

Delay in surgery can cause irreparable meniscus tears in children with ACL injuries

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For children aged 14 and under, delaying reconstructive surgery for anterior cruciate ligament (ACL) injuries may raise their risk of further injury, according to a new study by pediatric orthopaedic surgeons. If surgery occurs later than 12 weeks after the injury, the injury may even be irreparable.

"Treating ACL injuries in these children is controversial, because they are still growing and the surgery has a small risk of causing a growth disturbance," said study leader J. Todd Lawrence, M.D., Ph.D., an orthopaedic surgeon at The Children's Hospital of Philadelphia. "However, we found that the risk of additional injury outweighs the risk of growth disturbance in most children."

Lawrence's study appeared in a recent issue of *The American Journal of Sports Medicine*.

ACL injuries have increased among children and young adults in recent years, possibly because of increased participation in high-level sports such as football, skiing, lacrosse, hockey and soccer, all of which place a high demand on the knees, where the ACL is located.

This retrospective chart analysis looked at 70 patients 14 years of age and under with ACL injuries at The Children's Hospital of Philadelphia between 1995 and 2005. The average age at injury was about 13 years with an average age at surgery of about 13.5 years. Twenty-nine of the patients underwent [reconstructive surgery](#) more than 12 weeks from the time of injury. In patients who were reconstructed more than 12 weeks after their injury, the rate of serious irreversible injuries, such as medial meniscus tears that could not be repaired and full thickness [cartilage](#) injuries was up to 4-fold higher. The medial meniscus plays an important role in protecting against arthritis in the knee.

"We've developed surgical techniques to avoid the

growth plates in the knee but looking forward for each patient we still think about onset of arthritis within the next 20 years in the affected knee of young children with a complete tear of their ACL. More research is needed to continue to give us information that is crucial for making informed decisions on care for children and [young adults](#) with ACL injuries, but seeing these irreparable injuries that we know can lead to arthritis down the road had helped tip the balance in favor of early surgery for most children with an ACL tear," added Ted Ganley, M.D., the senior author on the study.

More information: Degeneration of the knee joint in skeletally immature patients with a diagnosis of an anterior cruciate ligament tear: Is there harm in delay of treatment? *American Journal of Sports Medicine*, Vol. 39 No. 12. [DOI: 10.1177/0363546511420818](#)

Provided by Children's Hospital of Philadelphia

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