

Injury Surveillance System

Women's
Lacrosse
2006-07



Table of Contents

Introduction.....	1
Highlights.....	2
Table 1 - Distribution of Participating Teams	3
Figure 1 - Practice and Competition Injury Rates	4
Figure 2 - Practice Injury Rates by Division	5
Figure 3 - Competition Injury Rates by Division	6
Figure 4 - Pre, Regular and Post Season Practice Injury Rates	7
Figure 5 - Regular and Post Season Competition Injury Rates	8
Figure 6 - Competition Surface Injury Rates.....	9
Figure 7 - Time-Loss Injuries – Practice	10
Figure 8 - Time Loss Injuries – Competition.....	11
Figure 9a - Injuries Requiring Surgery, Practice and Competition – Rate	12
Figure 9b - Injuries Requiring Surgery, Practice and Competition – Percent	13
Figure 10 - Above the Neck and Head Injury Rates – Competition.....	14
Figure 11 - Injuries by Body Area (%) Practice 2006-07 and 3 Year Average.....	15
Figure 12 - Injuries by Body Area (%) Competition 2006-07 and 3 Year Average.....	16
Figure 13 - Injury Mechanism Practice 2006-07 and 3 Year Average.....	17
Figure 14 - Injury Mechanism Competition 2006-07 and 3 Year Average.....	18
Figure 15 - Injuries by Competition Time 2006-07 and 3 Year Average.....	19
Figure 16 - Injuries by Field Location, Competition 2006-07 and 3 Year Average.....	20
Figure 17 - Injuries Above the Neck, Practice 2006-07 and 3 Year Average	21
Figure 18 - Injuries Above the Neck, Competition 2006-07 and 3 Year Average	22
Table 2 - Top Three Body Parts Injured	23
Table 3 - Top Three Body Parts / Injury Type Combinations	23
Table 4 - Top Three Severe Body Part / Injury Type Combinations (7+ days time loss)	23
Table 5 - Head Injuries, Competition Before and After Mandatory Eye Protection	24
Methods.....	25
Acknowledgements.....	29
All Sports Injury Rate Comparisons	
Figure 1 Practice Injury Rate Summary (All Sports).....	30
Figure 2 Game Injury Rate Summary (All Sports).....	31
Figure 3 Percentage of All Injuries Occurring in Practices and Games	32
Figure 4 SEVERITY – Practice Injuries Resulting in 7+ Days of Time Loss	33
Figure 5 SEVERITY – Game Injuries Resulting in 7+ Days of Time Loss.....	34
Figure 6 SEVERITY – Practice Injuries Requiring Surgery.....	35
Figure 7 SEVERITY – Game Injuries Requiring Surgery	36

INTRODUCTION

The NCAA Injury Surveillance System (ISS) was developed in 1982 to provide current and reliable data on injury trends in intercollegiate athletics. Injury data are collected yearly from a representative sample of NCAA member institutions and the resulting data summaries are reviewed by appropriate sports rules committees and the NCAA Committee on Competitive Safeguards and Medical Aspects of Sports. The goal of this project continues to be to reduce injury rates through suggested changes in rules, protective equipment or coaching techniques based on data provided by the Injury Surveillance System. Injury data are also presented at national sports science meetings.

During the 1982-83 academic year, injury data were collected only on the sport of football. By 1988, the system had expanded to include four additional fall sports (field hockey, men's soccer, women's soccer and women's volleyball); six additional winter sports (men's basketball, women's basketball, men's gymnastics, women's gymnastics, men's ice hockey and wrestling); and five spring sports (baseball, men's lacrosse, women's lacrosse, spring football and softball). Women's ice hockey was added in the 2000-01 academic year.

In academic year 2002-03 the NCAA began testing a Web-based version of data collection for its existing sports. In 2003-04 three sports (men's and women's soccer and field hockey) were piloted as a web-based system and data from these sports for this academic year were not included in the national totals. In 2004-05 all sixteen existing sports were converted to web-based data collection. In 2005-06 all NCAA championship sports, as well as emerging and club sports were available for data collection in the ISS. The web-based system allows the ISS to become a primary medical record for each institution. With real time access to individual school data and efficient end-of-year reports that allow comparison of individual school data across years as well as with conference, divisional and national trends, the ISS has become a tool for risk management at the individual school, conference and Association level.

The change from paper and pen to web-based data entry has resulted in a need to educate and support a new generation of ISS users. While the web-based system brings better data and significantly enhanced efficiency to athletic trainers, the transition learning curve has resulted in initial reduced participation. The differences in data collection methods and sample size may limit the comparability of the two generations of data. Therefore, most of the tables and figures in this report contain data from the last six years of the original data collection method (1998-99 through 2003-04) with an across-year average, followed by all years of data collected via the web with a second average value. New sports added to the system in 2005 will only have one year of data for each category. **The significant difference in data collection methods may limit comparability between the two data sets.**

The injury data presented in this report are a summary of reported injuries that occurred in organized practices and games that restricted participation for at least one day. All schools that submitted exposure information for at least 70% of actual practices and games in a given season were included in the final sample. It is important to emphasize that this system does not identify all injuries that occur at each NCAA institution in a particular sport. Rather, it collects a sampling that is representative of a cross-section of NCAA institutions. These data are descriptive in nature; no statistical analysis of these data has been performed.

WOMEN'S LACROSSE HIGHLIGHTS

In women's lacrosse, 23 schools (8 percent of sponsoring schools) submitted appropriate data to be included in the national sample (Table 1, page 3).

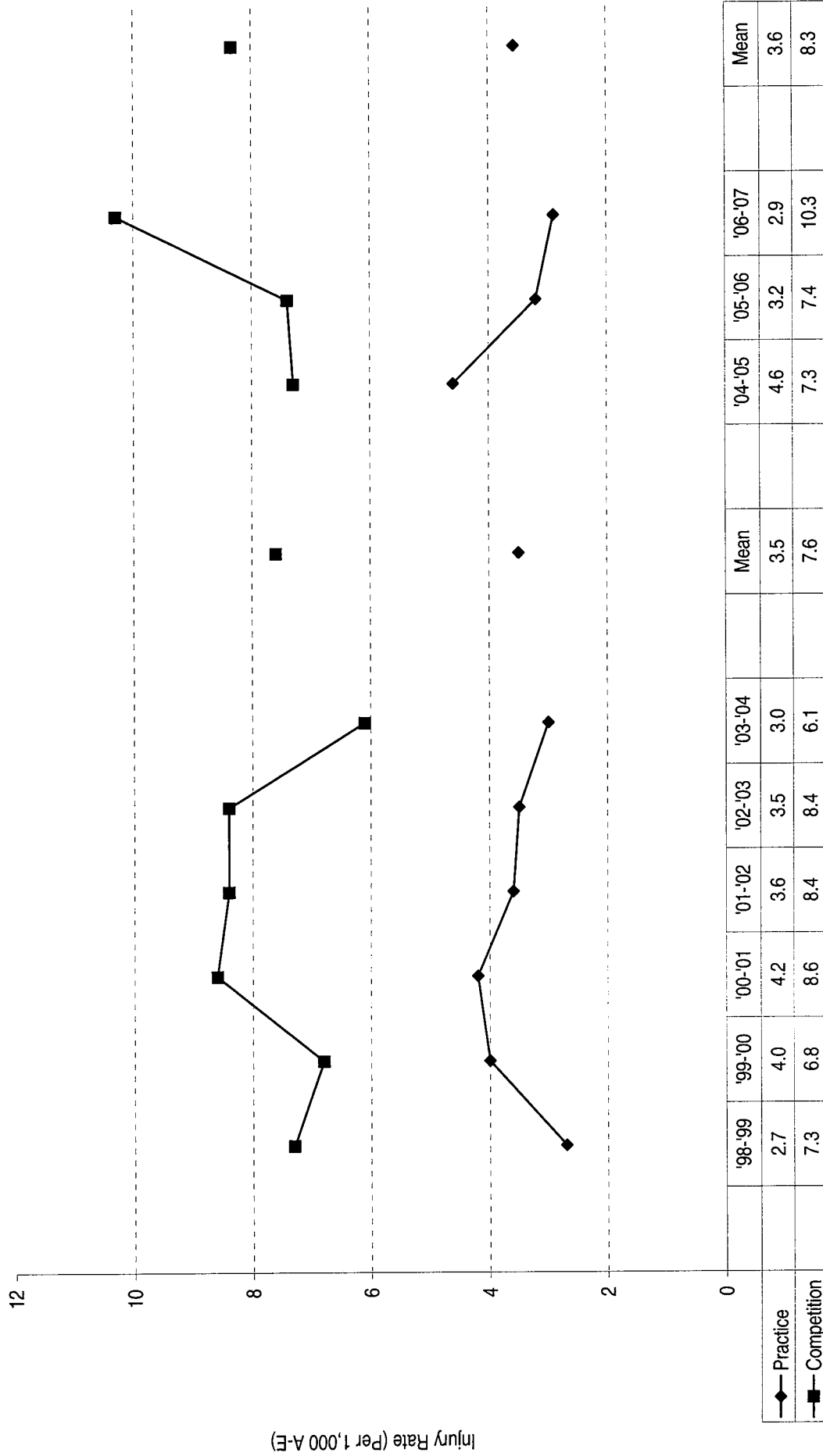
- **Practice injury rate** - The injury rate for practice was 2.9 injuries per 1000 athlete exposure (A-E). This was lower than the previous year's rate (Figure 1, page 4).
- **Competition injury rate** – The injury rate for competition was 10.3 injuries per 1000 A-E. The competition injury rate was higher than the previous year's rate (Figure 1, page 4). Assuming 15 competition participants, the competition injury rate equates to one injury every 6 competitions.
- **Season** – Women's lacrosse follows a pattern of most ISS sports of having the highest risk of practice injury in preseason and the lowest risk of competition injury in postseason (Figure 4, page 7). (Note: There is a smaller sample size in postseason).
- **General body area injured** - Lower extremity injuries accounted for 75 percent of all practice and 53 percent of all competition injuries with upper extremity accounting for another 9 percent in both practice and competition. Head injuries accounted for 8 percent of practice and 22 percent of competition injuries (Figures 11 and 12, pages 15 and 16). Other than concussion, no eye injuries and one nose injury were reported as above the neck competition injuries (Table 5, page 24).
- **Severe injuries** – Thirty-five percent of all reported practice and 43 percent of all competition injuries had time loss of 7 days or more (Figures 7 and 8, pages 10 and 11). Nine percent of both practice and competition injuries required surgery (Figure 9b, page 13). Ankle sprains, knee sprains and concussions were the top competition injuries that kept players out seven days or more (Table 4, page 23). While the head accounted for 22 percent of all competition injuries, only 15 percent of the head injuries resulted in time loss of seven days or more.
- **Concussion** –Fourteen percent of all competition injuries involved concussions (Table 3, page 23). The injury mechanism for concussion was primarily contact with stick or contact with the ball.
- **Time and location of competition injury** – In competitions, 48 percent of injuries occurred in the second half, and 25 percent in the first half (Figure 15, page 19). Twenty-eight percent of all competition injuries occurred in midfield and 23 percent occurred in the goal area (Figure 16, page 20).
- **Mechanism of injury** – Acute non-contact accounted for 51 percent of practice injuries and 46 percent of competition injuries. Contact with the stick and player contact each accounted for 14 percent of competition injuries (Figures 13 and 14, pages 17 and 18). Fifty-seven percent of above-the-neck competition injuries occurred from contact with a stick (Figure 18, page 22).

**Table 1 – Women’s Lacrosse
Distribution of Participating Teams**

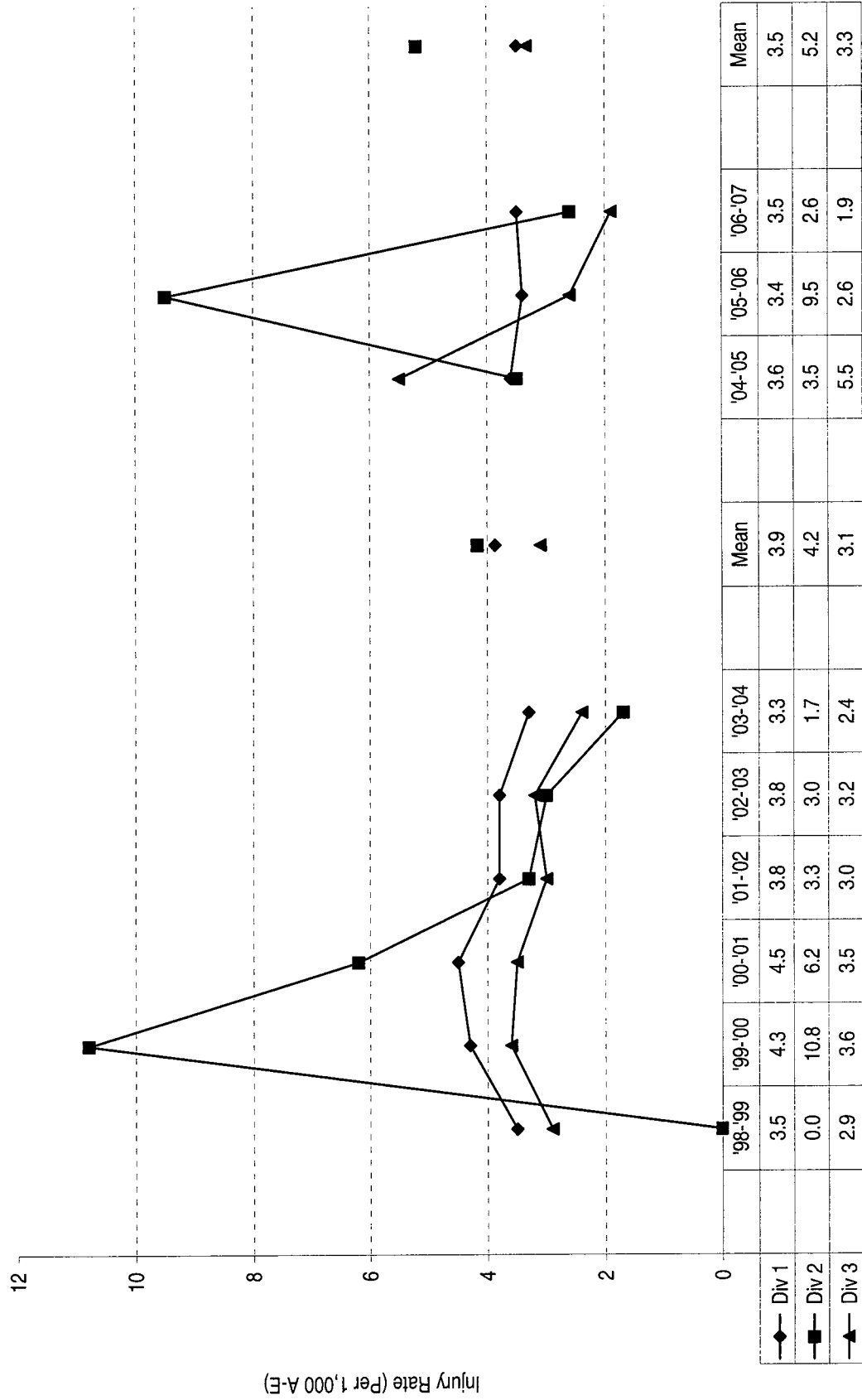
<u>Year</u>	<u>Div. I</u>	<u>Div. II</u>	<u>Div. III</u>	<u>Totals</u>
1997-98	13 59	4 22	24 118	41 199
1998-99	7 66	3 23	21 124	31 213
1999-00	8 69	2 24	30 134	40 227
2000-01	39 71	1 26	27 136	67 233
2001-02	39 75	5 28	24 146	68 249
2002-03	40 77	6 29	38 150	84 256
2003-04	37 77	3 32	27 149	67 258
2004-05	8 80	1 33	13 153	22 266
2005-06	12 80	1 37	14 156	27 273
2006-07	11 81	2 39	10 164	23 284

[Note: Totals indicate regional and divisional breakdown of institutions participating in the NCAA Injury Surveillance System. Numbers in bold, italicized text indicate the total numbers of NCAA institutions sponsoring the sport by division and nationally.]

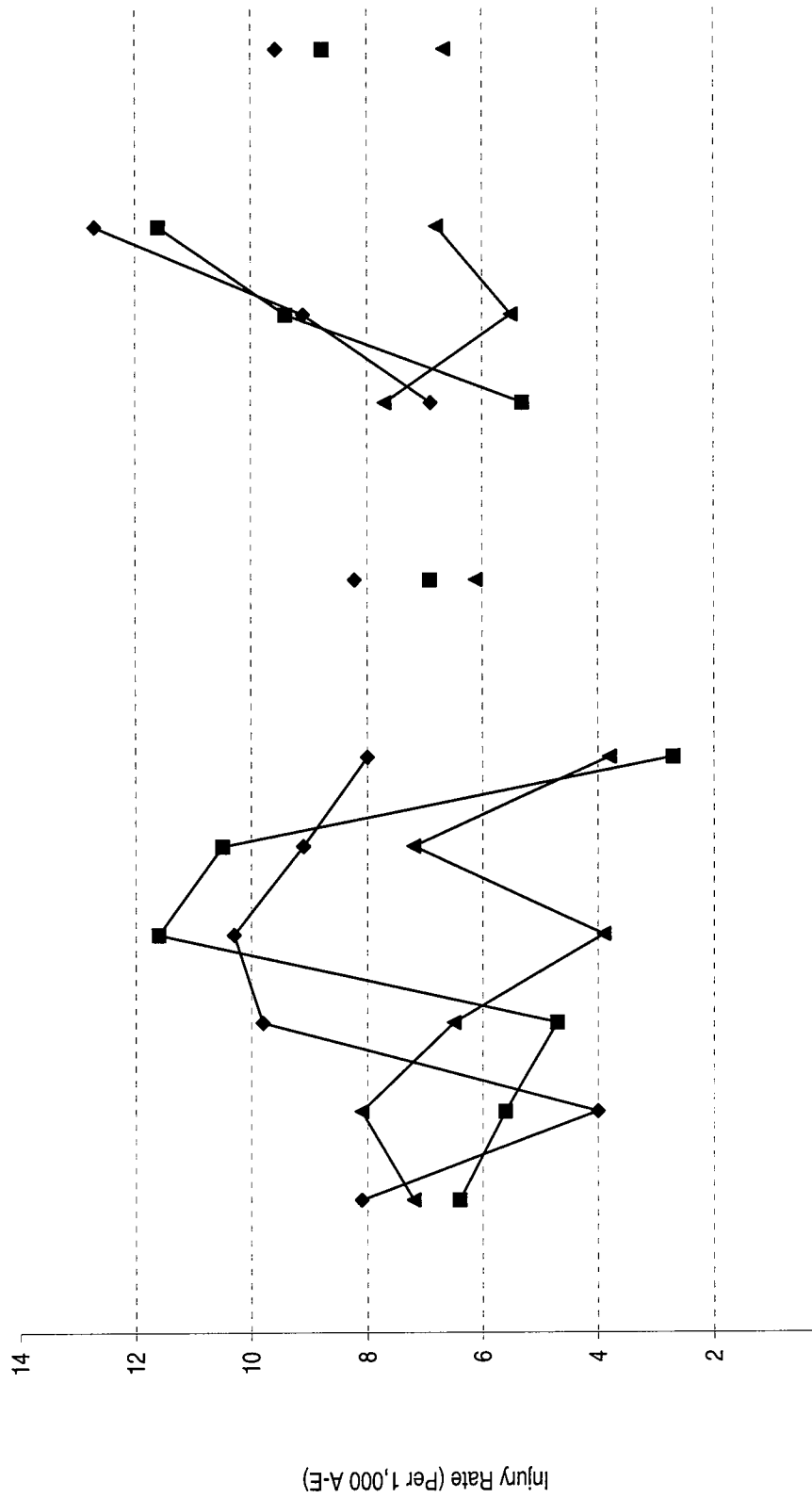
Women's Lacrosse - Figure 1
PRACTICE and COMPETITION Injury Rates
All Schools



Women's Lacrosse - Figure 2
PRACTICE Injury Rates by Division

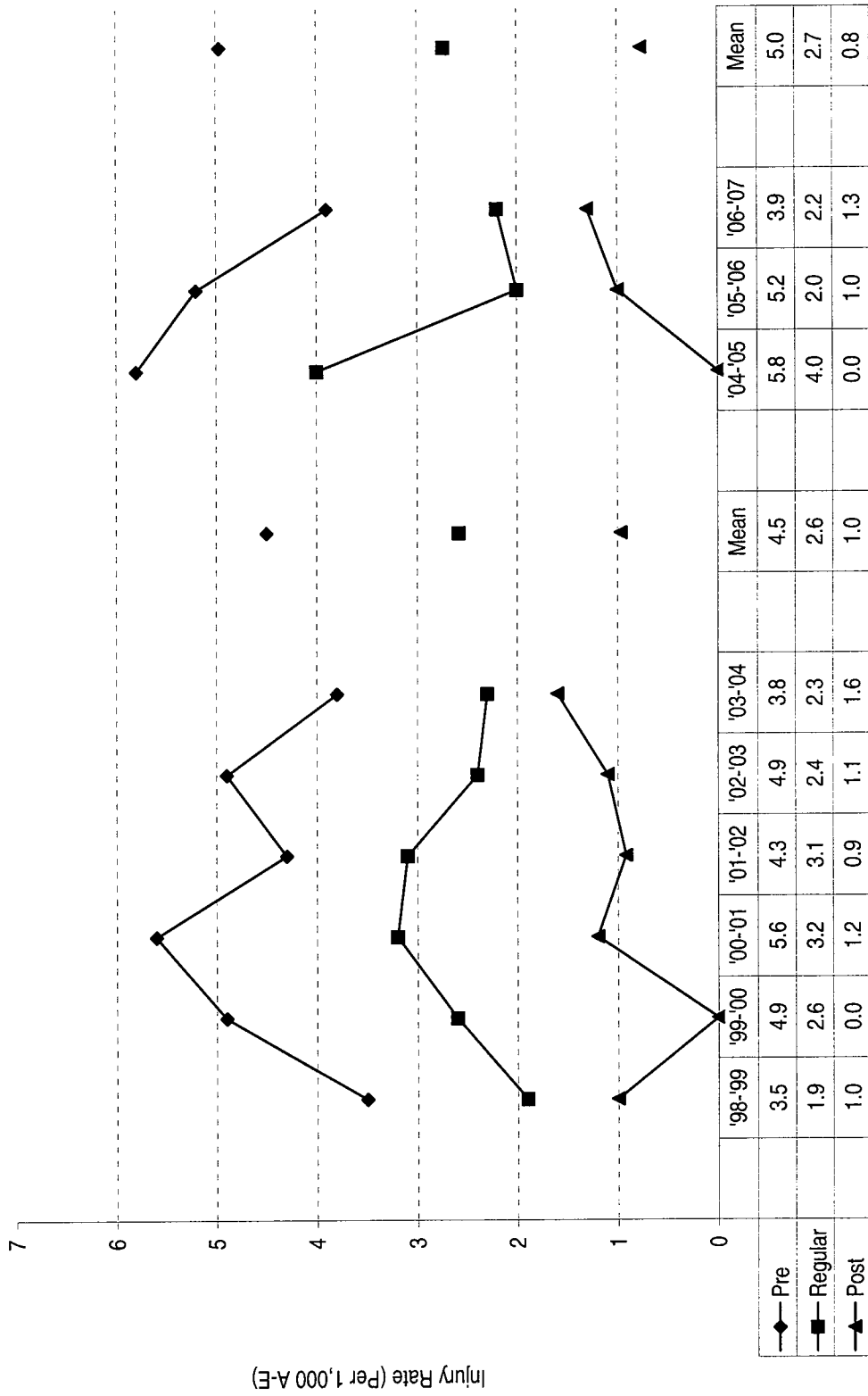


Women's Lacrosse - Figure 3
 COMPETITION Injury Rates by Division

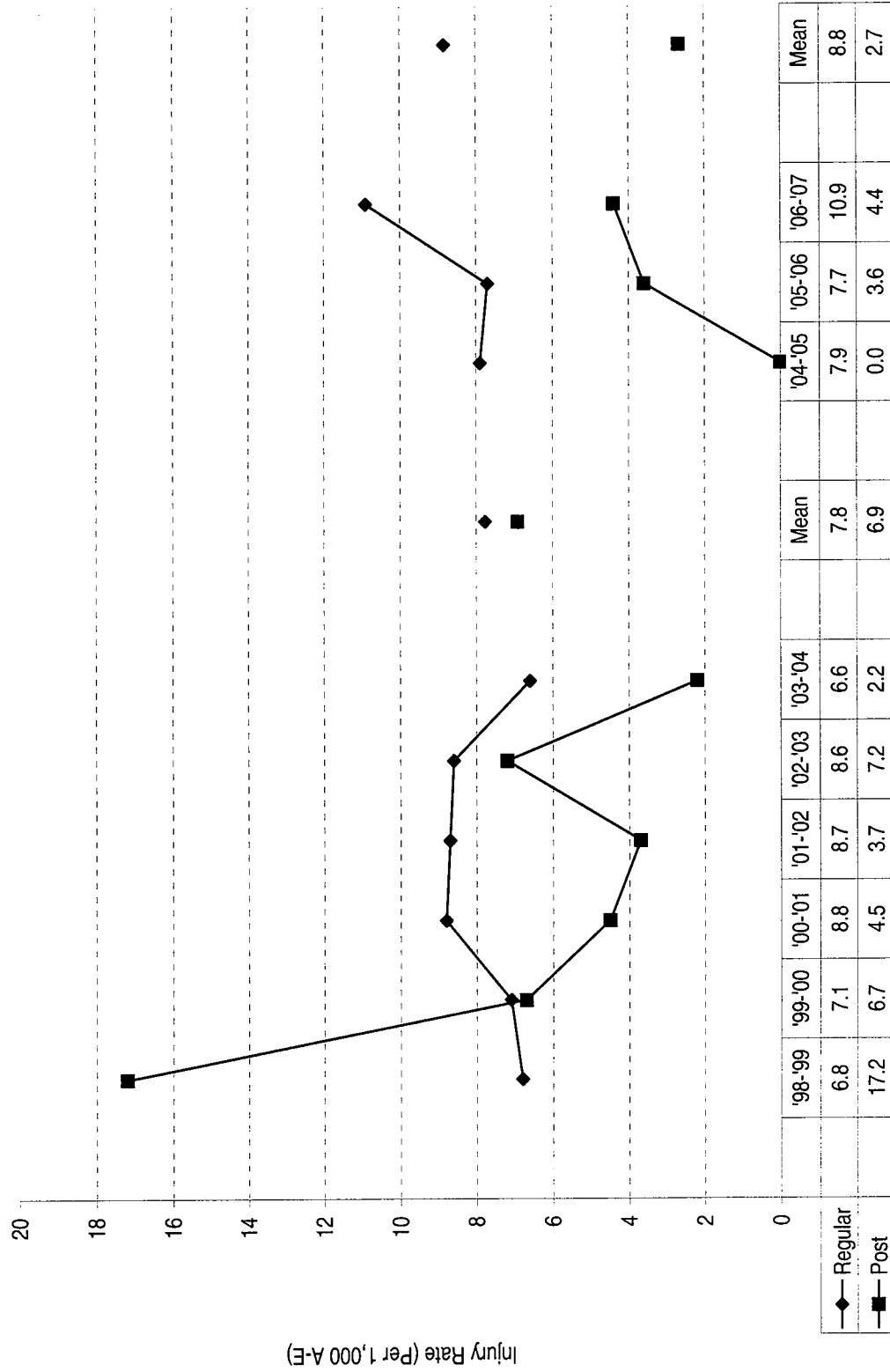


	'98-'99	'99-'00	'00-'01	'01-'02	'02-'03	'03-'04	Mean		'04-'05	'05-'06	'06-'07	Mean
◆ Div 1	8.1	4.0	9.8	10.3	9.1	8.0	8.2		6.9	9.1	12.7	9.6
■ Div 2	6.4	5.6	4.7	11.6	10.5	2.7	6.9		5.3	9.4	11.6	8.8
▲ Div 3	7.2	8.1	6.5	3.9	7.2	3.8	6.1		7.7	5.5	6.8	6.7

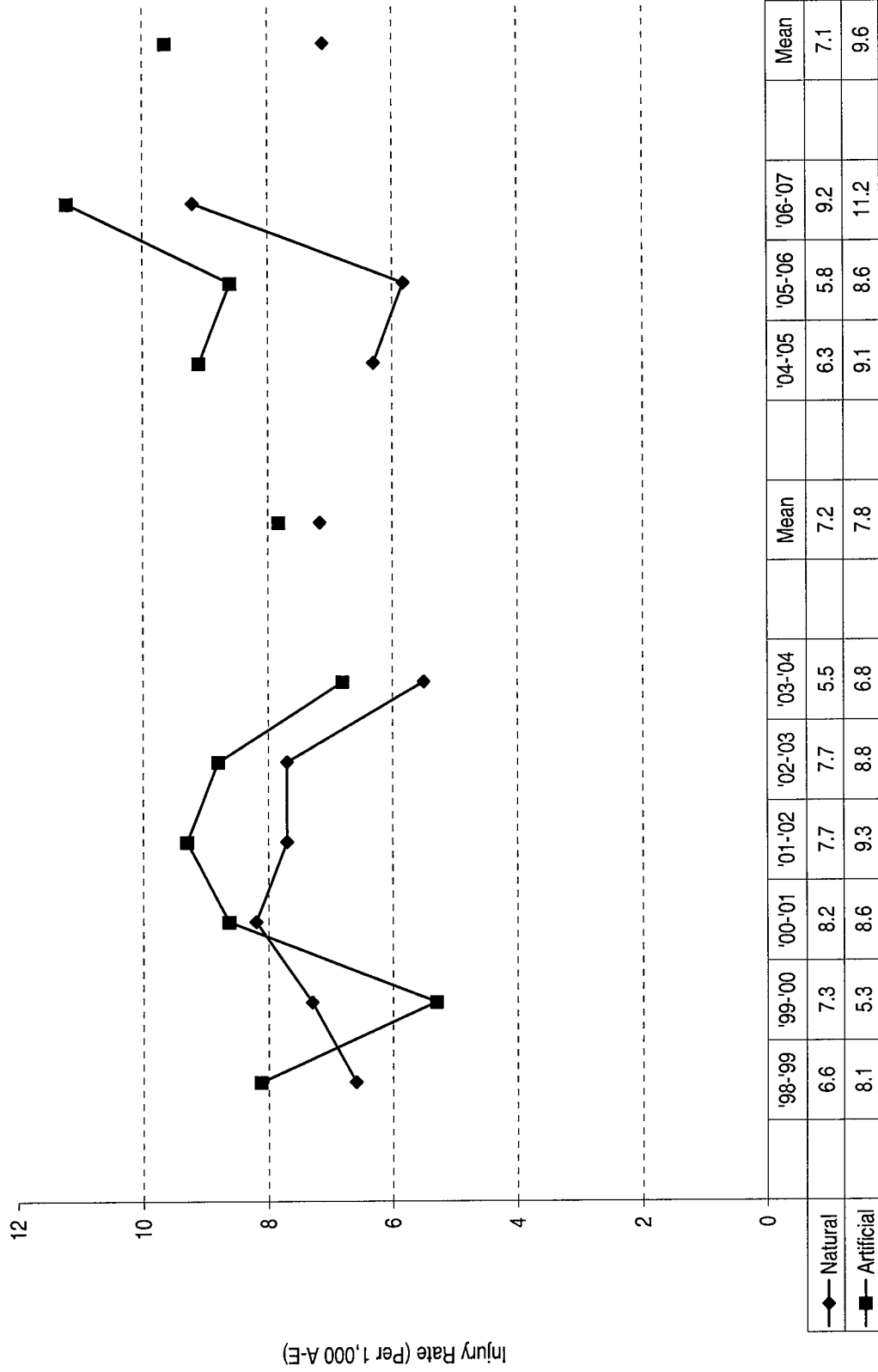
Women's Lacrosse - Figure 4
Pre, Regular and Post Season PRACTICE Injury Rates
 Preseason: *prior to the first regular season game*
 Postseason: *following the final regular season game*



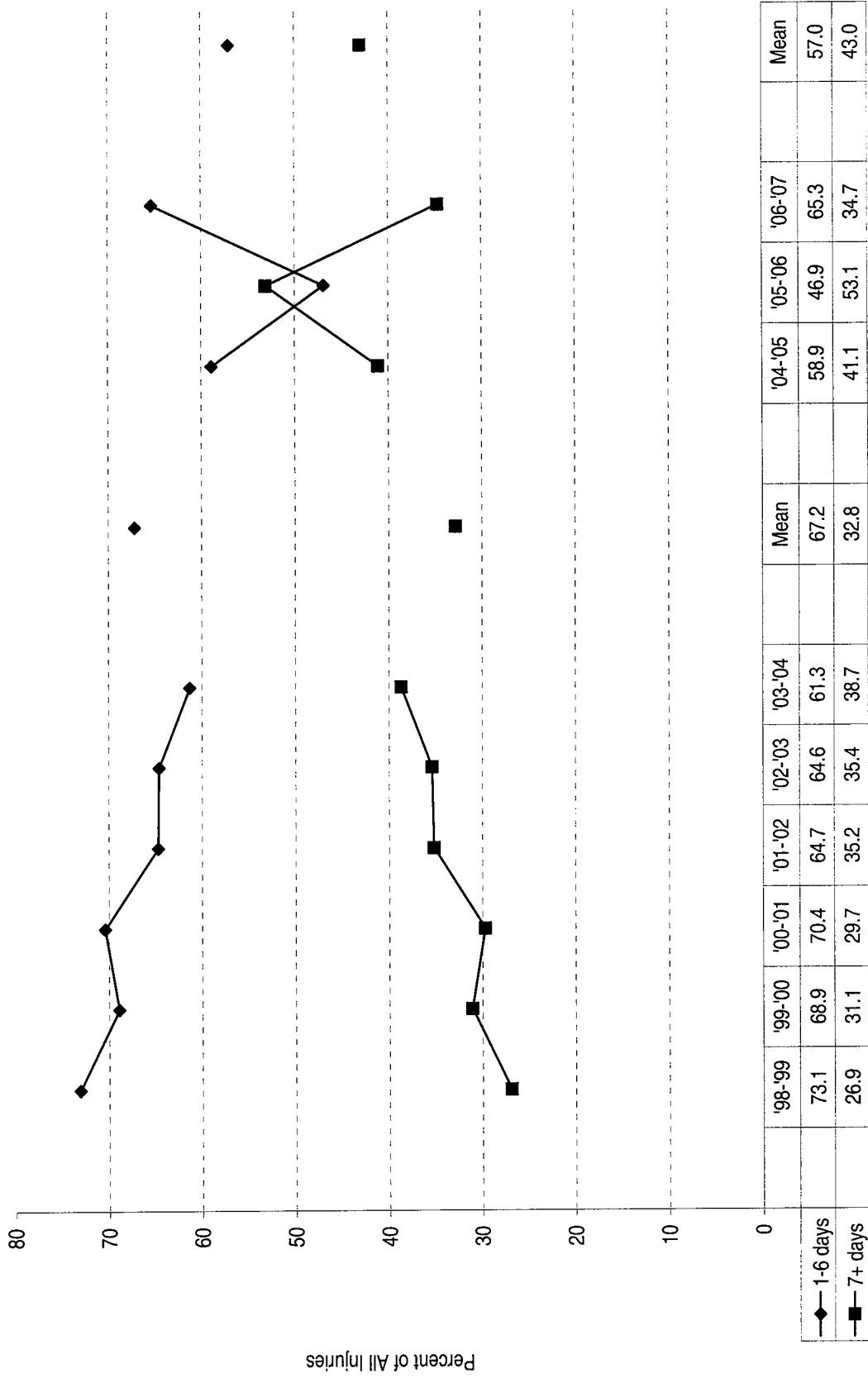
Women's Lacrosse - Figure 5
Regular and Post Season COMPETITION Injury Rates
Postseason: following the final regular season game



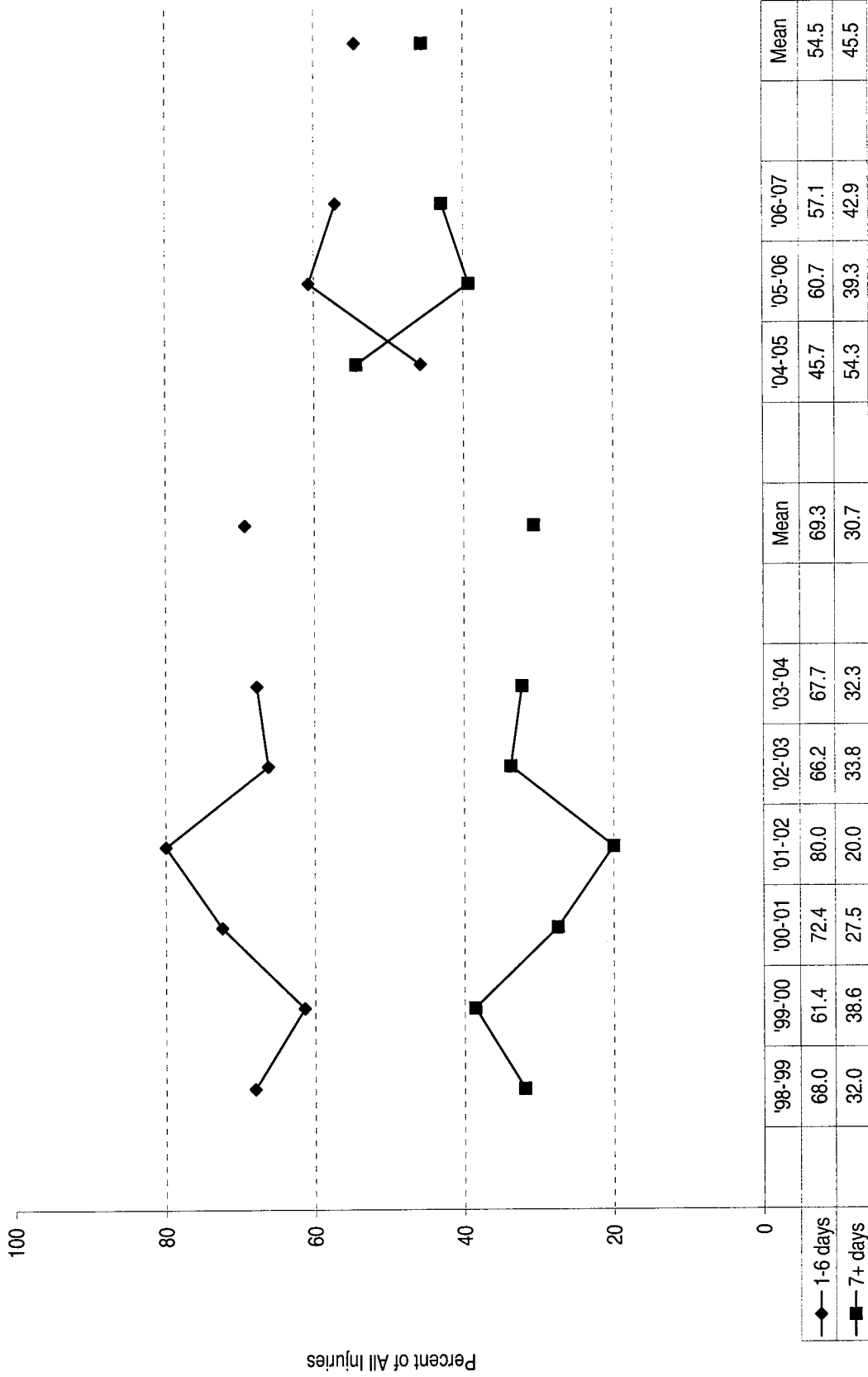
Women's Lacrosse - Figure 6
 COMPETITION Surface Injury Rates



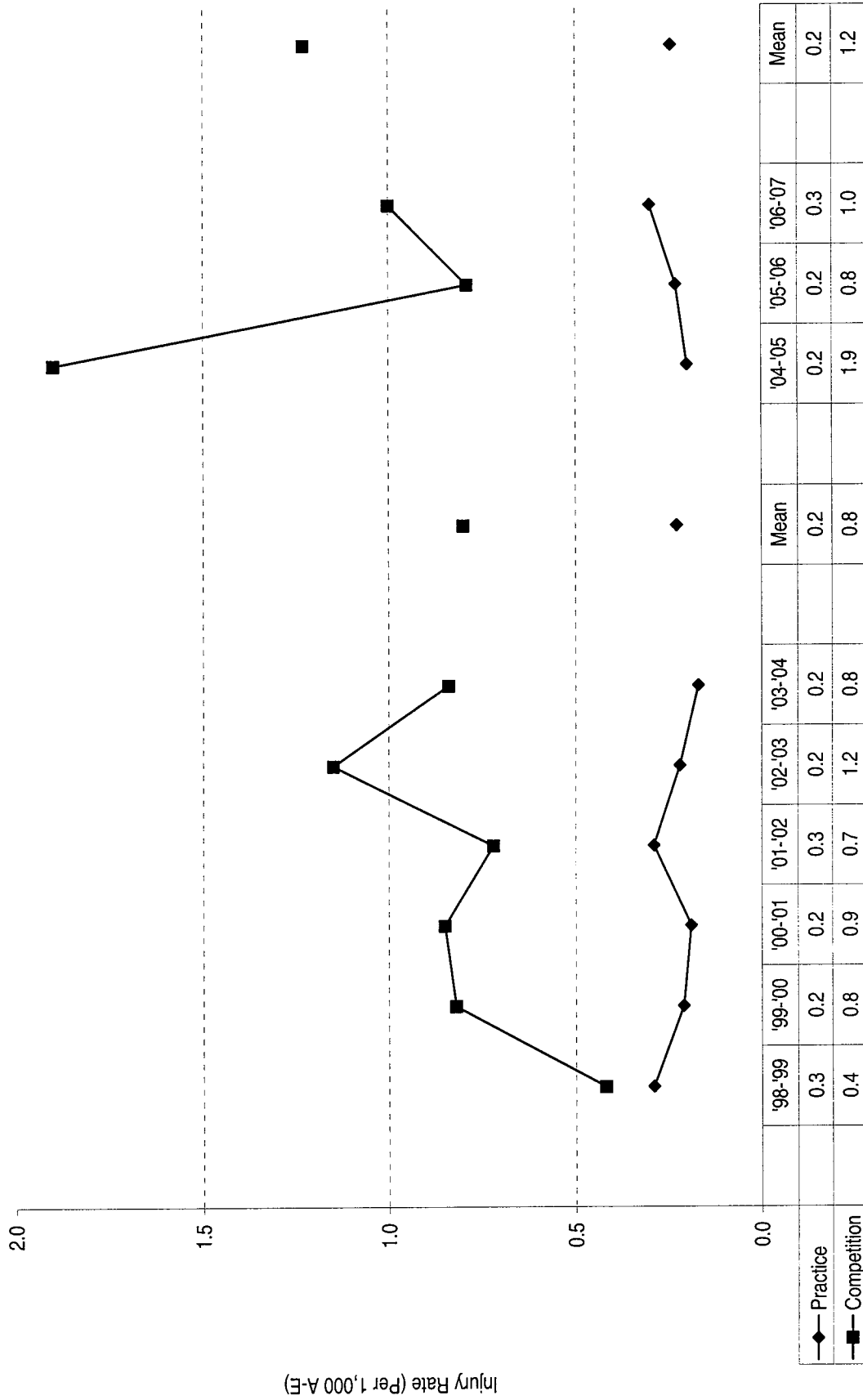
Women's Lacrosse - Figure 7
Time Loss Injuries - PRACTICE
Restricted or no participation



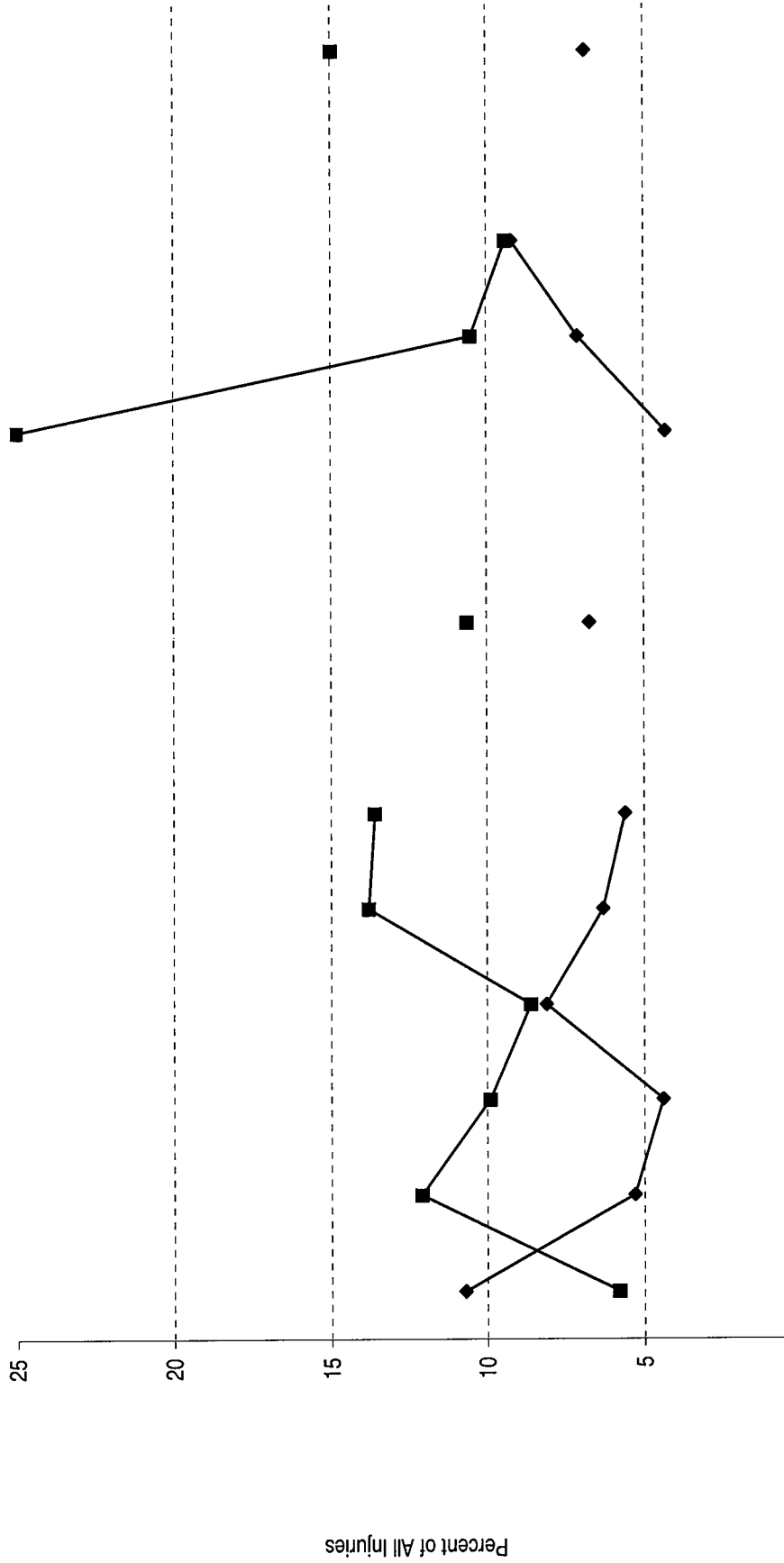
Women's Lacrosse - Figure 8
Time Loss Injuries - COMPETITION
Restricted or no participation



Women's Lacrosse - Figure 9a
Injuries Requiring Surgery (Rates)



Women's Lacrosse - Figure 9b
Injuries Requiring Surgery (Percent)



	'98-'99	'99-'00	'00-'01	'01-'02	'02-'03	'03-'04	Mean	'04-'05	'05-'06	'06-'07	Mean
—◆— Practice	10.7	5.3	4.4	8.1	6.3	5.6	6.7	4.3	7.1	9.2	6.9
—■— Competition	5.8	12.1	9.9	8.6	13.8	13.6	10.6	25.0	10.5	9.4	15.0

Women's Lacrosse - Figure 10
Above-the-Neck and Head Injury Rates - COMPETITION
(Note: Head injuries are primarily concussions)

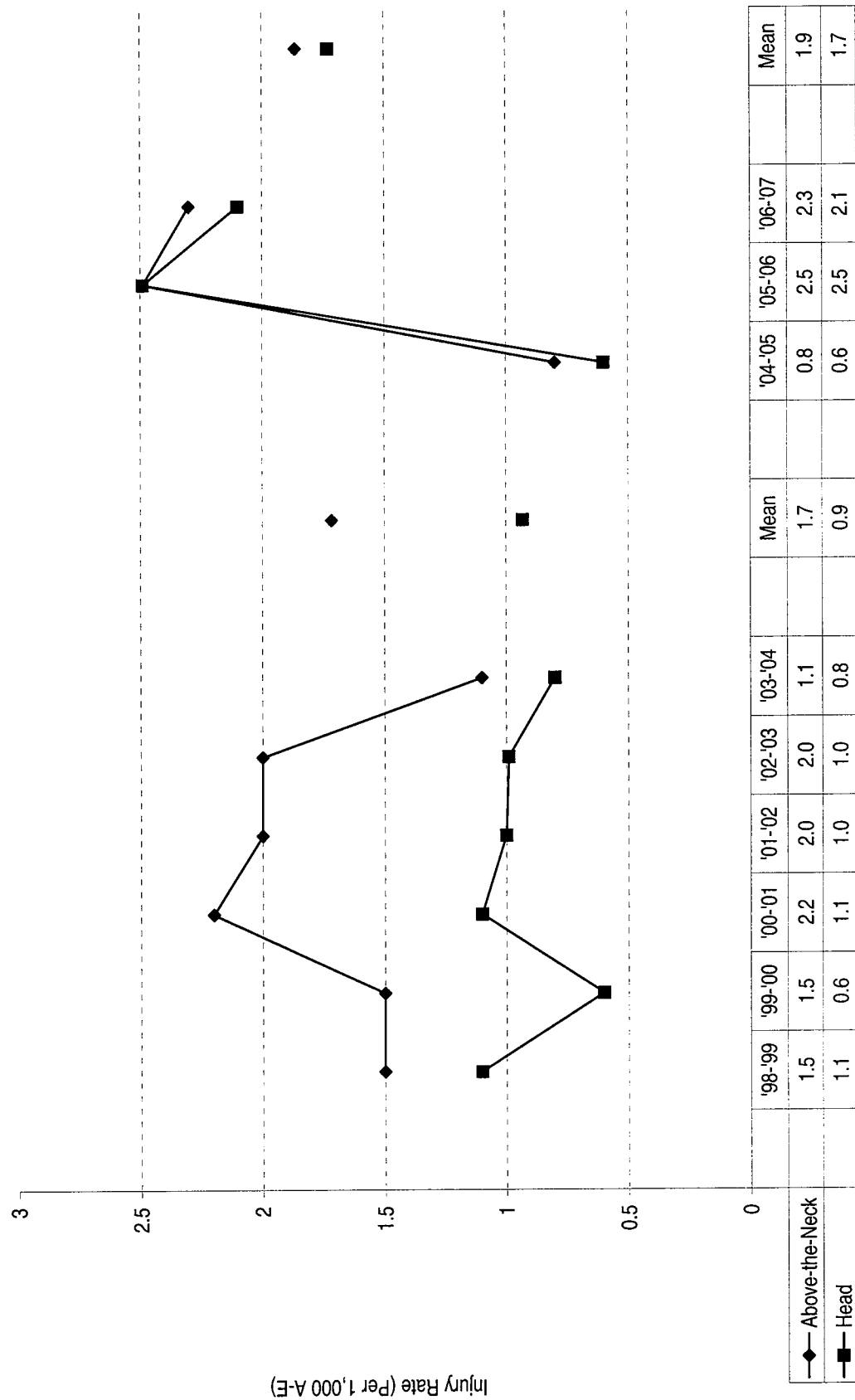
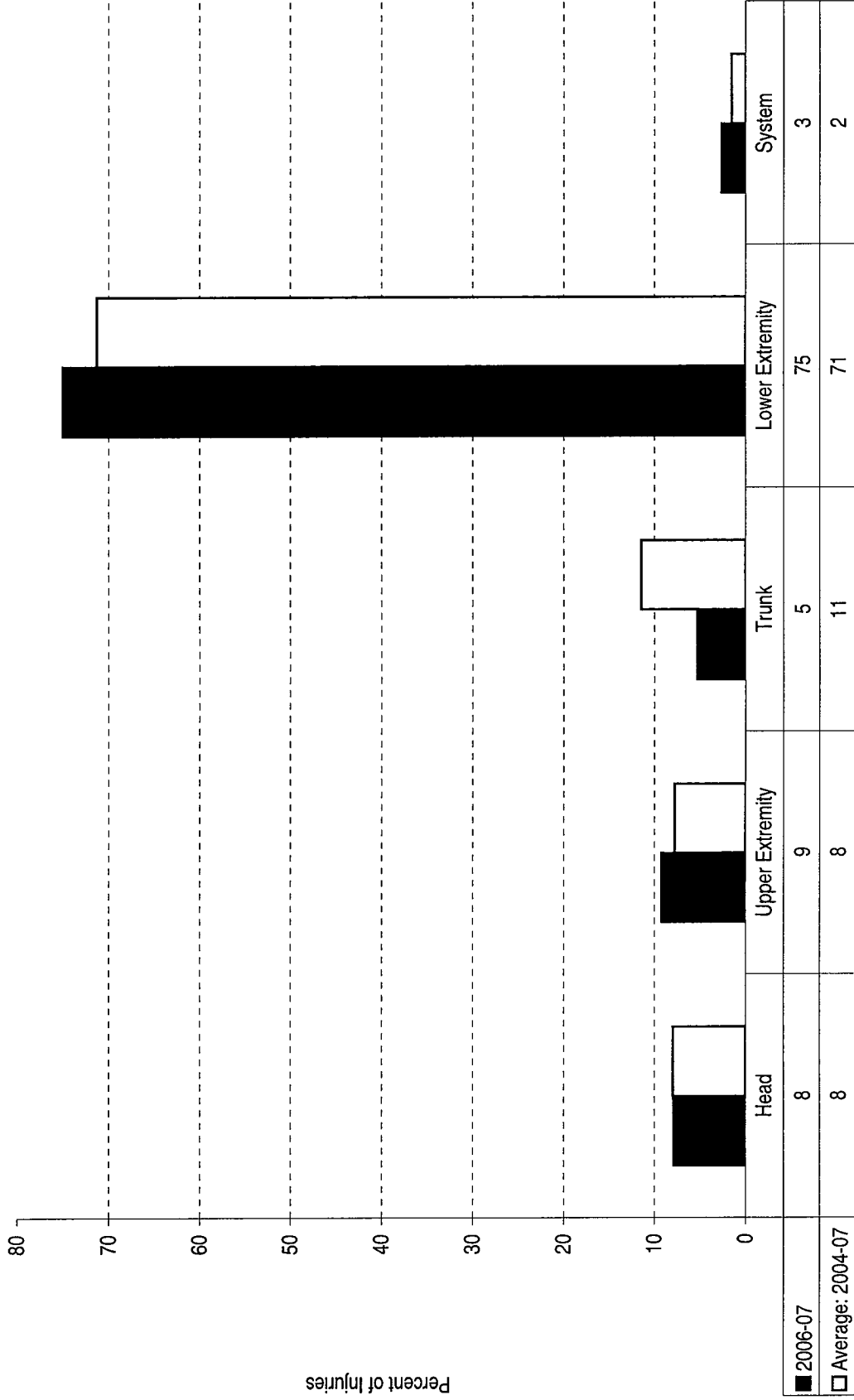
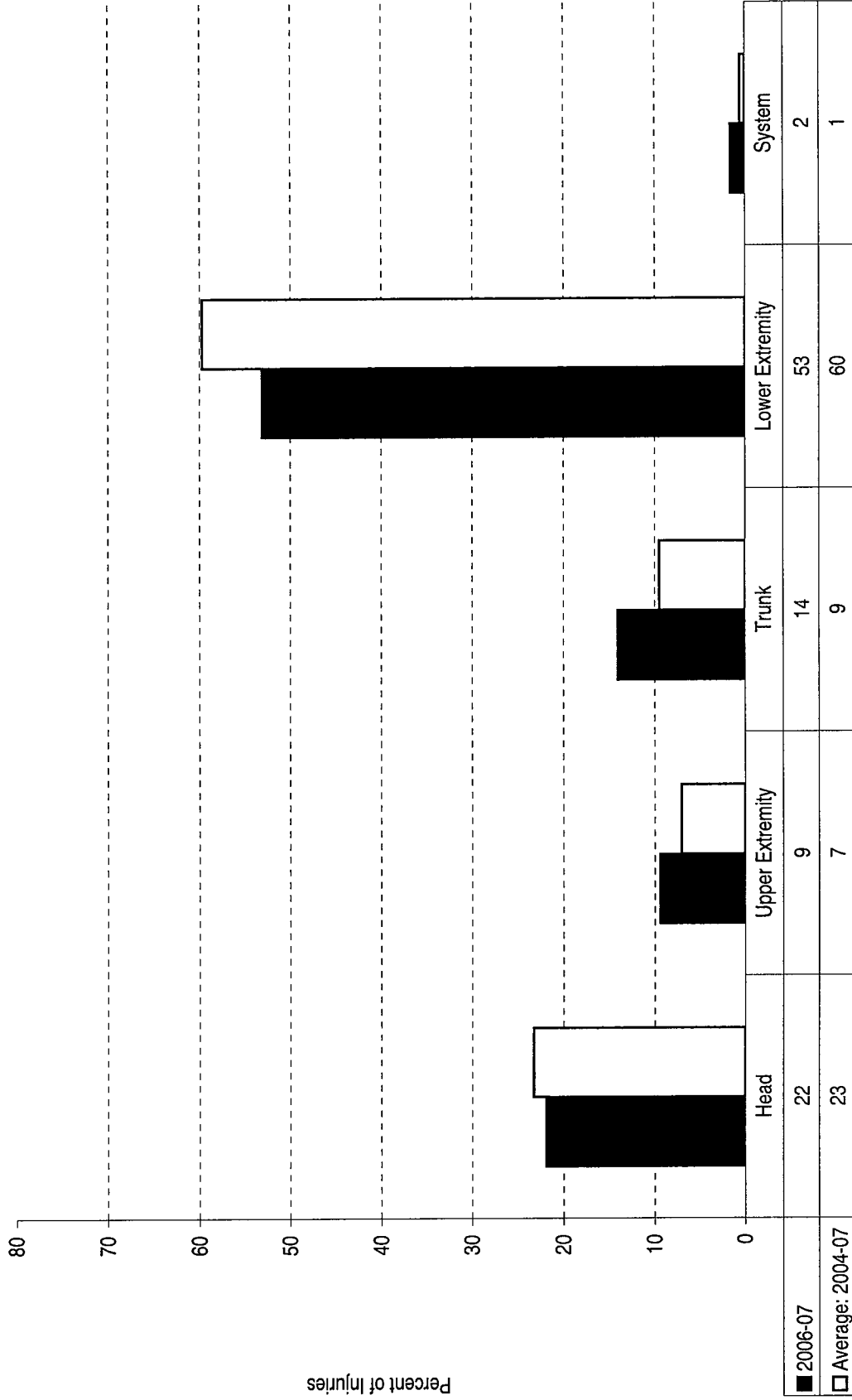


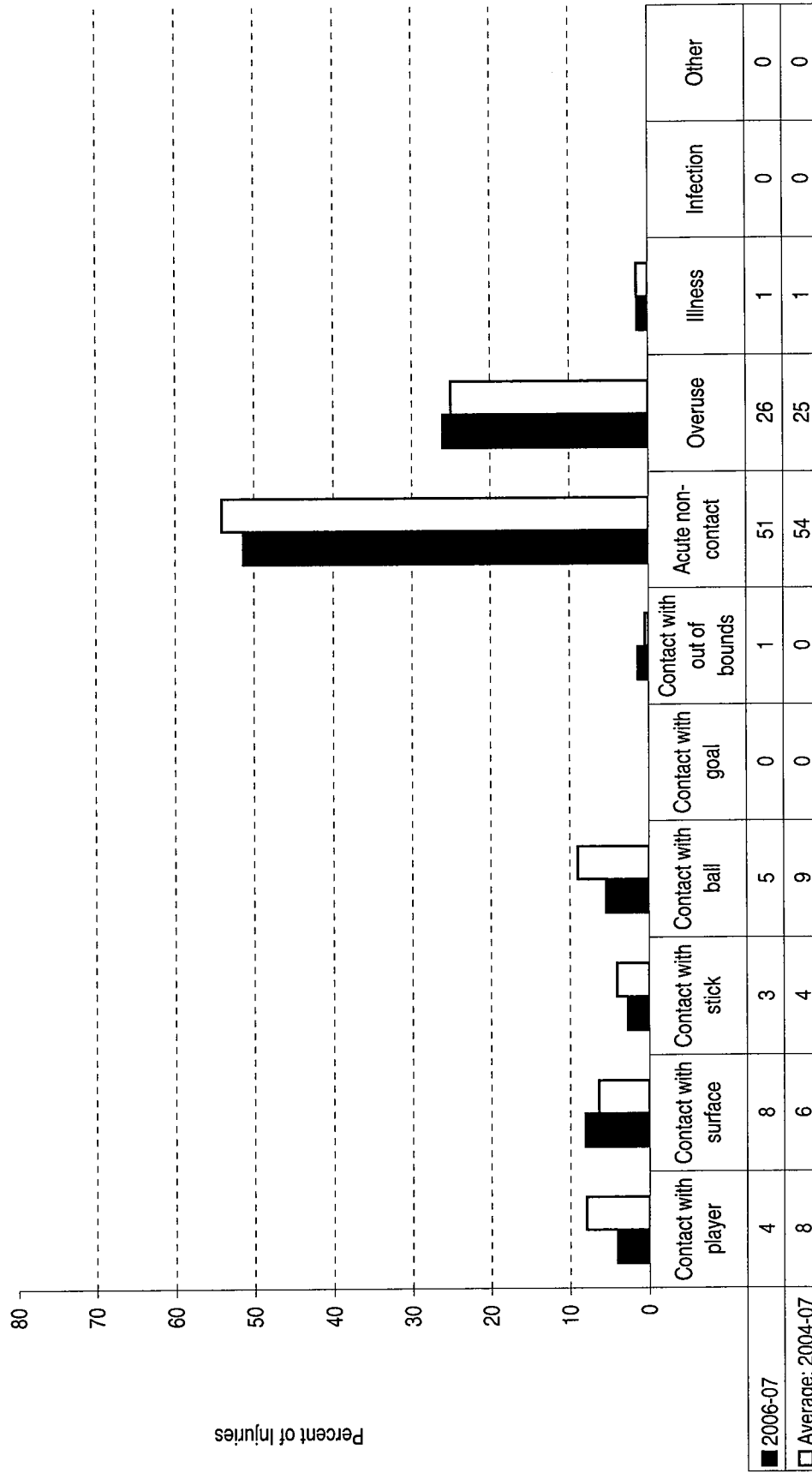
Figure 11 - Women's Lacrosse
Injuries By Body Area (%)
PRACTICE 2006-07 and 3 Year Average



**Figure 12 - Women's Lacrosse
Injuries By Body Area (%)
COMPETITION 2006-07 and 3 Year Average**



**Figure 13 - Women's Lacrosse
Mechanism of Injury (%)
Practice 2006-07 and 3 Year Average**



*Overuse/gradual onset not an option for 2004-05. These injuries may have been classified in Acute non-contact.

