Pediatric Orthopaedics & Scoliosis

T he orthopaedics program at the University of Chicago Hospitals has been named among the top orthopaedics programs in the country in U.S. News & World Report’s prestigious annual survey of over 6000 hospitals in the country.

The pediatric orthopaedics program provides both surgical and non-surgical treatment for conditions such as:
• Scoliosis and other spinal disorders
• Cerebral palsy and other neuromuscular conditions
• Congenital anomalies/birth defects of the extremities
• Hip diseases in children of all ages, i.e. developmental hip dysplasia, slipped capital femoral epiphysis and avascular necrosis
• Leg length differences
• Trauma and growth disturbances
• Club feet.

Treating Spinal Disorders

The pediatric orthopaedics program offers expertise in the evaluation, assessment and treatment of spinal problems in infants, children and adolescents. The most common conditions seen are:
• Scoliosis
• Kyphosis
• Spondylolysis
• Spondylolisthesis
• Back pain of various etiologies.

Scoliosis

Scoliosis affects two of every 100 children. Most curves do not progress and can be followed with observation. Children whose curvature is likely to progress:
• have curves greater than 20 degrees.
• are skeletally immature.
• are girls who have not yet started to menstruate.

If there is a significant risk of progression, patients should be followed every four months. If the risk of progression is low, they should be followed every six months to one year.

Treatment is reserved for those whose curves have a significant risk of progression. Bracing is used for skeletally immature children in the 25 - 40 degree range. Bracing does NOT make scoliosis better. It has been shown, however, to be effective in preventing progression in 75 percent of patients when worn for 16 - 18 hours per day.

Skeletally immature children with curves of 40 - 45 degrees or greater, and skeletally mature children with curves greater than 50 degrees are candidates for surgery.

Continued on reverse side

1) Preoperative x-ray of a 15 year old girl with a 60 degree thoracic and 45 degree lumbar scoliosis.

2) X-ray showing postoperative correction. Both curves now measure 23 degrees.

3) Postoperative lateral x-ray showing restoration of normal sagittal alignment.
Pediatric Orthopedics & Scoliosis, cont.

Surgery for Scoliosis

Surgery for the correction of spinal deformity has become increasingly sophisticated. The current rod systems have increased the amount of correction that is possible considerably. Postoperative bracing or casting is no longer necessary due to multiple fixation points that can be used to attach the rods to the spine. Newer neurologic monitoring systems and the use of cell savers and autologous blood donation continue to make the surgery even safer. Early mobilization has decreased hospital stay considerably. Long-term results of the surgery have been excellent.

New research into the use of bone graft substitutes and bone morphogenic protein, some of which is being carried out in the Department of Orthopaedics at the University of Chicago, should make the process of harvesting a patient’s own bone for fusions obsolete.

Working in concert, surgeons in the Department of Orthopaedics and the Department of Pediatric Neurosurgery have undertaken a combined approach that should enable them to care for children with a wide array of complex spinal problems.

Dr. Sturm earned his medical degree from New York University School of Medicine. He completed his surgical internship and orthopaedic surgery residency at the Mount Sinai Medical Center in New York. He was the Russell Boyce spine fellow at the Ottawa Civic Hospital/University of Ottawa and completed a fellowship in pediatric orthopaedics at the Children’s Hospital, Boston, MA.

Dr. Sturm was formerly a staff orthopaedic surgeon at the Floating Hospital/Tufts New England Medical Center; Assistant Professor of Orthopaedics, Tufts University School of Medicine; Vice Chairman of the Department of Orthopaedic Surgery, Children’s National Medical Center, Washington, D.C.; and Associate Professor of Orthopaedic Surgery, George Washington University School of Medicine.

Dr. Sturm’s clinical interests include scoliosis and other spinal deformities, children’s fractures, hip problems, club feet, congenital abnormalities and cerebral palsy.

His research interests include scoliosis and lower extremity fractures in children. He is a member of the Scoliosis Research Society, the International Research Society of Spinal Deformity and the Pediatric Orthopaedic Society of North America.

Dr. Sullivan did his residency at Northwestern University and completed a fellowship in pediatric orthopaedic surgery at the University of California, San Diego. He has been a staff pediatric orthopaedic surgeon at the University of Chicago Children’s Hospital for 14 years.

He has clinical interests in scoliosis and other spinal deformities, cerebral palsy, congenital abnormalities, fractures, acquired extremity deformities, hip problems, club feet and leg length discrepancies.

Dr. Sullivan is a member of the Pediatric Orthopaedic Society of North America.

To schedule a clinic appointment with Dr. Sullivan or Dr. Sturm, please call (773) 702-6169. To consult directly with either surgeon, please call (773) 702-5992.

To learn more about the University of Chicago Children’s Hospital, visit us at uchospitals.edu.