

# Does Surgery Affect the Recovery Rate of ACL injuries in Football Players?

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## Abstract

This study was designed to discover if surgery affected the recovery rate of Anterior Cruciate Ligament (ACL) injuries. Literature that was currently available on this subject was studied. A survey was designed and distributed to high school football coaches and high school football players who had suffered ACL injuries. The survey was designed to determine how the injuries occurred, whether the athlete had surgery, and the recovery time. The prediction was that surgery would lessen the recovery time for an ACL injury.

## Introduction

cruciate ligaments. (Coleman 2018). Studies indicate the need for physical therapy, but not necessarily a need for surgery. However, studies have shown that reconstruction surgery combined with the physical therapy can serve to improve the overall recovery time (What Football Players Need to Know About ACL Injuries). This study of high school football players with ACL injuries was designed to determine if surgery increased or decreased the amount of recovery time needed. Research has shown that an average of 12.2 months is required for players to return to the playing field (ACL Knee Injury: Players Who Overcame It). To discover the recovery time of local high school football players, surveys were distributed to high school football coaches and high school football players suffering from ACL injuries. The surveys questioned how an injury occurred and how the injury was treated. Information was gathered about how long the athletes were out of

## Method of Research

injuries and whether or not they had surgery as well as if the surgery or lack of decreased or prolonged the athlete's recovery time. It was The method of research was centered around high school football players who have sustained ACL injuries decided to create a survey for these athletes and their coaches that asked questions that pertained to these injuries such as how this injury occurred, did this injury require surgery, and how long did it take to return to play. Surveys were handed out to 5 high school football programs and their coaches that asked questions concerning ACL injuries and the recovery rates associated. In addition, research was gathered and numerous academic articles and accredited

gather as much base knowledge as possible about this injury and the typical recovery rates associated with it in order to obtain the most accurate compassion as possible and to either support or contradict our hypothesis. The results from our research and surveys and an independent T-Test was used for comparison and evaluation.

## Results

Surveys were obtained from two high school football coaches. Ways they see this injury occur in football were planting, cutting, sudden change of direction, impact from outside force, and contact to the knee with skill positions. Both coaches indicated that the athlete is out approximately 6 months when this injury occurs. From the surveys collected from athletes, 75% received surgery while 25% did not. Based off these surveys it was also concluded that the majority of these injuries occurred from a sudden change of direction. When the athletes that had received surgeries and physical therapy for their ACL injures where studied, it was concluded that the average recovery time was a time period of 12 to 12 ½ months along with one outlining athlete who recovered in 11 months and one week while the athletes who did not proceed with surgery and only attended physical therapy averaged a recovery time of 7 months. While the recovery time of the athletes who did not receive surgery was less than those who did, 50% of those suffered a complete tear later in their athletic career and had to undergo surgery while 0% of the athletes who originally received surgery faced reinjury. The conclusion was made that although having surgery prolongs the recovery time of an athlete it is a

## Discussion

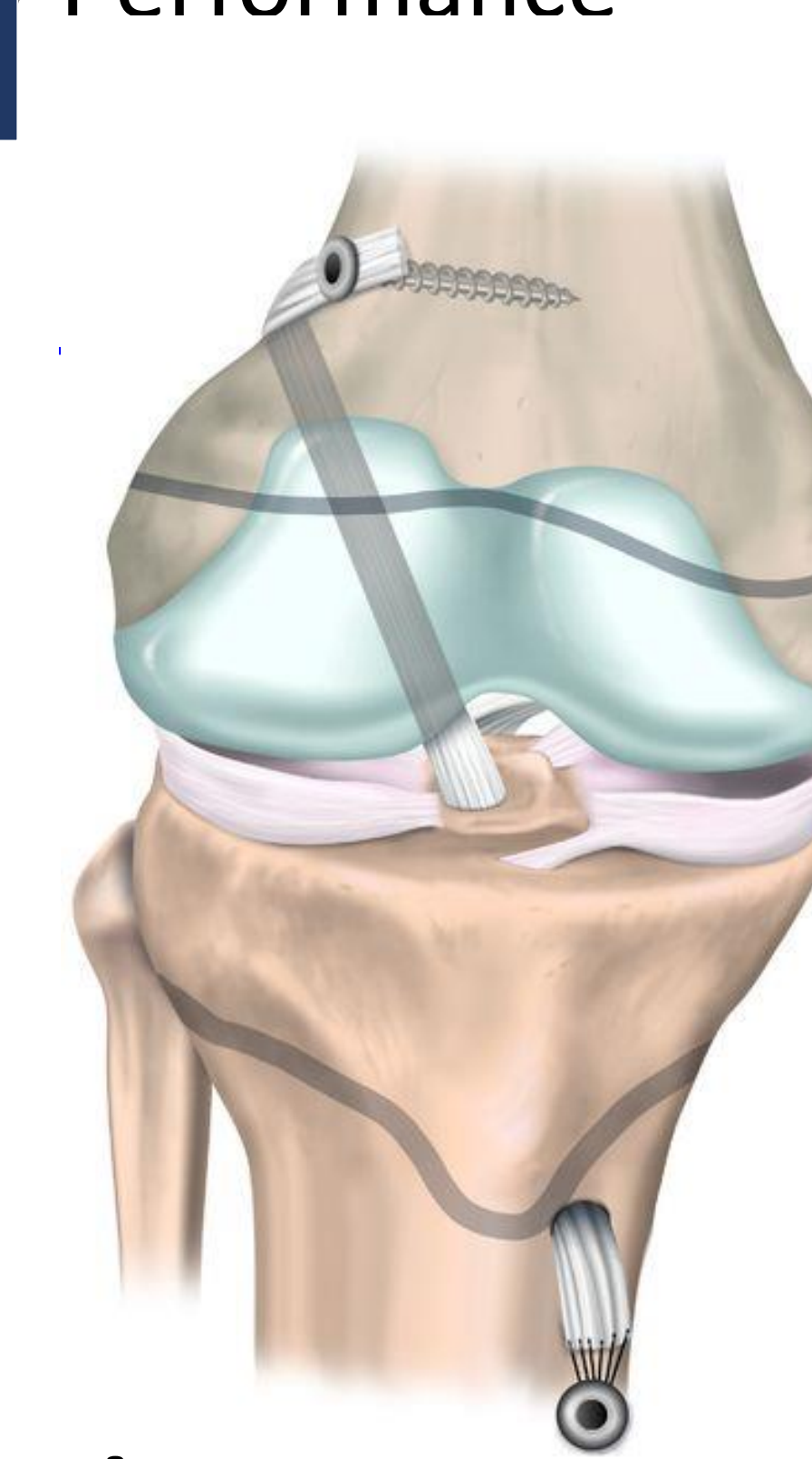
The goal of the study was to analyze the information and make a conclusion as to whether or not surgery after an ACL injury had an effect on the recovery time of the injured individual. An independent T-Test was used in order to compare the two different groups, those who elected to have surgery vs. those who did not. Based on prior knowledge and the accredited articles, inferences were made that those who decided to have surgery would ultimately return to the field of play sooner than those who did not. However, data was collected in order to make an educated conclusion towards whether or not surgery actually had an effect on recovery

## Conclusion

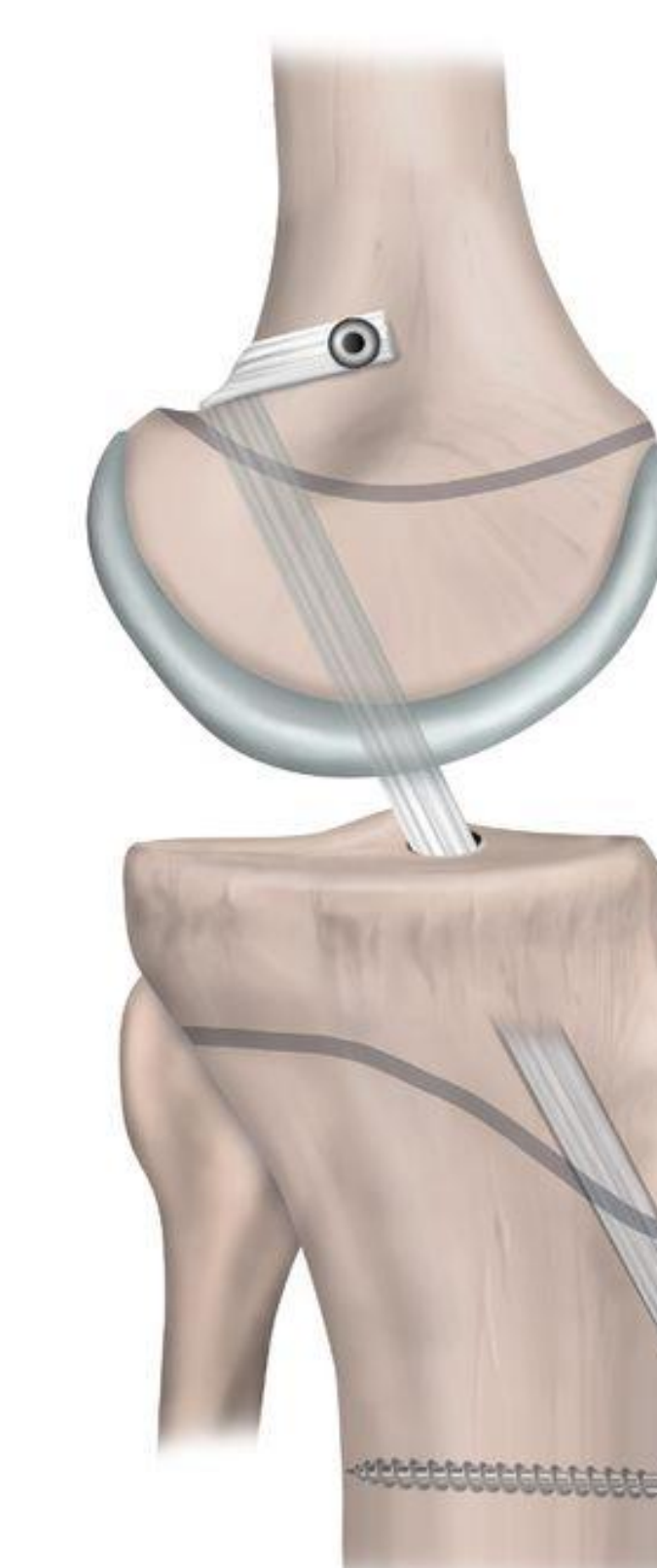
Based on the data collected, conclusions were made that although surgery may result in a longer recovery time, it lessens the chance of reinjuring the ACL later in your career. While those who opted to have surgery did take an average of around 3 months longer, none of those athletes reinjured their ACL. While the ones who opted to avoid surgery and do physical therapy instead did in fact return to their sport quicker, half of those athletes suffered a complete tear later in their athletic careers. Therefore, those who attended physical therapy and elected to not have surgery did in fact return to the field quicker, however they were at a substantial risk for reinjury in comparison to someone who had the same injury but underwent surgery. Therefore, the data that was collected indicated that surgery actually increased the immediate recovery time, but it also decreased the chance of reinjury of the ACL. Based on the results gathered, it was concluded that surgery, as opposed to only physical therapy, results in a longer timetable in which you return to the field, but it improves

## References

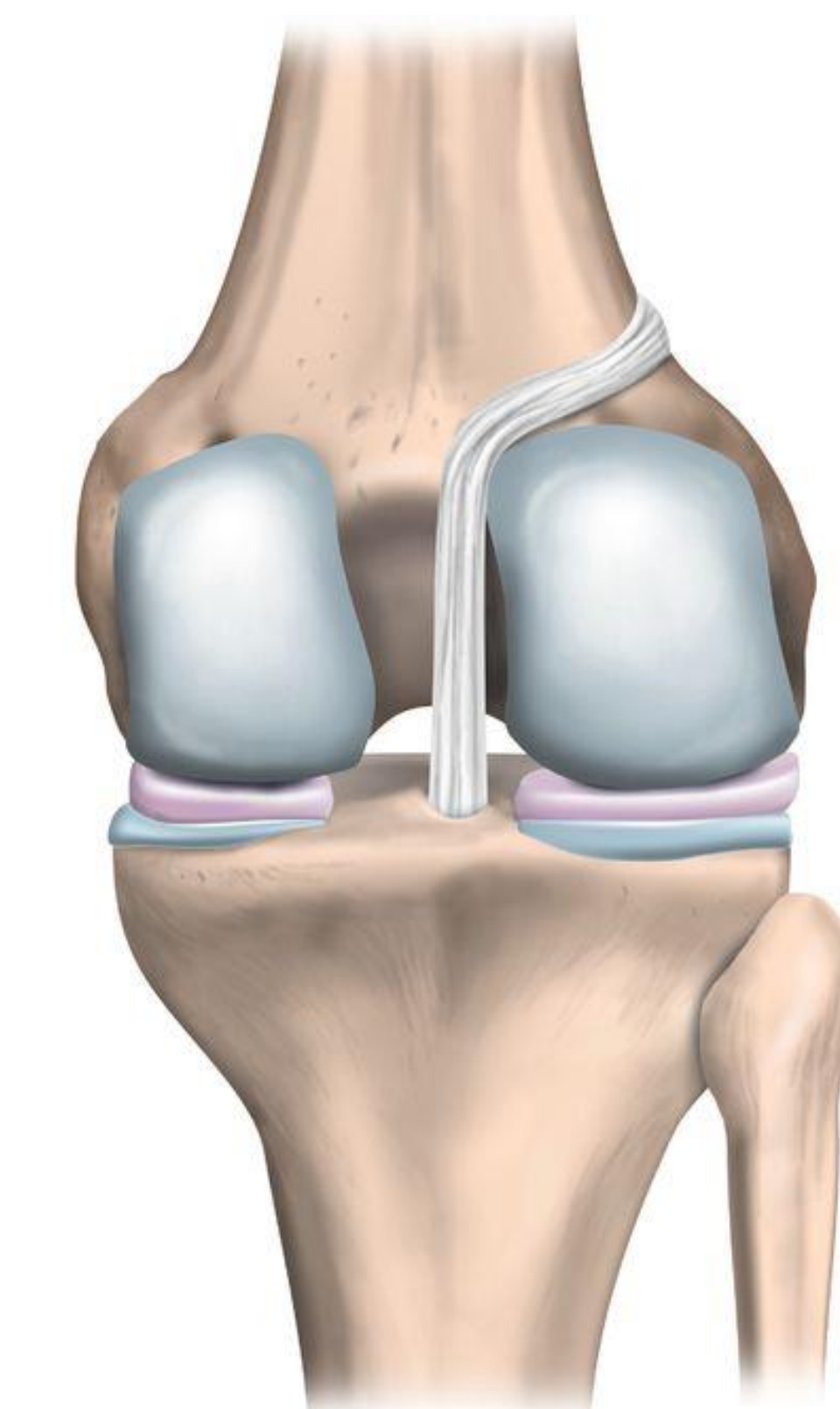
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A. Anterior view



B. Lateral view



C. Posterior view