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Current ACL return to sport criteria fails to identify second injury risk, say researchers

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Returning to your sport after an anterior cruciate ligament (ACL) injury and not suffering a second injury is often difficult but for a kid who suffers an ACL injury figuring out how to prevent reinjury is even more tricky, say researchers presented today at the American Orthopaedic Society for Sports Medicine's Annual Meeting in San Diego. This research study also received the STOP Sports Injuries Award during the meeting.

The incidence of a second ACL injury after having it repaired ranges from 25—33% in young, active individuals, with the greatest risk being in the first year after treatment. Recent research has highlighted that standard return to play criteria may help identify athletes at an increased risk of injury. This study looked at how the criteria that is normally applied to young athletes being able to return to play is accurate and whether that leads to any decreased risk of reinjury.

"The findings of our study suggest that current return to play measures may not correctly assess young patients who are at risk for a future injury," said lead researcher, Mark Paterno, Ph.D., PT, MBA, ATC from the Cincinnati Children's Hospital Medical Center in Ohio. "Additional work needs to be undertaken that can better identify, validate and incorporate clinically important measurements such as functional hop testing, strength testing and patient reported outcome scores into injury prevention strategies."

Paterno and his team evaluated 159 individuals ranging in age from

13-25 years old. The participants all underwent a primary, unilateral ACL reconstruction, performed rehabilitation and were released to continue to play pivoting/cutting sports. At the time the patients returned to sports, only 26% of the individuals met the standard return to play criteria at a >90 criterion level, which is considered "passing." They were tracked for a reoccurrence of a 2nd ACL injury for 24 months. Within this 2-year time frame 35 patients suffered a 2nd ACL injury, 26 of the 35 occurred within the first 12 months after injury. Interestingly, there was no difference in 2nd injury rates when comparing those who met all current return to sport criteria and those who failed to meet all return to sport criteria, suggesting the current criteria are not identifying young athletes at high risk for future injury.

"Our results further highlight that there may be gaps in function, strength, movement quality and psychological factors which relate to how frequently an adolescent reinjures their ACL. We hope that our work along with many others, will help to better identify the relationship between these diverse factors as a better measure of readiness to safely return to sport," said Paterno.

Provided by American Orthopaedic Society for Sports Medicine

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