

Table 1. Characteristics of Volleyball-Related Injuries, HS RIO (High School) vs NCAA ISS (College) 2005-06 – 2008-09

A.

Exposure	High School			College			Rate Ratio*	Lower Limit	Upper Limit
	Total Injuries	Total Exposures	Rate (x10,000)	Total Injuries	Total Exposures	Rate (x10,000)			
Practice	497	420,925	11.8	992	241,059	41.2	3.5	3.1	3.9
Competition	295	216,861	13.6	388	98,694	39.3	2.9	2.5	3.4
Overall	792	637,786	12.4	1380	339,753	40.6	3.3	3.0	3.6

*College/high school.

B.

Skill leading to injury most often	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
	N	%	N	%	N	%	N	%	N	%	N	%
Blocking	123	25.4	144	14.5	73	25.5	81	20.9	196	25.5	225	16.3
Digging	53	11.0	146	14.7	68	23.8	73	18.8	121	15.7	219	15.9
Spiking	62	12.8	153	15.4	38	13.3	69	17.8	100	13.0	222	16.1

C.

Time Lost	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
	N	%	N	%	N	%	N	%	N	%	N	%
1-2 days	117	24.8	264	28.0	66	23.5	64	17.8	183	24.3	328	25.2
3-9 days	225	47.8	425	45.1	141	50.2	195	54.2	366	48.7	620	47.6
10+ days	129	27.4	253	26.9	74	26.3	101	28.1	203	27.0	354	27.2

D.

	Competition			
	High School		College	
Position at time of injury*	N	%	N	%
Outside hitter	102	36.4	128	36.9
Middle blocker	73	26.1	98	28.2
Setter	55	19.6	42	12.1
Opposite player	25	8.9	26	7.5
Libero	20	7.1	42	12.1
All other	5	1.8	11	3.2

*Position relevant to competition only.

Table 2. Characteristics of Ankle Sprain Injuries, HS RIO (High School) vs NCAA ISS (College) 2005-06 – 2008-09

A.

Exposure	High School			College			Rate Ratio*	Lower Limit	Upper Limit
	Total Injuries	Total Exposures	Rate (x10,000)	Total Injuries	Total Exposures	Rate (x10,000)			
Practice	179	420,925	4.3	160	241,051	6.6	1.6	1.3	1.9
Competition	94	216,861	4.3	103	98,702	10.4	2.4	1.8	3.2
Overall	273	637,786	4.3	263	339,753	7.7	1.8	1.5	2.1

*College/high school.

B.

Most Common Ankle Sprain Diagnoses	High School	College
Lateral ligament sprain	76%	85%
Ankle sprain, NOS	22%	11%
High ankle sprain	1%	4%

C.

Skill leading to injury most often	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
	N	%	N	%	N	%	N	%	N	%	N	%
Blocking	87	49.4	63	39.4	43	47.8	41	39.8	130	48.9	104	39.5
All other	56	31.8	52	32.5	29	32.2	32	31.1	85	32.0	84	31.9
Spiking	27	15.3	35	21.9	13	14.4	26	25.2	40	15.0	61	23.2

D.

Time Lost	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
	N	%	N	%	N	%	N	%	N	%	N	%
1-2 days	31	17.9	31	19.5	14	15.9	11	10.9	45	17.2	42	16.2
3-9 days	89	51.4	84	52.8	52	59.1	54	53.5	141	54.0	138	53.1
10+ days	53	30.6	44	27.7	22	25.0	36	35.6	75	28.7	80	30.8

Table 3. Characteristics of Knee Injuries, HS RIO (High School) vs NCAA ISS (College) 2005-06 – 2008-09

A.

Exposure	High School			College			Rate Ratio*	Lower Limit	Upper Limit
	Total Injuries	Total Exposures	Rate (x10,000)	Total Injuries	Total Exposures	Rate (x10,000)			
Practice	45	420,925	1.1	137	241,051	5.7	5.3	3.8	7.4
Competition	41	216,861	1.9	44	98,702	4.5	2.4	1.5	3.6
Overall	86	637,786	1.3	181	339,753	5.3	4.0	3.1	5.1

*College/high school.

B.

Most common knee diagnoses	
High school	
Ligament sprain - unspecified	23%
Bursitis	6%
Contusion	6%
LCL sprain	6%
Tendon strain- unspecified	6%
Patellar tendinopathy	6%
Other	47%
College	
Patellar tendinopathy	19%
Inflammation- unspecified	11%
MCL sprain	8%
Contusion	8%
Effusion	7%
Patellar subluxation	6%
Other	31%

C.

	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
Skill leading to injury most often	N	%	N	%	N	%	N	%	N	%	N	%
Digging	11	24.4	23	16.8	15	37.5	9	20.5	26	30.6	32	17.7
Blocking	9	20.0	14	10.2	4	10.0	4	9.1	13	15.3	18	9.9
Spiking	1	2.2	10	7.3	10	25.0	9	20.5	11	12.9	19	10.5

D.

	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
Time lost	N	%	N	%	N	%	N	%	N	%	N	%
1-2 days	12	29.3	30	23.6	3	7.7	10	25.6	15	18.8	40	24.1
3-9 days	16	39.0	45	35.4	15	38.5	17	43.6	31	38.8	62	37.3
10+ days	13	31.7	52	40.9	21	53.8	12	30.8	34	42.5	64	38.6

Table 4. Characteristics of Shoulder Injuries, HS RIO (High School) vs NCAA ISS (College) 2005-06 – 2008-09

A.

Exposure	High School			College			Rate Ratio*	Lower Limit	Upper Limit
	Total Injuries	Total Exposures	Rate (x10,000)	Total Injuries	Total Exposures	Rate (x10,000)			
Practice	50	420,925	1.2	106	241,051	4.4	3.7	2.6	5.2
Competition	16	216,861	0.7	29	98,702	2.9	4.0	2.2	7.3
Overall	66	637,786	1.0	135	339,753	4.0	3.8	2.9	5.2

*College/high school.

B.

Most common shoulder diagnoses	
High school	
Musculotendinous strain	53%
Tendinosis	21%
Dislocation	5%
Ligament sprain	5%
Other	16%
College	
Tendinosis	29%
Impingement	14%
Subluxation	14%
Musculotendinous strain	12%
Other	31%

C.

Skill leading to injury most often	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
	N	%	N	%	N	%	N	%	N	%	N	%
Spiking	19	38.8	42	39.6	6	40.0	9	31.0	25	39.1	51	37.8
Digging	2	4.1	12	11.3	3	20.0	7	24.1	5	7.8	19	14.1
Blocking	1	2.0	3	2.8	0	0.0	1	3.4	1	1.6	4	3.0

D.

	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
Time lost	N	%	N	%	N	%	N	%	N	%	N	%
1-2 days	10	22.2	22	21.8	3	21.4	5	25.0	13	22.0	27	22.3
3-9 days	29	64.4	47	46.5	8	57.1	12	60.0	37	62.7	59	48.8
10+ days	6	13.3	32	31.7	3	21.4	3	15.0	9	15.3	35	28.9

Table 5. Characteristics of Concussions, HS RIO (High School) vs NCAA ISS (College) 2005-06 – 2008-09

A.

Exposure	High School			College			Rate Ratio*	Lower Limit	Upper Limit
	Total Injuries	Total Exposures	Rate (x10,000)	Total Injuries	Total Exposures	Rate (x10,000)			
Practice	15	420,925	0.4	44	241,051	1.8	5.1	2.9	9.2
Competition	23	216,861	1.1	25	98,702	2.5	2.4	1.4	4.2
Overall	38	637,786	0.6	69	339,753	2.0	3.4	2.3	5.1

*College/high school.

B.

Skill leading to injury most often	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
	N	%	N	%	N	%	N	%	N	%	N	%
Digging	8	53.3	21	47.7	14	60.9	14	56.0	22	57.9	35	50.7
All others	6	40.0	16	36.4	7	30.4	9	36.0	13	34.2	25	36.2
Blocking	1	6.7	4	9.2	2	8.7	1	4.0	3	7.9	5	7.2

C.

Time lost	Practice				Competition				Overall			
	High School		College		High School		College		High School		College	
	N	%	N	%	N	%	N	%	N	%	N	%
1-2 days	3	21.4	6	13.6	3	13.6	2	8.7	6	16.7	8	11.9
3-9 days	7	50.0	31	70.5	11	50.0	12	52.2	18	50.0	43	64.2
10+ days	4	28.6	7	15.9	8	36.4	9	39.1	12	33.3	16	23.9