

## Paper #179

# The Effect of Single Sport Specialization in Youth Sports: Does It Increase the Risk of Injury?: A Prospective Study

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### Summary:

Sports specialization is becoming increasingly popular among adolescence athletes; however, specialization may lead to an increase in sports related injuries

### Abstract:

## Introduction

As youth sports continue to gain popularity, sports specialization is becoming popular among young athletes due to the common perception of a gained competitive advantage. However, there is concern that early sports specialization increases the risk of overuse injuries in youth athletes. The purpose of this investigation was to determine the prevalence of sport specialization in youth athletes, and prospectively examine whether specialization correlates with an increased incidence of athletic injury.

## Methods

We prospectively enrolled 602 high school students. Sports specialization was defined as participating in one sport for more than 6 months of the year, while excluding other sports. Freshman and sophomore athletes filled out a sports specialization and injury survey at the beginning of each sport season. The same athletes were queried again at the conclusion of each season to collect injury information including but not limited to fractures, ligamentous injuries, dislocations and concussions. Athletic training records were reviewed and corroborated with covering team physician records to ensure capture of all injuries reported to health care personnel during the years of the investigation.

## Results

Of the 602 athletes, 255 (42.4%) reported sport specialization. Of the specialized athletes, 56.5% had been injured playing their primary sport in the past, compared to 43.5% of non-specialized athletes ( $p= 0.046$ ). Seventy-eight percent of the specialized athletes sustained an injury before the study period that prevented them from participating in sports for part or the whole season, whereas only 40% of the non-specialized athletes sustained these types of injuries ( $p= 0.055$ ). Finally, during the study period, 9.0% of specialized athletes sustained injuries compared to 5.2% of non-specialized athletes ( $p= 0.065$ ).

## Conclusion

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The preliminary results suggest that specialized student athletes tend to have considerably more injuries than non-specialized athletes. This relationship warrants further investigation into the potential health effects of early sports specialization.