Orthopaedic Department Awarded $300,000 Grant

This past year has been extremely special for the Department of Orthopaedic Surgery. With the opening of the Orthopaedic Center we have been blessed to offer care like no other facility in the area. We have everything patients need in one location; a rare distinction.

There have been a number of events that were cause for celebration within the Department, none larger than the recent acquisition of a $300,000, three-year grant awarded to the Department of Orthopaedic Surgery by the American Diabetes Association.

Dr. Beata Lecka-Czernik, professor of orthopaedic surgery, headed the effort for the proposal titled “Prevention of TZD-induced bone loss and improvement of TZD-affected bone fracture.” The department has been working hard to bolster its research efforts as of late. Dr. Beata has been working on the effects of drugs on bone. Other research Ph.D’s have also been working diligently on research. Dr. Champa Jayasuriya continues to work on bone tissue engineering, while Dr. Goel continues to be very involved in spine research.

The Department is now in the planning stages for establishing a Trauma and Orthopaedic Diseases Ph.D. program at the University that would supplement the Department’s current master’s program offering in orthopaedic sciences. The Department of Orthopaedic Surgery is working with the University’s Department of Bioengineering to bring this Ph.D. program to fruition.

Doctors in the Center are fortunate to have the talent to fix patients and help them regain function. This is the Center’s mission: to improve the human condition. It is a special talent Doctors in the Orthopaedic Center have been granted to help people. The focus is patients and a higher degree of personalized patient care.
Patient Regains Ability to Walk

After a motor vehicle accident on December 7, 2007, Susan Wittman knew her life was going to be different. She had an uphill climb to overcome her injuries, but she was ready. She was initially treated at another local hospital. However, her condition did not improve as well as she had expected as the fracture continued to present. According to Wittman, she was brought to The University of Toledo Medical Center for definitive care.

“It seemed like no one could help me,” Wittman said. “I was brought to UT’s Orthopaedic Center and was told I would walk again.”

UT’s orthopaedic surgeons fixed Wittman’s right peri-prosthetic femur fracture. After it was reduced and put back into position, it was a matter of keeping the wound clean to stave off infection. After these surgeries, she was on the road to recovery. According to Wittman, it was a battle but one worth the pay off.

“I praise the work done at UT’s Orthopaedic Center,” Wittman said. “I almost died in that car accident. I didn’t think I would ever walk again and now I am walking from 50-75 feet without pain. Everyone did such a wonderful job for me here.”

What is Bursitis?

Our bodies were constructed to withstand a certain level of pressure. However, with repetitive stress or excessive pressure, inflammation can occur. Bursitis refers to inflammation of the fluid-filled sacs (bursa) that cushion joints with ease. Bursitis usually affects the joints in the shoulders, hips, and knees, although it can also occur in heels and at the front of the knee. Bursitis of the elbow is associated with actions which require repeated bending and extending of the elbow, such as throwing a ball or Frisbee®. Bursitis of the hip, however, may be more difficult to identify because the hip is not as close to the surface as other joints, thus there may be no visible swelling or skin redness.

Doctors are typically able to diagnose bursitis with a combination of physical examination and x-ray imaging. By feeling the painful joint and surrounding area, doctors are able to identify points of tenderness. Bursitis usually affects the joints in the shoulders, elbows, hips, and knees, although it can also occur in heels and at the front of the knee. Bursitis is often the result of repetitive pressure, such as running, jumping, and other movements. In essence, tendons are similar to ligaments except that they are composed of fibrous tissue and are generally much longer than ligaments.

Bursitis Continued

Bursitis refers to inflammation of the fluid-filled sacs (bursa) that cushion joints with ease. Bursitis can develop small tears or completely rupture. Tendon damage occurs usually in the ankles, knees, shoulders, wrists, biceps, calves, and heels.

What is a Ruptured Tendon?

Tendons are composed of gelatin-like cells called tenocytes, collagen proteins and water. Millions of collagen proteins are woven together to form a tendon, a band of fibrous tissue that connects muscle to bone. Tendons enable people to perform physical activities such as running, jumping and other movements.

What is Ruptured Tendon?

Tendon ruptures are typically caused by direct trauma, advanced age, and unusual loading. Unusual loading refers to situations – when the muscle contracts while being stretched in the opposite direction. Advanced age can affect a tendon’s strength. Blood supply decreases as a person ages making the tendon weaker and more susceptible to injury. Advanced age can affect tendon’s strength.

In simplest terms, a tendon is a band of fibrous tissue that connects muscle to bone. Tendons enable people to perform physical activities such as running, jumping and other movements. In essence, tendons are similar to ligaments except that they are composed of fibrous tissue and are generally much longer than ligaments.

Tendons, like the name indicates, are capable of withstanding tension like an elastic band. When a muscle contracts it pulls on a bone to cause movement. This ability to withstand tension forms the basis of movement. Tendons can develop small tears or completely rupture. Tendon damage occurs usually in the ankles, knees, shoulders, wrists, biceps, calves, and heels.

Tendons are the quadriceps, the Achilles, the rotator cuffs, and the biceps. The quadriceps are a group of muscles above the knee cap that are used to extend the leg at the knee. The Achilles tendon is the tendon that runs on the back portion of the foot above the heel and is essential for pushing off with the foot. The rotator cuff is a group of four shoulder muscles which helps raise, rotate and provide stability for the shoulder socket. Finally, biceps are the muscle of the arm which helps bring the hand toward the shoulder by bending at the elbow.

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Continued on back
Ruptured Tendon Continued

Although typically first treated with rest, ice, compression and elevation, surgery may be needed to fix a tendon rupture. For instance, an Achilles tendon rupture has a high rate of reoccurrence when treated conservatively.

Of course, there are ways to prevent tendon injury.

- Properly stretch prior to engaging in physical activity
- Avoid activities which place excessive stress on tendons. Alternate high-impact activities with low-impact activities
- Listen to your body. If you feel pain, it’s best to stop your activity and get some rest.

Finally, it’s important to maintain a healthy weight and participate in exercises that will help strengthen your tendons. Ultimately, this will help preserve healthy tendons and minimize the risk of developing an injury.