 2017.
- The above-the-line tuition and fees deduction (expired Dec. 31, 2011) has been extended through 2013.
- The enhancements to the student loan interest deduction have been made permanent.
- The income exclusion for employer-provided education assistance has been made permanent.
- The $2,000 Coverdell Education Savings Account (ESA) annual contribution limit, the ability to use tax-free ESA distributions for elementary and secondary school expenses, and other ESA enhancements have been made permanent.

Be aware that the benefit of many of these breaks is phased out if a taxpayer's income exceeds certain limits.

Don't forget about Medicare tax hikes

Under the 2010 health care act, an additional 0.9% Medicare tax on earned income and a new 3.8% Medicare tax on net investment income go into effect in 2013 when income exceeds certain levels. Taxpayers hit with higher income tax rates under ATRA will generally also face the expanded Medicare taxes. Factoring together both taxes, these taxpayers could see a 5.5 percentage point tax increase on a portion of their earned income and an 8.8 percentage point tax increase on some or all of their long-term capital gains and qualified dividend income (8.4 percentage points on short-term gains, nonqualified dividends, and taxable interest).

But some taxpayers who escape an income tax hike will still face a Medicare tax increase. This is because the thresholds for expanded Medicare taxes are much lower than those for the 39.6% ordinary-income tax rate and the 20% long-term capital gains rate.

The additional 0.9% Medicare tax applies to FICA wages and self-employment income exceeding $200,000 (singles and heads of households) or $250,000 (married couples filing jointly). The new 3.8% Medicare tax applies to net investment income to the extent that modified adjusted gross income exceeds those same thresholds. ATRA did nothing to change these thresholds.

Tax planning remains complicated

The changes under ATRA affect many areas of planning, plus there are the Medicare tax increases to consider. Complicating matters further is the fact that higher rates and various limits on breaks go into effect at different income levels, depending on the type of tax or break. We'd be pleased to help you determine exactly how you'll be affected and what strategies you can implement to reduce, or at least defer, taxes.

PAIN:

The Misunderstood Messenger

In the days of Facebook and Twitter, as well as from media in general, we are bombarded with overwhelming amounts of information. From updates about what sandwich a friend had one minute ago to a family member's new favorite TV show, at least for the next day, a lot of the messages we receive don't do a whole lot to enrich our lives and help us understand more about ourselves.

The same can be said for people who deal with the issue of pain, and more specifically chronic pain. Over 50 million Americans live with persistent pain lasting more than three months, with over half having pain for more than five years. With that many people, one would think doctors would understand it, and treat it, better. But we don't. This large group continues to grow every year.

What doctors are traditionally taught about pain is that it relates to how bad a person's condition or injury is. For instance, a sprained ankle would be less painful than a broken ankle, as it takes less time and care to heal from.

What modern research into pain has recently showed us is that this is false. Pain is a physical AND emotional experience that is determined by many different factors that are unrelated to a person's injury, including things like emotional health, stress, fear, personal experiences, and memories. These are things that are related to how the brain interprets what is going on with the injured area.

If you sprain your ankle, the ankle will send "danger" messages up to the brain, in essence saying, "Hey, we have some funny stuff going on down here! Please make a note of it!" If you are mostly healthy and you know what a sprained ankle is, your brain will keep your pain level at a relatively manageable level. This is to prevent further damage to it and to allow it to heal, very much like a house alarm. When the alarm first goes off, everyone in the neighborhood looks to see what is going on and to make sure everything is OK, and even after the alarm is off, the neighborhood still is on the lookout. Then, as the tissue heals, the alarm begins to get softer until it is no longer there, and life can be continued. The message is there and then it is gone.

However, if you sprain your ankle, you may be fearful of it being broken, or you had a bad experience with the last sprained ankle you had, or you remember that your uncle had a sprained ankle once and he was off work for three months and lost his job, or you are worried about how you are going to take care of your kids with a sprained ankle. These are examples of the brain taking the same signals coming from the ankle and saying, "Oh no! This is bad news! We need to protect this ankle!" It then will amplify the pain response for that ankle, in other words sending a stronger message. This is an example of the house alarm being that much louder and more attention getting.

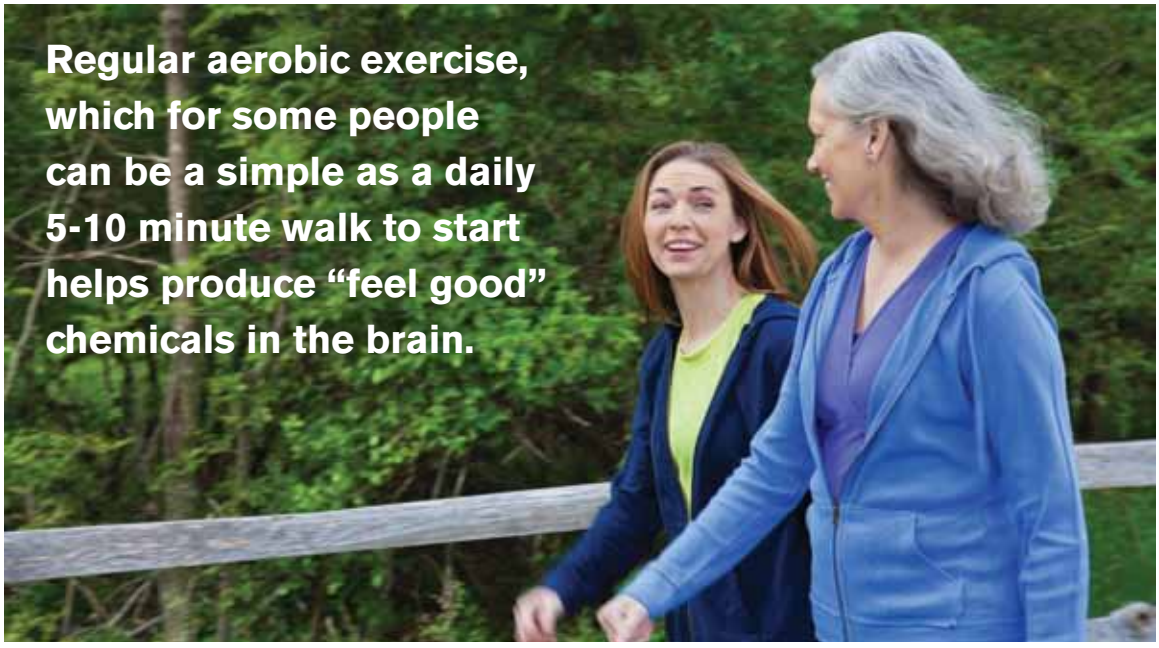
With that increased volume and urgency of messages, it takes even longer to quiet them down. And when something takes longer to accomplish, it doesn't always happen on its own. This is where people get stuck in the rut of chronic pain, as the house alarm that was really loud at first now continues to go off at regular intervals, WHETHER THE AREA CONTINUES TO BE DAMAGED OR NOT! The house alarm that is supposed to communicate that something is wrong is now just another message in the sea of the day's activities, only adding to the stress of the neighbors (you) and not consistently communicating anything of value to the neighborhood. The pain (house alarm) no longer is a reliable means of knowing what is bad or good, and only serves to make life harder and more stressful for everyone. The same phenomenon occurs with conditions such as fibromyalgia, chronic fatigue syndrome, and the like.

So how do you turn the alarm off? There is a growing amount of research in this area with good news! A person has more power than previously thought to help manage this alarm system and "turn the volume down."

One of these things is regular aerobic exercise, which for some people can be as simple as a daily five- to ten-minute walk to start, or in this case of a sprained ankle, a bike ride or swim. This type of activity helps produce "feel good" chemicals in the brain, which can help "rewire the alarm and turn down the volume."

Another technique is visualization of the activity that normally causes pain. The difference is to visual it pain free. This helps "rewire the brain" by preventing the pain from being expected every time the activity is performed.

These are just a few of the activities that can be done to effectively help the brain "relearn and rewire" itself to better know that "PAIN DOES NOT ALWAYS EQUAL HARM." To learn more about chronic pain and how to better deal with it feel free to speak with a KORT physical or occupational therapist to gain more strategies and education about dealing with chronic pain. And remember, "One must KNOW pain; otherwise there will be NO gain."



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