

# STEVEN CHUDIK MD

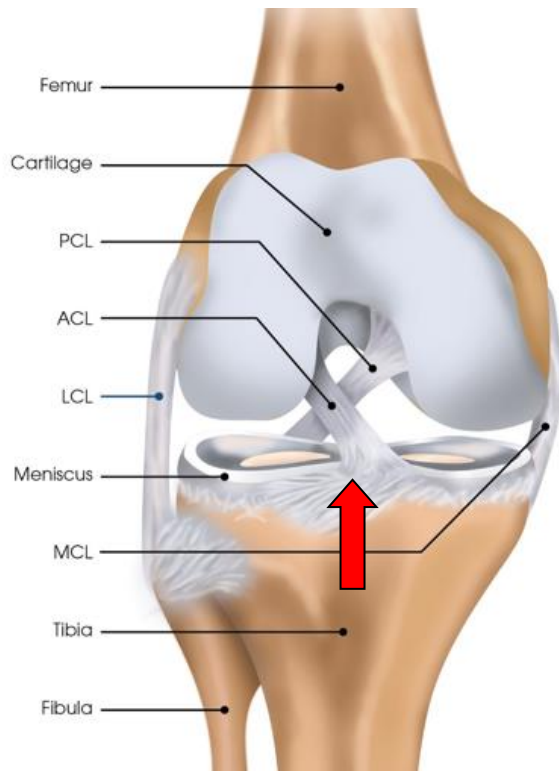
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## SHOULDER, KNEE & SPORTS MEDICINE

### Tibial Spine Avulsion Surgery for Pediatric Patients

#### Indications for Surgery

The anterior cruciate ligament (ACL) is one of the four major ligaments of the knee. This ropelike structure in the center of the knee helps maintain stability. The ligament has a bony attachment to the femur as well as the tibia. The tibial attachment is known as the tibial spine. In some injuries where the ACL appears to be torn, there is actually an avulsion fracture of the tibial spine, meaning that the ACL has pulled a fragment of bone away from the rest of the tibia. Patients often have similar symptoms to an ACL rupture, such as swelling, pain, and instability. It is important for the tibial spine fracture to heal properly and restore stability to the knee. Surgery is often required to reduce and repair the bone fragment and ACL back to the tibia.



Arrow indicating location of tibial spine and ACL attachment.



CT of tibial spine fracture



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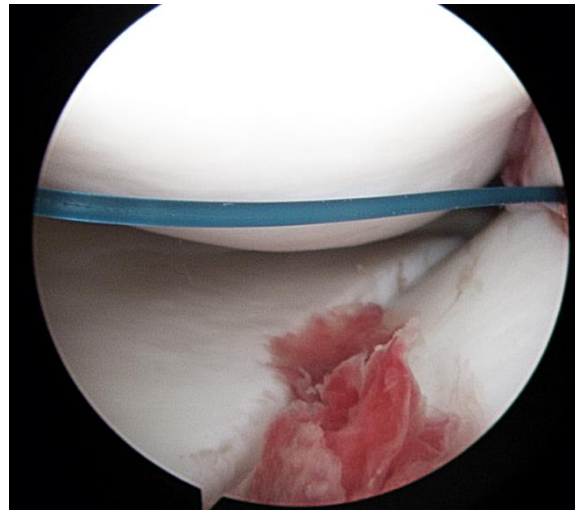
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### Contraindications to Surgery

- Persons who demonstrate an inability or unwillingness to complete the necessary postoperative rehabilitation program should not have surgery
- Infection of the knee, current or previous, is a concern, but not an absolute contraindication



Arthroscopic surgical photos of tibial spine fracture. The fracture line across the tibia can be seen, as well as bleeding that indicates a healing response to the injury

### Potential Surgical Risks and Complications

- Infection
- Nerve injury (numbness) in the skin around the knee. It is not uncommon to have some small area of numbness, temporary or permanent, around the incisions
- Knee stiffness (loss of knee motion) requiring prolonged rehabilitation or repeat surgery
- Persistent pain or failure to produce bony healing
- A clot in the veins of the calf or thigh (deep venous thrombosis, phlebitis) that may break off in the bloodstream and cause a pulmonary embolus in the lungs (rare)

### Hospitalization and Anesthesia

- Outpatient surgery (go home the same day)
- General anesthetic, femoral nerve block or IPACK and Adductor canal nerve block (See "Your Surgical Experience" packet)



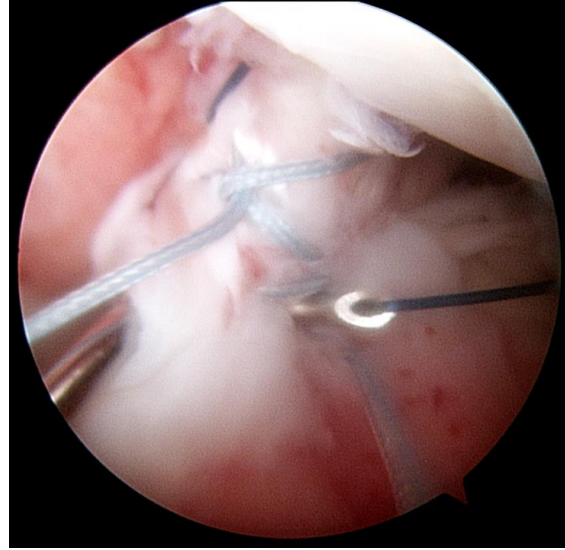
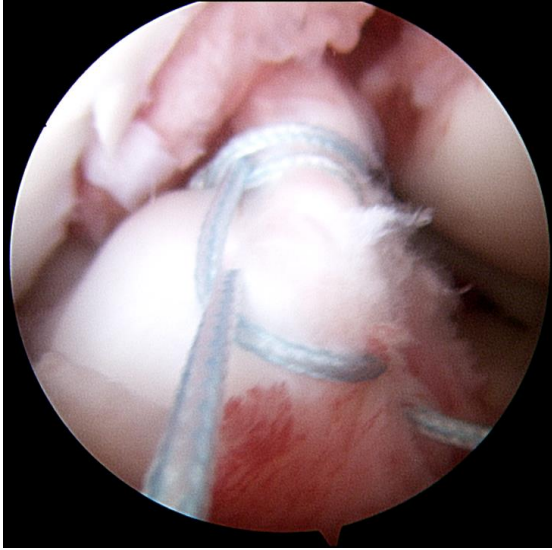
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## SHOULDER, KNEE & SPORTS MEDICINE

### General Surgical Technique

Dr. Chudik performs tibial spine fracture repair arthroscopically through small incisions. Using a tiny camera and tools, he is able to locate the fracture and then realign the fragment into its original position. Dr. Chudik then secures the bony fragment with surgical sutures so that it will heal properly. He is also able to inspect and test the ACL to make sure there is no significant damage to the ligament.



Arthroscopic photos of tibial spine repair. Left, the ACL attached to the bony tibial spine is captured with surgical sutures and pulled back down into proper fixation on the tibia. The sutures are passed with arthroscopic instruments developed by Dr. Chudik (right).

### Preoperative instructions

- Discontinue birth control pills
- Stop blood thinners (aspirin, Coumadin®, Lovenox®, Xarelto®) according to the prescribing doctor's directions
- Stop anti-inflammatory medicines (ibuprofen- Advil®, Motrin®, naproxen- Aleve®, etc.)
- Stop nutritional supplements and drinks (Vitamin C, ginseng, ginkgo biloba, etc.)
- Stop smoking for surgery and during the first six weeks postoperatively to allow proper healing of tissues

**Do not eat or drink anything after midnight the evening before surgery**



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### Post-Operative Course

- Post-operative plaster splint keeping the knee in terminal extension (fully straight) is applied and worn for a few days to one week
- Full weightbearing in knee brace locked to full extension (straight) for four weeks
- Knee brace worn until six weeks post-op
- Keep the wound clean and dry for the first three days after surgery. Showering lightly is allowed after three days but wounds cannot be submerged under water for three weeks
- Return to school in less than one week as long as the extremity can be elevated
- Physical therapy to restore motion, strength, and proprioception (balance) for up to four to six months
- After the knee is fully rehabilitated, **Dr. Chudik's Knee Functional Capacity Evaluation** is performed to determine that the knee is fully rehabilitated and more importantly, that any errors in movement patterns known to increase knee injury risk are corrected and the patient can return to activities safely

### Return to Activity

- Return to walking and regular daily activities once off crutches
- Return to running at about three months post-op
- Return to sports at four to six months post-op

### Scheduling Surgery

Contact Dr. Chudik's surgery scheduler at 630-324-0402 or [contactus@chudikmd.com](mailto:contactus@chudikmd.com) to:

- Schedule the date and location of surgery; the hospital/surgery center will call the day before with the arrival time
- Schedule an appointment with Dr. Chudik's PA to complete pre-operative surgical education and other requirements
- Schedule a post-operative appointment with Dr. Chudik's team to remove sutures and review post-op instructions

