

## Vertebral Body Stapling

- Application of metal staples to the front of the spine
- Staples are inserted between two vertebral bodies, which squeezes the growth plates and slows the growth of that side of the spine
- There's the potential to gradually straighten the spine, or to at least keep the degree of scoliosis from getting worse

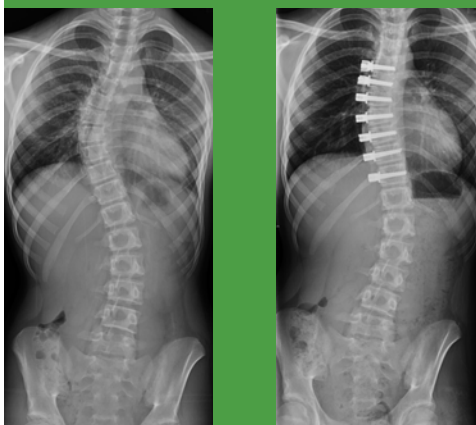
Reference, Betz RR et al. Vertebral body stapling: A treatment option for the growing child with scoliosis. Proceedings of the SRS 43 Annual Meeting. Salt Lake City, UT. September 2008

## Vertebral Body Tethering

- Titanium pedicle screws placed on the outside of the scoliotic vertebral bodies
- Polyethylene-terephthalate (PET)\* flexible cable connects and compresses the adjacent screws to help straighten
- Allows the spine to grow and remain flexible
- One time surgery
- No lengthening required
- Can be used with lumbar staples (VBS)
- Can do later fusion if needed

Reference, Shriners Hospitals for Children-Philadelphia. Vertebral Body Tethering (VBT): A new fusionless treatment option for scoliosis

**Dr. Hoernschemeyer used tethering to help correct Kaitlyn's spine.**



Before Fusionless Spine Surgery

After Fusionless Spine Surgery

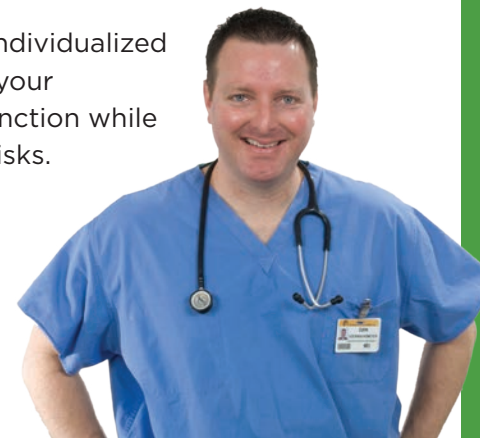
## Our approach

**Daniel G. Hoernschemeyer, MD** is an assistant professor of orthopaedic surgery. He is a member of the Pediatric Orthopaedic Society of North America. Dr. Hoernschemeyer completed a fellowship in Pediatric Orthopaedic Surgery and Spinal Deformity at John Hopkins University. In addition to serving the general orthopaedic needs of young patients, Dr. Daniel Hoernschemeyer and his staff offer specialized care for a full range of pediatric spine problems.

We are committed to making your treatment as easy on you as possible. Most of the services you will need are handled on-site, with access to the most sophisticated technology to provide you with the best care available.

Open communication, personal attention, and shared decision-making provide the foundation for our relationship. We begin with a comprehensive physical examination using the most advanced imaging technology available, which enables us to provide an accurate diagnosis.

We will then develop an individualized treatment plan to relieve your discomfort and restore function while minimizing any possible risks.



## Quality of care

At the Department of Orthopaedic Surgery, pediatric care is a priority. Our staff works with experts in a variety of medical disciplines, such as Child Health, Physical Medicine, and other specialties, to apply a team approach that addresses a patient's medical, social, emotional, and physical problems.

### We offer specialized care in these areas:

- Pediatric Orthopaedics
- Blounts
- Cerebral Palsy
- Clubfoot
- Developmental Dysplasia of the Hips
- Scoliosis
- Leg Length Discrepancy
- Osteogenesis Imperfecta
- Skeletal Dysplasia
- Slipped Capital Femoral Epiphysis
- Spina Bifida
- Spondylolisthesis
- Spondylolysis
- Legg-Calve-Perthes
- Fractures
- Kyphosis

**EACH PATIENT IS UNIQUE SO OUR GOAL IS TO GET TO KNOW YOU AS A PARTNER IN YOUR CARE.**

### Pediatric Orthopaedic Clinic

204 N. Keene Street #104  
Columbia, MO 65201  
573.884-7874

### Women's & Children's Hospital

404 N Keene St  
Columbia, MO 65201  
573.875.9000

### Missouri Orthopaedic Institute

1100 Virginia Avenue  
Columbia, MO 65215  
573.882.BONE

[spinedocforkids.com](http://spinedocforkids.com)

## The path of scoliosis surgery



PEDIATRIC ORTHOPAEDICS



**MU** Women's and Children's Hospital  
*University of Missouri Health Care*

# The steps of surgery

spinedocforkids.com

## 1 Pre-Operation

The morning of surgery, the patient and the family will report to the Children's Hospital Pre-Op Holding Area. Here our nursing staff will get the patient ready for surgery.

A **Child Life Specialist** is present to support the children teens by teaching coping strategies and offer support to the families. This helps each child feel better prepared for their surgery and hospitalization.



## 2 Pediatric Anesthesiologists

The Pediatric Anesthesia Team has a combined 50+ years of taking care of kids. Our doctors try to accommodate children with the least amount of pain possible. An IV can be started once the patient is asleep in the operating room. Our team does an excellent job monitoring vital signs and controlling blood pressure and body temp throughout the case. This helps to minimize blood loss during the surgery.



## 3 Operating room & Neuromonitoring

Once your child reaches the Operating Room, our nursing staff and team will keep the family updated throughout the procedure. A family member can request instant updates from the nursing staff at any time.

Our Neuromonitoring Team allows our OR team to know exactly what is going on with your child's spinal cord at all time during the surgery. Any changes are communicated directly to the surgeon. Each team member will be working hard to assure everything is running smoothly during their surgery.

Each family is Discharged home with a set of instructions so that the family has a clear understanding of the restrictions that should be followed. Wounds care instructions, discharge medications, and follow up appointments are discussed with each individual family prior to leaving the hospital.



## 4 Evening after surgery

The evening of surgery is spent in the Pediatric Intensive Care Unit. Here the nursing staff and attending physicians monitor the patient's vital signs and post-operative pain. Pain medication is adjusted accordingly to ensure the patients needs are met. Each room is large enough to allow for families to stay with the patient throughout the night.



## 5 Physical Therapy and transfer

Once the scoliosis patients are stable, they are transferred to the peds or adolescent floors. Each of the 43 private rooms is spacious for families and includes all the accommodations the child will need. Here the child progresses with physical therapy to become more mobile. The rooms include TV, blue ray DVD's and a Wii in every room. Each room has a private bathroom for the patient and their family.

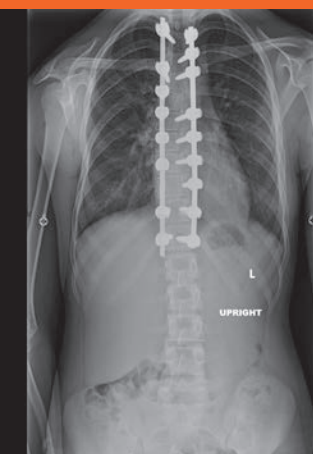
## 6 Discharge

Physical Therapy begins the day after surgery. Our dedicated therapy team at Children's Hospital works with each child to help them safely progress from sitting at the side of the bed to ambulating in the hallways.



Fusionless Spine Surgeries using the latest advancements in medical technology

13 YEAR-OLD WITH ADOLESCENT SCOLIOSIS, 53 DEGREE CURVE



POSTERIOR SPINAL FUSION WITH INSTRUMENTATION