



THE UNIVERSITY OF TOLEDO MEDICAL CENTER

ORTHOPAEDIC MONTHLY

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Access, Service, Convenience and Quality Patient Care: a Successful Concept

The concept of access, service, convenience and quality patient care was created to provide patients with a higher caliber of orthopaedic care and treatment. Since opening the doors of the Orthopaedic Center in October 2007, we've made that concept the focal point of our new and expanded offerings.

First, we wanted to establish a way for patients to have an easy access to timely orthopaedic appointments. We understand that pain doesn't wait so neither should relief. We began guaranteeing an appointment with an orthopaedic specialist within 24 hours of calling the Center. If there is an emergency, such as a fracture, we will see the patient immediately. We established this guarantee and we are working hard to provide that access in a friendly, patient-oriented environment. In addition, we expanded our access to appointments to include

Saturday clinic hours. If patients can't come during the week because of work, they can come in and see us on the weekend.

Our service is unparalleled in the area. We have ten orthopaedic surgeons on staff ready to treat injuries and conditions from neck-to-toe and every bone and joint in between. They are trained to treat injuries from simple to the most complex.

In creating the Orthopaedic Center, we wanted the experience to be very convenient for patients. We have tried to include every service under one roof. The Orthopaedic Center offers the following: free valet parking; concierge services; a complimentary coffee and snack bar; elegant waiting areas with flat panel televisions; on-site registration; examination rooms; digital imaging including x-ray, dexa scan, and MRI;

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Trauma Team Works Together to Save Patient's Life

On April 23, 2008 a faint whirring noise could be heard in the distance, followed quickly by an announcement over the UT Medical Center PA. "Attention, Trauma Alert, Level 1. All personnel please report to the emergency room immediately." With that warning, it was apparent that the whirring noise, which had gotten increasingly louder, was the sound of an approaching Life Flight helicopter. When the helicopter landed, 25-year-old Joshua Curry emerged.

Earlier that day, Curry was involved in a serious farming accident. When he was being pulled out of a ditch in a combine, a chain with a hook broke, went through a windshield and hit the patient in the chest causing a laceration.

Initial x-rays showed that Curry had sustained an open clavicle fracture. However, there was an underlying problem a CT scan revealed. Apparently, Curry had also sustained a subclavian artery injury. At this time, the orthopaedic team and vascular team knew they would have to work together to save Curry.

The vascular team took Curry to the operating room for subclavian artery repair. During this time, the vascular team reconstructed the right



Joshua Curry

subclavian artery. Upon finishing, the orthopaedic team entered to fix the right clavicle. After reducing the fracture, the orthopaedic team treated the clavicle with internal fixation. The teams, working together, completed the procedure without complication and saved Curry's life. Postoperatively, Curry remained in the surgical intensive care unit for several days for close monitoring.

Nearly 4 months after the accident, Curry is on his way to full recovery.

"It still hurts a bit, but I'm feeling much better," Curry said. "I'm really glad I was brought here and they did such a good job."

A Successful Concept

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a laboratory; cast rooms; a procedure room; an urgent care room; a patient education center; and financial counseling. In addition, patients benefit from having access to the University of Toledo Medical Center, which is a Level 1 Trauma Center equipped to handle the most serious types of injuries. The site accepts the most complicated cases and treats the young, the old, the rich and the poor. We truly are the Orthopaedic Center for everybody.

Since the Orthopaedic Center is attached to the hospital, we have specialists from every medical area including trauma, pulmonary, cardiology, radiology and nephrology available for consultations. In addition, the Center also offers pain management services, rehabilitation services, and EMG and nerve studies. Our mortality rate is one of the lowest in the country.

We have recently begun to increase the size of our clinical faculty. With the hiring of sports medicine surgeon Dr. David Sohn from Duke University, we are hoping to provide even better access, service and convenience. He will be essential in providing support for the sports medicine program which currently offers orthopaedic care for 16 area schools.

We look forward to continuing to provide the highest level of access, service, convenience and quality patient care. We are competing with ourselves every day to make our services better. We try to do better than yesterday, but we will certainly do better tomorrow than we did today. We do our best to understand patient needs and provide them with the highest quality of patient care.

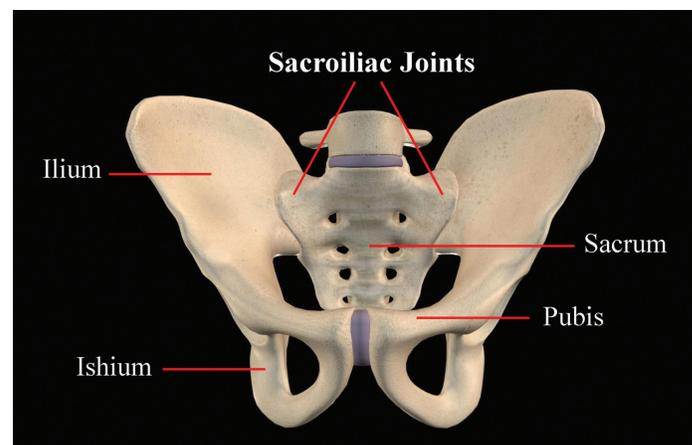
Sacroiliac Joint Pain and its Causes

The sacroiliac joint is the joint that connects the spine to the pelvis. It can be found between the sacrum, (the triangular-shaped bone in the lower portion of the spine) and the ilium of the pelvis. Joining these bones together are strong ligaments. Unlike other joints in the body, the sacroiliac joint does not have much movement. However, it is essential in transferring the load of your upper body to your lower body. In other words, weight bearing forces go through the sacroiliac joint and acetabulum. Injury to this area affects the weight bearing ability of the joints. Its motion is a combination of rotation, tilting and sliding. However, the sacroiliac joint may only slide a couple of millimeters and may tilt and rotate only three or four degrees.

Sacroiliac joint pain is a very common problem and one of the more common causes of low back pain. This type of pain is focused in the lower portion of the back and hip and may radiate out to the buttocks and lower back. In addition, it may radiate down the legs or around to the front, in the groin area. Pain is often worse with standing and walking and improves with lying down. When depending on the history and the clinical examination alone, it may be difficult to differentiate between sacroiliac joint pain and other sources of low back pain.

Examination of the sacroiliac joint usually begins with a physician conducting a Faber test. During this test, a physician forces external rotation of the affected hip in the supine position which causes pain in the sacroiliac joint. In addition, there would be tenderness over the sacroiliac joint. According to Dreyfuss et al, however, sacroiliac joint pain was resistant to identification by 12 clinical examination tests that were standardized against a confirmatory test of intraarticular injection.

There are many causes of sacroiliac joint pain including dislocation, sacroiliitis, sacroiliac joint dysfunction, and conditions that alter normal walking patterns. First, sacroiliac pain may be caused by subluxation of the joint. A slightly



Rendering of the pelvis.

displaced sacroiliac joint places excess stress on the ligaments that hold it together.

Second, sacroiliac joint pain may be caused by sacroiliitis. This is an inflammation of one or both of the sacroiliac joints. It is characterized by pain or stiffness in the lower back, pain that radiates down the leg, decreased range of motion, or pain that worsens when walking or standing.

Another cause of sacroiliac joint pain may be sacroiliac joint dysfunction. This type of sacroiliac joint pain differs from sacroiliitis because its origin is a disruption in the normal movement of the joint. This could either be the result of either too much or too little movement in the joint. When the cartilage is damaged or worn away, bones begin to rub on each other and degenerative arthritis occurs. This is typically the most common cause of sacroiliac joint dysfunction. However, pregnancy may be a cause of sacroiliac joint dysfunction in women. During pregnancy, hormones are released that allow the ligaments to



relax. This relaxation of the ligaments holding the SI joints together allows for increased motion of the joints and can lead to increased and abnormal wear on the sacroiliac joint.

Lastly, sacroiliac joint pain may be caused by conditions that alter your normal walking pattern. These conditions include: leg length discrepancy; pain in the hip, knee, ankle or foot; and pregnancy.

While there are a number of ways to determine SI joint pain, the most accurate way is to perform a diagnostic injection of the joint. This type of injection may be done in the office or more accurately using x-ray guidance with a fluoroscope. Once the doctor places a needle in the joint, an anesthetic is injected into the joint to numb the joint. If your pain goes away with the anesthetic, it can be gathered the pain you are experiencing is coming from the SI joint. In a study conducted here, 90 percent of patients that had a CT guided sacroiliac joint injection had sacroiliac joint pain confirmed by the injection.

Treatment for SI joint pain can range from conservative to surgical. First, doctors may suggest conservative measures such as rest, anti-inflammatory medication, physical therapy, and a sacroiliac belt to hold the SI joint together to ease the

pain. If these conservative measures are unsuccessful, a series of cortisone injections may be used to reduce the inflammation in and around the joint. If these tactics are unsuccessful, doctors may use one of two surgical approaches: radiofrequency ablation or fusion. Sacroiliac joint pain does remain a diagnostic and therapeutic challenge. In a study conducted here, CT scans were negative in 42 percent of symptomatic sacroiliac joints with a positive sacroiliac joint injection test.

Once it has been determined the pain is originating from the SI joint, doctors may perform a procedure called radiofrequency ablation. During this procedure, the nerves that provide sensation to the joint are burned with a needle called a radiofrequency probe. This eliminates sensation from the joint, making it essentially numb. This procedure is a temporary solution, although it can be repeated.

The other surgical option available for sacroiliac joint pain is fusion. During this procedure, the articular cartilage from both ends of the sacroiliac's bone is removed. The two bones are held together with plates and screws until they fuse into one bone. This will stop the motion between the bones, thus eliminating pain from the joint.

Marfan Syndrome

After studying his long arms, slender physique and increased flexibility, the media began to question whether or not Michael Phelps, the most decorated olympian of all time, had Marfan syndrome. While Phelps has assured the media and the public he is free from the syndrome (we also believe Phelps does not have Marfan), it has brought the syndrome affecting more than 200,000 Americans into the spotlight.

According to the National Marfan Foundation, it's estimated that at least 1 in 5,000 people in the United States have the disorder. So what exactly is Marfan syndrome? This refers to the hereditary condition that affects the connective tissue that is responsible for holding the body together. In addition, connective tissue affects growth and development. Because connective tissue is found throughout the body, Marfan syndrome can affect many of the body's systems including: the skeleton; eyes; heart and blood vessels; skin; nervous system; and lungs. It is caused by a defect in the gene that determines the structure of fibrillin, a protein that is an important part of connective tissue.

To correctly diagnose Marfan syndrome it takes examinations from many specialists including an orthopaedist, an ophthalmologist, a cardiologist, and a geneticist.

Orthopaedic doctors will evaluate the skeleton, examining the ratio of arm/leg size to trunk size. Patients with Marfan disease are typically very tall, slender, and loose jointed. In addition, they may have other skeletal abnormalities including

a protruding or indented sternum, flat feet, or scoliosis. These abnormalities are caused by ligament relaxation where there is constant pressure. Another characteristic of Marfan syndrome is having disproportionately long fingers and toes, called arachnodactyly. According to the National Marfan Foundation, however, only one-third of patients with Marfan syndrome have orthopaedic problems severe enough to merit an appointment with an orthopaedic surgeon.

A more prevalent characteristic of Marfan syndrome deals with vision. More than half of patients with Marfan syndrome experience dislocation of one or both lenses of the eyes. Retinal detachment is also a serious concern. Patients with Marfan syndrome are often nearsighted and may develop glaucoma or cataracts. These concerns can usually be fixed with eyeglasses or contacts, although surgery may be required in some cases.

A cardiologist should be consulted to examine the heart valves and the aorta. Patients with Marfan syndrome may have a defective heart valve that is larger than normal. This will result in an abnormal motion when the heart beats. In addition, the heart may leak, creating heart murmurs. Another serious concern for patients with Marfan syndrome is aortic dilation which occurs when the wall of the aorta is weakened and stretches. Drugs, such as beta blockers, may be used to control the heart for Marfan syndrome patients. However, surgery may be needed to replace a valve or repair the aorta.

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Marfan Syndrome

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Marfan syndrome may also affect the nervous system, skin and lungs. The brain and the spinal cord are surrounded by a membrane called the dura, which is comprised of connective tissue. Marfan disease weakens and stretches the dura, causing weight on the vertebrae in the lower spine which wears away the bone and surrounding spinal cord. Many people with Marfan syndrome also develop stretch marks on their skin without significant weight change or pregnancy. Finally, Marfan syndrome causes restrictive lung disease in 70 percent of patients with Marfan syndrome.

Marfan is a serious concern for patients that have a family history of the condition and there are specific problems in at least two of the body systems known to be affected. For a patient with no family history, at least three body systems must be affected before a diagnosis is made. According to the National Marfan Foundation, two of the systems must show clear physical signs that are relatively specific for Marfan syndrome. Each child of a person with Marfan syndrome has a 50 percent chance of inheriting the disorder.

September 2008

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Z	Y	R	D	O	Q	C	O	G	E	G	Z	A	Q	I	SUBLUXATION
G	B	P	I	W	R	H	R	P	H	P	B	L	Z	O	INJECTION
R	J	D	O	J	I	T	M	U	V	Y	T	U	E	R	MARFAN
S	W	J	L	E	D	N	H	A	M	Y	F	C	G	C	FIBRILLIN
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Editors: Dr. Nabil Ebraheim, department chairman and professor of orthopaedics, and Dave Kubacki, assistant to the chairman.

Neither Dr. Ebraheim nor Dave Kubacki have any relationships with industry to disclose.

Department of Orthopaedic Surgery
3000 Arlington Ave
Toledo, Ohio 43614
For appointments, call 419.383.3761.

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Department of Orthopaedic Surgery
The University of Toledo
3000 Arlington Ave
Toledo, Ohio 43614

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