

Original Research

Musculoskeletal Injuries and Illness in Professional British Tennis Players: An Injury Surveillance Study

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Background

Participation in tennis at elite levels comes with risk of health problems due to the high training volumes and physical demands of the sport. Injury surveillance is key to providing best practice athlete care in high performance sport. Minimizing time lost from training and competition due to illness or injury is the priority for professional tennis players and their performance teams. There is a gap in tennis literature investigating injury prevalence in professional tennis players.

Purpose

The primary aim of this study was to describe the incidence and prevalence of health conditions in elite tennis players over a full competition year. The injury and illness time loss and time modified from participation within British tennis players will provide baseline data for injury prevention programs and help to describe injury trends. It may also inform the design of injury mitigation measures.

Study Design

Descriptive, Retrospective cohort

Methods

Professional tennis players who were supported by a Lawn Tennis Association (LTA) Support Programme were eligible for the study. The study was undertaken between the 1st January 2023 and 31st December 2023. The study was a retrospective analysis from the injuries and illnesses documented in the weekly meeting of LTA medical and physiotherapy staff as well as using each player's electronic medical records using the computer notes program Sports Office. The injury region and number of days lost and modified from training and competition was extracted from the records and then used to calculate the incidence, prevalence and severity of the injuries.

Results

Thirty-three players (16 male and 17 female) were included in the study. The age range of these players was between 14 and 37 years (25.8 $\pm$ 1.41years; males 27.1 $\pm$ 1.42, females 24.3, SD $\pm$ 2.12). There were 109 injuries in total reported during the surveillance period. The overall incidence of injury and illness was found to be 3.3 per 365 days, 2.1 in males, and 4.4 in females. Medical illness had the highest overall incidence (0.5 per 365 days) followed by the wrist (0.5) and shoulder (0.4). In male players the highest incidence by body region was the wrist compared to the shoulder in the female players, The wrist had the highest prevalence overall (4.2%), and was 4.6% for female players, while the the highest prevalence in male players was both ankle and wrist (3.8%). The ankle had the

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highest overall mean severity with 45.8 days per injury, followed by the lower leg (31.7 days) and wrist (31.7 overall). In males the ankle region had the highest injury severity in contrast to the lower leg in female players.

Conclusions

The results of this study describe the incidence and prevalence of health conditions in elite tennis players over a full competition year. Overall medical illness had the highest incidence, the wrist had the highest prevalence, and the ankle had the highest severity in this cohort of professional tennis players. This research provides a valuable insight into injury profiles in professional tennis players helping to inform players, coaches, physiotherapists and medical professionals working in tennis.

Level of Evidence

3

INTRODUCTION

Tennis is an extremely popular sport worldwide with more than 75 million participants in around 215 countries.¹ While participation in tennis has numerous health benefits, a potential downside of participation is the risk of injury and illness.^{1,2} Sports injuries can also have substantial socio-economic consequences, particularly at the elite and professional level.^{3,4} Therefore, it is important that effective measures are developed to prevent health problems within tennis.

The first step in developing effective preventative measures is to understand the incidence, prevalence and severity of health problems within a sport.⁵ While there have been several injury surveillance studies that have reported on recreational, elite youth, junior, and college tennis players^{3,6-9}; there are a lack of studies in elite professional tennis players.^{10,11} Surveillance studies in professional tennis are largely based on injury presentations to medical staff during major tennis tournaments.^{4,12-14} The findings of these studies may not reflect the incidence and prevalence of injuries in elite players over a full season. Injuries which prevented players from participating in the tournament would not be reported in these studies, and players may not report some injuries they are managing by modifying activities, such as overuse injuries which are common in tennis players. To truly understand the burden of injury and illness in professional tennis players there is a need for prospective injury surveillance studies that record all health problems that occur both in and out of competition.

Year-round surveillance studies in non-professional tennis players have found lower extremity injuries to be more common than trunk/spine and upper limb injuries.^{3,6,7,9} The ankle is one of the most commonly injured regions, with lateral ligament ankle injuries being the most common diagnosis.^{7,9} This pattern is consistent with injuries sustained during major tennis tournaments with ankle injuries being the most common acute injury,¹³ although some differences have been reported between male and female players in both regions injured and the rates of injury during these tournaments.⁸ These results have not been replicated in year-round studies of college players.^{7,9}

Medical conditions can also have a significant impact on performance in elite athletes.¹⁵ In elite tennis, however,

few surveillance studies, either year-round or tournament based, have reported on the incidence and prevalence of medical conditions such as respiratory tract infections or gastrointestinal complaints. One study of elite junior players reported a 5.8% weekly prevalence of medical conditions.⁵ These conditions were self-reported and may not reflect the conditions that required medical attention. At present very little is known about the incidence and prevalence of medical conditions in elite tennis players.

Subsequent and recurrent injuries are common in sport.¹⁶ This may be due to incomplete healing and/or inadequate rehabilitation after the initial injury or the failure to address the risk factors that contributed to the initial injury. A subsequent injury is defined as any injury that occurs after a previous injury, with the first recordable injury during a surveillance period considered the index injury; whereas a recurrence is an injury to the same location and tissue after the individual has recovered fully from a previous injury.¹⁷ A better understanding of the relationships between an index injury (the initial injury in a surveillance period) and any subsequent injuries in tennis is warranted. This could help improve rehabilitation programs and return to play decisions, reducing the risk of subsequent injuries occurring.¹⁸ Several methods have been developed to help classify these injuries, with the method developed by Hamilton and colleagues¹⁶ widely recommended.¹⁷ Few studies, however, have reported recurrent and subsequent injury rates in tennis,^{4,6,8} and none of them have used a formal classification. At present the understanding of subsequent injuries in tennis is limited.

The primary aim of this study was to identify incidence, prevalence, and severity of injury and illness in elite British tennis players over a full competition year. The injury and illness time loss and time modified within British tennis players will provide baseline data for injury prevention programs and help to describe injury trends. In addition, the study will examine subsequent injury categorization to provide clarity on rates of recurrent injuries and exacerbations.

MATERIALS AND METHODS

RESEARCH DESIGN

The study was an observational study which described the injury and illness rates and proportions in a cohort of elite tennis players over a 12-month period (1st January 2023 until 31st December 2023). The research design used was a retrospective analysis of electronic medical records and weekly medical team meetings. The study received ethical approval by the Cardiff Metropolitan University Cardiff School of Sport's Ethics Sub-Committee. Informed consent was obtained from participants in the study to use anonymized data.

STUDY POPULATION

Professional tennis players who were supported by a Lawn Tennis Association (LTA) Support Programme in 2023 were eligible for the study. The support programmes were Elite, Pro Scholarship Programme and Men's and Women's Programmes. Players were accepted onto the programme based on their ranking and performance markers and were supported from the 1st of January each year until 31st of December. Players on these programmes were entitled to receive medical care by the LTA's medical and physiotherapy staff. Athletes who used their own medical team were excluded from the study as their medical records could not be verified by the LTA staff.

Thirty-seven elite tennis players were supported by these LTA programmes during 2023. Four players were excluded from the study due to travelling with their own medical teams and not sharing their information with the LTA.

DATA COLLECTION

All injuries and illnesses sustained by LTA Support Programme players were recorded by the LTA's medical and physiotherapy staff in weekly meetings. The meetings consisted of the medical and physiotherapy team including three doctors and three physiotherapists. For each injury the following information was extracted from each player's electronic medical records using the computer notes program Sports Office:

1. Athlete name (used initially to verify injury record data and then the data was anonymized)
2. Sex
3. Age at time of injury or illness occurrence
4. Hand dominance
5. Date of injury or illness occurrence
6. Body area affected by injury
7. Injury or illness severity: days lost and days modified where the athlete is unable to compete or practice fully
8. Total number of injuries per body part

An injury was defined as any health problem, injury, or illness that led to an athlete being unavailable for training/competition or resulted in training being modified. A time-loss injury was where a player was unavailable to train

$$Incidence = \left(\frac{\text{Number of injuries reported}}{\text{Total programme days}} \right) \times 365$$

Equation 1.

$$Prevalence = \left(\frac{\text{Number of days players were injured}}{\text{Total programme days}} \right) \times 100$$

Equation 2.

or compete in tennis. A time-modified injury was where a player's training was modified because of an injury or illness. The injuries were deemed to be resolved when a player had returned to full training or competition. If a player had returned to full competition after a time loss episode, then a subsequent injury was classified as a new injury. Time loss days were counted from the day of onset.

At the completion of the surveillance period all injuries reported were classified to determine if they were a subsequent or recurrent injury using the method proposed by Bahr and colleagues.¹⁷ Injuries could be classified as either an index injury, a subsequent new injury, a subsequent injury local to the index injury, a reinjury, or an exacerbation.

DATA ANALYSIS

The analysis of records was performed by the lead author (CN). Incidence, prevalence, and severity was reported for all injuries overall, and for each injury region. Incidence, prevalence and severity was also reported for both male and female players. Exposure was the total number of days players were on programme during the surveillance period. Incidence was reported as the number of injuries or illnesses that occurred for each body region during the surveillance period per athlete year (365 days) [see [Equation 1](#)].

Prevalence was reported as the percentage of players considered to have an injury on any given day of the programme year (see [Equation 2](#)).

Severity was reported as the total number of time loss or modified days for that injury. The mean severity for each injury was also calculated. The number, and overall percentage of injuries, that were classified as either an index injury, a subsequent new injury, a subsequent injury local to the index injury, a reinjury or an exacerbation was also recorded.

RESULTS

Thirty-three players (16 male and 17 female) were included in the study. The age range of these players was between 14 and 37 years (25.8+/-1.41), males (27.1+/-1.42) and females (24.3+/- 2.12). Players were on programme for 12,045 days in total across the surveillance period (5,840 days for males and 6,205 for females). There were 109 injuries in total reported during the surveillance period (34 in males and 75 in females). The overall incidence of injury and illness was

Table 1. Total number of injuries and incidence by region within the 365 days of the study period

Body Region	Total injuries (Overall)	Total injuries (Males)	Total injuries (Females)	Incidence (Overall)	Incidence (Males)	Incidence (Females)
Medical Illness	17	5	12	0.5	0.3	0.7
Ankle	6	2	4	0.2	0.1	0.2
Elbow	4	2	2	0.1	0.1	0.1
Foot	4	0	4	0.1	0.0	0.2
Forearm	1	1	0	0.0	0.1	0.0
Groin/Hip	5	2	3	0.2	0.1	0.2
Hand	1	0	1	0.0	0.0	0.1
Head	2	0	2	0.1	0.0	0.1
Knee	6	1	5	0.2	0.1	0.3
Lower leg	7	4	3	0.2	0.3	0.2
Lumbar spine	6	2	4	0.2	0.1	0.2
Shoulder	14	3	11	0.4	0.2	0.7
Thigh	6	1	5	0.2	0.1	0.3
Thoracic spine	2	0	2	0.1	0.0	0.1
Trunk/Abdominal	11	3	8	0.3	0.2	0.5
Upper arm	1	0	1	0.0	0.0	0.1
Wrist	16	8	8	0.5	0.5	0.5
Total	109	34	75	3.3	2.1	4.4

found to be 3.3 per 365 days, 2.1 in males, and 4.4 in females ([Table 1](#)).

The overall prevalence of injuries was 17.6%, 16.2% in males and 18.7% in females ([Table 2](#)). The total number of days lost or modified due to injury was 2115, 972 were time-loss days, while 1143 were time-modified days ([Table 3](#)). The overall mean severity was 19.4 days per injury, 8.9 of these were time-loss days and 10.5 were time-modified days ([Table 4](#)). Severity was higher in male players than female players (27.9 days in males and 15.7 days in females).

Medical illness had the highest number of cases with 17 (0.5 per 365 days) followed by the wrist with 16 (0.5), shoulder with 14 (0.4) and trunk and abdominals with 11 (0.3) (see [Table 1](#)). The number of medical illnesses was greater in the female athletes, 12 compared to 5 in males ([Table 1](#)). The overall incidence of injury was higher in the female players than in males (4.4 in females compared to 2.1 in males). In male players the wrist had the highest incidence (0.5) followed by the lower leg (0.3) and shoulder (0.2), whereas in the female players the shoulder had the highest incidence (0.7) followed by the wrist and the trunk and abdominal regions (both 0.5).

The wrist had the highest prevalence, both overall (4.2%) and for male (3.8%) and female (4.6%) players (see [Table 2](#)). The regions with the next highest prevalence overall were the shoulder (2.6%) and ankle regions (2.3%). In the female players the shoulder (3.7%) and the knee (2.0%) had the next highest prevalence. While in the male players ankle injuries were as prevalent as wrist injuries (3.8%), followed by lower leg injuries (1.8%).

[Table 3](#) shows the number of days lost and modified across the athlete year by region. The wrist had the highest severity with 507 days (24% of the overall total); 248 of these days were time-loss days, while 259 were modified days. The shoulder had the next highest severity (315 days, 14.9% of the total, 91 time-loss days and 224 modified days) followed by the ankle (275 days, 13.0% of the total, 151 and 124 days).

The ankle had the highest overall mean severity with 45.8 days per injury, 25.2 of these were time-loss and 20.7 were modified days (see [Table 4](#)). This was followed by the lower leg (31.7, 20 time-loss days and 11.7 modified days), and wrist (31.7 overall, 15.5 time-loss and 16.2 modified). Male players had a higher overall severity compared to female players (27.9 vs 15.6 days). In the male players ankle injuries had the highest overall severity with 111 days (59.5 time-loss and 51.5 modified days). While in the female tennis players lower leg had the highest overall severity with 39 days (25.3 time-loss and 13.7 modified).

Most subsequent injuries were classified as a subsequent new injury (85.0%), which is an injury unrelated to previous injury in that player. Nine percent of subsequent injuries were classified as either reinjuries or repeated illnesses and 5.0% were found to be exacerbations of existing injuries. Of the injuries which were classified as reinjuries or repeated illnesses two of these each were to the wrist, shoulder, and trunk, and abdominal region (Appendix 1).

Table 2. Injury prevalence (%) – All players, further separated by sex.

Body Region	Prevalence – Overall (%)	Prevalence – Males (%)	Prevalence – Female (%)
Medical Illness	1.3	1.2	1.4
Ankle	2.3	3.8	0.9
Elbow	0.6	0.9	0.2
Foot	0.2	0.0	0.4
Forearm	0.2	0.4	0.0
Groin/Hip	0.3	0.4	0.2
Hand	0.2	0.0	0.3
Head	0.1	0.0	0.1
Knee	1.6	1.1	2.0
Lower leg	1.8	1.8	1.9
Lumbar spine	0.6	0.9	0.4
Shoulder	2.6	1.4	3.7
Thigh	0.3	0.1	0.4
Thoracic spine	0.1	0.0	0.2
Trunk/Abdominal	1.1	0.5	1.6
Upper arm	0.2	0.0	0.4
Wrist	4.2	3.8	4.6
Total	17.6	16.2	18.7

Table 3. Injury severity by region

Body Region	Days Lost	Days Modified	Total Days Injured	% of total days
Medical Illness	107	49	156	7.4
Ankle	151	124	275	13.0
Elbow	15	52	67	3.2
Foot	11	12	23	1.1
Forearm	11	13	24	1.1
Groin/Hip	20	11	31	1.5
Hand	0	21	21	1.0
Head	7	1	8	0.4
Knee	52	136	188	8.9
Lower leg	140	82	222	10.5
Lumbar spine	45	32	77	3.6
Shoulder	91	224	315	14.9
Thigh	21	11	32	1.5
Thoracic spine	7	7	14	0.7
Trunk/Abdominal	33	95	128	6.1
Upper arm	13	14	27	1.3
Wrist	248	259	507	24.0
Total	972	1143	2115	100

DISCUSSION

This is one of the few injury surveillance studies in elite tennis players over a 12-month period. In contrast to previous year-round surveillance studies which have reported lower extremity injuries to be the most common, wrist in-

juries had the highest incidence and prevalence followed by shoulder injuries. The severity of lower extremity injuries, particularly ankle injuries was greatest, followed by the lower leg and wrist. Medical conditions had the highest incidence overall, although the prevalence and severity of these conditions was lower than wrist, shoulder and ankle injuries. This study has increased the understanding of the

Table 4. Mean severity of injuries per region and by time-loss and modified days, reported in days.

Body Region	Overall Severity			Male Severity			Female Severity		
	Total	DL	DM	Total	DL	DM	Total	DL	DM
Medical Illness	9.2	6.3	2.9	14.2	9.6	4.6	7.1	4.9	2.2
Ankle	45.8	25.2	20.7	111.0	59.5	51.5	13.3	8.0	5.3
Elbow	16.8	3.8	13.0	26.0	4.0	22.0	7.5	3.5	4.0
Foot	5.8	2.8	3.0	0.0	0.0	0.0	5.8	2.8	3.0
Forearm	24.0	11.0	13.0	24.0	11.0	13.0	0.0	0.0	0.0
Groin/Hip	6.2	4.0	2.2	10.5	7.0	3.5	3.3	2.0	1.3
Hand	21.0	0.0	21.0	0.0	0.0	0.0	21.0	0.0	21.0
Head	4.0	3.5	0.5	0.0	0.0	0.0	4.0	3.5	0.5
Knee	31.3	8.7	22.7	63.0	3.0	60.0	25.0	9.8	15.2
Lower leg	31.7	20.0	11.7	26.3	16.0	10.3	39.0	25.3	13.7
Lumber spine	12.8	7.5	5.3	25.0	13.0	12.0	6.8	4.8	2.0
Shoulder	22.5	6.5	16.0	28.0	8.3	19.7	21.0	6.0	15.0
Thigh	5.3	3.5	1.8	5.0	3.0	2.0	5.4	3.6	1.8
Thoracic spine	7.0	3.5	3.5	0.0	0.0	0.0	7.0	3.5	3.5
Trunk/ Abdominal	11.6	3.0	8.6	10.0	3.0	7.0	12.3	3.0	9.3
Upper arm	27.0	13.0	14.0	0.0	0.0	0.0	27.0	13.0	14.0
Wrist	31.7	15.5	16.2	27.6	11.3	16.4	35.8	19.8	16.0
Total	19.4	8.9	10.5	27.9	12.4	15.5	15.6	7.4	8.2

DL = Days Lost, DM = Days Modified

incidence, prevalence and severity of injuries in tennis in this population. It may assist practitioners in design and implementation of targeted interventions to minimize the impact of injury on tennis performance.

Medical conditions had the highest incidence in the current study, although the prevalence and severity of these conditions was lower than in other regions. This finding is similar to that in a study of elite junior players which used the Oslo Sports Trauma Research Centre questionnaire on a weekly basis.³ In this study, illnesses accounted for just over a third of all reported health problems, with the weekly prevalence of illness reported to be 5.8%. This is higher than that reported in the current study, however, an all-complaints injury definition was used which may have contributed.¹⁷ In the study by Pluim and colleagues,³ respiratory tract infections were most common, followed by gastrointestinal complaints. This is similar to that reported in studies of elite athletes from multiple sports which used a similar design to the current study.¹⁵ While medical conditions were not categorized into organ systems herein, it is likely these conditions would be the most common. Future studies should prospectively record medical conditions and categorize them by organ system. Given the incidence of illness, practitioners working with tennis players should look to implement preventative measures to mitigate the impact of these problems upon performance.

Wrist conditions had the highest incidence and prevalence of all injury regions. This was unexpected as previous studies have reported lower extremity injuries to be the most common conditions in tennis players.^{3,4} Wrist conditions, more commonly overuse conditions, however, are

often treated by practitioners working in tennis.¹⁰ Players often manage to continue playing with these overuse conditions which may account for why they are less commonly reported by professional players during major tournaments compared to lower extremity injuries.^{4,13} Several factors can contribute to the development of wrist injuries in tennis. The authors hypothesize that changes in playing surface over the year, heavier balls during some tournaments, along with hitting technique and changes in training and competition schedules could all lead to the occurrence of overuse wrist injuries. Examining the transition periods between court surfaces as well as the adjustments to playing conditions including ball types and travel requirements is a key area for further investigation into injury patterns in the tennis literature.

Ankle injuries were one of the most prevalent injuries and had the highest severity of all injury regions. The onset of these injuries was acute non-contact injuries, that in some cases required surgery, which consequently resulted in a higher number of time-loss days. This finding is similar to those in previous studies which have reported injury mechanism and severity related to the ankle.^{3,7,9} Lateral ligament complex injuries are the most common ankle condition reported in tennis and are thought to occur due to rapid and repeated changes of direction while playing, particularly on a hard court.⁸ Given the severity of this condition, preventative measures, such as neuromuscular control exercises and potentially prophylactic bracing, should be considered in this population.⁹

The current study results support the findings from tournament surveillance studies that shoulder injuries are com-

mon in elite tennis players.^{8,13} The conditions are often overuse conditions such as rotator cuff tendinopathy, internal impingement, and SLAP lesions.¹⁰ High loads and forces occur at the shoulder during both serving and groundstrokes, which are thought to contribute to the development of these conditions, along with excessive load due to training and competition schedules.^{10,19} Musculoskeletal factors such as rotator cuff strength deficits, internal rotation range of motion deficits, scapular dyskinesis, and kinetic chain abnormalities are also thought to increase the risk of these conditions.¹⁹ Preventative measures targeted to address these factors may need to be considered in tennis players due to the prevalence of these conditions.

In addition to the wrist and shoulder body regions there were also a high number of injuries to the trunk and abdominal region supporting previous research in national collegiate athletes.^{7,9} Due to tennis being both an overhead and rotational sport, high forces are generated, absorbed, and transferred through the kinetic chain between the upper body and the lower body via the trunk.²⁰ The high eccentric-concentric activation of the abdominals during the tennis serve appears to be implicated in the high incidence of trunk and abdominal injuries sustained.⁸ In particular, rectus abdominis muscle strains are common among competitive tennis players. Monitoring of serving loads as well as tennis specific rehabilitation programs focused on eccentric and plyometric exercises for the abdominal wall should be explored to reduce the number of trunk and abdominal injuries and consequently maximize health and performance.

In the current study, descriptively, the incidence and prevalence of injuries was higher in female players than in male players, but severity was higher in males than females. Previous studies in elite junior tennis players found severity of injuries to be significantly greater in male players than in female players, although there was no significant difference in incidence.⁸ Studies in college tennis have also shown no significant difference in the overall injury rates between male and female tennis players.⁷ In major professional tournaments however, the rates of injuries in female players per game are reported to be higher.¹⁴ Several factors, including physical, technical, and tactical, have been suggested as contributors leading to differences in injury rates between male and female tennis players.¹⁴ Larger scale studies are required to establish if differences in injury exist between elite male and female tennis players.

Many sports injuries are recurrent.¹⁸ By understanding which injuries are more likely to recur, better preventative measures can be implemented. At present very few studies have investigated this specific outcome in tennis players. In the current study 14.0% of all subsequent injuries were classified as either reinjuries or repeated illnesses or exacerbations. This is much lower than has been reported previously over a similar surveillance period (35.0%).⁶ However, this study by Hjelm and colleagues was in recreational junior players and used a different method to classify recurrent injuries. The only study to have investigated subsequent injuries in elite tennis players was conducted dur-

ing a single major tennis tournament.⁴ While this study reported similar recurrence rates to those found in the current study (11.0%), this finding was based on player self-reporting, and a formal classification method was not used. Thus, further work is required to understand the prevalence of recurrent injuries in professional tennis players.

While the current study increases the understanding of the injuries reported by elite tennis players, it is not without its limitations. The final cohort included only 33 players; four players were excluded from the study as their injuries were managed by their own medical team. It is possible, had they been included in the final analysis, that the findings of this study may have differed. This issue has been recognized previously as a limitation in all surveillance studies of professional tennis players.^{13,14} In addition, the different age groups of tennis players may respond to load, injury, and treatment in distinct ways. Future studies with larger cohorts of players may want to separate the data collected into two age brackets for example 14–17-year-olds and then over 18-year olds. This would help to highlight variations in the injury profiles between the age groups.

Previous injury surveillance consensus statements in tennis have recommended that injury rates be calculated per 1000 hours or 1000 games played.^{21,22} These statements, however, have recognized that this is not always possible due to the individualized nature of tennis. As it was not possible to accurately capture the number of hours of training and match play in the included cohort, days on programme was used as a measure of exposure instead. This method has been used previously in other surveillance studies in elite athletes where it is not possible to accurately record hours of training and competition.

While this study describes the incidence, prevalence and severity of injuries by body region in elite tennis players, further work is required. The mode of onset and the activity at the time of injury are yet to be described in this population of tennis players, along with the specific tissue types of injury. The impact of court surface on injury types over a season is also yet to be explored. While the current study found that medical conditions (illnesses) were common, the specific types of pathology have not been investigated. In addition, further studies by tennis federations including the ATP and WTA would benefit from calculating injury data during practice and out of competition times as well as during competition to ensure that the injury surveillance data is fully captured. Additionally, a recent tennis surveillance consensus statement emphasized the need for studies to be conducted in Wheelchair tennis, however at present there is little work undertaken in this area.²²

CONCLUSIONS

The results of the current investigation describe the incidence and prevalence of musculoskeletal injuries and illness in professional tennis players over a full competition year. Medical illness had the highest overall incidence followed by injuries in the wrist and shoulder. The wrist had the highest overall prevalence whereas the most severe

were the ankle injuries. These results provide valuable insight into injury surveillance profiles in elite British tennis players. The findings will inform players, coaches and medical professionals working in tennis and help to guide injury prevention programs. Minimizing time lost from training and competition due to illness or injury is the priority for professional tennis players and their performance teams.

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SUPPLEMENTARY MATERIALS

Appendix

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