

XI. Softball Injury Epidemiology

Table 11.1 Softball Injury Rates by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year

	# Injuries	# Exposures	Injury rate (per 1,000 athlete- exposures)	Nationally Estimated # Injuries
Total	147	128,172	1.15	58,124
Competition	85	43,478	1.96	35,477
Practice	62	84,694	0.73	22,647

Table 11.2 Demographic Characteristics of Injured Softball Athletes, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year*

Year in School	n=58,124
Freshman	27.2%
Sophomore	24.3%
Junior	26.3%
Senior	22.2%
Total†	100%
Age (years)	
Minimum	13
Maximum	18
Mean (St. Dev.)	15.9 (1.1)
BMI	
Minimum	17.2
Maximum	40.4
Mean (St. Dev.)	22.8 (4.0)

*All remaining analyses in this chapter present data weighted to provide national injury estimates.

†Throughout this chapter, totals and n's represent the total weighted number of injury reports containing a valid response for the particular question. Due to a low level of non-response, these totals are always similar but are not always equal to the total number of injuries.

Figure 11.1 Diagnosis of Softball Injuries by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year

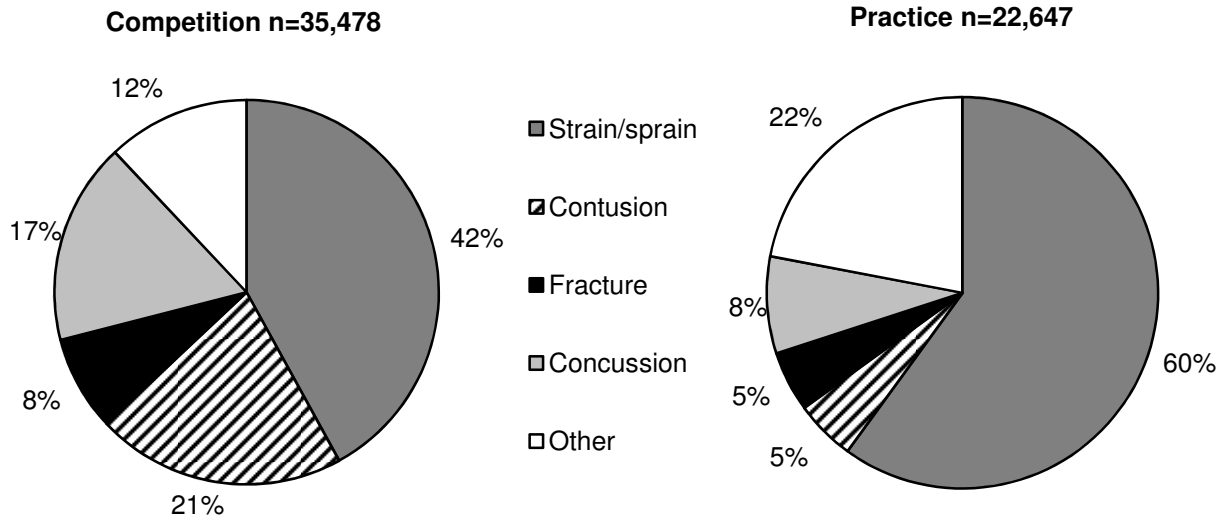


Table 11.3 Body Site of Softball Injuries by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year*

Body Site	Competition		Practice		Overall	
	n	%	n	%	n	%
Head/face	7,676	21.6%	2,322	10.3%	9,998	17.2%
Ankle	5,949	16.8%	3,539	15.6%	9,488	16.3%
Knee	6,096	17.2%	2,821	12.5%	8,917	15.3%
Shoulder	2,949	8.3%	4,684	20.7%	7,633	13.1%
Hand/wrist	3,793	10.7%	2,203	9.7%	5,996	10.3%
Arm/elbow	2,672	7.5%	1,408	6.2%	4,080	7.0%
Lower leg	3,198	9.0%	258	1.1%	3,456	5.9%
Hip/thigh/upper leg	953	2.7%	1,893	8.4%	2,846	4.9%
Trunk	615	1.7%	1,390	6.1%	2,005	3.4%
Foot	801	2.3%	658	2.9%	1,459	2.5%
Neck	338	1.0%	0	0.0%	338	0.6%
Other	437	1.2%	1,471	6.5%	1,908	3.3%
Total	35,477	100%	22,647	100%	58,124	100%

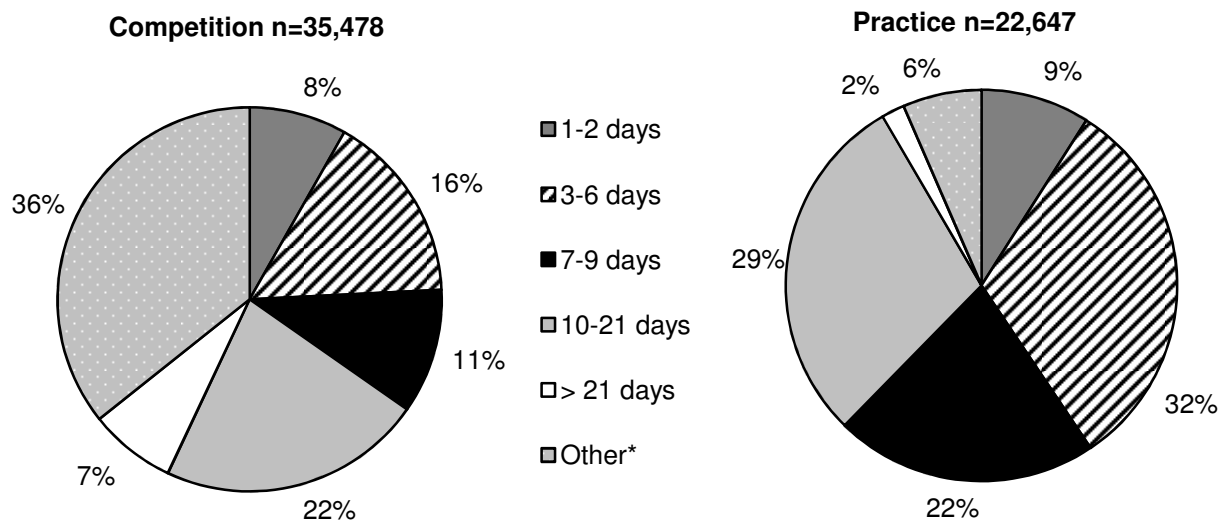
* Totals and n's are not always equal due to slight rounding of the weighted number of injuries and missing responses. Due to a low level of non-response, these totals are always similar but are not always equal to the total number of injuries.

Table 11.4 Ten Most Common Softball Injury Diagnoses by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year*

Diagnosis	Competition n=35,482		Practice n=22,651		Total n=58,133	
	n	%	n	%	n	%
Ankle strain/sprain	5,692	16.0%	3,362	14.8%	9,054	15.6%
Head/face concussion	5,841	15.5%	1,744	7.7%	7,585	13.0%
Knee strain/sprain	5,659	15.9%	1,210	5.3%	6,869	11.8%
Shoulder other	2,513	7.1%	1,419	6.3%	3,932	6.8%
Shoulder strain/sprain	258	0.7%	3,265	14.4%	3,523	6.1%
Lower leg contusion	3,198	9.0%	0	0.0%	3,198	5.5%
Hand/wrist strain/sprain	1,353	3.8%	1,435	6.3%	2,788	4.8%
Hip/thigh/upper leg strain/sprain	953	2.7%	1,715	7.6%	2,668	4.6%
Hand/wrist fracture	1,554	4.4%	431	1.9%	1,985	3.4%
Other other	437	1.2%	1,471	6.5%	1,908	3.3%

* Totals and n's are not always equal due to slight rounding of the weighted number of injuries and missing responses. Due to a low level of non-response, these totals are always similar but are not always equal to the total number of injuries.

Figure 11.2 Time Loss of Softball Injuries by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year



*Other category is made up of medical disqualification for season, medical disqualification for career, athlete chooses not to continue, and season ended before athlete returned to play

Table 11.5 Softball Injuries Requiring Surgery by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year*

	Competition		Practice		Overall	
	n	%	n	%	n	%
Need for surgery						
Required surgery	2,607	7.6%	435	2.0%	3,042	5.4%
Did not require surgery	31,918	92.4%	21,516	98.0%	53,434	94.6%
Total	34,525	100%	21,951	100%	56,476	100%

* Totals and n's are not always equal due to slight rounding of the weighted number of injuries and missing responses. Due to a low level of non-response, these totals are always similar but are not always equal to the total number of injuries.

Figure 11.3 History of Softball Injuries by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year

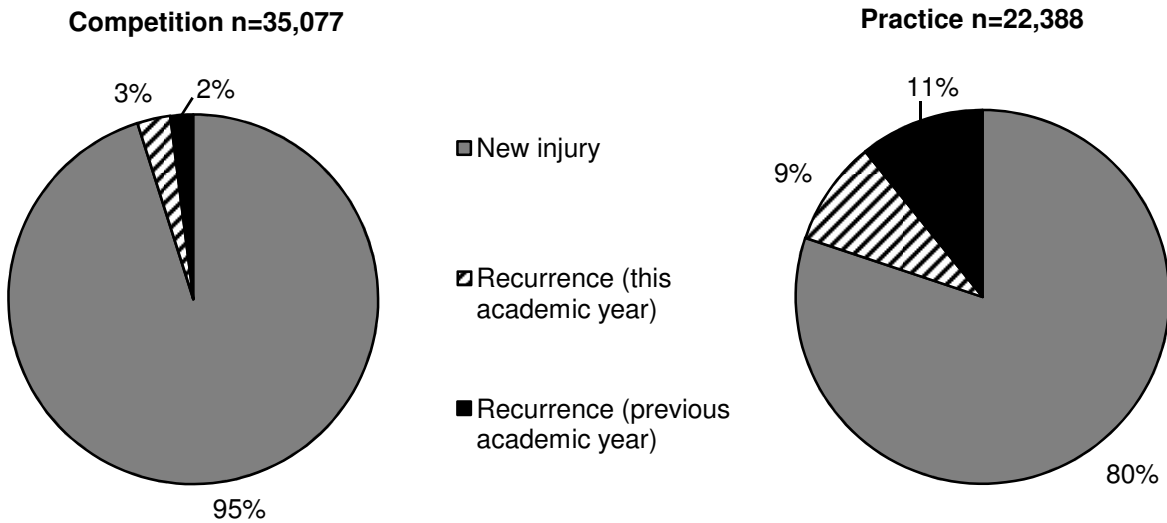


Table 11.6 Time during Season of Softball Injuries, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year*

	n	%
Time in Season		
Preseason	11,897	20.5%
Regular season	43,800	75.4%
Post season	2,427	4.2%
Total	58,124	100%

* Totals and n's are not always equal due to slight rounding of the weighted number of injuries and missing responses. Due to a low level of non-response, these totals are always similar but are not always equal to the total number of injuries.

Table 11.7 Competition-Related Variables for Softball Injuries, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year*

	n	%
Time in Competition		
Pre-competition/warm-ups	3,239	9.8%
First inning	2,645	8.0%
Second inning	3,082	9.4%
Third inning	6,907	21.0%
Fourth inning	8,529	25.9%
Fifth inning	4,356	13.2%
Sixth inning	2,182	6.6%
Seventh inning	1,548	4.7%
Extra innings	401	1.2%
Total	32,889	100%
Field Location		
Home plate	9,056	26.4%
Outfield	5,657	16.5%
Third base	5,051	14.7%
Second base	4,566	13.3%
First base	4,278	12.5%
Infield	2,784	8.1%
Pitcher's mound	1,124	3.3%
Foul territory	979	2.9%
Other	780	2.3%
Total	34,274	100%

* Totals and n's are not always equal due to slight rounding of the weighted number of injuries and missing responses. Due to a low level of non-response, these totals are always similar but are not always equal to the total number of injuries.

Table 11.8 Practice-Related Variables for Softball Injuries, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year*

	n	%
Time in Practice		
First 1/2 hour	2,360	12.1%
Second 1/2 hour	4,583	23.4%
1-2 hours into practice	12,264	62.7%
>2 hours into practice	355	1.8%
Total	19,563	100%

* Totals and n's are not always equal due to slight rounding of the weighted number of injuries and missing responses. Due to a low level of non-response, these totals are always similar but are not always equal to the total number of injuries.

Figure 11.4 Player Position of Softball Injuries by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year

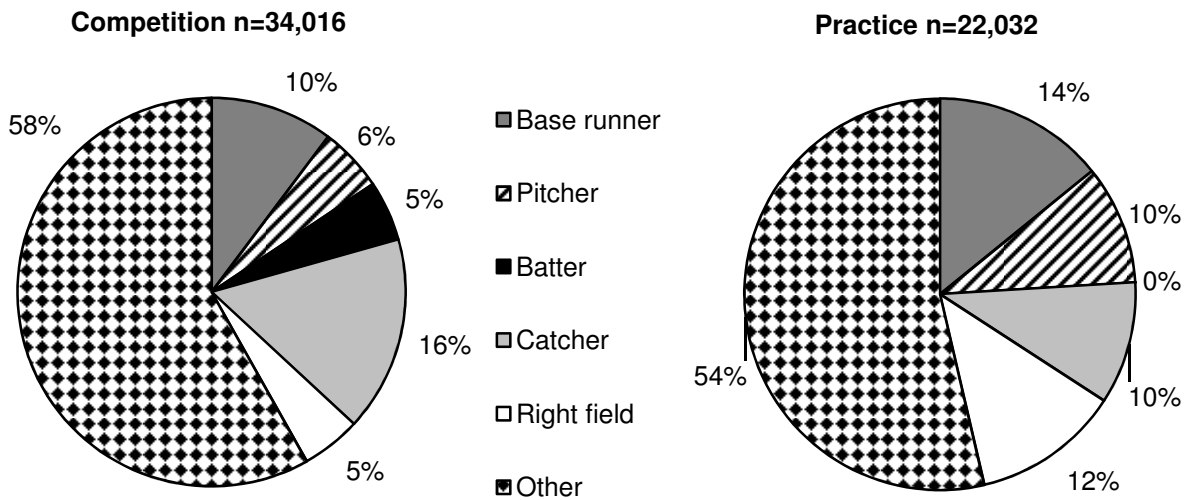


Table 11.9 Activities Leading to Softball Injuries by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year*

Activity	Competition		Practice		Overall	
	n	%	n	%	n	%
Running bases	6,944	20.3%	4,154	18.3%	11,098	19.5%
Fielding a batted ball	6,441	18.8%	3,432	15.2%	9,873	17.3%
Catching	5,899	17.2%	2,472	10.9%	8,371	14.7%
Fielding a thrown ball	5,119	14.9%	1,872	8.3%	6,991	12.3%
Throwing (not pitching)	1,037	3.0%	4,253	18.8%	5,290	9.3%
Sliding	1,726	5.0%	2,163	9.6%	3,889	6.8%
Batting	3,097	9.0%	615	2.7%	3,712	6.5%
Pitching	1,124	3.3%	886	3.9%	2,010	3.5%
General Play	437	1.3%	1,263	5.6%	1,700	3.0%
Conditioning	0	0.0%	1,453	6.4%	1,453	2.6%
Other	2,449	7.1%	85	0.4%	2,534	4.5%
Total	34,273	100%	22,648	100%	56,921	100%

* Totals and n's are not always equal due to slight rounding of the weighted number of injuries and missing responses. Due to a low level of non-response, these totals are always similar but are not always equal to the total number of injuries.

Figure 11.5 Activity Resulting in Softball Injuries by Injury Diagnosis, High School Sports-Related Injury Surveillance Study, US, 2012-13 School Year

