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## Introduction

- Sports-related injuries, both acute and overuse, pose a significant challenge faced among the collegiate athlete population.
- Between 2011 and 2014, an average of **8.6 million** sports-related injuries were reported annually in the U.S., with an incidence rate of **34 injuries per 1000 persons**.

**Objective:** To examine the relationship between regular use of **injury prevention techniques** (such as stretching, warm-ups, and recovery) and the incidence of **severe sports-related injuries** (requiring 2+ weeks off) among UCSD student-athletes.

## Methodology

### Sample:

- Cross-sectional survey conducted using Qualtrics in May of 2025 available to 81 UCSD student-athletes.
- Participants were recruited through flyers and word of mouth.

### Outcome:

- Severe sports-related injuries were defined as those that kept the athlete out of their sport for 2 or more weeks. This was assessed and recorded as a binary variable (Yes/No), where:
  - Yes** = Injured and out for 2+ weeks
  - No** = Not Injured

### Exposure:

- Injury prevention and recovery techniques were assessed based on frequency of use for various techniques (e.g., stretching, warm-ups, active recovery, and injury maintenance). Frequency responses were grouped as follows:
  - Regular use:** "Always" or "Most of the time"
  - Non-regular use:** "About half the time," "Sometimes," or "Never"

**Analysis:** A Chi-Square test was conducted using R statistical software.

## Results

Being a "Regular User" of injury prevention techniques is associated with a lower proportion of severe injury compared to "Not Regular" users of injury prevention techniques.

Fig. 1: Distribution of Sports Among Participants

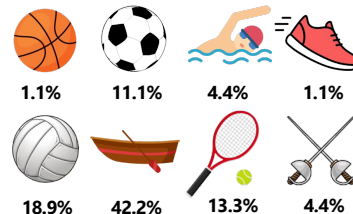
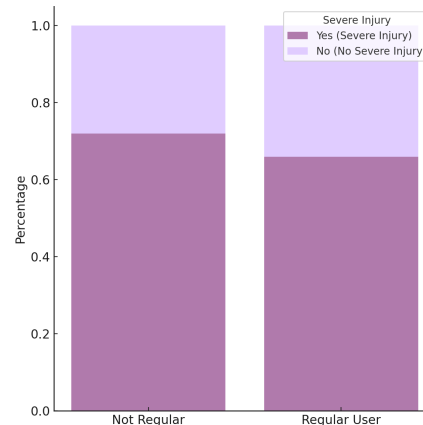


Fig. 2: Percentage of Severe Injury For Regular vs Not Regular



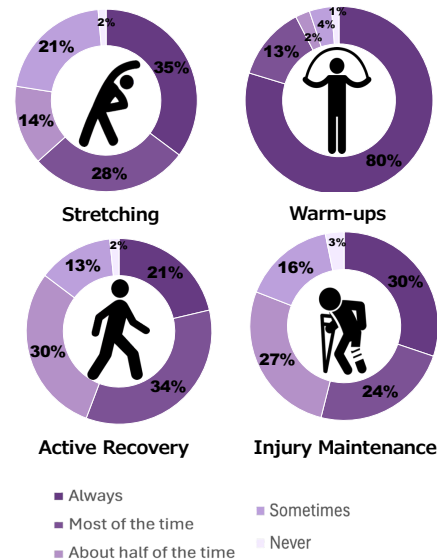
### Pearsons Chi-Squared Test :

X-Squared= 25.717

Degrees of freedom= 3

P-value= 1.093e-05

Fig. 3 : Frequency of use of each prevention technique



## Conclusion

Because the chi-square analysis yielded a p-value < 0.001, there is a statistically significant association between injury prevention use and severe injury occurrence.

- This suggests that athletes who consistently engage in stretching, warm-ups, recovery practices, and injury maintenance are significantly less likely to experience severe injuries.

## Policy Implications

- Encourage athletic programs to implement and track regular injury prevention routines (stretching, warm-ups, recovery).
- Develop mandatory injury prevention education for student-athletes.
- Monitor compliance to further reduce severe injuries.

## References

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