



THE UNIVERSITY OF TOLEDO  
**MEDICAL CENTER**

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THE UNIVERSITY OF TOLEDO MEDICAL CENTER

# ORTHOPAEDIC MONTHLY

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## Orthopaedic Department Donates Presidential Scholarship to the Medical School



It is safe to say that the state of the economy has been tough for everyone with it's effect being felt nationwide and in our own backyard. The tough economic climate can make it difficult for top-notch students to afford education costs. In an effort to help The University of Toledo and potential students, the Department of Orthopaedic Surgery has decided to donate a Presidential Scholarship, providing a "full ride" for a UT medical student.

The scholarship will be applied to the 2009-2010 academic year. The approximate donation will be \$118,820 paid over a four-year period. The awarded student must maintain a high performance to remain eligible.

The Department of Orthopaedic Surgery appreciates the support of the University and is excited to help attract high-caliber medical students. At its core, the Department of Orthopaedic Surgery is a teaching and educational body seeking to train the next wave of doctors.

The Department of Orthopaedic Surgery has always put education and patient care at the forefront. The orthopaedic residency program continues to be one of the most successful in the country, touting a 100 percent passing board rate for first-time takers. In addition, the residency program has scored in the 95th percentile on the American Academy of Orthopaedic Surgeons In-Training Examination over the past six years. The program was commended by the Accreditation Council for Graduate Medical Education (ACGME) in late 2007 for its sound education and substantial compliance with ACGME graduate medical education requirements and was reaccredited for a full 5 year cycle and was awarded an increase in resident complement (from 3 to 4 per year). The Department's accredited trauma fellowship is one of only five in the country. Future success hinges on the faculty's ability to teach medical students as they rotate through the Department on a monthly basis. This interaction is important for medical student education and something that is not taken lightly.

The Department of Orthopaedic Surgery is pleased to announce this scholarship and looks forward to working with the University over the next four years and beyond.



## Multiple Trauma Patient Recalls Challenging Day

In the blink of an eye your life can change. On March 4, 2008, Stephen Smith learned this first hand. One moment he was in his car and the next he was in a helicopter on his way to The University of Toledo Medical Center.

Smith was involved in a 3-car motor vehicle accident. His once pristine, well-maintained vehicle now lay in ruins. Its airbags were deployed and its frame was badly damaged with an intrusion into his compartment. It took rescue workers an hour to remove Smith from his car. At that time, life-flight helicopters took Smith as a Level 1 Trauma emergency to UT Medical Center. As soon as he arrived, advanced trauma life support was initiated. Smith was in and out of consciousness and hardly opened his eyes to verbal stimuli.

The findings were staggering. Smith had sustained a mild subarachnoid hemorrhage; facial fractures; fractures of the proximal humerus, the left ulna, and the left olecranon; a posterior wall fracture of the hip and a tibial plateau fracture. Smith's entire left side was almost entirely damaged.

The orthopaedic team went to work on Smith immediately to retain limb function. He underwent open reduction and internal fixation of his left proximal humerus and left ulna, closed reduction and percutaneous pinning of his left tibial plateau, and repair of his left triceps avulsion. A few days later, Smith returned to the operating room for open reduction and internal fixation of his left acetabulum posterior wall and posterior column fracture. According to Smith, he was happy to have been brought to UT Medical Center.



*Dr. Stephen Smith*

"I am so fortunate to be alive," Smith said. "Everyone has done such a fantastic job here. I can't say how fortunate I feel to have been brought here."

Smith returned to the Orthopaedic Center in December on his way to full recovery. He was walking on his own and in great spirits. His wife, her name here, however, said she will never forget that first day.

"I remember talking to Dr. Ebraheim and saying how long a day it had been," Mrs. Smith said. "I just remember him saying to me that it had been a long day, but a more challenging one. He was right, it was challenging, but they saved my husband's life."

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## What is Trigger Finger?

Trigger finger is a condition where the motion of the tendon that opens and closes the finger is limited, causing the finger or thumb to lock or catch in a bent position when extended. The condition, which is more formally known as stenosing tenosynovitis, is named for its similarity to a trigger being pulled and released.

In simple terms, trigger finger is caused by swelling from inflammation around the tendons that aid in pulling the affected finger inward toward the palm. Tendons, which control movement and connect muscle to bone, slide through a tunnel lined with tenosynovium that releases lubricating fluid. This fluid allows the tendon to move smoothly within its tunnel as a finger is straightened or bent. However, as the tendon moves through the tunnel it can become irritated and thicken, causing passage to become more difficult. If the repetitive movement, strain, overuse or inflammatory conditions continue, the tunnel can become narrow and constricting. As the tunnel narrows and constricts, the tendon has a difficult time moving smoothly and may catch in a bent position before straightening out. This occurrence is known as trigger finger.

The causes for trigger finger are not always known. The condition is more prevalent in women and occurs in most cases between the ages of 40 and 60 years of age. In addition, the condition is more prevalent in people with certain medical problems such as rheumatoid arthritis and diabetes.

There are many symptoms to look for if you suspect you may have trigger finger. The most obvious is a catching or popping feeling in the finger or thumb joints. Other symptoms include: presence of a small lump on the affected joint; swelling; and pain in the palm. In some instances, the finger cannot be extended from its bent position.

Diagnosis for trigger finger is usually quite simple and can be diagnosed with physical examination and information obtained from the patient. However, x-rays are sometimes taken to rule out other injuries or diseases.

Treatment for trigger finger can range from conservative to surgical. Sometimes, it's relieved with a combination of rest, pain medications and splints. However, cortisone injections may be utilized in some

### Trigger Finger Continued

cases. If trigger finger is associated with an underlying medical problem, such as diabetes, this method may be less effective. Physical therapy and finger exercises may be suggested to alleviate the problem.

If conservative treatment fails, an orthopaedic surgeon may suggest surgical intervention such as percutaneous trigger finger release. Here, a needle is used to release the locked finger by widening the opening of the tunnel so the tendon can slide through more easily. This is an outpatient procedure with an expected complete recovery within a few weeks.

The prevalence of trigger finger is a growing concern, as injuries resulting from repeated motion are growing. According to the U.S. Survey of Occupational Injuries and Illnesses, more than 302,000 repetitive/cumulative trauma disorders occur each year in the United States. Trigger finger is classified as a repetitive strain injury. According to the U.S. Bureau of Labor Statistics, ergonomic disorders account for 56 percent of illnesses reported to the Occupational Safety and Health Administration.



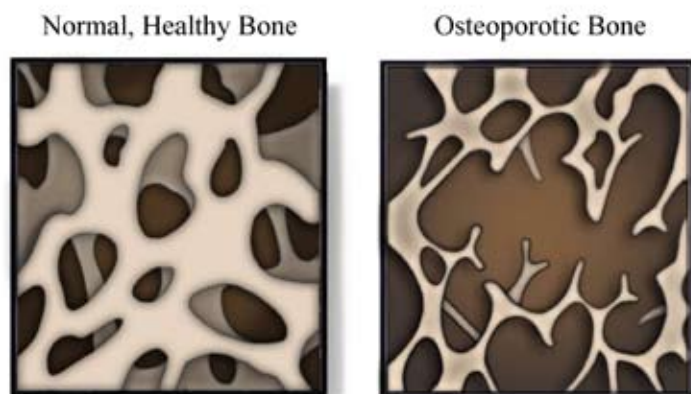
Depiction of trigger finger

## Affect of Diabetes on the Musculoskeletal System

Diabetes is a syndrome of disordered metabolism due to a combination of hereditary and environmental causes resulting in abnormally high blood sugar levels. Diabetes, which affects nearly 23.6 million (7.8 percent of the population) people in the United States, has a negative impact on the musculoskeletal system. Diabetics are at an increased risk for bone and joint disorders. While most problems are more prevalent in patients with type I diabetes, conditions are also seen in patients with type II diabetes.

Diabetes increases susceptibility to several conditions including: diabetic hand syndrome, trigger finger, Dupuytren's contracture, carpal tunnel syndrome, osteoporosis, osteoarthritis, frozen shoulder and Charcot's syndrome.

A number of hand conditions are more common in diabetics. First, diabetic hand syndrome is a concern. Diabetic hand syndrome is characterized by waxy skin which thickens, limiting finger movement.



Patients with diabetes type I are at an increased risk for osteoporosis due to a lower than normal bone mineral density

It is especially prevalent in type I diabetes patients with symptoms such as an inability to fully extend fingers or press palms together. Diabetic hand syndrome can often be treated conservatively with stretching exercises, anti-inflammatory medications, pain relievers and a tight control of blood sugar levels.

Trigger finger is another condition of the hand that is a concern for patients with diabetes. Trigger finger is condition where the motion of the tendon that opens and closes the finger is limited, causing the finger or thumb to lock or catch in a bent position when extended. In simple terms, trigger finger is caused by swelling from inflammation around the tendons that aid in pulling the affected finger inward toward the palm.

Dupuytren's contracture refers to a deformity where one or more fingers are bent toward the palm. It is common in people with a long history of diabetes, which may be due to the metabolic changes related to the disease. Symptoms include thickening of the skin on the palm of the hand and an inability to straighten one or more fingers. Treatment can range from conservative to surgical in severe cases.

Carpal tunnel syndrome is another condition that affects 20 percent of diabetic patients. Carpal tunnel syndrome is characterized by burning, paresthesias and sensory loss in the median nerve distribution. Median nerve entrapment caused by diabetes-induced connective tissue changes is said to be the relationship with diabetes. Conservative treatment includes anti-inflammatory drugs and volar wrist splints. Surgical intervention may be utilized with the release of the transverse carpal ligament.

Osteoporosis, which causes bones to become weak and brittle, can be a concern for patients with diabetes. Patients with diabetes type I are

*Continued on back page*





*Musculoskeletal System Continued*

at an increased risk for osteoporosis due to a lower than normal bone mineral density. Symptoms of osteoporosis include loss of weight, bone fractures and poor posture. The best treatment for osteoporosis includes exercise and a diet rich with calcium and vitamin D.

Osteoarthritis, a joint disorder characterized by the breakdown of joint cartilage, is common in patients with type II diabetes. These patients are more prone to obesity, which likely contributes to the breakdown of joint cartilage. Symptoms for osteoarthritis include joint pain, loss of joint movement and stiffness.

Approximately 19 percent of the diabetic population is affected by frozen shoulder. This condition refers to a stiff glenohumeral joint. Symptoms of frozen shoulder include decreased range of shoulder motion and stiffness. Conservative treatment is often utilized consisting of immobilization and injections.

Lastly, while rare in occurrence, diabetic patients may develop a condition of the foot called Charcot's syndrome. This condition involves lytic joint changes and a destructive form of degenerative arthritis. This destructive condition can cause a loss of joint sensation.

**January 2009 Word Search**

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