



# Sport Specialization in Young Athletes and the Risk of Subsequent Injuries: Results from The NCAA SAFE Consortium

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## Disclosure

- Relevant Financial Relationships: **None**

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## The NCAA SAFE Consortium

**Michigan State University**  
(East Lansing, MI)



**Lee University**  
(Cleveland, TN)



**Defiance College**  
(Defiance, OH)



## Study Design Highlights

- Institution representing each NCAA Division (Div. I, II, & III)
- Retrospective Cohort Study
- Retrospectively asked about sport specialization
- Injuries reported only while as a college athlete
- All participants surveyed were on a NCAA roster
- Data collected during 2022-2023 school year

## Study Characteristics

Variable	n	%
<b>NCAA Division</b>		
Division I	66	31.3
Division II	109	51.6
Division III	36	17.1
<b>Specialization Status</b>		
Low	40	19.0
Moderate	69	32.7
High	95	45.0
Extreme	7	3.3

Variable	n	%
<b>Sex</b>		
Male	92	43.6
Female	119	56.4
<b>Class Standing</b>		
Freshman	55	26.0
Sophomore	50	23.7
Junior	58	27.5
Senior	39	18.5
Other	9	4.3

## Specialization Status

1. Did you choose a main sport before college? If Yes, what sport do you specialize in? Yes/No
2. Did you quit other sports to focus on 1 sport before graduating high school? Yes/No
3. Did you train for 1 sport more than 8 months of the year before college? Yes/No

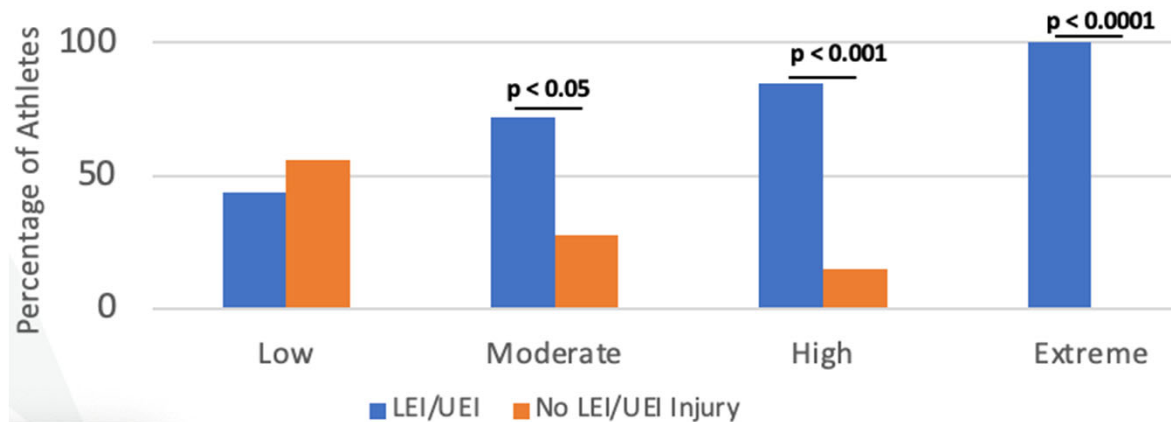


- Yes 1/3 → Low Specialization
- Yes 2/3 → Moderate Specialization
- Yes 3/3 → High Specialization

4. Quit all other sports before age 12?

- Yes 3/3 → Extreme Specialization

## Injuries & Noninjuries in Low, Moderate, High, & Extreme



Specialization Status	History of Any Injury	UEI	LEI	Surgery Required
<b>Low<sup>A</sup></b>	-	-	-	-
<b>Moderate</b>	<b>3.0 (1.1-8.2)<sup>B</sup></b>	<b>2.8 (0.9-7.6)</b>	<b>2.7 (1.1-5.3)<sup>B</sup></b>	<b>2.3 (0.8-6.8)</b>
<b>High</b>	<b>5.1 (1.8-14.4)<sup>B</sup></b>	<b>3.9 (1.5-10.1)<sup>B</sup></b>	<b>2.2 (1.1-4.6)<sup>B</sup></b>	<b>3.5 (1.3-9.9)<sup>B</sup></b>

<sup>A</sup> The values are reported as odds ratios (95% CI); "low" serves as the the reference category  
<sup>B</sup>  $p < 0.05$

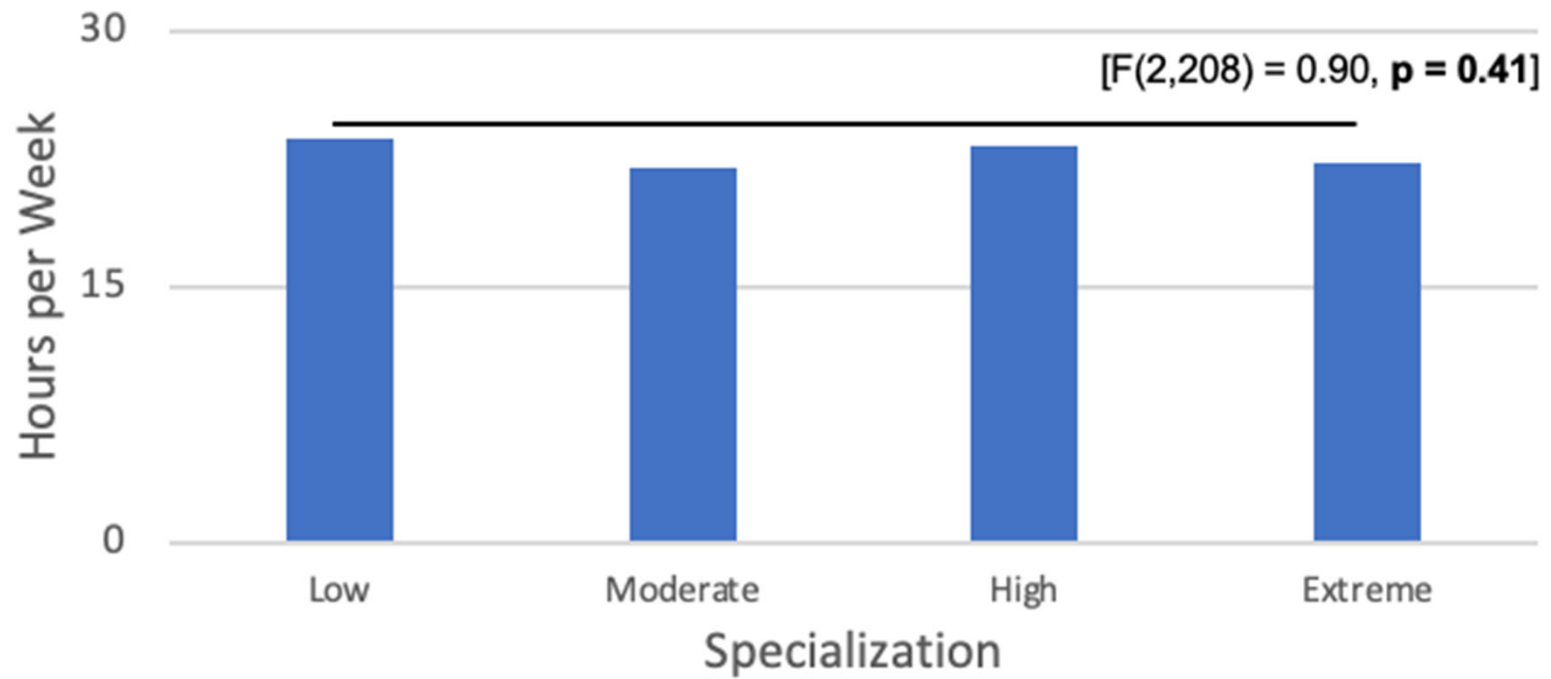


## Return to Play and Re-injury

Specialization Status	Return to Play (Days)
Low	85
Moderate	101
High	112

Specialization Status	Number Reinjured
Low	5 (27.8%)
Moderate	17 (39.1%)
High	46 (53.5%)

## Time Commitment Based on Specialization



## Implications for Clinical Practice

- Current and future collegiate athletes are at risk for injuries; over half of the athletes in this study were classified as highly or extremely specialized.
- Past sport specialization status can be a prognostic indicator for how well and quickly athletes will be able to return to sport.
- High school and younger athletes should be strongly encouraged to engage in different sports or activities to engage different muscle groups and prevent susceptibility to injury in the future.

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