



Brief Summary Report: 2023/24 National High School Sports-Related Injury Surveillance Study
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August 2024

Introduction

2023/24 marked the 19th year of the National High School Sports-Related Injury Surveillance Study, more commonly known as High School RIO™.

- The original surveillance study of athletes participating in nine sports (boys' football, soccer, basketball, wrestling, and baseball and girls' soccer, volleyball, basketball, and softball) from a nationally representative sample of U.S. high schools was continued.
 - o This 19-year study represents the longest running continuous surveillance study and the largest dataset of all time-loss sports injuries compiled from a national sample of U.S. high school athletes.
- The expanded surveillance study continued the 16th year of surveillance of athletes participating in eight additional sports (boys' lacrosse, ice hockey, swimming and diving, and track and field and girls' field hockey, lacrosse, swimming and diving, and track and field) and, for the 15th year, co-ed cheerleading. For the 12th year, data were also collected for athletes participating in boys' and girls' cross country. The expanded study captures data from a convenience sample of U.S. high schools.
 - o While previously included in High School RIO, boys' volleyball and girls' gymnastics data were no longer collected starting in the 2012/13 academic year due to a low number of schools with athletic trainers who provided services for these sports. Similarly, while also previously included in High School RIO, boys' and girls' tennis data were no longer collected starting in the 2018/19 academic year due to a low number of injuries sustained by athletes participating in tennis.
 - o In the 2023/24 academic year, exposure and injury data were collected for marching band. However, due to a low number of schools reporting data, marching band data were not included in this report.
- To date, from 2005/06 through 2023/24, participating schools have reported 128,014 injuries during 64,629,608 athletic exposures (AEs) for an overall injury rate of 1.98 injuries per 1,000 AEs for all 24 sports included during the 19-year study period.
 - o 67,369 competition injuries during 16,258,269 competition AEs for an injury rate of 4.14 injuries per 1,000 AEs
 - o 60,338 practice injuries during 47,814,633 practice AEs for an injury rate of 1.26 injuries per 1,000 AEs
 - o 307 performance injuries during 556,706 performance AEs for an injury rate of 0.55 injuries per 1,000 AEs (cheerleading only)
- This surveillance study was funded through the generous support of the National Federation of State High School Associations (NFHS) and the NFHS Foundation.

2023/24 Data Snapshot

- When combined, schools reporting for the original and convenience sample reported 5,684 injuries (55% competition-related) during 2,664,227 AEs for an injury rate of 2.13 injuries per 1,000 AEs in the 20 sports studied during the 2023/24 academic year.
- While injury rates varied by sport, competition injury rates were higher than practice injury rates for all but one sport (cheerleading) (**Figure 1**).
- Patterns of injury varied by sport (**Table 1**).
 - o Consistent with the 2022/23 academic year, the head/face was the most commonly injured body site in eleven sports (boys' football, wrestling, ice hockey, and lacrosse, and girls' soccer, wrestling, softball, field hockey, lacrosse, and swimming and diving as well as cheerleading).
 - o Also consistent with previous years, strain/sprain was the most common injury diagnosis in all sports except girls' swimming and diving (tendonitis), girls' cross country (tendonitis), and cheerleading (concussion).
 - o Across sports, 0.0% to 12.5% of injuries kept the student athlete out of play for more than three weeks.
 - Girls' wrestling had the highest proportion of injuries that kept the athlete out of play for more than three weeks.
 - o Across sports, 0.0% to 11.3% of injuries resulted in surgical repair either during or after the season.
 - Boys' ice hockey had the highest proportion of injuries that resulted in surgical repair in 2023/24.

Trends Over Time

Interpretation of trends over time becomes clearer through long-term surveillance efforts. Competition injury rates have remained relatively stable over time for each of the nine sports included in the original sample (**Figure 2**). There was an increase in the rate of boys' wrestling competition injuries in the 2021/22 academic year compared to previous years and the rate stayed elevated in the 2022/23 and 2023/24 academic years. We will continue to monitor the rate of competition injuries in boys' wrestling in 2024/25 to determine if this is random fluctuation or a potential area of focus in terms of injury prevention efforts.

In 2020/21, concussion injury rates were lower than in previous years (**Table 2**). Multiple factors may have affected concussion rates including characteristics of schools playing sports, athletes who were able to/chose to compete during the pandemic, other injuries sustained during the sport season, Athletic Trainers ability to participate in High School RIO given other responsibilities, changes in practice-related activities, and the national sample in terms of sport cancellation/modified seasons. Concussion injury rates increased after the 2020/21 academic year but continue to be generally lower than pre-pandemic concussion rates. We will continue to monitor concussion rates in 2024/25 and in future academic years.

Impact

Data from this surveillance study have been used over the past year in multiple forums including:

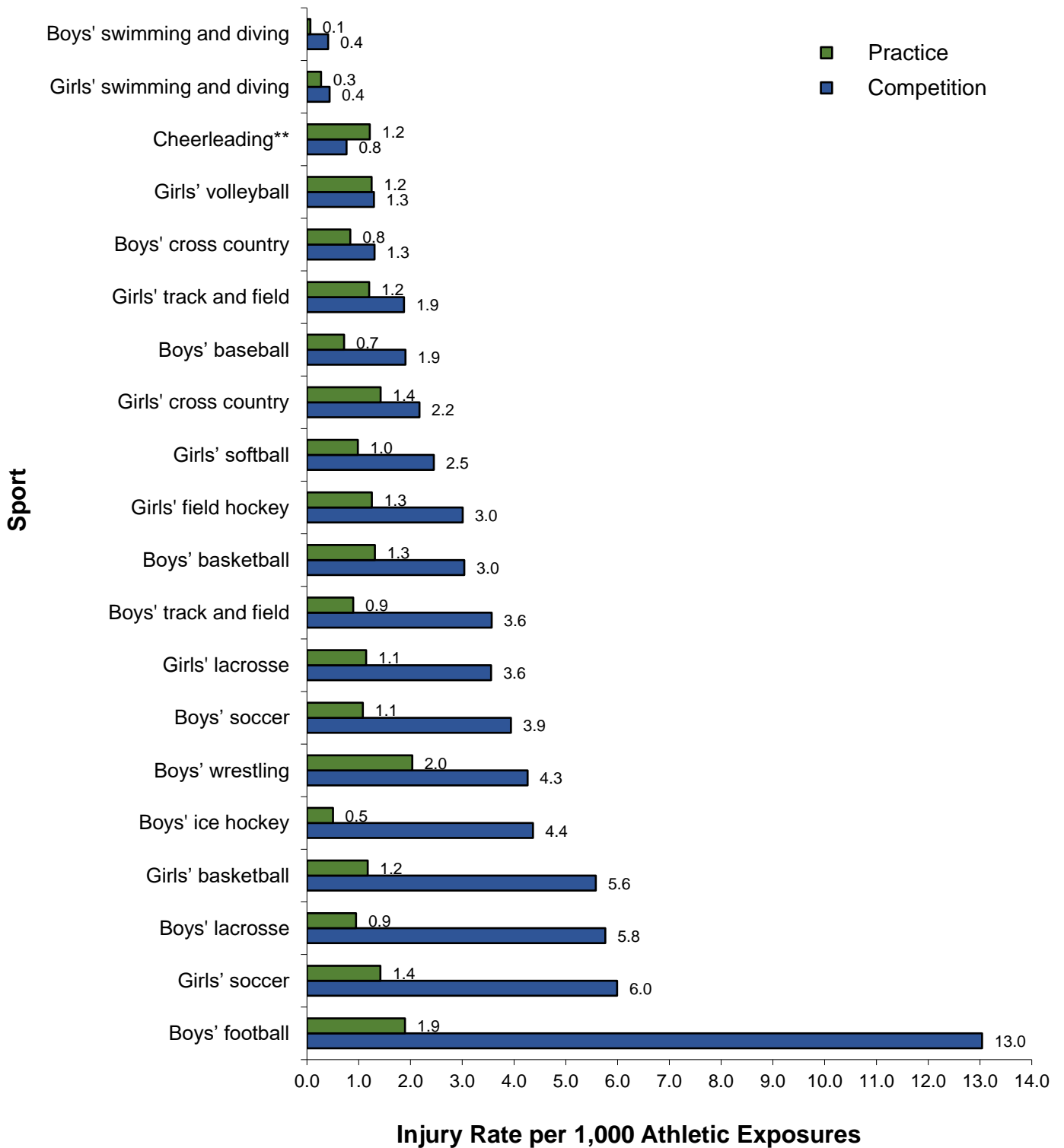
- NFHS Sports Medicine Advisory Committee (SMAC) review at NFHS SMAC committee meetings
- NFHS SMAC data requests to address topics of interest throughout the year
- NFHS Rules Committee reviews
- Continued evaluation of the effectiveness of several NFHS rule changes
- Weekly surveillance for infectious disease outbreaks (skin infections and COVID-19) and communication with affected schools or geographic areas to contain the spread of the illness
- Weekly surveillance for exertional heat illness and communication with NFHS if increases are noted in specific geographic areas.
- State Associations and State Association SMACs data requests to address topics of interest
- Publications in the scientific literature and presentations at national scientific conferences

Future

Dr. Collins, along with the Datalys staff, will work with the NFHS, National Athletic Trainers' Association (NATA), and other partners to increase enrollment in High School RIO. Datalys will also work closely with reporting schools, the NFHS, NFHS SMAC, and NFHS Rules Committees throughout the year to continue to produce the data needed to help drive evidence-based decisions to keep athletes as healthy as possible.

- Detailed reports will be provided to the NFHS SMAC at their twice-yearly meetings as well as throughout the year upon request.
- Sentinel incidence reports on specific topics of interest (i.e., exertional heat injuries, skin infections, COVID-19 infections) will again be provided to the NFHS SMAC weekly throughout the year.
- Additional detailed reports will be provided upon request to individual NFHS rules committees.
- Continued cooperation with State Associations and other partner organizations upon request.

Figure 1: Convenience Sample Injury Rates per 1,000 Athletic Exposures by Sport and Type of Athletic Exposure, National High School Sports-Related Injury Surveillance Study, U.S., 2023/24



**Cheerleading competition rate represents the rate of injury per 1,000 AEs in competition and performance.

Table 1: Convenience Sample Patterns of Injury by Sport, National High School Sports-Related Injury Surveillance Study, U.S., 2023/24

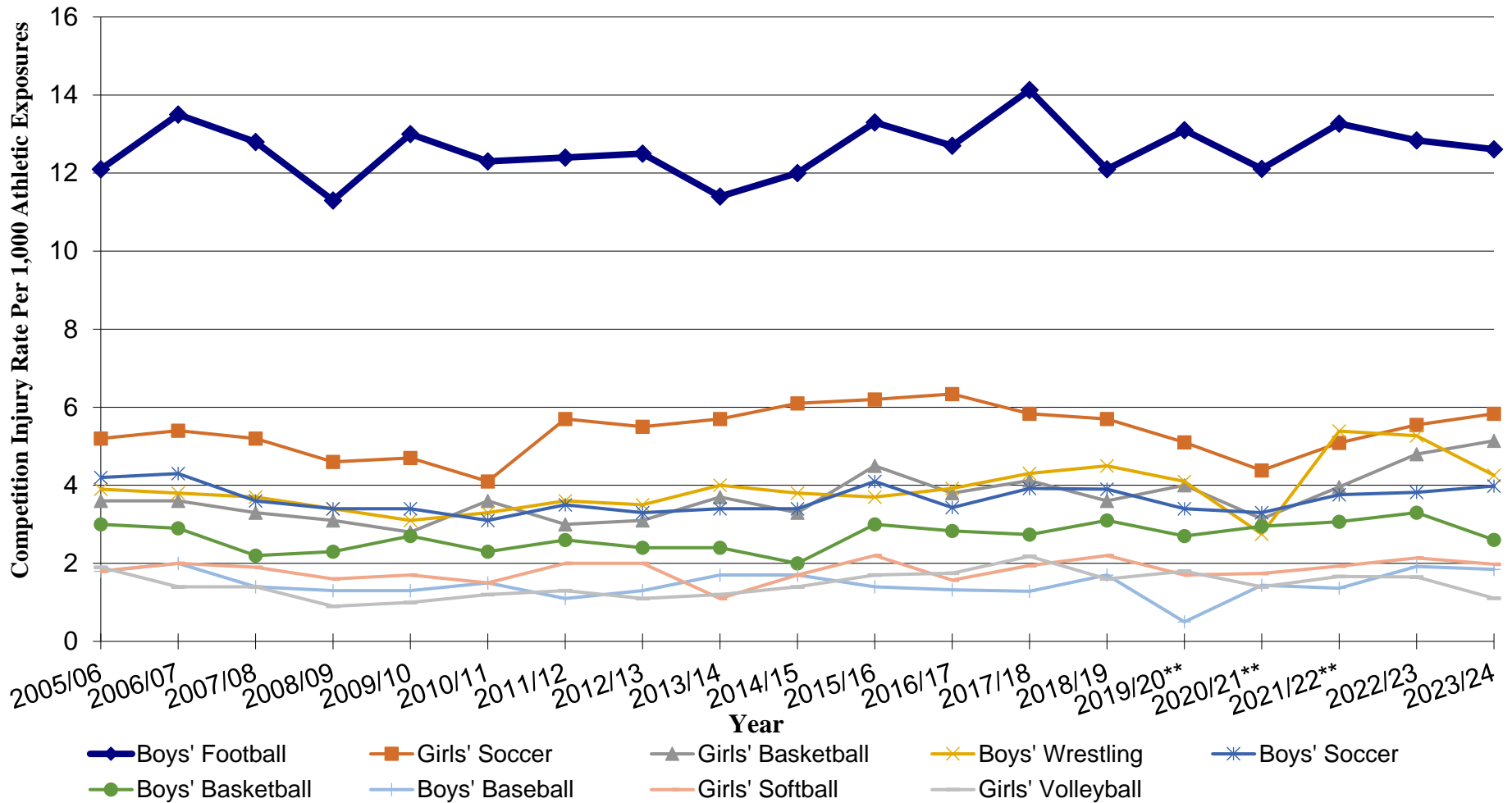
Sport[†]	Most Commonly Injured Body Site	Most Common Diagnosis of Injury	Proportion of Injuries with >3 Weeks Time Loss^{††}	Proportion of Injuries that Resulted in Surgery^{†††}
Boys' Sports				
Football	Head/Face	Strain/Sprain	6.0%	8.1%
Soccer	Ankle	Strain/Sprain	5.1%	5.1%
Basketball	Ankle	Strain/Sprain	6.8%	6.3%
Wrestling	Head/Face	Strain/Sprain	9.0%	6.2%
Baseball	Shoulder	Strain/Sprain	8.1%	2.4%
Ice Hockey	Head/Face	Strain/Sprain	11.3%	11.3%
Lacrosse	Head/Face	Strain/Sprain	5.8%	5.8%
Track & Field	Thigh/Upper Leg	Strain/Sprain	3.3%	1.6%
Cross Country	Lower Leg	Strain/Sprain	1.8%	0.0%
Girls' Sports				
Soccer	Head/Face	Strain/Sprain	3.7%	4.3%
Volleyball	Ankle	Strain/Sprain	3.6%	1.8%
Basketball	Ankle	Strain/Sprain	8.2%	7.9%
Wrestling	Head/Face	Strain/Sprain	12.5%	3.6%
Softball	Head/Face	Strain/Sprain	6.2%	5.6%
Field Hockey	Head/Face	Strain/Sprain	3.1%	1.0%
Lacrosse	Head/Face	Strain/Sprain	2.0%	8.8%
Swimming & Diving	Head/Face	Tendonitis	0.0%	0.0%
Track & Field	Lower Leg	Strain/Sprain	3.2%	1.9%
Cross Country	Lower Leg	Tendonitis	2.7%	1.3%
Coed' Sports				
Cheerleading	Head/Face	Concussion	9.0%	2.2%

[†]Boys' swimming was excluded from this table due to low number of reported injuries (n=5)

^{††}Includes "Returned to activity in 22 days or more" (i.e., does not include other categories such as season ending, career ending, etc.)

^{†††}Includes injuries that were surgically repaired prior to return to play during the sport season and injuries that were repaired after the end of the season

Figure 2: Original Sample Trends over Time in Rates of Competition-Related Injury by Sport, National High School Sports-Related Injury Surveillance Study, U.S., 2005/06-2023/24*



*Includes only time loss injuries

**The COVID-19 pandemic may have affected these results.

Table 2. Original Sample Concussion National Estimates and Rates by Sport and Type of Exposure, National High School Sports-Related Injury Surveillance Study, U.S., 2005/06 – 2023/24 School Years

	2005-06	2006-07	2007-08**	2008-09**	2009-10**	2010-11**	2011-12**	2012-13**
Sport and Event Type	# of nationally estimated concussions (rate of concussions per 10,000 athlete-exposures)							
Overall total*†	134,965 (2.27)	123,864 (2.28)	137,802 (2.41)	149,699 (2.55)	192,051 (3.22)	249,655 (4.09)	333,253 (5.11)	348,565 (5.47)
Competition	92,795 (5.40)	87,749 (5.66)	95,957 (5.99)	109,645 (6.47)	135,983 (7.72)	186,804 (10.16)	210,457 (11.59)	231,621 (12.14)
Practice	42,170 (1.06)	36,114 (1.04)	41,846 (1.09)	40,053 (1.10)	56,067 (1.55)	62,847 (1.79)	122,796 (2.75)	116,944 (2.93)
Boys' football total	55,007 (4.66)	60,136 (4.80)	70,929 (5.29)	70,672 (5.20)	100,928 (7.20)	117,173 (8.20)	140,057 (9.41)	167,604 (11.08)
Competition	33,723 (15.48)	39,265 (18.53)	43,850 (19.82)	46,439 (19.09)	65,227 (27.34)	85,095 (33.73)	69,810 (31.12)	93,029 (35.50)
Practice	21,284 (2.12)	20,870 (2.12)	27,079 (2.41)	24,233 (2.37)	35,701 (3.36)	32,078 (3.11)	70,247 (5.31)	74,575 (6.02)
Boys' soccer total	21,972 (2.22)	15,355 (2.01)	17,447 (1.92)	14,215 (1.67)	20,247 (2.23)	30,716 (2.97)	41,813 (4.14)	46,511 (3.92)
Competition	19,761 (6.09)	12,316 (5.24)	13,847 (5.48)	10,253 (4.71)	18,456 (6.39)	25,858 (8.09)	34,751 (11.14)	38,972 (11.14)
Practice	2,212 (0.38)	3,039 (0.70)	3,600 (0.42)	3,962 (0.39)	1,791 (0.43)	4,858 (0.76)	7,062 (1.30)	7,539 (0.90)
Girls' soccer total	29,204 (3.61)	21,570 (2.26)	23,595 (2.65)	31,739 (3.53)	25,954 (2.96)	37,611 (4.19)	59,215 (7.34)	67,677 (7.87)
Competition	23,080 (9.95)	18,188 (6.50)	21,748 (7.91)	27,684 (10.24)	22,552 (8.23)	35,194 (12.20)	49,180 (21.82)	58,826 (22.99)
Practice	6,124 (0.82)	3,382 (0.52)	1,847 (0.41)	4,055 (0.69)	3,401 (0.67)	2,417 (0.51)	10,035 (1.45)	8,851 (1.46)
Girls' volleyball total	2,568 (0.50)	2,962 (0.68)	4,330 (1.00)	1,837 (0.32)	5,628 (0.88)	4,498 (1.06)	8,667 (1.70)	7,603 (1.72)
Competition	500 (0.46)	2,469 (1.51)	2,625 (1.97)	1,443 (0.62)	2,756 (0.95)	2,335 (1.61)	7,241 (3.94)	4,504 (2.26)
Practice	2,069 (0.53)	493 (0.28)	1,705 (0.53)	394 (0.16)	2,871 (0.85)	2,163 (0.77)	1,426 (0.55)	3,099 (1.42)
Boys' basketball total	3,513 (0.69)	4,452 (0.73)	4,179 (0.84)	4,247 (0.85)	11,013 (1.98)	11,699 (2.05)	11,011 (2.35)	13,076 (2.26)
Competition	1,639 (1.14)	3,403 (1.98)	2,418 (1.75)	3,439 (2.32)	7,985 (4.73)	8,083 (4.02)	7,648 (5.42)	7,055 (3.99)
Practice	1,874 (0.51)	1,049 (0.21)	1,761 (0.46)	808 (0.24)	3,028 (0.84)	3,616 (1.18)	3,363 (1.08)	6,021 (1.50)
Girls' basketball total	13,136 (2.20)	7,552 (2.04)	7,389 (1.81)	8,700 (1.98)	10,662 (2.02)	19,909 (4.21)	16,902 (3.65)	19,663 (4.53)
Competition	10,826 (6.38)	5,084 (4.48)	6,021 (4.90)	6,643 (5.13)	7,553 (5.02)	14,769 (9.77)	13,186 (8.85)	13,081 (10.14)
Practice	2,310 (0.53)	2,468 (1.00)	1,368 (0.50)	2,057 (0.67)	3,109 (0.69)	5,139 (1.79)	3,715 (1.52)	6,582 (1.98)
Boys' wrestling total	5,417 (1.74)	5,133 (1.54)	5,982 (1.45)	10,096 (2.16)	7,350 (2.15)	13,196 (3.81)	27,041 (5.70)	13,895 (4.89)
Competition	2,268 (3.23)	3,375 (3.43)	2,870 (2.75)	8,206 (5.65)	3,652 (3.49)	6,971 (6.75)	10,976 (8.25)	6,890 (8.28)
Practice	3,149 (1.27)	1,758 (0.87)	3,113 (0.98)	1,891 (0.90)	3,699 (1.65)	6,224 (2.76)	16,065 (4.76)	7,005 (3.63)
Boys' baseball total	1,450 (0.39)	2,747 (0.43)	523 (0.21)	1,858 (0.43)	2,990 (0.37)	6,391 (1.04)	8,594 (1.35)	4,773 (0.99)
Competition	846 (0.63)	1,982 (0.86)	459 (0.45)	1,637 (1.07)	2,735 (0.86)	4,527 (1.80)	6,013 (2.76)	3,245 (1.75)
Practice	605 (0.26)	765 (0.19)	64 (0.08)	221 (0.08)	255 (0.10)	1,863 (0.64)	2,582 (0.57)	1,528 (0.59)
Girls' softball total	2,695 (0.67)	3,957 (0.75)	3,428 (0.69)	6,332 (1.49)	7,279 (1.38)	8,462 (1.39)	19,953 (2.96)	7,763 (1.87)
Competition	152 (0.21)	1,667 (0.94)	2,119 (1.16)	3,901 (2.03)	5,067 (3.12)	3,972 (1.87)	11,652 (5.17)	6,019 (3.91)
Practice	2,543 (0.91)	2,290 (0.65)	1,309 (0.43)	2,432 (1.20)	2,212 (0.49)	4,489 (1.15)	8,301 (1.80)	1,744 (0.83)

*Overall totals represent only the nine sports from the original study which was randomly sampled; **In years 2007/08 through 2021/22, the definition of injury was expanded to include all concussions, regardless of whether or not they resulted in restriction of the student-athlete's participation; †Numbers do not always sum due to rounding; ††The COVID-19 pandemic may have affected these results.

Table 2 (Continued). Original Sample Concussion National Estimates and Rates by Sport and Type of Exposure, National High School Sports-Related Injury Surveillance Study, U.S., 2005/06 – 2023/24 School Years

Sport and Event Type	2013-14**	2014-15**	2015-16**	2016-17**	2017-18**	2018-19**	2019-20**††	2020-21**††
	# of nationally estimated concussions (rate of concussions per 10,000 athlete-exposures)							
Overall total*†	342,393 (5.30)	315,540 (5.63)	367,306 (5.81)	305,128 (5.43)	283,956 (5.39)	283,433 (5.24)	200,478 (4.75)	160,587 (2.76)
Competition	228,016 (12.01)	208,943 (13.24)	241,515 (13.69)	220,454 (12.87)	212,671 (13.15)	204,249 (12.91)	143,635 (13.42)	102,839 (6.71)
Practice	114,377 (2.71)	106,597 (2.78)	125,791 (2.78)	84,674 (2.49)	71,287 (2.26)	79,184 (2.22)	56,843 (1.68)	57,748 (1.36)
Boys' football total	161,874 (9.97)	141,715 (10.07)	150,249 (10.39)	132,361 (10.50)	114,876 (11.54)	116,846 (10.35)	82,495 (8.35)	72,319 (5.23)
Competition	96,275 (32.98)	83,364 (33.87)	90,689 (35.80)	85,678 (38.37)	81,923 (43.20)	77,672 (37.84)	54,912 (31.87)	44,322 (22.17)
Practice	65,599 (5.19)	58,351 (5.24)	59,560 (4.77)	46,683 (4.66)	32,953 (4.46)	39,174 (4.20)	27,583 (3.07)	27,997 (2.30)
Boys' soccer total	40,583 (4.38)	29,386 (4.10)	41,380 (4.44)	28,582 (3.34)	32,093 (3.36)	35,287 (3.65)	29,915 (4.02)	19,546 (2.18)
Competition	32,110 (12.10)	24,572 (11.10)	28,058 (9.87)	25,881 (9.47)	27,380 (8.82)	31,923 (10.46)	24,037 (11.83)	13,647 (5.17)
Practice	8,473 (0.93)	4,814 (0.99)	13,322 (1.95)	2,702 (0.62)	4,713 (0.89)	3,364 (0.60)	5,878 (0.59)	5,899 (1.07)
Girls' soccer total	58,946 (6.95)	78,490 (10.39)	76,447 (8.63)	64,707 (7.52)	66,140 (7.44)	56,904 (7.27)	36,781 (6.27)	23,918 (4.27)
Competition	50,990 (18.38)	59,226 (27.14)	63,317 (23.97)	58,188 (21.23)	56,364 (20.37)	44,760 (18.61)	28,097 (17.71)	16,656 (11.11)
Practice	7,956 (1.93)	19,264 (2.93)	12,830 (1.73)	6,519 (1.11)	9,776 (1.70)	12,144 (2.04)	8,684 (1.67)	7,262 (1.62)
Girls' volleyball total	10,874 (2.50)	13,246 (3.17)	16,471 (3.09)	14,734 (3.85)	12,927 (3.00)	10,925 (2.97)	9,975 (2.58)	8,398 (1.35)
Competition	4,791 (3.45)	6,713 (4.87)	8,013 (4.93)	8,718 (6.45)	7,646 (5.01)	6,325 (4.76)	6,203 (5.31)	4,486 (2.86)
Practice	6,083 (2.00)	6,533 (2.32)	8,458 (2.20)	6,016 (2.54)	5,282 (1.92)	4,600 (2.11)	3,772 (1.22)	3,912 (0.69)
Boys' basketball total	12,177 (2.13)	5,627 (1.16)	14,608 (2.57)	14,894 (2.54)	10,038 (1.86)	10,410 (2.07)	12,343 (2.14)	7,577 (1.10)
Competition	8,105 (4.25)	2,934 (1.90)	7,613 (5.09)	8,478 (4.66)	6,246 (3.73)	5,410 (4.57)	9,521 (5.35)	5,087 (2.13)
Practice	4,072 (1.18)	2,693 (0.84)	6,995 (1.51)	6,416 (1.58)	3,793 (1.03)	5,000 (1.01)	2,822 (0.76)	2,490 (0.71)
Girls' basketball total	20,927 (4.58)	17,824 (4.88)	29,111 (6.12)	17,314 (4.27)	16,410 (3.96)	19,555 (4.61)	15,331 (4.03)	8,035 (2.39)
Competition	15,713 (12.01)	12,960 (11.53)	19,723 (14.72)	14,218 (10.43)	12,679 (9.95)	14,373 (10.68)	12,471 (10.56)	5,217 (5.17)
Practice	5,214 (1.25)	4,864 (1.96)	9,388 (2.32)	3,096 (1.34)	3,731 (1.23)	5,182 (1.96)	2,860 (1.22)	2,818 (1.33)
Boys' wrestling total	20,431 (5.97)	14,191 (4.39)	22,448 (5.83)	13,334 (4.22)	13,114 (4.76)	18,543 (5.07)	9,732 (3.16)	6,161 (1.99)
Competition	11,205 (12.35)	11,017 (12.22)	11,490 (11.09)	7,624 (8.79)	7,003 (9.84)	13,147 (12.87)	6,802 (7.93)	4,624 (6.34)
Practice	9,226 (3.67)	3,174 (1.92)	10,958 (4.04)	5,710 (2.63)	6,111 (2.86)	5,396 (2.37)	2,930 (1.54)	1,537 (0.78)
Boys' baseball total	6,523 (1.07)	6,570 (1.49)	5,078 (1.05)	6,074 (1.07)	7,009 (1.17)	5,557 (1.00)	2,091 (0.91)	3,377 (0.47)
Competition	4,002 (1.95)	4,232 (2.99)	4,117 (2.50)	3,921 (1.79)	4,714 (2.03)	3,990 (1.81)	460 (2.32)	2,308 (0.65)
Practice	2,521 (0.58)	2,338 (0.67)	961 (0.27)	2,153 (0.64)	2,295 (0.68)	1,567 (0.55)	1,631 (0.70)	1,069 (0.37)
Girls' softball total	10,058 (1.57)	8,491 (2.51)	11,514 (2.26)	13,128 (2.69)	11,349 (2.56)	9,406 (2.74)	1,815 (1.18)	11,256 (2.79)
Competition	4,825 (1.96)	3,925 (4.23)	8,195 (4.03)	7,748 (3.94)	8,716 (4.86)	6,649 (5.06)	1,132 (3.86)	6,492 (4.53)
Practice	5,233 (1.37)	4,566 (1.59)	3,319 (1.32)	5,380 (1.97)	2,633 (1.32)	2,757 (1.46)	683 (0.50)	4,764 (1.85)

*Overall totals represent only the nine sports from the original study which was randomly sampled; **In years 2007/08 through 2021/22, the definition of injury was expanded to include all concussions, regardless of whether or not they resulted in restriction of the student-athlete's participation; †Numbers do not always sum due to rounding; ††The COVID-19 pandemic may have affected these results.

Table 2 (Continued). Original Sample Concussion National Estimates and Rates by Sport and Type of Exposure, National High School Sports-Related Injury Surveillance Study, U.S., 2005/06 – 2023/24 School Years

Sport and Event Type	2021-22**††	2022-23**	2023-24**
	# of nationally estimated concussions (rate of concussions per 10,000 athlete-exposures)		
Overall total*†	222,757 (4.06)	244,907 (4.21)	254,126 (3.87)
Competition	154,437 (9.46)	168,482 (10.03)	175,657 (9.78)
Practice	68,320 (1.86)	76,425 (2.00)	78,469 (1.57)
Boys' football total	86,614 (8.21)	108,377 (7.88)	102,464 (7.09)
Competition	58,417 (30.10)	77,284 (31.84)	71,461 (29.27)
Practice	28,197 (3.43)	31,093 (2.90)	31,003 (2.45)
Boys' soccer total	20,857 (2.47)	15,496 (2.21)	18,099 (1.94)
Competition	16,344 (7.06)	11,116 (5.29)	13,047 (4.87)
Practice	4,513 (0.49)	4,381 (0.86)	5,052 (0.69)
Girls' soccer total	38,733 (5.45)	41,292 (5.63)	48,238 (6.08)
Competition	33,881 (15.16)	32,124 (14.72)	36,486 (15.87)
Practice	4,852 (0.95)	9,168 (1.70)	11,752 (1.83)
Girls' volleyball total	9,869 (2.11)	11,390 (2.07)	10,244 (1.68)
Competition	6,827 (4.00)	7,546 (3.71)	5,396 (2.66)
Practice	3,042 (1.09)	3,844 (1.20)	4,848 (1.14)
Boys' basketball total	11,524 (1.81)	8,834 (1.90)	11,014 (1.64)
Competition	7,263 (3.73)	4,334 (3.25)	7,013 (3.19)
Practice	4,261 (0.93)	4,501 (1.34)	4,001 (0.91)
Girls' basketball total	19,908 (4.66)	15,811 (4.22)	19,751 (4.51)
Competition	12,467 (9.59)	12,694 (10.92)	17,176 (11.84)
Practice	7,441 (2.41)	3,117 (1.37)	2,575 (1.02)
Boys' wrestling total	16,910 (3.50)	26,188 (5.15)	30,133 (4.51)
Competition	12,195 (8.87)	14,126 (7.77)	18,356 (10.20)
Practice	4,715 (1.67)	12,062 (4.29)	11,777 (2.51)
Boys' baseball total	3,781 (0.76)	3,754 (0.75)	2,751 (0.46)
Competition	1,096 (0.85)	1,583 (0.88)	1,327 (0.77)
Practice	2,685 (0.71)	2,171 (0.67)	1,425 (0.30)
Girls' softball total	14,561 (3.15)	13,764 (2.63)	11,432 (1.93)
Competition	5,947 (3.81)	7,675 (4.51)	5,395 (3.25)
Practice	8,614 (2.78)	6,089 (1.64)	6,036 (1.24)

*Overall totals represent only the nine sports from the original study which was randomly sampled; **In years 2007/08 through 2021/22, the definition of injury was expanded to include all concussions, regardless of whether or not they resulted in restriction of the student-athlete's participation; †Numbers do not always sum due to rounding; ††The COVID-19 pandemic may have affected these results.