

Abstract Presentation Submission– Original Research

Title: The Effect of Sport Specialization on Injury Risk in NCAA Athletes: Results From the SAFE Consortium

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Background: Athletes are beginning to specialize in a single sport more often. Previous studies in sports medicine have shown an association between degree of sport specialization and injuries. This study is the first of its kind to explore the effect of early sport specialization on injury risk in NCAA athletes. The goal of this study was to evaluate NCAA athletes injuries and their prior specialization status to determine if there is an association between the degree of high school sport specialization and injuries as a collegiate athlete.

Methods: A Retrospective cohort study implanted at multiple NCAA institutions. Participants were collegiate athletes from the NCAA's three levels of competition: Division I, II, and III. Data were collected by the Sport, Action, Finding, Evaluation (SAFE) Consortium. Participants

completed a questionnaire about their prior specialization, college injuries, recovery, and surgery requirement. For specialization status, we used a previously published three-point scale: low, moderate, and high. Injuries were categorized as upper extremity injuries (UEIs) and lower extremity injuries (LEIs).

Results: Highly specialized athletes were more likely to report UEIs and LEIs than low specialized athletes ($p < 0.0001$). Moderately specialized athletes were more likely to report LEIs than low specialized athletes ($p = 0.03$), however, they were not more likely to report UEIs ($p = 0.052$). Highly specialized athletes, in comparison to low specialized athletes, had a greater likelihood of reporting an injury. Over a quarter [57 (27%)] underwent surgery to ameliorate an injury or reinjury.

Discussion: High specialization status was associated with a history of UEIs and LEIs. Return to play after an injury was longer for highly specialized athletes versus low specialized athletes (112 days versus 85 days, respectively). Stakeholders should be aware of the association between degree of sport specialization and risk of injury for collegiate athletes to take future risk mitigation measures successfully.

Images/Tables/Charts:

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 college? Yes/No
3. Do you train for 1 sport more than 8 months of the year before college? Yes/No



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|---|-----------------------------------|
| | 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 |

Figure 1. The method of how specialization status was determined for athletes.

TABLE 1. Athlete Characteristics		
Variable	N	%
Sex		
Male	92	43.6
Female	119	56.4
NCAA Division Classification		
Division I	66	31.2
Division II	109	51.7
Division III	36	17.1
Specialization Category		
Low	40	18.0
Moderate	69	32.7
High	102	48.3

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