

## Trusted Advisors

### Adolescent Idiopathic Scoliosis A New Orthopaedic Solution

By Corey Gehrold

Patients suffering from Adolescent Idiopathic Scoliosis (AIS), a curvature of the spine in the coronal plane, can take comfort in the knowledge and experience of patient-focused pediatric orthopaedist Tamara A. Topoleski, M.D. and the Orlando Orthopaedic Center team.

Dr. Topoleski is among the 16 board certified physicians within nine specialties at OOC that provide a full-range of state-of-the-art, leading edge orthopaedic services to patients across their five local offices. Specializing in pediatric orthopaedics, Dr. Topoleski has managed to make her childhood dreams of being a successful surgeon come true by combining her love of children with her passion for medicine. Upon completion of her residency at New York Medical College and their affiliated hospitals, she became a Pediatric Orthopaedic Fellow at Shriners Hospital for Children in Tampa, Florida. It was at the Shriners Hospital that she received specialized training in all aspects of children's orthopaedics, including pediatric spinal surgery and the Ilizarov method.

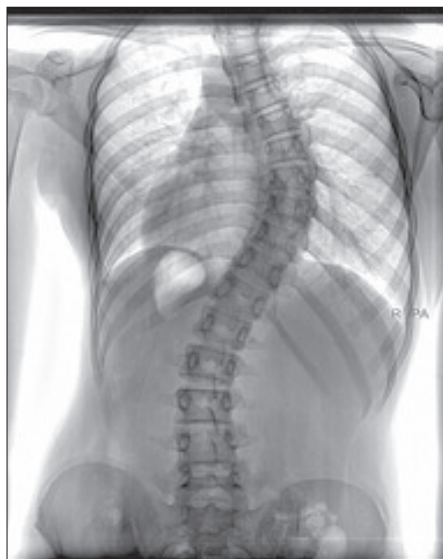
"For me, it has always been about putting the patient first, making the child comfortable with his or her surroundings," Dr. Topoleski says. "Orthopaedic care involves more than just surgery and rehab; we have to consider what's best for the patient, their overall quality of life and ensure that they know exactly what to expect."

AIS is a twisting of the spine coupled with curvature producing a deformity in both coronal and sagittal planes. Interestingly, females are most commonly affected. The exact cause is not known, however research suggests that genetics play a role.

"Research shows that changes in muscles, the spinal column and the chemistry of cartilage in discs suggest abnormalities are likely secondary to the primary scoliosis and not a causative factor," says Dr. Topoleski. "Each case is unique, in that curves can occur in various degrees of severity in the cervical, thoracic and/or lumbar spine; it's important to focus on patients on an individual basis because no two curves are exactly alike."

Symptoms rarely include back pain. Hip asymmetry, a prominent shoulder blade, and rib cage asymmetry on clinical exam are common findings. "It's important to seek treatment for AIS because if left untreated, it may result in significant deformity and cardio-pulmonary compromise," says fellow Orlando Orthopaedic Center physician Dr. Michael McCleary. After earning his degree from Medical College of Ohio, Dr. McCleary completed his residency in Pediatrics at Akron's Children's Hospital in Akron, Ohio. After completing his residency in pediatrics, he went on to complete a fellowship in Primary Care Sports Medicine at Akron Children's Hospital as well. "In addition to psychological distress, advanced deformity can have physical consequences including compression of the heart and lungs," Dr. McCleary says.

The initial evaluation should include a medical history, physical and neurological exam



as well as diagnostic tests. "Medical history includes questions about the parent's genealogy so we can get a complete picture of family health conditions and concerns," says Dr. McCleary. "We also look at skeletal markers that can help determine when a patient reaches skeletal maturity. The level of skeletal maturity helps determine when, and if, surgery is necessary," according to Dr. Topoleski.

The principle of surgery is to stop the progression of the curve of the spine and leave the patient balanced. "Cessation of the curve progression is achieved with bony fusion between the affected vertebrae while correction is supported by spinal instrumentation until the fusion is solid," says Dr. Topoleski. Depending on the type of instrumentation used, a brace may or may not be necessary following surgery.

"Surgical fusion is very effective at halting curve progression and most patients report that they are happy with the outcome," says Dr. Topoleski. "Adolescents, who have their whole lives front of them, can be assured that scoliosis does not need to alter or restrict their functional nor professional futures."

"At Orlando Orthopaedic Center our goal, either with surgical or non-surgical treatment, is to provide top quality care and to produce results that increase the quality of life," says Dr. McCleary.

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**Tamara A. Topoleski, M.D.**  
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Dr. Topoleski attended Cornell University in Ithaca, New York where she completed her B.S. degree in physiology and a M.S. degree in textile science with a minor in cellular physiology. She earned her M.D. degree from New York Medical College. She remained there to complete a general surgical internship and an orthopaedic residency with the college's Affiliated Hospitals.

Upon completion of her residency, Dr. Topoleski became a Pediatric Orthopaedic Fellow at Shriners Hospital for Children in Tampa, Florida. She received specialized training in all aspects of children's orthopaedics, including pediatric spinal surgery and the Ilizarov method.

Throughout her training, Dr. Topoleski has been involved in both clinical and laboratory research. She has presented her studies at national meetings for orthopaedic and pediatric surgeons.



**Michael D. McCleary M.D.**  
Specializing in Musculoskeletal Medicine

A long-time native and resident of Ohio, Dr. McCleary joined the staff and physicians of Orlando Orthopaedic Center in August 2007. Before moving to the sunshine state, he earned a Bachelor of Science degree in Biology at Kent State University. From there, he attended the Medical College of Ohio to earn his medical degree before completing a residency in Pediatrics at Akron's Children's Hospital (ACH) in Akron, Ohio. It was also at ACH where he completed a fellowship in Primary Care Sports Medicine, providing him specialty training in the care of musculoskeletal and medical problems of active individuals, particularly athletes. During his fellowship, Dr. McCleary served as Assistant Team Physician for the University of Akron as well as Walsh University and Co-Team Physician for Mogadore High School.

In addition, Dr. McCleary gave his time and expertise toward numerous sporting events including MAC and Big East Conference Championships in various collegiate sports. He also served on the medical staff for Ohio High School Championship events and tournaments.

Dr. McCleary is an active participant in education and research. He has given numerous lectures to fellow healthcare providers as well as to the public, coaches and parents. Dr. McCleary's dedication to education and research includes published works in medical journals including the American Academy of Pediatrics' News Sports Shorts and Current Sports Medicine Reports and co-authoring a chapter in the book "Care of the Young Athlete".

Locally, Dr. McCleary is the Team Physician for Hagerty High School. He is also a member of the American Medical Association, the American Academy of Pediatrics, and the American Medical Society for Sports Medicine.



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