

# The dominant leg is more likely to get injured in soccer players: systematic review and meta-analysis

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**ABSTRACT:** In soccer (football), dominant limb kicking produces higher ball velocity and is used with greater frequency than the non-dominant limb. It is unclear whether limb dominance has an effect on injury incidence. The purpose of this systematic review with meta-analysis is to examine the relationship between limb dominance and soccer injuries. Studies were identified from four online databases according to PRISMA guidelines to identify studies of soccer players that reported lower extremity injuries by limb dominance. Relevant studies were assessed for inclusion and retained. Data from retained studies underwent meta-analyses to determine relative risk of dominant versus non-dominant limb injuries using random-effects models. Seventy-four studies were included, with 36 of them eligible for meta-analysis. For prospective lower extremity injury studies, soccer players demonstrated a 1.6 times greater risk of injury to the dominant limb (95% CI [1.3–1.8]). Grouped by injury location, hamstring (RR 1.3 [95% CI 1.1–1.4]) and hip/groin (RR 1.9 [95% CI 1.3–2.7]) injuries were more likely to occur to the dominant limb. Greater risk of injury was present in the dominant limb across playing levels (amateurs RR 2.6 [95% CI 2.1–3.2]; youths RR 1.5 [95% CI 1.26–1.67]; professionals RR 1.3 [95% CI 1.14–1.46]). Both males (RR 1.5 [95% CI 1.33–1.68]) and females (RR 1.5 [95% CI 1.14–1.89]) were more likely to sustain injuries to the dominant limb. Future studies investigating soccer injury should adjust for this confounding factor by using consistent methods for assigning limb dominance and tracking use of the dominant versus non-dominant limb.

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## INTRODUCTION

Total injury incidence in soccer (football) has been reported at rates of 2.0 to 19.4 per 1000 hours exposure in elite youth players, and 2.5 to 9.4 per 1000 hours exposure in professionals [1]. These injuries present a high burden to both players and their teams, as time lost to injury and illness is detrimental to success [2–4]. Clearly, player availability (e.g. fewer days lost) is an important factor for team success.

Improving player availability by reducing injury risk has been a focus in soccer medicine research. Some risk factors are consistently reported, such as previous injury contributing to subsequent injuries [5–7]. Strength assessments [8,9] and screening tools [10] have also been studied as possible risk factors for soccer injury. Although the burden of soccer injuries is well-known and risk factor studies have been published in attempt to reduce injuries, one inherent characteristic has been often overlooked.

The dominant limb is commonly collected in injury research, but it has not been often documented whether injury incidence is affected.

Limb dominance (e.g. footedness in soccer players) is an intrinsic trait that plays a significant role in soccer competition. It is often defined as the preferred kicking limb [11], and strongly influences soccer activity representing 82–84% of touches on average in the world's most elite international competition, the World Cup [12]. Häggglund et al. [7] observed increased rate of muscle strain injuries in the kicking leg, while Serner et al. [13] reported greater incidence of dominant limb adductor injuries and kicking as a frequent mechanism of those injuries. During kicking, each limb plays a contributing role: the dominant limb performs coordinated intersegmental hip flexion, knee extension, and ankle plantarflexion to impact the ball [14] while the stabilizing limb undergoes high ground reaction forces to provide a foundation for the pending kick [15]. These different activity profiles clearly influence the load of the dominant and non-dominant leg during kicking, but kicking is not the only soccer activity that may be affected by limb dominance. After all, the dominant kicking limb and non-dominant stabilizing limb are not

exclusively reserved to perform those roles. Players choose to use either limb for kicking tasks depending on intrinsic (capability, comfortability, awareness) and extrinsic factors (opponent's position, game situation, contact). Other aspects of the game, such as running and cutting, may also impact injury rate. There is some evidence to suggest that soccer players perform even bilateral tasks (e.g. running and bilateral jumping) with between-limb asymmetry [16].

The effects of limb dominance on lower extremity injury rate in soccer players are unclear. Overall, no comprehensive report of limb dominance as a risk factor for lower extremity soccer injury exists. Understanding if there is a difference in injury rate according to limb dominance may shed light on injury mechanisms and risk factors. This systematic review primarily aims to examine the relationship between limb dominance and injury incidence in soccer players. Our secondary aim is to consider and stratify these injuries into subgroups such as gender, playing level, injury location, injury severity, contact versus non-contact injuries, and match versus practice injuries.

## MATERIALS AND METHODS

### Guidelines

This systematic review used the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) guidelines during the search and reporting phase of the research process. The PRISMA statement includes a 27-item checklist that has been designed to improve the reporting of systematic reviews and meta-analysis [17].

### Literature search

The literature search was performed by a medical librarian comprised of studies from four online databases (CINAHL, Cochrane Library, Embase, and PubMed) from dates of inception through January 2019. Only peer-reviewed English language studies were considered, including conference presentations published only as abstracts. The literature search was compiled into an online systematic review software service, Rayyan (Doha, Qatar) [18], and screened independently by two researchers (MD and PS) from February to April 2019. Any discrepancies between the two researchers were resolved by reaching consensus. If consensus was not possible, a third researcher (KC) resolved the discrepancy.

During preliminary searches, we discovered that limb dominance was commonly embedded in full texts of studies even if missing from the abstract. Therefore, we were intentionally lenient in title and abstract screens to ensure studies with limb dominance were not missed within a full text. As demonstrated in the PRISMA flow sheet (Figure 1), our approach deviated slightly from a traditional systematic review screening process by including an "abstract maybe" group characterized by studies that may have been otherwise inclusive but did not confirm the presence of limb dominance in the abstract (i.e. containing soccer players and injury with the possibility of dominant versus non-dominant distinctions in the full text). The "abstract maybe" group was subsequently screened for existence of limb dominance in full text by screening for any iteration of domin\* (i.e.

**Table 1.** Characteristics of included studies (n = 74).

| Study Types               | n  |
|---------------------------|----|
| Prospective               | 53 |
| Retrospective             | 13 |
| Cross-Sectional           | 8  |
| <b>Playing Levels</b>     |    |
| Professional              | 40 |
| Adult/Amateur Competitive | 7  |
| Adult Recreational        | 1  |
| Collegiate                | 2  |
| Youth                     | 8  |
| Multi-Level               | 7  |
| Unspecified               | 9  |
| <b>Gender</b>             |    |
| Males                     | 57 |
| Females                   | 8  |
| Both                      | 8  |
| Unspecified               | 1  |

dominant, dominance) or pref\* (i.e. preferred, preference). In cases where dominance was present, they were later rescreened with greater depth to determine final inclusion or exclusion. This review was registered with the international prospective register of systematic reviews PROSPERO in March 2019 (ID# CRD42019126979).

### Study selection

Inclusion criteria were: studies of (1) soccer players (any playing level, age, or gender), (2) injury, and (3) limb dominance. We accepted any operational definition for injury (i.e. time-loss injuries or players with performance-limiting symptoms despite no cessation of soccer participation) [19]. However, participants without symptoms were excluded (e.g. cam deformities of the hip in asymptomatic players). Any limb dominance definition was permitted, whether dichotomized into right versus left or including a mixed-footed (ambidextrous) component. Included studies must have investigated injury as an outcome. Studies were excluded if limb dominance was reported as right-footed versus left-footed without assigning dominance, or if limb dominance reported in an injured sample without assigning the injuries to a dominant or non-dominant limb. All experimental study designs (except case studies/case reports) were included.

### Data extraction

Relevant data were extracted and compiled into a modified PICOS table [Appendix 1] [7,20–92]. Subgroups were classified as follows: gender separated into studies with males, females, or both. Injury location was grouped by region in the lower extremity: hip/groin,

knee, foot/ankle, and specific injuries as possible such as hamstrings or quadriceps strains. Playing level was stratified into subgroups of adult players (professional, collegiate, and amateur) as well as a separate group for youth players classified under the age of 18. Other proposed subgroups (injury severity, contact versus non-contact injuries, and match versus practice injuries) did not yield sufficient results to be extracted.

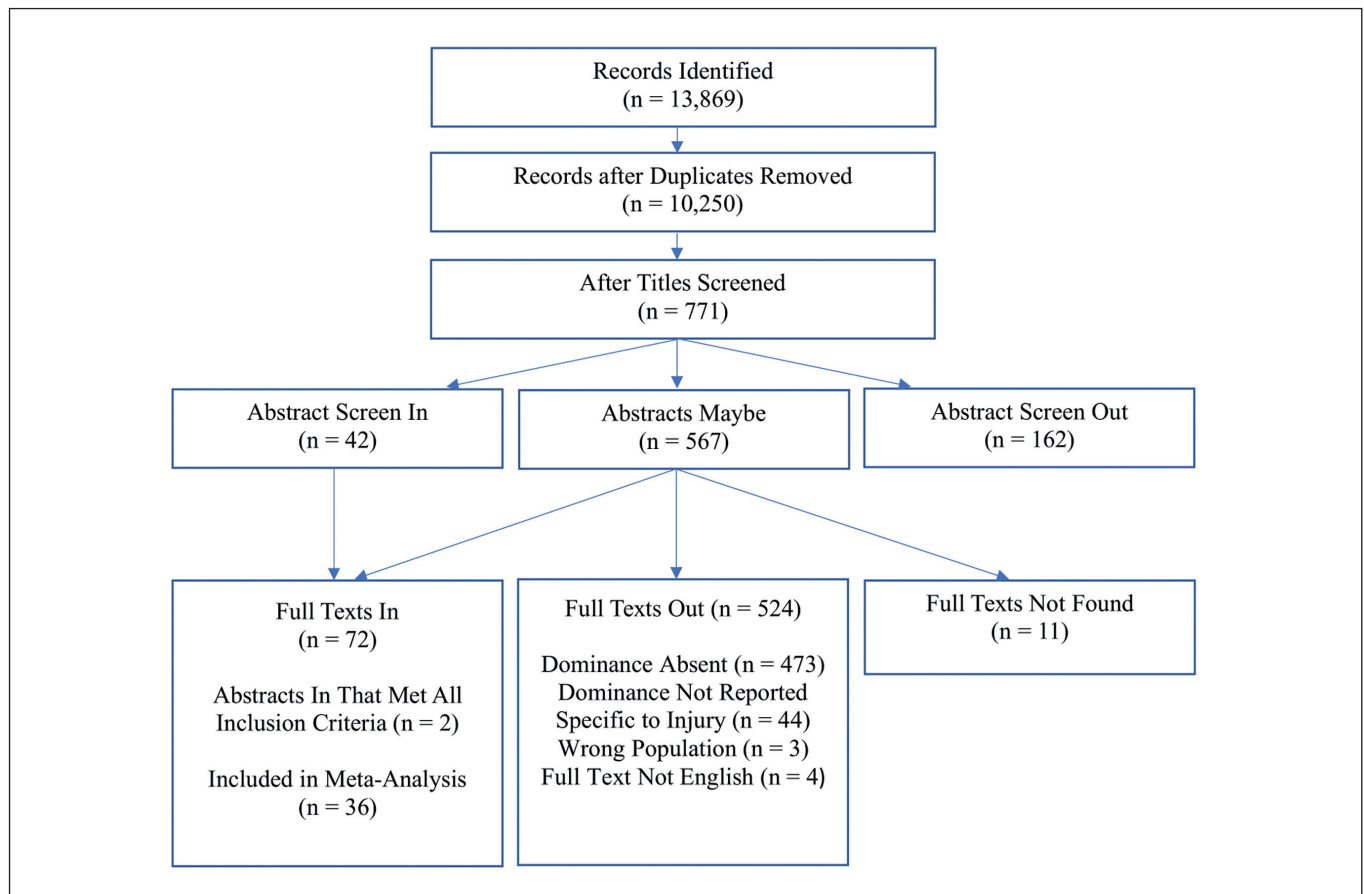
Studies that were eligible for meta-analysis were computed. The effect size of interest was relative risk, computed as risk of dominant limb injuries (number of injuries to dominant limb/n) vs. risk of non-dominant limb injuries (number of injuries to non-dominant limb/n) where N is the number of players in the sampled research study. Meta-analyses were performed using metafor package in R v3.2 (Maastricht, The Netherlands) [93] with a random-effects model. Further subgroup analyses were included to explain underlying heterogeneity due to playing level, gender, and injury location. Heterogeneity across studies was assessed using I<sup>2</sup> statistics (I<sup>2</sup> = 0–40% represented low heterogeneity; I<sup>2</sup> = 75–100% represented considerable heterogeneity) [94].

Studies that were not eligible for meta-analysis are listed in Appendix 1, with a general overview of their findings. Players reporting

**TABLE 2.** Number of players by dominant limb (n = 25 studies).

| <b>Two-Way Footedness (n = 17 studies)</b>  |             |
|---|-------------|
| Right-Footed                                | 2,257 (84%) |
| Left-Footed                                 | 435 (16%)   |
| <b>Three-Way Footedness (n = 8 studies)</b> |             |
| Right-Footed                                | 2185 (74%)  |
| Left-Footed                                 | 545 (19%)   |
| Mixed-Footed                                | 206 (7%)    |

as ambidextrous and injuries reported as bilateral (or not laterally-specific) were omitted for the purpose of analyses to better homogenize the data. When extracting these data, we assumed the study used a dichotomous (right- versus left-footed) definition of limb dominance if it was not otherwise specified – in the event that ambidexterity was included, we assumed the study defined it as such.



**FIG. 1.** PRISMA Flow Diagram.

## RESULTS

### Identification of studies

Results from the literature search are available in the PRISMA Flow Sheet (Figure 1). The search yielded 13,869 studies; 3,619 duplicates were removed. After title screening, 771 studies remained that were further separated into “abstract in” (n = 42), “abstract maybe” (n = 567), or “abstract out” (n = 162) groups. Exclusion criteria were: no limb dominance present (n = 473), limb dominance reported but not specific to injury (n = 44), full text not found (n = 11), full text not available in English (n = 4), or the wrong population studied (n = 3). A total of 74 full text studies qualified for inclusion in this review, and a total of 36 were eligible for meta-analysis.

### Study characteristics

The characteristics of the 74 included studies (72 full texts and two abstracts) are outlined in Table 1. Although studies without full text available were excluded, two abstracts met all other inclusion criteria and were therefore included with available data presented in Appendix 1. Definitions of limb dominance were reported in only 36 of 74 studies (48.6%), each of which including some iteration of “preferred kicking leg” to define the dominant limb. Three studies more specifically defined the dominant limb to a task, using the question “which foot would you use for a penalty kick?” [22,65,66]. Data for limb dominance was provided in 25 studies (see Table 2). The remaining studies did not provide a specific definition for limb dominance, but reported data relative to limb dominance.

Injury definitions were provided in 72 of 74 studies, with 41 studies based on some iteration of a time-loss injury (any time missed

n = 30, >48 hours missed n = 5, >1 week missed n = 3, unable to finish game/miss game/miss work n = 1, immediate cessation of playing n = 1, or missing at least one match n = 1). Symptom-based injuries accounted for nine studies. Studies based on players undergoing a surgical intervention (n = 13) included ACL reconstruction (n = 10), hip arthroscopy (n = 2), and proximal rectus femoris suture repair (n = 1). Nine studies used some other type of injury definition, such as a diagnosed fifth metatarsal fracture (n = 3), medical attention or time-lost (not explicitly time-loss; n = 2), tibial shaft fracture (n = 1), injury defined by the club (n = 1), injury defined by post-match interview (n = 1), and diagnosed posterior ankle syndrome (n = 1).

Of the 74 included studies, 36 (48.6%) reported dominant versus non-dominant injury incidence but did not run analyses between those groups. Fifteen studies compared limb dominance to injury incidence with exact p-values reported, and 23 studies reported significance by some iteration of  $p < 0.05$ ,  $p > 0.05$  or stating in-text that no significance was present between dominant and non-dominant limb injury incidence.

### Results of Individual Studies

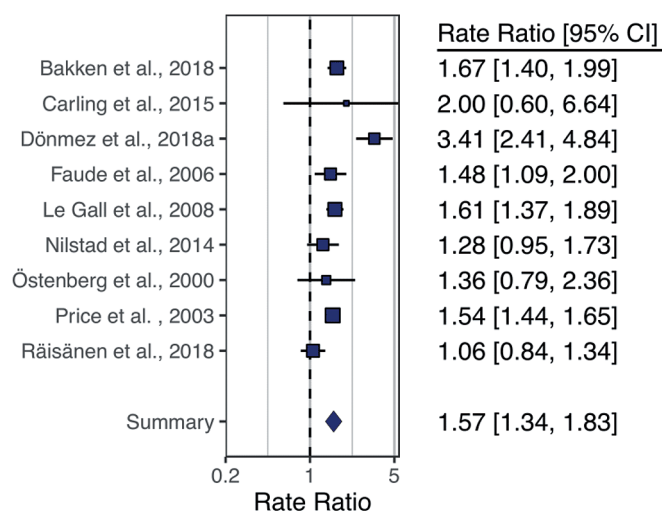
Results of all individual studies can be found in Appendix 1.

### Results of the Meta-Analysis

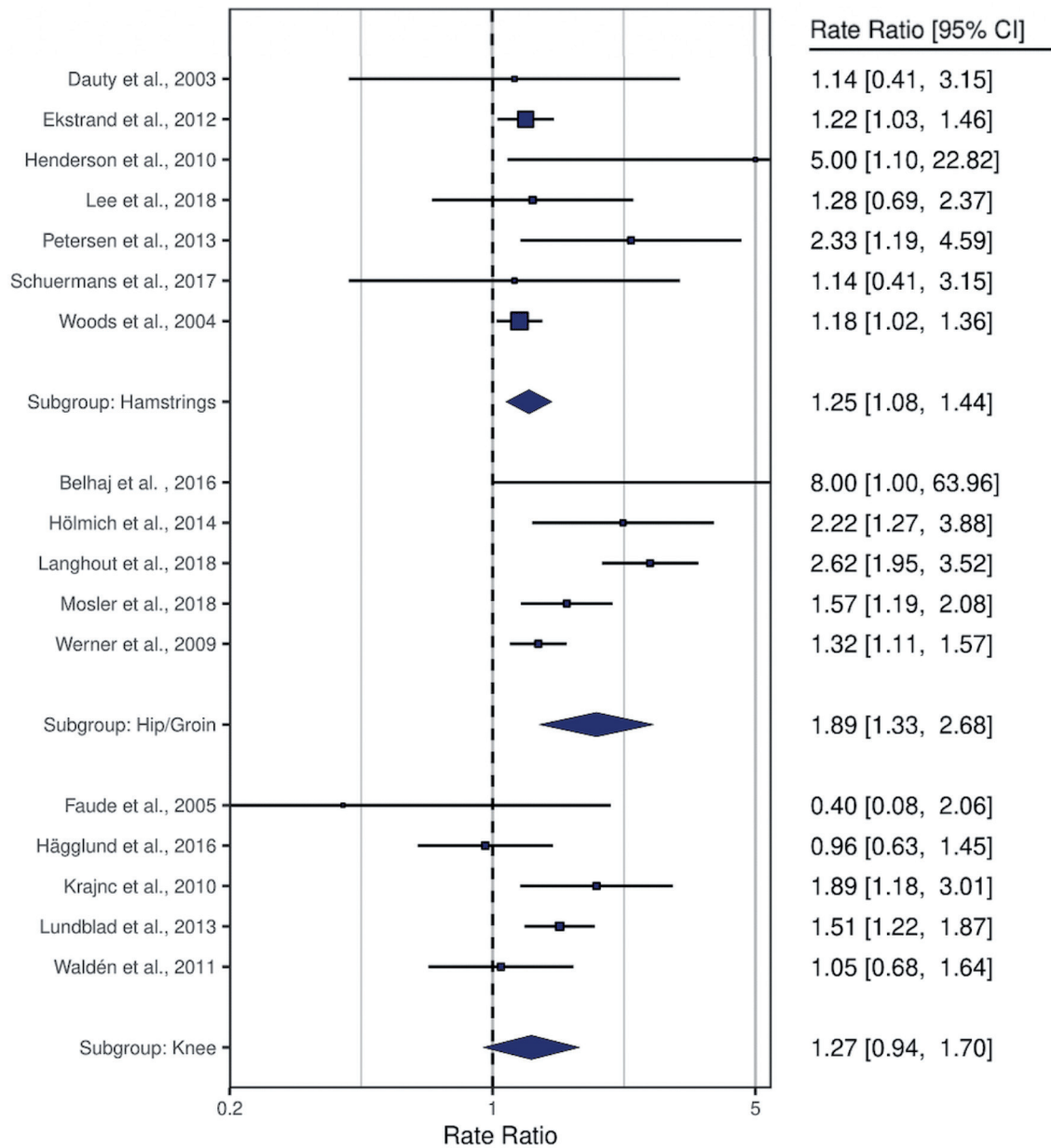
There is a significant association between occurrence of injury and limb dominance. Players have 1.6 times more risk of injury to the dominant limb (95% CI [1.3 to 1.8]) (Figure 2). The meta-analysis with subgroups for injury location (Figure 3) revealed that dominant limb hip/groin (RR 1.9 [95% CI 1.3 to 2.7]) and hamstring (RR 1.3 [95% CI 1.1 to 1.4]) injuries are more frequent. Knee (RR 1.3 [95% CI 0.91 to 1.70]) injuries were more common in the dominant limb but not to a statistically significant effect. Subgroups by playing level (Figure 4) revealed greater risk of injury on the dominant limb across all levels. Amateur players had the greatest effect size for being injured on the dominant limb (RR 2.6 [95% CI 2.1 to 3.2]). Youth players (RR 1.5 [95% CI 1.26 to 1.67]) and professionals (RR 1.3 [95% CI 1.14 to 1.46]) had greater incidence of dominant limb injuries. Males (RR 1.5 [95% CI 1.33 to 1.68]) and females (RR 1.5 [95% CI 1.14 to 1.89]) were each more likely to sustain injuries to the dominant limb (Figure 5).

## DISCUSSION

Soccer players are more likely to sustain injuries to the dominant limb regardless of playing level or gender. Many specific injury locations were not available for pooling of studies in a meta-analysis, although significant effects for dominant limb injury were observed in hamstrings and hip/groin injuries. Prospective studies of lower extremity injuries were pooled in Figure 2, with a significant risk towards dominant limb injuries. Given these findings, the dominant kicking limb likely exhibits some inherent differences that predispose it to injury.



**FIG. 2.** Forest plot showing risk of injuries in dominant versus non-dominant limb using random-effects model for studies that prospectively collected “any lower extremity injury”. CI, confidence interval.



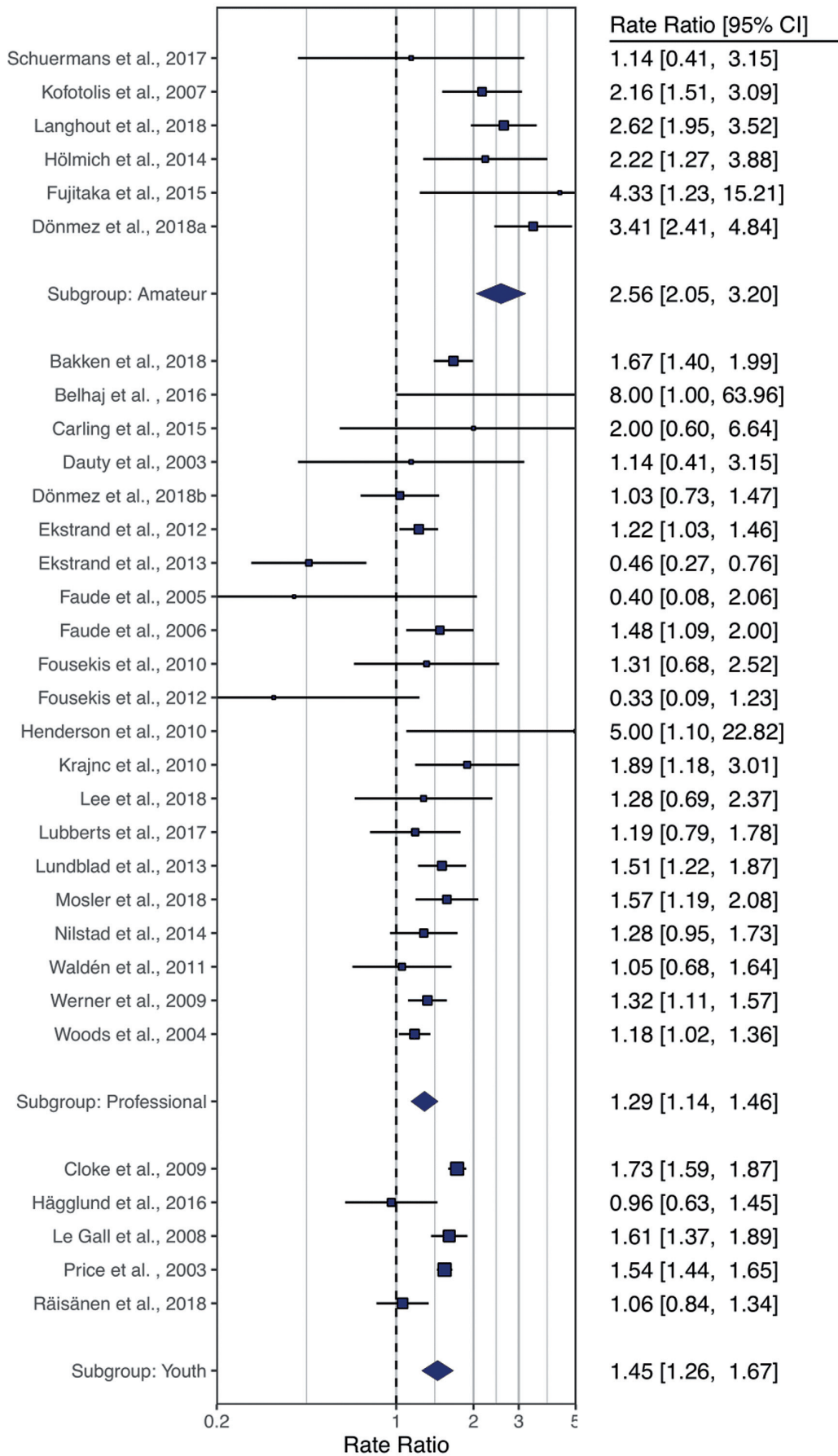
**FIG. 3.** Forest plot showing dominant versus non-dominant limb injury risk using random-effects model and sub-grouped by injury location (hamstrings, hip/groin, and knee were eligible for meta-analysis). *CI*, confidence interval.

*Dominant limb kicking and frequency*

The most likely difference between the dominant and non-dominant limb that may be attributable to injury incidence in soccer players is kicking performance and kicking frequency. Although the dominant limb does not operate exclusively in a kicking role and the non-dominant limb does not always stabilize, soccer kicking is a unilateral task. The stabilizing (most often non-dominant) limb functions to resist external forces to maintain posture and transfer mechanical energy through the proximal-to-distal segmental motion of the kicking (most often dominant) limb [95].

The dominant, kicking limb performs the swing and ball contact phases, with evidence suggesting that subsequent ball velocity output

is mainly attributed to knee extension torque [96]. The dominant limb's prime movers undergo higher knee extension and hip flexion angular velocity that may contribute to mechanisms of injury in either sudden onset (acute) or gradual onset (overuse) injury scenarios. Additionally, the dominant limb is obviously exposed to these loads more frequently. In the 1998 World Cup in France, players used the dominant limb for approximately 82–84% of all ball contacts [12]. These factors may bias the dominant limb for greater occurrence of kicking-based injuries. For example, the adductor region is particularly active during inside-of-the-foot and driven passes. Serner et al. [13] reported greater incidence of sudden-onset adductor-related groin pain in the dominant limb, while long-standing



**FIG. 4.** Forest plot showing dominant versus non-dominant limb injury risk using random-effects model and sub-grouped by playing levels (amateur, professional, and youth were eligible for meta-analysis). The subgroup for level “collegiate” did not contain enough studies to be eligible for meta-analysis. *CI*, confidence interval.

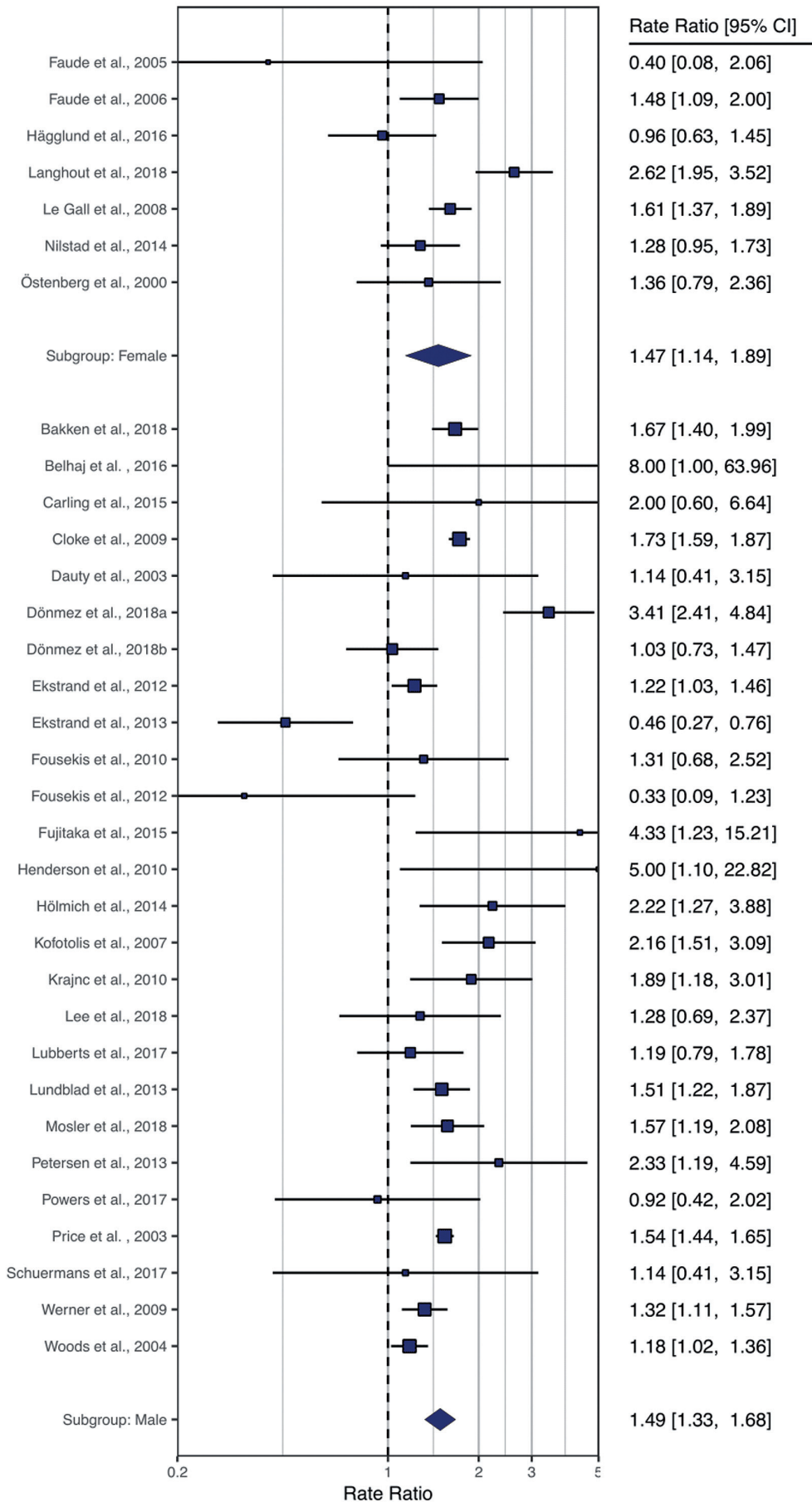


FIG. 5. Forest plot showing dominant versus non-dominant limb risk using random-effects model and sub-grouped by gender. CI, confidence interval.

adductor-related groin pain in Rafn *et al.* [81] and Tak *et al.* [76] similarly reported 79.2% and approximately 70% of injuries to the dominant kicking limb respectively. The result of either this singular high torque (sudden onset) or repetitively high torques (gradual onset) may feasibly be attributed to adductor-related groin pain, although this link has not been studied directly. More broadly, amateur soccer players may utilize the dominant limb for kicking at even higher rates than more skilled professional players. The present review found a significant effect across all playing levels that were available for meta-analysis, with amateurs demonstrating the largest effect size. Perhaps amateur players have less-developed non-dominant limbs for kicking compared to professionals or even elite youth players, furthering the likelihood to undergo a kicking-based dominant limb injury.

#### *Other on-field demands and neuromuscular considerations*

Although kicking-based injuries may be a primary differentiator between dominant and non-dominant limb injury incidence, kicking comprises only a small part of in-game competition. In a study of German Bundesliga players, individual ball controls per ten minutes (average of all positions) were  $10.1 \pm 8.1$  contacts with the ball; an average interval of those interactions being only  $1.2 \pm 1.0$  seconds [97]. Extrapolated out to a 90-minute match, this would equate to roughly 90 seconds for an individual player interacting with the ball. Each of these ball contacts is obviously not a maximal effort kick. Indeed, in another study of English Championship players, passing distribution distances were reported to be of  $11.0 \pm 3.6$  meters and  $11.6 \pm 3.2$  meters for first and second halves, respectively [98]. Clearly, passing distances over ten meters are not maximal effort kicks. In comparison to other soccer activities, kicking occurs relatively infrequently during games. High speed running accounts for 9.0% of total game play [99], correlating to about 8.1 minutes per 90 minutes. Changes in locomotor activity (speed and/or direction) occur every 4 to 4.5 seconds [100], and cutting frequency is upwards of 300 times per game to both the left and right directions [101]. Even lateral shuffling occurs at greater frequency than ball kicking, with shuffling accounting for 3.9–4.5% of time during a match [101]. Thus, not only are soccer kicks not often maximal effort attempts, but they are also infrequent in comparison to other on-field tasks such as running and changes of direction. If dominant limb injury incidence may not be specific to task frequency, other factors may also contribute to these injuries, including an accumulation of low intensity repetitive movements (e.g. change of direction) in addition to sparse maximal effort tasks (e.g. kicking).

Perhaps the dominant limb is susceptible to injury not only due its higher kicking velocities and greater kicking frequency, but also for what the limb lacks relative to the non-dominant limb. Although isokinetic strength characteristics [11], lower extremity muscle cross-sectional area [102], and power outputs [103] between limbs in previous studies have been reported to be relatively symmetrical, evidence of between-limb neuromuscular differences may be more

telling. Coordinated neuromuscular tasks requiring multi-joint and multiplanar actions may help to elucidate between-limb differences. The non-dominant limb has been evidenced to perform better in neuromuscular activation strategies of closed kinetic chain tasks, including unanticipated side-cuts [104], where the non-dominant limb performed earlier muscle activation in the gastrocnemius, hamstrings, and quadriceps. It is unknown whether dominant kicking limb deficiencies exist, or whether asymmetrical neuromuscular control may be a potential risk for injury.

#### *Defining limb dominance in soccer*

Limb dominance was a primary variable for this review, and any iteration of lower extremity limb dominance was acceptable. However, actual operational definitions for limb dominance were provided in less than half of included studies. Of the studies that did define footedness, some were dichotomous (right- versus left-footed) while others included a mixed-footed/ambidextrous response. Although the present review compiled 74 studies that included limb dominance and injury, many reported only descriptively and hardly any emphasized limb dominance as a primary dependent variable in the study. This highlights a conceptual framework that needs to be better defined in soccer players.

Lateral dominance is an inherent characteristic of human beings, suggesting that dichotomous right- versus left-footedness would be sufficient. However, soccer-specific footedness is likely oversimplified by deconstructing to right- and left- only; it is likely a competitive advantage to demonstrate bilateral competence [105]. Even so, a player self-designating as ambidextrous has subjective bias. Attempts at classifying mixed footedness through questionnaires has been trialed in soccer players [106], but the survey has not been validated for soccer. Carey *et al.* [107] published a questionnaire outcome for soccer footedness that has not since been replicated. To date, no validated questionnaire or methodology poses to accurately examine footedness along a spectrum from right- to mixed- to left-footedness.

The present review included the simplified footedness definition despite its likely shortcomings. We would like to propose two frameworks for collecting future limb dominance data: 1) use dichotomous footedness explicitly defined by “which foot would you use to take a penalty kick that would be decisive for the outcome of an important game?” and 2) validate an assessment of a “spectrum of footedness” to more appropriately define limb dominance specific to soccer. This spectrum of limb dominance should account for both performance and frequency, and may be validated using a combination of players’ subjective reports and on-field observation.

#### *Limitations*

There are several limitations within our study. Homogeneity of retained studies is a primary limitation of the review. Variability in injury definitions, limb dominance definitions (or no definition at all despite presenting results on dominance), injury types that were collected



in the study, and study designs all contribute to the poor homogeneity of the included studies. Because we permitted all iterations of injury definition, we did not account for variance in methodology of injury surveillance, which has been recently noted as an area of concern [108]. However, random-effects modeling for the meta-analysis attempts to mitigate the lack of homogeneity. Furthermore, some subgroups are underrepresented in the meta-analysis due to insufficient studies available to analyze. For example, injury locations are not exhaustive for lower extremity injuries, and playing levels do not include every level. The retained studies did not have sufficient data to make interpretations based on injury type (sprains versus strains), contact versus non-contact, or incidence in games versus training.

The aforementioned assumption that dominant limb kicking greatly outweighs non-dominant kicking in frequency of use may be somewhat outdated. Since the cited study from the 1998 World Cup, the sport has advanced and adapted, with bilateral competence being more widely emphasized and encouraged at all levels of play. Kicking proficiently with both limbs has been suggested as an asset dating back to at least Starosta [109], where the ability to score with both feet was regarded as an advantage. Despite significant advances in player tracking technology, to the best knowledge of the present study authors, there are no peer-reviewed

publications citing frequency of use between the dominant and non-dominant limb during competition, warranting further studies in this area.

### CONCLUSIONS

This review indicates the relationship between soccer player limb dominance and injury incidence. Dominant limb injuries occur more frequently in soccer players across ages, genders, and playing levels. Other injury variables, such as contact versus non-contact and occurrence during matches versus training, could not be examined related to footedness; future studies could address these factors. The dominant limb represents the primary kicking limb – both in frequency and performance – and investigations into injury risk in soccer players must include measures of footedness. Future studies investigating soccer injury should adjust for limb dominance by using consistent methods for assigning limb dominance, reporting this methodology, and tracking the use of the dominant limb compared to its non-dominant counterpart.

### Conflicts of Interest

The authors have no conflicts of interest to report.

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APPENDIX

| Study                                 | Study Type & Population   | Limb Dominance  | Injury   | Injury Data by Dominance  | Specific Injury Data  |
|---------------------------------------|---|---|--|---|---|
| Adeoye et al. 2013*[20]               | <p><b>Study Type:</b> Retrospective</p> <p><b>Population Pool:</b> Soccer players with hip arthroscopy on a data registry (Timeline: unspecified)</p> <p><b>Whole Sample:</b> <i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b> 57 (38 male, 19 female) high-level soccer players who underwent a total of 71 hip arthroscopies (14 bilateral cases were all initially dominant limb)</p>  | <p><b>Dominance Definition:</b> Not Reported</p> <p><b>Right:</b> Not Reported</p> <p><b>Left:</b> Not Reported</p> <p><b>Ambidextrous/Mixed:</b> Not Reported</p>          | <p><b>Injury Definition:</b> Hip Arthroscopy (Femoroacetabular Impingement)</p> <p><b>Type(s):</b> Post-Surgical Femoroacetabular Impingement</p> <p><b>Body Part(s):</b> Hip</p>  | <p><b>DOM Injuries:</b> 41 (71.9%)</p> <p><b>NON-DOM Injuries:</b> 16 (28.1%)</p> <p><b>AMBI Injuries:</b> N/A</p> <p><b>BILATERAL Injuries:</b> N/A</p> <p><b>Significance:</b> Not Reported</p>   | No additional data  |
| Alonso, Greve, and Camanho, 2009 [21] | <p><b>Study Type:</b> Cross-Sectional</p> <p><b>Population Pool:</b> Soccer players with unilateral ACL reconstruction comprised the “surgery group” (Timeline: At 36 ± 10 months follow-up post-ACLR)</p> <p><b>Whole Sample:</b> <i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b> 24 male soccer players (age 29 ± 6 years; height 175 ± 8.5 cm; mass 79.6 ± 8.5 kg)</p>  | <p><b>Dominance Definition:</b> Preferred kicking leg</p> <p><b>Right:</b> Not Reported</p> <p><b>Left:</b> Not Reported</p> <p><b>Ambidextrous/Mixed:</b> Not Reported</p> | <p><b>Injury Definition:</b> Patients who sustained ACL tear and underwent reconstruction</p> <p><b>Type(s):</b> Post-Surgical ACL Reconstruction</p> <p><b>Body Part(s):</b> Knee</p>   | <p><b>DOM Injuries:</b> 14 (58.3%)</p> <p><b>NON-DOM Injuries:</b> 10 (41.7%)</p> <p><b>AMBI Injuries:</b> N/A</p> <p><b>BILATERAL Injuries:</b> N/A</p> <p><b>Significance:</b> Not Reported</p>   | No additional data  |
| Bakken et al. 2018 [22]               | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b> Soccer players from Qatar Stars League teams (Timeline: 2 seasons [2013/14 and 2014/15])</p> <p><b>Whole Sample:</b> 369 male professional soccer players (514 player-seasons) (age 26.0 ± 4.7 years; height 176.8 ± 6.9 cm; weight 72.2 ± 9.1 kg; exposure 213 ± 92 hours/season)</p> <p><b>Injured Sample:</b> 206 (55.8%) players sustained 538 lower extremity injuries</p> | <p><b>Dominance Definition:</b> Preferred limb for a penalty kick</p> <p><b>Right:</b> 297 (80.5%)</p> <p><b>Left:</b> 72 (19.5%)</p> <p><b>Ambidextrous/Mixed:</b> N/A</p> | <p><b>Injury Definition:</b> Time-Loss Injury: if the player was unable to participate in future soccer training or match play because of injury to lower extremity</p> <p><b>Type(s):</b> Any</p> <p><b>Body Part(s):</b> Lower Extremities</p> | <p><b>DOM Injuries:</b> 329 (61.2%)</p> <p><b>NON-DOM Injuries:</b> 197 (36.6%)</p> <p><b>AMBI Injuries:</b> N/A</p> <p><b>BILATERAL Injuries:</b> 12 (2.2%)</p> <p><b>Significance:</b> Injury to the dominant leg deemed a significant risk factor (Hazard Ratio 1.57 [1.21–2.05]; p = 0.001)</p> | Injury to the dominant leg associated with <b>acute injuries</b> (Hazard Ratio 2.08 [1.54–2.80]; p < 0.001); <b>Overuse injuries</b> not significant (Hazard Ratio 1.14 [0.85–1.53]). Injury to the dominant leg associated with only <b>knee injuries</b> not significant of 85 injuries (Hazard Ratio 1.33 [0.84–2.11]) |

## APPENDIX

| Study                         | Study Type & Population   | Limb Dominance   | Injury   | Injury Data by Dominance  | Specific Injury Data  |
|-------------------------------|---|--|--|---|---|
| Belhaj et al. 2016 [23]       | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from Moroccan professional league by random selection (Timeline: 2 years)</p> <p><b>Whole Sample:</b><br/>21 male professional soccer players (stratified by injured [with adductor-related groin pain]: n = 9; age 24.11 ± 3.02 years; height 1.84 ± 0.08 m; mass 78.56 ± 8.07 kg) (stratified by non-injured [without adductor-related groin pain]: n = 12; age 23.17 ± 3.88 years; height 1.80 ± 0.06 m; mass 73.58 ± 5.30 kg)</p> <p><b>Injured Sample:</b><br/>9 (42.9%) players sustained adductor-related groin pain injuries</p> | <p><b>Dominance Definition:</b><br/>Question: "which leg do you kick a ball with?"</p> <p><b>Right:</b><br/>18 (85.7%)</p> <p><b>Left:</b><br/>3 (14.3%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>   | <p><b>Injury Definition:</b><br/>Groin pain or groin injury with clinical symptoms persisting at least two months</p> <p><b>Type(s):</b><br/>Chronic Adductor-Related Groin Pain only</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p>  | <p><b>DOM Injuries:</b><br/>8 (88.9%)</p> <p><b>NON-DOM Injures:</b><br/>1 (11.1%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>p &lt; 0.005</p>  | No additional data  |
| Bradley and Portas, 2007 [24] | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from an English Football Association Premier League club (Timeline: 1 season [2003/04])</p> <p><b>Whole Sample:</b><br/>36 male professional players (age 25.6 ± 4.7 years)</p> <p><b>Injured Sample:</b><br/>32 (88.9%) players sustained clinically diagnosed muscle strain injury during competitive season (only one injury was counted per player)</p>  | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>   | <p><b>Injury Definition:</b><br/>Time-Loss Injury: A recordable injury was defined as any musculotendinous damage to the lower extremity sustained during training or competition that prevented the player from participating in normal training or competition</p> <p><b>Type(s):</b><br/>Muscle Strains</p> <p><b>Body Part(s):</b><br/>Lower Extremities</p> | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injures:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>p&gt;0.005 (Number of injuries between dominant non-dominant limbs was insignificant among 32 injuries)</p> | No additional data  |
| Brophy et al. 2010 [25]       | <p><b>Study Type:</b> Retrospective Observational</p> <p><b>Population Pool:</b><br/>Soccer players with ACL reconstruction performed by a single orthopaedic surgeon affiliate (Timeline: unspecified)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>93 (41 male, 52 female) soccer players with history of ACL reconstruction (female average age at injury 20.4 ± 7.99 years; male average age at injury 30.6 ± 8.84 years) [some players sustained multiple ACL injuries]</p>  | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>84 (90.3%)<br/>Female 47 (90.4%);<br/>Male 37 (90.2%)</p> <p><b>Left:</b><br/>9 (9.7%)<br/>Female 5 (9.6%); Male 4 (9.8%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p> | <p><b>Injury Definition:</b><br/>Patients who had sustained ACL tear and underwent reconstruction</p> <p><b>Type(s):</b><br/>ACL tears</p> <p><b>Body Part(s):</b><br/>Knee</p>  | <p><b>DOM Injuries:</b><br/>53 (53.5%)</p> <p><b>NON-DOM Injures:</b><br/>46 (46.5%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>  | <b>Non-Contact:</b> Non-contact injury not significant between limbs (dominant n = 30; non-dominant n = 28). When stratified for gender: male non-contact injury more common in dominant limb (20/27; 74.07%); whereas females sustained non-contact injury more in the non-dominant limb (21/31; 67.7%; p < 0.002) |

APPENDIX

| Study                       | Study Type & Population   | Limb Dominance  | Injury   | Injury Data by Dominance  | Specific Injury Data   |
|-----------------------------|---|---|--|---|--|
| Brophy et al. 2012 [26]     | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players within the Multicenter Orthopaedic Outcomes Network (MOON) ACL cohort (Timeline: 2002/03 participant database at a mean follow-up of 7.0 years)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>100 (55 male, 45 female)<br/>soccer players with a history of ACL reconstruction (age 24.2 [11.1–53.0] years)</p>                             | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>86 (86.0%)<br/>Female<br/>43 (96%); Male<br/>43 (78%)</p> <p><b>Left:</b><br/>14 (14.0%)<br/>Female 2 (4%);<br/>Male 12 (22%)</p> <p><b>Ambidextrous/<br/>Mixed:</b> N/A</p> | <p><b>Injury Definition:</b><br/>Patients who had sustained ACL tear and underwent reconstruction</p> <p><b>Type(s):</b> ACL tears</p> <p><b>Body Part(s):</b><br/>Knee</p>  | <p><b>DOM Injuries:</b><br/>57 (57%)</p> <p><b>NON-DOM Injuries:</b><br/>43 (43%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>   | <p><b>Gender:</b> no difference between men and women in dominant limb incidence.</p> <p><b>Return to play rate:</b> no difference between dominant and non-dominant.</p> <p><b>Time to return to play:</b> no difference between dominant and non-dominant.</p> <p><b>Long-term return to play:</b> no difference. <b>Contralateral retear:</b> more likely with initial surgery on non-dominant limb (16% versus 3.5%; p = 0.03)</p> |
| Carling et al. 2015 [27]    | <p><b>Study Type:</b> Prospective Observational</p> <p><b>Population Pool:</b><br/>Soccer players from French Ligue 1 clubs who also participated in national team duties during testing period (Timeline: 5-season period from 2009/10 to 2013/14)</p> <p><b>Whole Sample:</b><br/>30 male professional soccer players participating in both club and national team duties</p> <p><b>Injured Sample:</b><br/>11 (37.7%) players sustained 12 injuries during national team participation</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/<br/>Mixed:</b><br/>Not Reported</p>   | <p><b>Injury Definition:</b><br/>Time-Loss Injury: if the player was unable to participate in future soccer training or match play because of injury to lower extremity</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p> | <p><b>DOM Injuries:</b><br/>8 (66.7%)</p> <p><b>NON-DOM Injuries:</b><br/>4 (33.3%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>   | <p><b>By Injury Type: Sprains</b> (n = 3, dominant 3, non-dominant 0);</p> <p><b>Strains</b> (n = 8, dominant 4, non-dominant 4);</p> <p><b>Tendinopathies</b> (n = 1, dominant 1, non-dominant 0).</p> <p><b>Contact Injuries:</b><br/>All 3 recorded contact injuries were sustained to the dominant limb;</p> <p><b>Non-Contact Injuries:</b><br/>Of 9 non-contact injuries, 5 dominant and 4 non-dominant</p>                      |
| Cavalcante et al. 2016 [28] | <p><b>Study Type:</b> Cross-Sectional</p> <p><b>Population Pool:</b><br/>Soccer players with ACL reconstruction from Brazilian professional football clubs (Timeline: 1-year study period from August 2011 to July 2012)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>17 male professional soccer players (age 21.3 ± 4.4 years; BMI 23.4 ± 1.5 kg/cm<sup>2</sup>)</p>  | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>9 (53%)</p> <p><b>Left:</b><br/>8 (47%)</p> <p><b>Ambidextrous/<br/>Mixed:</b><br/>N/A</p>  | <p><b>Injury Definition:</b><br/>Patients who had sustained ACL tear and underwent reconstruction</p> <p><b>Type(s):</b><br/>ACL tears</p> <p><b>Body Part(s):</b><br/>Knee</p>  | <p><b>DOM Injuries:</b><br/>5 (29%)</p> <p><b>NON-DOM Injuries:</b><br/>12 (71%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Greater number of injuries in non-dominant limb (significant difference; value not specified)</p> | <p>No additional data</p>  |

## APPENDIX

| Study   | Study Type & Population  | Limb Dominance  | Injury  | Injury Data by Dominance   | Specific Injury Data  |
|---|--|---|---|--|---|
| Chaves <i>et al.</i> 2012 [29]                  | <p><b>Study Type:</b> Cross-Sectional</p> <p><b>Population Pool:</b><br/>Soccer players with ACL reconstruction from Brazilian professional football clubs (Timeline: 1-year study period in 2011 with participants between 4–12 months post-operatively)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>22 male professional soccer players (age <math>21.77 \pm 4.45</math> years; weight <math>76.41 \pm 7.99</math> kg; height <math>1.79 \pm 0.06</math> m; BMI <math>23.70 \pm 1.54</math> kg/m<sup>2</sup>)</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>          | <p><b>Injury Definition:</b><br/>Patients who had sustained ACL tear and underwent reconstruction</p> <p><b>Type(s):</b><br/>ACL tears</p> <p><b>Body Part(s):</b><br/>Knee</p>                                     | <p><b>DOM Injuries:</b><br/>7 (31.8%)</p> <p><b>NON-DOM Injuries:</b><br/>15 (68.1%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>                                   | No additional data  |
| Cloke <i>et al.</i> 2009 [30]                   | <p><b>Study Type:</b> Retrospective</p> <p><b>Population Pool:</b><br/>Soccer players from injury audit databases of 40 English Football Association academies (Timeline: 1998–2006 retrospective analysis)</p> <p><b>Whole Sample:</b><br/>14691 male youth soccer players (age under-9 to under-16)</p> <p><b>Injured Sample:</b><br/>2563 ankle injuries sustained among 13662 total injuries</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>          | <p><b>Injury Definition:</b><br/>Time-Loss Injury of 48 hours or greater from training or competition</p> <p><b>Type(s):</b><br/>Ankle Injuries</p> <p><b>Body Part(s):</b><br/>Ankle</p>                           | <p><b>DOM Injuries:</b><br/>Approx. 1579 (61.6%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 900 (35.1%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>Approx. 69 (2.7%)</p> <p><b>Significance:</b><br/>Not Reported</p> | <b>Severity:</b> Injury time-loss greater than 3 months related to injury to dominant limb ( $p < 0.001$ ). <b>Contact injuries</b> were more likely in the dominant limb |
| Dauty, Potiron-Josse, and Rochcongar, 2003 [31] | <p><b>Study Type:</b><br/>Cross-Sectional</p> <p><b>Population Pool:</b><br/>Soccer players from French Ligue 1 clubs deemed healthy enough to participate (Timeline: Previously injured players within last 2 years)</p> <p><b>Whole Sample:</b><br/>29 male professional soccer players</p> <p><b>Injured Sample:</b><br/>11 (39.3%) players had sustained 15 hamstring injuries in the previous 24 months</p>   | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Hamstring muscle injuries defined and verified by the medical certificates of the club</p> <p><b>Type(s):</b><br/>Hamstring Strains</p> <p><b>Body Part(s):</b><br/>Hamstrings</p> | <p><b>DOM Injuries:</b><br/>8 (53.3%)</p> <p><b>NON-DOM Injuries:</b><br/>7 (46.7%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>                                    | No additional data  |



APPENDIX

| Study                      | Study Type & Population   | Limb Dominance  | Injury  | Injury Data by Dominance  | Specific Injury Data  |
|----------------------------|---|---|---|---|---|
| De Ridder et al. 2016 [32] | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from a first division club's youth teams (Timeline: 3-year prospective study)</p> <p><b>Whole Sample:</b><br/>133 male youth soccer players (age 12.7 ± 2.1 years; BMI 17.8 ± 2.0 kg/m<sup>2</sup>; exposure 252.7 ± 197.8 hours)</p> <p><b>Injured Sample:</b><br/>12 (9.0%) players sustained lateral ankle sprain injuries</p>                         | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Time-Loss Injury:<br/>A physical complaint that prohibited the player from participating in practices or games for at least 48 hours</p> <p><b>Type(s):</b><br/>Lateral Ankle Sprains</p> <p><b>Body Part(s):</b><br/>Ankle</p>                                      | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injuries:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>No significant difference between incidence of lateral ankle sprains of the dominant and non-dominant limbs (p = 0.30)</p> | No additional data  |
| Dönmez et al. 2018 [33]    | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from Turkish Super League teams in Ankara, Turkey (Timeline: 3 seasons prospective study)</p> <p><b>Whole Sample:</b><br/>118 male professional players (total exposure 54437.5 hours for entire sample)</p> <p><b>Injured Sample:</b><br/>124 muscle injuries sustained among unspecified number of players</p>                                       | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>93 (75.0%)</p> <p><b>Left:</b><br/>31 (25.0%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>                       | <p><b>Injury Definition:</b><br/>All soccer-related muscle injuries resulting in absence from at least one practice or game, followed consensus statement guidelines (Fuller et al. 2006)</p> <p><b>Type(s):</b><br/>Muscle Strains</p> <p><b>Body Part(s):</b><br/>Any</p>                           | <p><b>DOM Injuries:</b><br/>63 (50.8%)</p> <p><b>NON-DOM Injuries:</b><br/>61 (49.2%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>No significance (p = 0.67)</p>   | <b>Severity:</b> No significance in dominant or non-dominant injury and severity (p = 0.94) |
| Dönmez et al. 2018 [34]    | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players participating in Turkish tournament of public employees (Timeline: 2014 tournament)</p> <p><b>Whole Sample:</b><br/>1038 male recreational soccer players (age 34.9 ± 6.5 [20–56] years; height 176.9 ± 6.2 cm; weight 79.7 ± 9.4 kg; BMI 25.4 ± .5 kg/m<sup>2</sup>)</p> <p><b>Injured Sample:</b><br/>192 (10.5%) players sustained 218 injuries</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>744 (71.7%)</p> <p><b>Left:</b><br/>167 (16.1%)</p> <p><b>Ambidextrous/Mixed:</b><br/>127 (12.2%)</p>             | <p><b>Injury Definition:</b><br/>An authorized individual from each team (not a medical care provider) was asked to report any injury that caused a player to be unable to finish the game, attend work, or play the next game</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p> | <p><b>DOM Injuries:</b><br/>140 (64.2%)</p> <p><b>NON-DOM Injuries:</b><br/>41 (18.8%)</p> <p><b>AMBI Injuries:</b><br/>37 (17.0%)</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>   | No additional data  |

## APPENDIX

| Study                                     | Study Type & Population  | Limb Dominance  | Injury  | Injury Data by Dominance  | Specific Injury Data  |
|---|--|---|---|---|---|
| Ekstrand and Gillquist, 1982 [35]         | <p><b>Study Type:</b> Retrospective Observational</p> <p><b>Population Pool:</b><br/>Soccer players from Swedish Fourth Division teams (Timeline: examined at time point prior to season for previous injury)</p> <p><b>Whole Sample:</b><br/>180 male competitive soccer players (age <math>24.6 \pm 4.6</math> [17–38] years)</p> <p><b>Injured Sample:</b><br/>465 total injuries sustained among sample of 180 players</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>146 (81%)</p> <p><b>Left:</b><br/>26 (14%)</p> <p><b>Ambidextrous/Mixed:</b><br/>8 (5%) reported “no dominance”</p> | <p><b>Injury Definition:</b><br/>Past injuries: any injury sustained during sports* severe enough to require<br/>1) hospital admission, 2) medical attention, or 3) absence from practice/games more than one week. <i>*not all injuries were sustained while playing soccer</i></p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p> | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injuries:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>No significant difference between dominant and non-dominant limb injury incidence</p>                      | <p><b>Ankle sprains</b> were more common in the dominant leg (<math>p &lt; 0.005</math>). <b>Hamstring/Quadriceps strains</b> three times more likely in the dominant limb (<math>p &lt; 0.005</math>)</p>  |
| Ekstrand, Hägglund, and Waldén, 2011 [36] | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from three European professional soccer cohorts: UEFA Champions League cohort (24 teams); Swedish First League cohort (15 teams), and Artificial Turf cohort (15 teams) (Timeline: UEFA cohort July 2001–June 2009; Swedish cohort 2001, 2002, 2005; Artificial Turf cohort February 2003–December 2009)</p> <p><b>Whole Sample:</b><br/><math>25 \pm 4</math> male professional soccer players per team across the sample (total number of included players not reported; total exposure 1,175,000 hours)</p> <p><b>Injured Sample:</b><br/>2908 muscle injuries sustained among 9275 total injuries (hamstring approx. 1076; adductors approx. 669; quadriceps approx. 553; calf approx. 378)</p> | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>            | <p><b>Injury Definition:</b><br/>Muscle injury defined as “a traumatic distraction or overuse injury to the muscle leading to a player being unable to fully participate in training or match play”</p> <p><b>Type(s):</b><br/>Muscle Strains</p> <p><b>Body Part(s):</b><br/>Any (92% lower extremity)</p>   | <p><b>DOM Injuries:</b><br/>Approx. 1424</p> <p><b>NON-DOM Injuries:</b><br/>Unknown (cannot differentiate ND and Bilateral)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>Unknown (cannot differentiate ND and Bilateral)</p> <p><b>Significance:</b><br/>Reported by muscle group only (see right)</p> | <p>By Muscle Group: <b>Quadriceps:</b> majority of injuries occurred in dominant limb (60%; non-dominant 33%; unknown dominance or both legs 7%; <math>P &lt; 0.05</math>). Other muscle groups not significant between dominant and non-dominant limbs (<b>Hamstrings</b> dominant 50%; <b>Adductors</b> dominant 54%; <b>Calf</b> dominant 51%)</p> |
| Ekstrand et al. 2012 [37]                 | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from UEFA Champions League cohort (24 professional teams) (Timeline: Four seasons from July 2007–April 2011)</p> <p><b>Whole Sample:</b><br/>816 male professional soccer players</p> <p><b>Injured Sample:</b><br/>516 hamstring injuries sustained among sample of 816 players</p>  | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>   | <p><b>Injury Definition:</b><br/>Hamstring injury defined by traumatic distraction or overuse injury to the hamstring muscle leading to a player being unable to fully participate in training or match play</p> <p><b>Type(s):</b><br/>Hamstring strains</p> <p><b>Body Part(s):</b><br/>Hamstrings</p>  | <p><b>DOM Injuries:</b><br/>Approx. 284 (55%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 232 (45%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>   | <p>No difference in <b>lay-off time</b> between injuries to the kicking and supporting leg (<math>17 \pm 14</math>, <math>22 \pm 25</math>, <math>p = 0.13</math>)</p>  |

APPENDIX

| Study                                     | Study Type & Population  | Limb Dominance  | Injury   | Injury Data by Dominance  | Specific Injury Data   |
|---|--|---|--|---|--|
| Ekstrand and van Dijk, 2013 [38]          | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b> Soccer players from 64 male professional soccer teams across the top divisions of 15 European countries (Timeline: From 1 to 11 seasons between July 2001–June 2012)</p> <p><b>Whole Sample:</b> 3487 male professional soccer players (7525 player-seasons)</p> <p><b>Injured Sample:</b> 53 players (1.5%) sustained 67 fifth metatarsal fractures from 13,754 total injuries</p>                                  | <p><b>Dominance Definition:</b> Not Reported</p> <p><b>Right:</b> Not Reported</p> <p><b>Left:</b> Not Reported</p> <p><b>Ambidextrous/Mixed:</b> Not Reported</p>  | <p><b>Injury Definition:</b> Time-loss Injury: Injury to the fifth metatarsal defined as traumatic or stress injury to the 5th metatarsal with a visible fracture line on imaging leading to a player being unable to fully participate in training or match play</p> <p><b>Type(s):</b> Fifth metatarsal fractures</p> <p><b>Body Part(s):</b> Foot</p> | <p><b>DOM Injuries:</b> Approx. 21 (31%)</p> <p><b>NON-DOM Injuries:</b> Approx. 46 (69%)</p> <p><b>AMBI Injuries:</b> N/A</p> <p><b>BILATERAL Injuries:</b> N/A</p> <p><b>Significance:</b> Not Reported</p>   | No additional data   |
| Evans, Otter, and Walker-Bone, 2010* [39] | <p><b>Study Type:</b> Retrospective Survey in a Cross-Sectional Study</p> <p><b>Population Pool:</b> Soccer players from 1 amateur and 2 professional teams (Timeline: Injury incidence within previous 12 months)</p> <p><b>Whole Sample:</b> 34 amateur/professional soccer players</p> <p><b>Injured Sample:</b> 15 players (44%) sustained ankle/foot injuries in the previous 12 months. 273 total injuries with 114 foot and 44 ankle injuries</p>                                     | <p><b>Dominance Definition:</b> Not Reported</p> <p><b>Right:</b> Not Reported</p> <p><b>Left:</b> Not Reported</p> <p><b>Ambidextrous/Mixed:</b> Not Reported</p>  | <p><b>Injury Definition:</b> Not Reported</p> <p><b>Type(s):</b> Ankle and foot injuries</p> <p><b>Body Part(s):</b> Ankle/Foot</p>  | <p><b>DOM Injuries:</b> Not Reported</p> <p><b>NON-DOM Injuries:</b> Not Reported</p> <p><b>AMBI Injuries:</b> Not Reported</p> <p><b>BILATERAL Injuries:</b> Not Reported</p> <p><b>Significance:</b> Significantly more foot/ankle injuries occurred in the dominant limb (p &lt; 0.0001)</p> | No additional data   |
| Fältström et al. 2019 [40]                | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b> Active soccer players aged 16–25 with unilateral ACL reconstruction identified in the Swedish National Knee Ligament Register (Timeline: 2-year follow up of injuries sustained in previous 6 to 36 months)</p> <p><b>Whole Sample:</b> <i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b> 117 female soccer players who underwent ACL reconstruction (age at ACL reconstruction 18.3 ± 2.4 years)</p> | <p><b>Dominance Definition:</b> Preferred kicking leg</p> <p><b>Right:</b> 97 (82.9%)</p> <p><b>Left:</b> 7 (6.0%)</p> <p><b>Ambidextrous/Mixed:</b> 13 (11.1%)</p> | <p><b>Injury Definition:</b> Patients who had sustained ACL tear and underwent reconstruction</p> <p><b>Type(s):</b> ACL tears</p> <p><b>Body Part(s):</b> Knee</p>  | <p><b>DOM Injuries:</b> 65 (56%)</p> <p><b>NON-DOM Injuries:</b> 52 (44%)</p> <p><b>AMBI Injuries:</b> 0 (0.0%)</p> <p><b>BILATERAL Injuries:</b> N/A</p> <p><b>Significance:</b> Not Reported</p>  | <p><b>Reinjury:</b> Dominant leg (n = 35): ACL total rupture (n = 4), ACL partial rupture (n = 1), meniscus (n = 1), MCL/LCL (n = 5), patellar subluxation (n = 1), distortion (n = 7), contusion (n = 5), non-traumatic pain/instability/locking (n = 11). Non-dominant leg (n = 23): ACL total rupture (n = 3), meniscus (n = 1), MCL/LCL (n = 3), patellar subluxation (n = 1), distortion (n = 1), contusion (n = 2), traumatic pain/instability/locking (n = 4), wound (n = 1), nontraumatic pain/instability/locking (n = 7)</p> |

## APPENDIX

| Study                              | Study Type & Population   | Limb Dominance   | Injury   | Injury Data by Dominance  | Specific Injury Data  |
|------------------------------------|---|--|--|---|---|
| Fankhauser <i>et al.</i> 2004 [41] | <p><b>Study Type:</b> Prospective</p> <p><b>Population Pool:</b><br/>Soccer players who sustained tibial-shaft fractures and were treated at medical department with Unreamed Tibial Nail approach (Timeline: Starting in 1992)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>25 male soccer players sustained a tibial shaft fracture (age 28.1 [21–62] years)</p>  | <p><b>Dominance Definition:</b><br/>Shooting/Striking Limb</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Occurrence of isolated tibial-shaft fracture during soccer participation</p> <p><b>Type(s):</b><br/>Tibial-Shaft Fracture</p> <p><b>Body Part(s):</b><br/>Lower Leg</p>   | <p><b>DOM Injuries:</b><br/>23 (92.0%)</p> <p><b>NON-DOM Injuries:</b><br/>2 (8.0%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p> | No additional data  |
| Faude <i>et al.</i> 2005 [42]      | <p><b>Study Type:</b> Prospective, Descriptive Epidemiological</p> <p><b>Population Pool:</b><br/>Soccer players from German first national league (Timeline: 1 season from August 2003–June 2004)</p> <p><b>Whole Sample:</b><br/>165 female professional soccer players (age 22.4 ± 5.0 years; mass 61 ± 6.0 kg; BMI 21.4 ± 1.4 kg/m<sup>2</sup>; exposure 183 training hours and 31 match hours) (demographics of 143 players due to one team missing baseline demographic data)</p> <p><b>Injured Sample:</b><br/>10 players sustained ACL tears among 115 players (70.0%) who sustained 241 total injuries</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>7 (70%)</p> <p><b>Left:</b><br/>0 (0%)</p> <p><b>Ambidextrous/Mixed:</b><br/>3 (30%)</p>                           | <p><b>Injury Definition:</b><br/>Any physical complaint associated with soccer that limits athletic participation for at least the day after the day of onset, via the National Athletic Injury Registration System of the United States (van Mechelen W, Hlobil H, Kemper HC. Incidence, severity, aetiology and prevention of sports injuries: a review of concepts. <i>Sports Med.</i> 1992; 14:82–99. Only registered ACL tears were inclusive for the purpose of this review.</p> <p><b>Type(s):</b><br/>ACL tears</p> <p><b>Body Part(s):</b><br/>Knee</p> | <p><b>DOM Injuries:</b><br/>2 (20%)</p> <p><b>NON-DOM Injuries:</b><br/>5 (50%)</p> <p><b>AMBI Injuries:</b><br/>3 (30%)</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p> | Of 5 non-dominant ACL tears: change of direction (n = 3), tackling (n = 2). Of the 2 dominant ACL tears: foul play (n = 1), tackling (n = 1). |

APPENDIX

| Study                     | Study Type & Population   | Limb Dominance   | Injury   | Injury Data by Dominance  | Specific Injury Data  |
|---------------------------|---|--|--|---|---|
| Faude et al. 2006 [43]    | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from German first national league (Timeline: 1 season from August 2003–June 2004)</p> <p><b>Whole Sample:</b><br/>143 female professional soccer players (age <math>22.4 \pm 5.0</math> years; mass <math>61 \pm 6.0</math> kg; height <math>169 \pm 6.0</math> cm)</p> <p><b>Injured Sample:</b><br/>115 players (70.0%) sustained 241 injuries (from Faude et al. 2005); 176 injuries included in limb dominance table.</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>   | <p><b>Injury Definition:</b><br/>Any physical complaint associated with soccer that limits athletic participation for at least the day after the day of onset, via the National Athletic Injury Registration System of the United States.</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p> | <p><b>DOM Injuries:</b><br/>105 (60.0%)</p> <p><b>NON-DOM Injuries:</b><br/>71 (40.3%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/><math>p = 0.01</math></p>   | <p>Of 22 <b>Overuse injuries</b>, 16 occurred in the dominant limb and 6 in the non-dominant limb (<math>p = 0.03</math>). Of 81 <b>Contact injuries</b>, 52 occurred in the dominant limb and 29 in the non-dominant limb (<math>p = 0.01</math>). Of 73 <b>Non-Contact injuries</b>, 37 occurred in the dominant limb and 36 in the non-dominant limb (<math>p = 0.91</math>). <b>Injuries By Body Part:</b> <b>Hip/Thigh/Groin</b> (<math>n = 56</math>, 33:23 [dominant: non-dominant], <math>p = 0.18</math>), <b>Knee</b> (<math>n = 42</math>, 25:17, <math>p = 0.22</math>), <b>Lower leg</b> (<math>n = 19</math>, 7:12, <math>p = 0.25</math>), <b>Ankle</b> (<math>n = 41</math>, 27:14, <math>p = 0.04</math>), <b>Foot/toe</b> (<math>n = 18</math>, 13:5, <math>p = 0.06</math>). <b>Injuries By Type:</b> <b>Sprains</b> (<math>n = 66</math>, 33:33, <math>p = 1.00</math>), <b>Ligament Complete Ruptures</b> (<math>n = 26</math>, 18:8, <math>p = 0.049</math>), <b>Contusions</b> (<math>n = 36</math>, 24:12, <math>p = 0.046</math>), <b>Strains</b> (<math>n = 33</math>, 19:14, <math>p = 0.38</math>), <b>Fractures</b> (<math>n = 2</math>, 1:1, <math>p = 1.00</math>), <b>Other injuries</b> (<math>n = 39</math>, 28:11, <math>p = 0.01</math>).</p> |
| Fousekis et al. 2010 [44] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from Greek Third National Soccer League division (Timeline: 10-month prospective study period)</p> <p><b>Whole Sample:</b><br/>100 male professional soccer players (age 19.4–27.8 years; height 172.04–183.32 cm; mass 67.40–79.28 kg; training age 5.90–11.52 years)</p> <p><b>Injured Sample:</b><br/>38 players (38.0%) sustained at least one muscle strain injury</p>  | <p><b>Dominance Definition:</b><br/>Acquired through questionnaire; specific method not reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>All muscle strains forcing players to miss at least one scheduled practice session or game</p> <p><b>Type(s):</b><br/>Muscle Strains</p> <p><b>Body Part(s):</b><br/>Lower Extremities</p>  | <p><b>DOM Injuries:</b><br/>21 (57%)</p> <p><b>NON-DOM Injuries:</b><br/>16 (43%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>*one injury missing</p> <p><b>Significance:</b><br/>Not Reported</p> | <p>No additional data</p>   |

## APPENDIX

| Study                                    | Study Type & Population  | Limb Dominance   | Injury   | Injury Data by Dominance  | Specific Injury Data |
|--|--|--|--|---|----------------------|
| Fousekis, Tsepis, and Vagenas, 2012 [45] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from Greek Third National Soccer League division (Timeline: 10-month prospective study period)</p> <p><b>Whole Sample:</b><br/>100 male professional soccer players (stratified by injured:<br/>age <math>24.23 \pm 5.76</math> years;<br/>mass <math>73.82 \pm 5.81</math> kg;<br/>height <math>177.07 \pm 5.93</math> cm;<br/>BMI <math>23.44 \pm 1.42</math> kg/m<sup>2</sup>)<br/>(stratified by non-injured:<br/>age <math>25.41 \pm 2.45</math> years;<br/>mass <math>70.98 \pm 6.17</math> kg;<br/>height <math>177.78 \pm 5.60</math> cm;<br/>BMI <math>22.60 \pm 0.94</math> kg/m<sup>2</sup>).</p> <p><b>Injured Sample:</b><br/>24 players (24.0%) sustained one or more ankle sprains, of which 17 players sustained non-contact ankle injuries</p> | <p><b>Dominance Definition:</b><br/>Acquired through questionnaire; specific method not reported</p> <p><b>Right:</b><br/>74 (74.0%)</p> <p><b>Left:</b><br/>16 (16.0%)</p> <p><b>Ambidextrous/Mixed:</b><br/>10 (10.0%)</p> | <p><b>Injury Definition:</b><br/>First incidence of any non-contact ankle sprain that forced the player to be absent from at least one scheduled practice or game</p> <p><b>Type(s):</b><br/>Non-Contact Ankle Sprains</p> <p><b>Body Part(s):</b><br/>Ankle</p> | <p><b>DOM Injuries:</b><br/>3 (17.6%)</p> <p><b>NON-DOM Injures:</b><br/>9 (52.9%)</p> <p><b>AMBI Injuries:</b><br/>5 (29.5%)</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>  | No additional data   |
| Fujitaka et al. 2018 [46]                | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players affiliated with a collegiate team (Timeline: 9-year testing period from 2005 to 2013)</p> <p><b>Whole Sample:</b><br/>273 male collegiate soccer players (at time of college entry:<br/>age <math>18.0 \pm 0.2</math> years;<br/>height <math>171.4 \pm 14.0</math> cm)</p> <p><b>Injured Sample:</b><br/>16 players (5.9%) sustained fifth metatarsal stress fractures</p>  | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>                                  | <p><b>Injury Definition:</b><br/>Incurrence of a fifth metatarsal stress fracture</p> <p><b>Type(s):</b><br/>Fifth metatarsal fractures</p> <p><b>Body Part(s):</b><br/>Foot</p>   | <p><b>DOM Injuries:</b><br/>3 (18.8%)</p> <p><b>NON-DOM Injures:</b><br/>13 (81.3%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/><math>\chi^2 = 5.22</math>,<br/><math>p &lt; .05</math></p>                        | No additional data   |
| Gebert et al. 2018 [47]                  | <p><b>Study Type:</b> Retrospective</p> <p><b>Population Pool:</b><br/>Soccer players who were Swiss citizens, by random sample (Timeline: July 2013 to June 2014 via retrospective survey)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>708 total injuries sustained (age <math>28.6 \pm 10.5</math> years;<br/>6.1% females)</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>   | <p><b>Injury Definition:</b><br/>All injuries classified by severity based on time-loss</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p>   | <p><b>DOM Injuries:</b><br/>Approx. 426 (60.2%)</p> <p><b>NON-DOM Injures:</b><br/>Approx. 282 (39.8%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/><math>2(1,462) = 19.13</math>;<br/><math>p &lt; .001</math></p> | No additional data   |

APPENDIX

| Study                          | Study Type & Population  | Limb Dominance   | Injury   | Injury Data by Dominance   | Specific Injury Data   |
|--------------------------------|--|--|--|--|--|
| Hägglund and Waldén, 2016 [48] | <p><b>Study Type:</b> Prospective</p> <p><b>Population Pool:</b> Soccer players from eight regional districts of the Swedish Football Association (under-14 to under-18 age groups) (Timeline: 2009 competitive youth season from April 1–October 31)</p> <p><b>Whole Sample:</b> 4556 female youth soccer players (age 14.1 ± 1.2 years; weight 53.3 ± 8.6 kg; height 163.6 ± 6.7 cm; BMI 19.9 ± 2.5 kg/m<sup>2</sup>; total exposure 278,298 hours)</p> <p><b>Injured Sample:</b> 92 players (2.0%) sustained 96 acute knee injuries</p>   | <p><b>Dominance Definition:</b> Not Reported</p> <p><b>Right:</b> Not Reported</p> <p><b>Left:</b> Not Reported</p> <p><b>Ambidextrous/Mixed:</b> Not Reported</p>   | <p><b>Injury Definition:</b> A recordable acute knee injury was one that occurred during organized football training or match play, had a sudden onset, and led to a player being unable to fully participate in future training or match play (excluding contusions)</p> <p><b>Type(s):</b> Acute knee injuries (including ACL tears)</p> <p><b>Body Part(s):</b> Knee</p>                                      | <p><b>DOM Injuries:</b> 44 (46%)</p> <p><b>NON-DOM Injuries:</b> 46 (48%)</p> <p><b>AMBI Injuries:</b> 6 (6%) [excluded from analysis]</p> <p><b>BILATERAL Injuries:</b> N/A</p> <p><b>Significance:</b> Not Reported</p>  | <p><b>ACL Tears</b> (n = 21, dominant 6 (29%), non-dominant 11 (52%), p = 0.011) [4 ambidextrous players with ACL injury not included in analysis]</p>   |
| Hägglund et al. 2013 [7]       | <p><b>Study Type:</b> Prospective</p> <p><b>Population Pool:</b> Soccer players from 26 professional clubs in 10 European countries affiliated with UEFA (Timeline: 9 seasons from July 2001–June 2010)</p> <p><b>Whole Sample:</b> 1401 male professional soccer players (age 25.8 ± 4.5 years; height 182.3 ± 6.3 cm; mass 77.9 ± 7.0 kg; exposure 247 ± 87 hours/season)</p> <p><b>Injured Sample:</b> 2123 lower extremity muscle injuries were sustained among 6140 total injuries. Muscle injuries by location: adductors (n = 523), hamstrings (n = 900), quadriceps (n = 394), calf (n = 306)</p>            | <p><b>Dominance Definition:</b> Not Reported</p> <p><b>Right:</b> 1065 (76%)</p> <p><b>Left:</b> 295 (21%)</p> <p><b>Ambidextrous/Mixed:</b> 41 (3%)</p>   | <p><b>Injury Definition:</b> Time-loss injury resulting in a player being unable to fully participate in training or match play; more specifically, a muscle injury was defined as a traumatic distraction or overuse injury to a muscle leading to a player being unable to fully participate in training or match play</p> <p><b>Type(s):</b> Muscle Strains</p> <p><b>Body Part(s):</b> Lower Extremities</p> | <p><b>DOM Injuries:</b> Approx. 1150</p> <p><b>NON-DOM Injuries:</b> Unknown (cannot differentiate ND and Mixed-Footed)</p> <p><b>AMBI Injuries:</b> Unknown (cannot differentiate ND and Mixed-Footed)</p> <p><b>BILATERAL Injuries:</b> Not Reported</p> <p><b>Significance:</b> Reported by muscle group only (see right)</p> | <p><b>Adductor Strains</b> were more common in the dominant leg (n = 523, dominant 56%, p = 0.015). <b>Hamstring Strains</b> were not significant between dominant and non-dominant limbs (n = 900, dominant 50%, p = 0.889). <b>Quadriceps Strains</b> were more frequent in the dominant leg (n = 394, dominant 63%, p &lt; 0.001). <b>Calf Strains</b> were not significant between dominant and non-dominant limbs (n = 306, dominant 52%, p = 0.521).</p> |
| Hawkins and Fuller, 1999 [49]  | <p><b>Study Type:</b> Prospective</p> <p><b>Population Pool:</b> Soccer players from 4 professional English clubs (senior players [4 clubs] and youth players [2 clubs]) (Timeline: November 1994–May 1997)</p> <p><b>Whole Sample:</b> An average of 108 male professional soccer players and 30 male youth soccer players (varied depending on roster changes) (Professionals exposure 823 matches played; Youth exposure 160 matched played)</p> <p><b>Injured Sample:</b> 744 injuries were sustained in competition (professional n = 391, youth n = 109) and training (professional n = 187, youth n = 57)</p> | <p><b>Dominance Definition:</b> Acquired through injury questionnaire by selecting dominant, non-dominant, or N/A in response to “injured body side”</p> <p><b>Right:</b> Not Reported</p> <p><b>Left:</b> Not Reported</p> <p><b>Ambidextrous/Mixed:</b> Not Reported</p> | <p><b>Injury Definition:</b> A recordable injury was defined as one received during competition or training that prevented the injured player from participating in competition or normal training for at least one day</p> <p><b>Type(s):</b> Any</p> <p><b>Body Part(s):</b> Any</p>   | <p><b>DOM Injuries:</b> Approx. 389 (52.3%)</p> <p><b>NON-DOM Injuries:</b> Approx. 288 (38.7%)</p> <p><b>AMBI Injuries:</b> N/A</p> <p><b>BILATERAL Injuries:</b> 67 (9.0%) injuries were not lateral in nature</p> <p><b>Significance:</b> p &lt; 0.01</p>   | <p>No additional data</p>  |

## APPENDIX

| Study                                    | Study Type & Population  | Limb Dominance  | Injury   | Injury Data by Dominance  | Specific Injury Data  |
|--|--|---|--|---|---|
| Henderson, Barnes, and Portas, 2010 [50] | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from 1 English Premier League club (Timeline: During 45-week competitive season)</p> <p><b>Whole Sample:</b><br/>36 male professional players (age <math>22.6 \pm 5.2</math> years; height <math>1.81 \pm 0.08</math> m; mass <math>75.8 \pm 9.4</math> kg)</p> <p><b>Injured Sample:</b><br/>12 players sustained 14 hamstring strain injuries (11 single incidence, 1 triple incidence) among 104 total injuries</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>          | <p><b>Injury Definition:</b><br/>A hamstring injury was defined as one that would result in the player being unable to participate in general training for a period of 48 hours or more</p> <p><b>Type(s):</b><br/>Hamstring Strains</p> <p><b>Body Part(s):</b><br/>Hamstrings</p>  | <p><b>DOM Injuries:</b><br/>10 (83.3%)</p> <p><b>NON-DOM Injuries:</b><br/>2 (16.7%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>                        | Regression model for propensity of hamstring strain incidence in the dominant limb concluded that increased age, increased non-counter-movement jump performance, decreased active hip range of motion all may contribute to injury   |
| Hölmich <i>et al.</i> , 2014 [51]        | <p><b>Study Type:</b> Prospective Randomized Controlled Trial</p> <p><b>Population Pool:</b><br/>Soccer players from 120 Danish Soccer Federation clubs were invited to participation (Timeline: During 10-month competitive season)</p> <p><b>Whole Sample:</b><br/>998 male amateur competitive players (exposure 144.757 hours)</p> <p><b>Injured Sample:</b><br/>54 players (5.4%) sustained 58 groin injuries among 494 total injuries</p>  | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>A groin injury was defined as any physical symptom in the groin related to participation in soccer or match play, incapacitating the player while playing soccer or demanding special medical attention for the player to be able to participate or preventing him from participating in training or match play</p> <p><b>Type(s):</b><br/>Groin Injuries</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p> | <p><b>DOM Injuries:</b><br/>Approx. 40 (68%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 18 (32%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/><math>p = 0.048</math></p> | <p><b>Adductor-related groin pain</b> (n = 30, dominant 63%);</p> <p><b>Abdominal-related groin pain</b> (n = 11, dominant 64%);</p> <p><b>Iliopsoas-related</b> (n = 18, dominant 63%)</p>   |
| Junge <i>et al.</i> , 2000 [52]          | <p><b>Study Type:</b> Retrospective Survey</p> <p><b>Population Pool:</b><br/>Soccer players from Germany, France, and Czech Republic of varying ages and skill levels (Timeline: Unspecified)</p> <p><b>Whole Sample:</b><br/>588 male youth/adult soccer players (age <math>18.4 \pm 4.0</math> [14–41] years) designated into the following age groups: Under-16 (n = 146), Under-16 to Under-18 (n = 240), Adults (n = 202)</p> <p><b>Injured Sample:</b><br/>588 players reported a total of 3848 previous injuries (via retrospective questionnaire)</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>          | <p><b>Injury Definition:</b><br/>Injury defined as a player being prevented from participating in usual sporting activities for at least 1 week (per subjective history report of the player)</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p>   | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injuries:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>Not Reported</p> | <p><b>Knee Pathologies</b> were more commonly found in the non-dominant limb than the dominant limb of 189 injuries (significance value not reported). <b>Ankle Pathologies</b> were more commonly found in the dominant limb than the non-dominant limb (significance values not reported)</p> |



APPENDIX

| Study  | Study Type & Population  | Limb Dominance   | Injury   | Injury Data by Dominance   | Specific Injury Data   |
|--|--|--|--|--|--|
| Kofotolis, Kellis, and Vlachopoulos, 2007 [53] | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from 19 of 22 amateur clubs in North Division League of the Greek Amateur Association (Timeline: 2-year period from 2003 to 2005)</p> <p><b>Whole Sample:</b><br/>312 male amateur adult soccer players (24.8 ± 4.63 years; mass 65.5 ± 5.75 kg; height 1.75 ± 0.09 m; BMI 20.3 ± 5.17 kg/m<sup>2</sup>; training age 7.6 ± 4.02 years; average exposure in practice 1.85 ± 0.49 hours/week; average exposure in games 0.71 ± 0.43 hours/week)</p> <p><b>Injured Sample:</b><br/>139 ankle sprain injuries occurred (132 with &lt; 7 sessions time lost, 7 with &gt;7 sessions time lost) among 208 total ankle injuries</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Injury was defined as one sustained during training or competition that prevented the injured player from participating in practice or training sessions</p> <p><b>Type(s):</b><br/>Ankle Sprains</p> <p><b>Body Part(s):</b><br/>Ankle</p> | <p><b>DOM Injuries:</b><br/>Approx. 95 (68.3%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 44 (Approx. 32.7%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>p &lt; 0.05</p> | No additional data   |
| Krajnc et al. 2010 [54]                        | <p><b>Study Type:</b><br/>Retrospective</p> <p><b>Population Pool:</b><br/>Soccer players who formerly played from Slovenian club NK Maribor (Timeline: post-career follow-up of former players)</p> <p><b>Whole Sample:</b><br/>40 male former professional soccer players (mean age 49.2 years; mean BMI 26.4 kg/m<sup>2</sup>)</p> <p><b>Injured Sample:</b><br/>The sample of 40 former players had sustained an average of 1.95 acute knee injuries during their careers</p>  | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>34 (85%)</p> <p><b>Left:</b><br/>6 (15%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>                   | <p><b>Injury Definition:</b><br/>Time-Loss Injury: Knee injury was defined as knee trauma that prevented participation in training or in a game for some days or weeks afterwards</p> <p><b>Type(s):</b><br/>Knee Injuries</p> <p><b>Body Part(s):</b><br/>Knee</p>          | <p><b>DOM Injuries:</b><br/>27 (35%)</p> <p><b>NON-DOM Injuries:</b><br/>51 (65%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>p = 0.033</p>                               | <p><b>By Number of Knee Operations:</b> dominant 8 (28.6%), non-dominant 20 (71.4%); p = 0.053);</p> <p><b>Present Symptoms of Knee Pain:</b> non-dominant (n = 21, 52.5%) knees more symptomatic than dominant knees (n = 10, 25%) (p = 0.011);</p> <p><b>Radiographical Signs of Osteoarthritis:</b> dominant 17 (42.5%), non-dominant 23 (57.5%); not significant</p> |
| Kudas et al. 2016 [55]                         | <p><b>Study Type:</b><br/>Prospective Case Series</p> <p><b>Population Pool:</b><br/>Soccer players from Turkish Super League teams diagnosed with posterior ankle impingement syndrome at sports medicine clinic (Timeline: From 2007–2012)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>26 male professional soccer players with posterior ankle impingement syndrome (age 21.9 [17–29] years)</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>19 (73.1%)</p> <p><b>Left:</b><br/>7 (26.9%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>               | <p><b>Injury Definition:</b><br/>Athletes diagnosed with posterior ankle impingement syndrome</p> <p><b>Type(s):</b><br/>Posterior Impingement Syndrome</p> <p><b>Body Part(s):</b><br/>Ankle</p>  | <p><b>DOM Injuries:</b><br/>23 (88.5%)</p> <p><b>NON-DOM Injuries:</b><br/>3 (11.5%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>                         | No additional data   |

## APPENDIX

| Study                                   | Study Type & Population  | Limb Dominance   | Injury   | Injury Data by Dominance  | Specific Injury Data  |
|---|--|--|--|---|---|
| Langhout <i>et al.</i> 2018 [56]        | <p><b>Study Type:</b><br/>Retrospective Survey (in a Cross-Sectional Study)</p> <p><b>Population Pool:</b><br/>Soccer players registered in Dutch women's football league from all Royal Dutch Football Association (KNVB) districts (Timeline: During preseason 2014/15)</p> <p><b>Whole Sample:</b><br/>434 female adult amateur soccer players (age <math>24.2 \pm 5.1</math> [18–52] years; height <math>170.7 \pm 6.0</math> [155–190] cm; weight <math>66.4 \pm 8.7</math> [46–110] kg; BMI <math>22.6 \pm 2.7</math> [17.1–40.0] kg/m<sup>2</sup>; match exposure <math>20.9 \pm 8.7</math> [0–60] matches/season; training exposure <math>3.0 \pm 1.4</math> [0–12] hours/week)</p> <p><b>Injured Sample:</b><br/>During the previous season: 172 players (40%) reported 200 hip and groin injuries among 404 players sustaining 1,439 total injuries. During the preseason: 117 players (27%) sustained 132 hip and groin injuries.</p> | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>389 (90%)</p> <p><b>Left:</b><br/>45 (10%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>        | <p><b>Injury Definition:</b><br/>Time-Loss Injury: any physical complaint sustained by a player as a result of a football match or training, resulting in the player being unable to fully take part in future training or match play. Non-Time Loss Injury: a situation where a player experienced any physical complaint related to soccer but without time-loss</p> <p><b>Type(s):</b><br/>Hip and Groin Injuries</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p> | <p><b>DOM Injuries:</b><br/>Total 160 (55.4%) [Previous Season 100 (58%); Preseason 60 (51%)]</p> <p><b>NON-DOM Injuries:</b><br/>Total 61 (21.1%) [Previous Season 33 (19%); Preseason 28 (24%)]</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>Total 68 (23.5%) [Previous Season 39 (23%); Preseason 29 (25%)]</p> <p><b>Significance:</b><br/>Not Reported</p> | No additional data  |
| Le Gall, Carling, and Reilly, 2008 [57] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players at Clarefontaine CNFE in France (Timeline: 8 seasons from August 1998–June 2006)</p> <p><b>Whole Sample:</b><br/>119 female elite youth soccer players (age 15–19 years; total training exposure 87,530 hours; total match exposure 9795 hours)</p> <p><b>Injured Sample:</b><br/>110 players (92.4%) sustained 619 total injuries (average of 5.2 injuries per player)</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Any physical complaint received during soccer training or competition and which prevented the injured party from participating in normal training or competition for at least 1 day after the onset</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p>  | <p><b>DOM Injuries:</b><br/>Approx. 378 (61%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 235 (38%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>Approx. 6 (1%)</p> <p><b>Significance:</b><br/>Not Reported</p>  | 12 <b>ACL ruptures</b> sustained by 11 players: 7 non-dominant, 5 dominant limb |
| Lee <i>et al.</i> 2018 [58]             | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from six clubs in top national soccer league (Timeline: 1 competitive season)</p> <p><b>Whole Sample:</b><br/>146 male professional soccer players (age <math>24.2 \pm 4.4</math> years; height <math>177.7 \pm 5.9</math> cm; weight <math>72.9 \pm 8.65</math> kg; playing experience <math>4.53 \pm 3.65</math> years)</p> <p><b>Injured Sample:</b><br/>41 acute hamstring injuries were sustained (5 recurred during study period)</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Hamstring injury defined as an acute pain in the posterior thigh which causes an immediate cessation of match play or training</p> <p><b>Type(s):</b><br/>Acute Hamstring Strains</p> <p><b>Body Part(s):</b><br/>Hamstrings</p>  | <p><b>DOM Injuries:</b><br/>23 (56%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 18 (Approx. 44%)</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>Not Reported</p>   | No additional data  |

APPENDIX

| Study                                   | Study Type & Population  | Limb Dominance  | Injury  | Injury Data by Dominance   | Specific Injury Data |
|---|--|---|---|--|----------------------|
| Locks et al. 2017 [59]                  | <p><b>Study Type:</b> Prospective Case Series</p> <p><b>Population Pool:</b> Soccer players with hip arthroscopy for femoroacetabular impingement treated by one surgeon (Timeline: From 2005–2015)</p> <p><b>Whole Sample:</b> <i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b> 24 male professional soccer players (age at surgery 25.0 ± 4.0 years) who underwent hip arthroscopy for symptomatic FAI resulting in 26 total hips operated (2 bilateral, 1 contralateral surgery 2 months later, 1 recurrence 10 months later)</p> | <p><b>Dominance Definition:</b> Not Reported</p> <p><b>Right:</b> 12 (50.0%)</p> <p><b>Left:</b> 9 (37.5%)</p> <p><b>Ambidextrous/Mixed:</b> 9 (37.5%)</p>  | <p><b>Injury Definition:</b> Players who underwent hip arthroscopy for symptomatic FAI</p> <p><b>Type(s):</b> Femoroacetabular impingement</p> <p><b>Body Part(s):</b> Hip/Groin</p>  | <p><b>DOM Injuries:</b> 12 (46%)</p> <p><b>NON-DOM Injures:</b> 11 (42%)</p> <p><b>AMBI Injuries:</b> Not Reported</p> <p><b>BILATERAL Injuries:</b> 3 (12%)</p> <p><b>Significance:</b> Not Reported</p>    | No additional data   |
| Lord, Ma'ayah, and Blazevich, 2017 [60] | <p><b>Study Type:</b> Cross-Sectional</p> <p><b>Population Pool:</b> Soccer players from Western Australia State League (semi-professional) with previous unilateral hamstring injury (injury-free at testing) comprised the "injured group" (Timeline: Injury in previous 2 years)</p> <p><b>Whole Sample:</b> <i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b> 20 male semi-professional soccer players had sustained hamstring strain in previous two years but were injury-free at time of testing</p>                           | <p><b>Dominance Definition:</b> Titled "preferred leg" and "kicking leg" herein</p> <p><b>Right:</b> Not Reported</p> <p><b>Left:</b> Not Reported</p> <p><b>Ambidextrous/Mixed:</b> Not Reported</p> | <p><b>Injury Definition:</b> PREVIOUS HAM-STRING INJURY in the study herein: soccer players in the injured group had sustained a unilateral hamstring strain injury in the previous two years but were injury-free at the time of testing</p> <p><b>Type(s):</b> (Previous) Hamstring Strains</p> <p><b>Body Part(s):</b> Hamstrings</p>  | <p><b>DOM Injuries:</b> 20 (100%)</p> <p><b>NON-DOM Injures:</b> 0 (0%)</p> <p><b>AMBI Injuries:</b> N/A</p> <p><b>BILATERAL Injuries:</b> N/A</p> <p><b>Significance:</b> Not Reported</p>                  | No additional data   |
| Lubberts et al. 2017 [61]               | <p><b>Study Type:</b> Prospective Cohort</p> <p><b>Population Pool:</b> Soccer players from European professional club first teams were invited to participate (including 61 teams in 17 countries) (Timeline: 15 seasons from 2001–2016)</p> <p><b>Whole Sample:</b> 3677 male professional soccer players</p> <p><b>Injured Sample:</b> 94 syndesmotic ankle injuries were sustained among 1,320 ankle ligament injuries and 14,653 total injuries</p>   | <p><b>Dominance Definition:</b> Preferred kicking leg</p> <p><b>Right:</b> Not Reported</p> <p><b>Left:</b> Not Reported</p> <p><b>Ambidextrous/Mixed:</b> Not Reported</p>                           | <p><b>Injury Definition:</b> Ankle syndesmosis injuries were classified by: athletes with tenderness on palpation over the anterior interosseous membrane proximal to the ankle joint and positive special tests (ankle external rotation and syndesmosis squeeze test). If diagnosis remained uncertain, confirmation via imaging was performed (radiograph, ultrasound, or magnetic resonance imaging)</p> <p><b>Type(s):</b> Ankle Syndesmosis Sprains</p> <p><b>Body Part(s):</b> Ankle</p> | <p><b>DOM Injuries:</b> Approx. 51 (54%)</p> <p><b>NON-DOM Injures:</b> Approx. 43 (46%)</p> <p><b>AMBI Injuries:</b> N/A</p> <p><b>BILATERAL Injuries:</b> N/A</p> <p><b>Significance:</b> Not Reported</p> | No additional data   |

## APPENDIX

| Study                                       | Study Type & Population  | Limb Dominance   | Injury   | Injury Data by Dominance  | Specific Injury Data   |
|---|--|--|--|---|--|
| Lundblad et al. 2013 [62]                   | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from European professional club first teams were invited to participate (including 27 teams) (Timeline: 11 seasons from 2001–2012)</p> <p><b>Whole Sample:</b><br/>1741 male professional soccer players (total exposure 1 057 201 hours; total training exposure 888 249 hours; total match exposure 168 952 hours)</p> <p><b>Injured Sample:</b><br/>346 MCL injuries were sustained among 8029 total injuries</p>  | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>  | <p><b>Injury Definition:</b><br/>MCL injury defined as “a traumatic distraction injury to the superficial MCL, deep MCL, or posterior oblique ligament leading to a player being unable to fully participate in training or match play</p> <p><b>Type(s):</b><br/>MCL sprains</p> <p><b>Body Part(s):</b><br/>Knee</p> | <p><b>DOM Injuries:</b><br/>Approx. 208 (60%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 138 (40%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>                         | <p><b>Lay-Off Time:</b> No differences in lay-off time between the dominant and non-dominant limb MCL injuries (<math>p = 0.39</math>)</p> |
| Matsuda, Fukubayashi, and Hirose, 2017 [63] | <p><b>Study Type:</b><br/>Retrospective Survey (in a Cross-Sectional Study)</p> <p><b>Population Pool:</b><br/>Soccer players from Kanto University Football Association with previous history of fifth metatarsal stress fracture injury comprised the “injured group” (Timeline: Cross-sectional measurements obtained in February-March before competitive season)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>29 male collegiate players with a history of fifth metatarsal stress fracture (28 unilateral, 1 bilateral) (present age <math>20.0 \pm 1.1</math> years; height <math>172.8 \pm 5.8</math> cm; weight <math>67.5 \pm 7.0</math> kg)</p> | <p><b>Dominance Definition:</b><br/>“Kicking foot” for dominant and “pivoting foot” for non-dominant</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>                          | <p><b>Injury Definition:</b><br/>Injury defined as a history of fifth metatarsal fracture as diagnosed by an orthopedic surgeon</p> <p><b>Type(s):</b><br/>Fifth metatarsal fractures</p> <p><b>Body Part(s):</b><br/>Foot</p>   | <p><b>DOM Injuries:</b><br/>Approx. 18 (63%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 11 (37%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not significant</p>                        | No additional data   |
| Mohammadi et al. 2013 [64]                  | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players with unilateral ACL reconstruction with intent to return to sport presenting to sports medicine clinic (Timeline: From 2010 to 2011)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>42 male soccer players with unilateral ACL tears and underwent surgery</p>  | <p><b>Dominance Definition:</b><br/>Subject asked to kick a ball to determine dominance (support leg = non-dominant)</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Patients who had sustained ACL tear and underwent reconstruction</p> <p><b>Type(s):</b><br/>ACL tears</p> <p><b>Body Part(s):</b><br/>Knee</p>  | <p><b>DOM Injuries:</b><br/>9 (21.4%)</p> <p><b>NON-DOM Injuries:</b><br/>33 (78.6%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>“Majority of reconstructed limbs were non-dominant”</p> | No additional data   |

APPENDIX

| Study                   | Study Type & Population   | Limb Dominance   | Injury   | Injury Data by Dominance   | Specific Injury Data  |
|-------------------------|---|--|--|--|---|
| Mosler et al. 2018 [65] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from Qatar Stars League teams (first division [13 teams], second division [4 teams]) (Timeline: 2 professional seasons, 2013/14 and 2014/15)</p> <p><b>Whole Sample:</b><br/>606 male professional soccer players (age 26 ± 4.9 years; height 177 ± 6.9 cm; weight 73 ± 9.2 kg; BMI 23 ± 2.0 kg/m<sup>2</sup>; exposure 234 ± 114 hours/season; training exposure 209 ± 105 hours/season; match exposure 26 ± 18 hours/season)</p> <p><b>Injured Sample:</b><br/>150 players (24.8%) sustained 206 groin injuries among 1,145 total injuries (identical to Mosler et al. 2018)</p> | <p><b>Dominance Definition:</b><br/>Preferred limb for a penalty kick</p> <p><b>Right:</b><br/>Approx. 485 (80%)</p> <p><b>Left:</b><br/>Approx. 121 (20%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p> | <p><b>Injury Definition:</b><br/>Time-loss injuries</p> <p><b>Type(s):</b><br/>Hip and Groin Injuries</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p>  | <p><b>DOM Injuries:</b><br/>120 (58%)</p> <p><b>NON-DOM Injuries:</b><br/>74 (36%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>12 (6%)</p> <p><b>Significance:</b><br/>“Unilateral groin injuries were more prevalent on the dominant side”</p> | No additional data  |
| Mosler et al. 2018 [66] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from Qatar Stars League teams (first division [14 teams], second division [18 teams]) (Timeline: 2 professional seasons, 2013/14 and 2014/15)</p> <p><b>Whole Sample:</b><br/>438 male professional soccer players (609 player-seasons) (age 26 ± 5 [18–38] years; height 1.77 ± 0.67 [1.56–2.04] m; weight 72 ± 9 [47–105] kg; BMI 23.2 ± 2 [17.8–29.1] kg/m<sup>2</sup>)</p> <p><b>Injured Sample:</b><br/>150 players sustained 206 groin injuries among 1,145 total injuries (identical to Mosler et al. 2018), of which 113 injuries were included in regression analysis</p> | <p><b>Dominance Definition:</b><br/>Preferred limb for a penalty kick</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>  | <p><b>Injury Definition:</b><br/>Time-Loss Injury located to the hip joint or surrounding soft tissues or at the junction between the anteromedial part of the thigh, including the proximal part of the adductor muscle bellies, pubic symphysis, and lower abdomen, that resulted from playing soccer and led to a player being unable to participate in future training or match play</p> <p><b>Type(s):</b><br/>Hip and Groin Injuries</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p> | <p><b>DOM Injuries:</b><br/>47 (41.6%)</p> <p><b>NON-DOM Injuries:</b><br/>66 (58.4%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Confidence Interval 0.99–2.00; p = 0.06</p>                               | Of Adductor-Related Groin Injuries only, dominant (n = 50) versus non-dominant (n = 35) limbs were not significant (95% Confidence Interval 0.93–2.20; p = 0.104) |

## APPENDIX

| Study                            | Study Type & Population   | Limb Dominance  | Injury   | Injury Data by Dominance  | Specific Injury Data  |
|----------------------------------|---|---|--|---|---|
| Navandar <i>et al.</i> 2018 [67] | <p><b>Study Type:</b><br/>Cross-Sectional</p> <p><b>Population Pool:</b><br/>Soccer players from Spanish Segunda Division [1 male team] and Spanish Primera Division [2 female teams] who had previously sustained hamstring strain (but injury-free at time of testing) (Timeline: previous hamstring strain in last 2 years)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>14 (4 males, 10 females) professional soccer players had sustained a hamstring injury in the previous two years</p> | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Time-Loss Injury: Hamstring injury was defined as having missed a match due to hamstring strain in the previous two years (but recovered and healthy at time of testing)</p> <p><b>Type(s):</b><br/>Hamstring Strains</p> <p><b>Body Part(s):</b><br/>Hamstrings</p>              | <p><b>DOM Injuries:</b><br/>9 (64.3%)<br/>Males 3<br/>Females 6</p> <p><b>NON-DOM Injuries:</b><br/>5 (35.7%)<br/>Males 1<br/>Females 4</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p> | No additional data  |
| Nilstad <i>et al.</i> 2014 [68]  | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from Norwegian Toppserien women's league (Timeline: During the 2009 competitive season)</p> <p><b>Whole Sample:</b><br/>173 female professional soccer players (age 21.5 ± 4.1 years; height 167 ± 5 cm; weight 62 ± 6 kg; total exposure 44,831 hours)</p> <p><b>Injured Sample:</b><br/>107 players (62%) sustained 171 lower extremity injuries</p>   | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>152 (88%)</p> <p><b>Left:</b><br/>21 (12%)</p> <p><b>Ambidextrous/Mixed:</b><br/>21 (12%)</p>            | <p><b>Injury Definition:</b><br/>Time-Loss Injury: An injury was recorded if the player was unable to participate in training or match play at least one day beyond the day of injury</p> <p><b>Type(s):</b><br/>Lower Extremities</p> <p><b>Body Part(s):</b><br/>Lower Extremities</p>                           | <p><b>DOM Injuries:</b><br/>96 (56%)</p> <p><b>NON-DOM Injuries:</b><br/>75 (44%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>p = 0.86</p>   | No additional data  |
| Nogueira <i>et al.</i> 2017 [69] | <p><b>Study Type:</b><br/>Prospective (Descriptive Epidemiological)</p> <p><b>Population Pool:</b><br/>Soccer players from youth clubs in Aveiro, Portugal (51 teams invited, 21 included) (Timeline: 6-month follow-up throughout course of 1 season)</p> <p><b>Whole Sample:</b><br/>529 male youth amateur soccer players (age 15–19 years; total exposure 62,062 hours; training exposure 53,159.5 hours; match exposure 8902.5 hours)</p> <p><b>Injured Sample:</b><br/>173 players (32.7%) sustained 248 injuries</p>                             | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Time-Loss Injury: Any physical complaint sustained by a player as a result of a football match or training that resulted in a player being unable to take a full part in future football training or match</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p> | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injuries:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>Not Reported</p>                             | Of 122 <b>Non-Contact</b> injuries: "most of the injuries occurred in the dominant leg" (n = 80, 65.6%) when compared to the non-dominant leg (n = 42, 34.4%) (significance not reported) |

APPENDIX

| Study                         | Study Type & Population   | Limb Dominance   | Injury  | Injury Data by Dominance   | Specific Injury Data   |
|-------------------------------|---|--|---|--|--|
| Östenberg and Roos, 2000 [70] | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from 8 senior division first team in south of Sweden (Timeline: During the 1996 competitive season)</p> <p><b>Whole Sample:</b><br/>123 female elite and non-elite soccer players (age <math>20.7 \pm 4.6</math> years; height <math>167.2 \pm 5.0</math> cm; weight <math>61.5 \pm 7.0</math> kg; BMI <math>22.0 \pm 2.2</math> kg/m<sup>2</sup>; experience <math>12.3 \pm 5.2</math> years)</p> <p><b>Injured Sample:</b><br/>47 players (38.2%) sustained 52 lower extremity injuries among 65 total injuries</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>   | <p><b>Injury Definition:</b><br/>An injury was recorded if there was an absence from scheduled activities for at least one practice or game</p> <p><b>Type(s):</b><br/>Lower Extremities</p> <p><b>Body Part(s):</b><br/>Lower Extremities</p>  | <p><b>DOM Injuries:</b><br/>29 (55.8%)</p> <p><b>NON-DOM Injuries:</b><br/>21 (40.4%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>2 (3.8%)</p> <p><b>Significance:</b><br/>Not Reported</p> | No additional data   |
| Oztekin et al. 2009 [71]      | <p><b>Study Type:</b><br/>Retrospective Descriptive</p> <p><b>Population Pool:</b><br/>Soccer players from National Football Association of Turkey reporting to private sports/orthopaedic clinic and cared for by one surgeon (Timeline: During 2003/04 season)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>66 (61 male, 5 female) professional soccer players with "severe foot/ankle" injuries (age 23 [17–31] years)</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>40 (60.6%); Males 35 (57.4%), Females 5 (100%)</p> <p><b>Left:</b><br/>25 (37.9%); Males 25 (41.0%), Females 0 (0.0%)</p> <p><b>Ambidextrous/Mixed:</b><br/>1 (1.5%); Males 1 (1.6%), Females 0 (0.0%)</p> | <p><b>Injury Definition:</b><br/>Severe foot/ankle injuries were defined by classification based on length of incapacity and classified anatomically by location in ankle, midfoot, or hindfoot</p> <p><b>Type(s):</b><br/>Severe Foot/Ankle Injuries</p> <p><b>Body Part(s):</b><br/>Foot/Ankle</p>  | <p><b>DOM Injuries:</b><br/>61 (92.4%)</p> <p><b>NON-DOM Injuries:</b><br/>4 (6.1%)</p> <p><b>AMBI Injuries:</b><br/>1 (1.5%)</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>   | <p><b>Severe Ankle/Foot Injuries: Overuse injuries</b> (n = 19, dominant 18 (94.7%), non-dominant 1 (5.3%)).</p> <p><b>Severe Ankle/Foot Injuries by Type: Strains</b> (n = 10; dominant 9 (90.0%), non-dominant 1 (10.0%));</p> <p><b>Sprains</b> (n = 21; dominant 21 (100.0%), non-dominant 0 (0.0%));</p> <p><b>Fractures</b> (n = 12; dominant 10 (83.3%), non-dominant 2 (16.7%));</p> <p><b>Contusions</b> (n = 4; dominant 4 (100.0%), non-dominant 0 (0.0%)).</p> <p><b>Severe Ankle/Foot Injuries: Match Play</b> (N = 40, dominant 38 (95.0%), non-dominant 2 (5.0%);</p> <p><b>Training</b> (n = 26, dominant 24 (92.3%), non-dominant 2 (7.7%))</p> |
| Petersen et al. 2013 [72]     | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from first teams of 50 Danish clubs in the top 5 divisions (Timeline: 1 calendar year from January-December 2008)</p> <p><b>Whole Sample:</b><br/>942 male national elite and sub-elite soccer players</p> <p><b>Injured Sample:</b><br/>67 players sustained hamstring injuries, and 51 subsequently received diagnostic imaging to warrant inclusion</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>   | <p><b>Injury Definition:</b><br/>Hamstring injury was defined as any suddenly occurring physical complaint in the region of the posterior thigh sustained during a soccer match or training, irrespective of the need for medical attention or time loss from soccer activities</p> <p><b>Type(s):</b><br/>Hamstring Strains</p> <p><b>Body Part(s):</b><br/>Hamstrings</p> | <p><b>DOM Injuries:</b><br/>28 (54.9%)</p> <p><b>NON-DOM Injuries:</b><br/>23 (45.1%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>      | No additional data   |

## APPENDIX

| Study                           | Study Type & Population   | Limb Dominance  | Injury  | Injury Data by Dominance   | Specific Injury Data |
|---------------------------------|---|---|---|--|----------------------|
| Powers <i>et al.</i> 2017 [73]  | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from Isfahan competitive clubs across junior, high junior, and adult ages (Timeline: One 30-week competitive season)</p> <p><b>Whole Sample:</b><br/>210 male junior/high junior/adult soccer players (demographics stratified by injury: Injured Group (n = 25, age 20.9 ± 5.9 years; height 1.78 ± 0.06 m; mass 71.6 ± 7.1 kg; BMI 22.5 ± 1.1 kg/m<sup>2</sup>); Uninjured Group (n = 160, age 19.6 ± 5.1 years; height 1.78 ± 0.08 m; mass 68.6 ± 10.3 kg; BMI 21.6 ± 2.0 kg/m<sup>2</sup>))</p> <p><b>Injured Sample:</b><br/>25 players (11.9%) sustained non-contact ankle injuries among 50 players who sustained any ankle injury (only one injury counted per player)</p> | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Non-contact ankle sprains were defined by injuries sustained without direct contact (from another player or object) to the lower extremity, upper extremity, or trunk that necessitated absence from physical activity for at least 1 week, and only a single sprain per player counted</p> <p><b>Type(s):</b><br/>Non-Contact Ankle Sprains</p> <p><b>Body Part(s):</b><br/>Ankle</p> | <p><b>DOM Injuries:</b><br/>12 (48.0%)</p> <p><b>NON-DOM Injuries:</b><br/>13 (52.0%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>                | No additional data   |
| Price <i>et al.</i> 2003 [74]   | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from 29 of 38 invited English Football Association youth academies (Timeline: 2 competitive seasons, 1999/00 and 2000/01)</p> <p><b>Whole Sample:</b><br/>4773 male youth soccer players (ages 9–19 years)</p> <p><b>Injured Sample:</b><br/>3805 total injuries sustained (90% lower extremity)</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>          | <p><b>Injury Definition:</b><br/>Time-Loss Injury: a recordable injury was defined as one that prevented the participant from training or player for at least 48 hours, not counting the day of injury</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p>   | <p><b>DOM Injuries:</b><br/>Approx. 2055 (54%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 1332 (35%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>p &lt; 0.05</p> | No additional data   |
| Räsänen <i>et al.</i> 2018 [75] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from Sami Hyypiä academy (Finland) (Timeline: 20 weeks from January to June 2014)</p> <p><b>Whole Sample:</b><br/>558 (445 male, 113 female) youth soccer players (ages under-11 to under-14) (3 players omitted from analysis for unknown dominance)</p> <p><b>Injured Sample:</b><br/>205 players (37%) sustained at least one injury, for a total of 285 acute lower extremity injuries</p>   | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Approx. 491 (88%)</p> <p><b>Left:</b><br/>Approx. 67 (12%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p> | <p><b>Injury Definition:</b><br/>Injury defined as any physical complaint sustained by a player that resulted from football training or playing, causing a need for medical attention or time loss from full football activities</p> <p><b>Type(s):</b><br/>Lower Extremities</p> <p><b>Body Part(s):</b><br/>Lower Extremities</p>   | <p><b>DOM Injuries:</b><br/>Approx. 145 (51%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 137 (48%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>  | No additional data   |



APPENDIX

| Study                       | Study Type & Population   | Limb Dominance  | Injury   | Injury Data by Dominance   | Specific Injury Data |
|-----------------------------|---|---|--|--|----------------------|
| Rafn et al. 2015 [76]       | <p><b>Study Type:</b><br/>Cross-Sectional</p> <p><b>Population Pool:</b><br/>Soccer players from Danish clubs in divisions 1–4 with long-standing (&gt;6 weeks) unilateral hip/groin pain (Timeline: From July 2011 to June 2012)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>24 male elite and sub-elite soccer players (age 25.3 ± 3.44 years; height 181.75 ± 6.44 m; weight 78.29 ± 8.50 kg)</p>   | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>          | <p><b>Injury Definition:</b><br/>Long-standing unilateral hip/groin pain defined by &gt;6 weeks of involvement</p> <p><b>Type(s):</b><br/>Long-Standing Hip/Groin Pain</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p>   | <p><b>DOM Injuries:</b><br/>19 (79.2%)</p> <p><b>NON-DOM Injuries:</b><br/>5 (20.8%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p> | No additional data   |
| Saita et al. 2017 [77]      | <p><b>Study Type:</b><br/>Retrospective for injury (in a Cross-Sectional Study)</p> <p><b>Population Pool:</b><br/>Soccer players from a Japanese club with history of Jones fracture (fifth metatarsal) (Timeline: From 2000–2014 by retrospective analysis)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>20 male professional soccer players (age 27.1 ± 4.0 years; height 179.1 ± 4.2 cm; weight 73.6 ± 4.2 kg; BMI 22.9 ± 0.9 kg/m<sup>2</sup>) with a previous history of fifth metatarsal fracture (Jones fracture)</p> | <p><b>Dominance Definition:</b><br/>Not reported</p> <p><b>Right:</b><br/>13 (65.0%)</p> <p><b>Left:</b><br/>7 (35.0%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>                        | <p><b>Injury Definition:</b><br/>Fifth metatarsal stress fracture (Jones fracture) defined by fracture at the fifth metaphyseal-diaphyseal junction with stress-related radiological features</p> <p><b>Type(s):</b><br/>Fifth metatarsal fractures</p> <p><b>Body Part(s):</b><br/>Foot</p>   | <p><b>DOM Injuries:</b><br/>8 (40.0%)</p> <p><b>NON-DOM Injuries:</b><br/>12 (60.0%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p> | No additional data   |
| Schuermans et al. 2017 [78] | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer playing competing in Belgium (Oost-Vlaanderen) (Timeline: 1.5 season monitoring phase beginning in 2013)</p> <p><b>Whole Sample:</b><br/>51 male amateur soccer players (demographics stratified by injury: Injured Group (n = 15, age 22.8 ± 2.5 years; weight 72.6 ± 5.6 kg; height 1.78 ± 0.07 m); Uninjured Group (n = 36, age 24.3 ± 4.4 years; weight 75.2 ± 7.3 kg; height 1.81 ± 0.06 m))</p> <p><b>Injured Sample:</b><br/>15 players (29.4%) sustained hamstring strain injuries</p>        | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Time-Loss Injury: Hamstring injury was defined as an injury in the hamstring muscle region that was sustained during soccer training or match play preventing the player from participating in training or competition for at least 1 entire week</p> <p><b>Type(s):</b><br/>Hamstring strains</p> <p><b>Body Part(s):</b><br/>Hamstrings</p> | <p><b>DOM Injuries:</b><br/>8 (53.3%)</p> <p><b>NON-DOM Injuries:</b><br/>7 (46.7%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>  | No additional data   |

## APPENDIX

| Study                            | Study Type & Population   | Limb Dominance  | Injury  | Injury Data by Dominance  | Specific Injury Data   |
|----------------------------------|---|---|---|---|--|
| Svensson <i>et al.</i> 2018 [79] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from 1 Swedish first division club (Timeline: During 5 competitive seasons from 2010–2014)</p> <p><b>Whole Sample:</b><br/>137 male professional soccer players</p> <p><b>Injured Sample:</b><br/>86 lower extremity muscle injuries sustained</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>          | <p><b>Injury Definition:</b><br/>Time-loss injury: Injuries were defined as a physical complaint leading to the player not being able to fully participate in soccer, training and/or match play</p> <p><b>Type(s):</b><br/>Muscle Strains</p> <p><b>Body Part(s):</b><br/>Lower Extremities</p>  | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injuries:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>No correlations were found between dominant and non-dominant limbs for muscle injury incidence among 86 injuries</p> | No additional data   |
| Svensson <i>et al.</i> 2018 [80] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from 1 Swedish first division club (Timeline: 7 seasons from 2007–2013)</p> <p><b>Whole Sample:</b><br/>Not Reported</p> <p><b>Injured Sample:</b><br/>54 male professional soccer players sustained unilateral muscle injuries</p>                | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Muscle injuries of the lower extremity were included after being verified by ultrasonography (hip adductors, quadriceps, hamstrings, triceps surae). Muscle injuries were defined as traumatic or overuse leading to inability to fully participate in training or a match</p> <p><b>Type(s):</b><br/>Muscle Strains</p> <p><b>Body Part(s):</b><br/>Lower Extremities</p> | <p><b>DOM Injuries:</b><br/>56 (53%)</p> <p><b>NON-DOM Injuries:</b><br/>49 (47%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Significant (95% CI 44–63%)</p>  | <p><b>Severity:</b> No significant difference was found between the dominant and non-dominant leg in terms of the length of injury (<math>t(58) = 0.79</math>).</p> <p><b>Injury Location:</b> <b>Hip Adductors</b> (<math>n = 26</math>, dominant 11 (42.3%), [95% CI 22–63%]); <b>Quadriceps</b> (<math>n = 14</math>, dominant 10 (71.4%), [95% CI 44–98%]); <b>Hamstrings</b> (<math>n = 48</math>, dominant 23 (47.9%), [95% CI 33–63%]); <b>Triceps Surae</b> (<math>n = 17</math>, dominant 12 (70.6%), [95% CI 46–95%]). No significant differences were found between the dominant and non-dominant limb for Type of Injury (functional versus structural) (<math>\chi^2 = 0.313</math>, <math>df = 1</math>). Extent of Structural Hamstring Injuries was greater in the dominant limb than the non-dominant limb (volume dominant <math>2.9 \pm 2.8 \text{ cm}^3</math>; volume non-dominant <math>1.4 \pm 2.2 \text{ cm}^3</math>; <math>p = 0.044</math>)</p> |

APPENDIX

| Study                     | Study Type & Population  | Limb Dominance  | Injury  | Injury Data by Dominance  | Specific Injury Data |
|---------------------------|--|---|---|---|----------------------|
| Tak et al. 2016 [81]      | <p><b>Study Type:</b><br/>Cross-Sectional</p> <p><b>Population Pool:</b><br/>Soccer players recruited from primary outpatient healthcare clinics with long-standing adductor-related groin pain (&gt;8 weeks) (Timeline: August 2011–October 2012)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>57 male elite (n = 4) and amateur (n = 53) soccer players (age 26 ± 7.0 years; height 180 ± 7 cm; weight 73 ± 7.3 kg; BMI 22.3 ± 1.7 kg/m<sup>2</sup>) with long-standing adductor-related groin pain of &gt;8 weeks duration</p>                  | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>48 (84%)</p> <p><b>Left:</b><br/>9 (16%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>                            | <p><b>Injury Definition:</b><br/>Long-standing adductor-related groin pain defined as: duration &gt;8 weeks, not able to play unrestrictedly due to groin symptoms, tenderness to palpation of proximal insertion of adductor longus on injured side, pain on resisted adduction testing in supine, minimal playing load of 2 times/week</p> <p><b>Type(s):</b><br/>Long-Standing Adductor-Related Groin Pain</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p> | <p><b>DOM Injuries:</b><br/>Approx. 40 (70%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 17 (30%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p> | No additional data   |
| Tak et al. 2018 [82]      | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players recruited from two sports medicine outpatient clinics in the Netherlands with long-standing adductor-related groin pain (Timeline: From July 2013–June 2014)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>34 male soccer players (age 27.3 ± 5.6 years; height 1.82 ± 0.07 m; weight 77.8 ± 7.5 kg; BMI 23.5 ± 7.5 kg/m<sup>2</sup>; duration of complaints 4 [3.0–7.8] months) with long-standing adductor-related groin pain of &gt;8 weeks duration</p> | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>30 (88.2%)</p> <p><b>Left:</b><br/>4 (11.8%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>                        | <p><b>Injury Definition:</b><br/>Long-standing adductor-related groin pain defined as: groin pain during or after soccer, groin pain &gt;8 weeks, not able to fully participate in soccer due to groin pain, pain at palpation at adductor origin, pain on resisted adduction, unilateral or bilateral</p> <p><b>Type(s):</b><br/>Long-Standing Adductor-Related Groin Pain</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p>                                   | <p><b>DOM Injuries:</b><br/>14 (41.2%)</p> <p><b>NON-DOM Injuries:</b><br/>18 (52.9%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>2 (5.9%)</p> <p><b>Significance:</b><br/>Not Reported</p>        | No additional data   |
| Thorborg et al. 2014 [83] | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from a larger cohort of 700 players from 40 clubs in Eastern Denmark with hip/groin pain (Timeline: July 2011–June 2012)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>21 male amateur competitive soccer players with dominant limb adductor-related groin pain (age 24.5 ± 2.5 years; weight 74.6 ± 6.4 kg; height 179.8 ± 6.4 cm) among a sample of 28 total players reporting with adductor-related groin pain</p>                                      | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Adductor-related groin pain patients had symptoms at least 4 weeks and no signs of clinical osteoarthritis</p> <p><b>Type(s):</b><br/>Adductor-Related Groin Pain</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p>  | <p><b>DOM Injuries:</b><br/>10 (35.7%)</p> <p><b>NON-DOM Injuries:</b><br/>7 (25.0%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>11 (39.3%)</p> <p><b>Significance:</b><br/>Not Reported</p>       | No additional data   |

## APPENDIX

| Study                       | Study Type & Population   | Limb Dominance  | Injury   | Injury Data by Dominance   | Specific Injury Data  |
|-----------------------------|---|---|--|--|---|
| Tourmy et al. 2003 [84]     | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from French Ligue 1 club (Timeline: 3 competitive seasons)</p> <p><b>Whole Sample:</b><br/>199 male youth soccer player-seasons accounted (pretraining group under-12 to under-15; training group under-16 to under-20)</p> <p><b>Injured Sample:</b><br/>618 injuries sustained</p>   | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Players were interviewed after training/match participation and if any possible injury may have been sustained, were further evaluated by the club physicians</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p>  | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injuries:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>No major difference in injury rate between dominant and non-dominant limbs among 618 injuries</p> | No additional data  |
| Uebliacker et al. 2015 [85] | <p><b>Study Type:</b><br/>Retrospective Case Series</p> <p><b>Population Pool:</b><br/>Soccer players from European first division clubs in UEFA competitions who underwent suture anchor repair of complete proximal rectus femoris avulsions at a single institution (Timeline: Follow-up at 35 ± 6 months post-operatively)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>4 male professional elite soccer players (age at surgery 30 ± 2 [28–32] years) who underwent suture repair for proximal rectus femoris avulsions</p>  | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>1 (25.0%)</p> <p><b>Left:</b><br/>3 (75.0%)</p> <p><b>Ambidextrous/Mixed:</b><br/>N/A</p>                         | <p><b>Injury Definition:</b><br/>Patients who had sustained complete proximal rectus femoris avulsions and underwent suture repair surgery</p> <p><b>Type(s):</b><br/>Proximal Rectus Femoris Avulsions</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p>  | <p><b>DOM Injuries:</b><br/>4 (100.0%)</p> <p><b>NON-DOM Injuries:</b><br/>0 (0.0%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>  | <b>Mechanism of Injury:</b> In all 4 cases, injury occurred while kicking a ball without involvement of an opposing player (dominant n = 4, non-dominant n = 0) |
| Waldén et al. 2006 [86]     | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from all 14 Swedish first division clubs (Timeline: During 2001 competitive season)</p> <p><b>Whole Sample:</b><br/>310 male professional soccer players (demographics stratified by previous/present injury: ACL injured group (age 25 ± 4 years; height 183 ± 6 cm; weight 81 ± 6 kg; training exposure 233 ± 79 hours; match exposure 32 ± 13 hours), ACL healthy group (age 25 ± 5 years; height 182 ± 6 cm; weight 79 ± 6 kg; training exposure 266 ± 72 hours; match exposure 38 ± 15 hours)</p> <p><b>Injured Sample:</b><br/>625 total lower extremity injuries sustained (of the 24 ACL past/previous injury players: 54 lower limb injuries and 24 knee injuries sustained; of 286 ACL healthy players: 571 lower limb injuries and 88 knee injuries sustained)</p> | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Injuries were defined as occurring during scheduled training sessions or matches causing the player to miss the next training session or match; the ACL injured group had sustained ACL tears and underwent reconstruction</p> <p><b>Type(s):</b><br/>Any</p> <p><b>Body Part(s):</b><br/>Any</p> | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injuries:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>Not Reported</p>  | <b>ACL Tears:</b> no difference in number of ACL injuries between dominant and non-dominant limb (dominant 16, non-dominant 11; p = 0.55)                       |

APPENDIX

| Study                   | Study Type & Population  | Limb Dominance  | Injury  | Injury Data by Dominance  | Specific Injury Data   |
|-------------------------|--|---|---|---|--|
| Waldén et al. 2011 [87] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from three European professional soccer cohorts: UEFA Champions League cohort (male); Swedish Football Association (male), and Swedish Football Association (female) (Timeline: From 2001 to 2009)</p> <p><b>Whole Sample:</b><br/>2329 male and female professional soccer players (4659 player-seasons)</p> <p><b>Injured Sample:</b><br/>76 players (3.3%) sustained 78 (63 Male, 15 Female) ACL tears (2 re-ruptures) among 574 knee sprains and 9,035 total injuries</p>                                   | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Time-loss injury was defined as any physical complaint sustained by a player that results from a football training or match and leads to the player being unable to participate in future football training or match play; ACL injury was defined as a first-time or recurrent partial or total rupture of the ligament occurring either isolated or associated with other concomitant injuries to the knee joint</p> <p><b>Type(s):</b><br/>ACL tears</p> <p><b>Body Part(s):</b><br/>Knee</p>  | <p><b>DOM Injuries:</b><br/>40 (51.3%)</p> <p><b>NON-DOM Injuries:</b><br/>38 (48.7%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>Not Significant</p>           | No additional data   |
| Waldén et al. 2013 [88] | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from 27 clubs in 10 countries participating in UEFA Champions League competition during testing period (Timeline: 11-year study from 2001/02 to 2011/12)</p> <p><b>Whole Sample:</b><br/>1743 male elite professional soccer players (4,375 club seasons; total exposure 1,057,201 hours; total training exposure 888,249 hours; total match exposure 168,952 hours)</p> <p><b>Injured Sample:</b><br/>1,080 ankle injuries (of which 729 were sprain/ligament injuries) were sustained among 8,029 total injuries</p> | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Ankle injury was defined by injury to the tibiotalar and the inferior tibiofibular joints as well as the surrounding stabilizing connective soft tissue (joints, capsules, ligaments) of these joints and the overlying skin; All injuries followed time-loss definition: any physical complaint sustained by a player that resulted from a football match or football training and led to the player being unable to take full part in future football training or match play</p> <p><b>Type(s):</b><br/>Ankle Injuries</p> <p><b>Body Part(s):</b><br/>Ankle</p> | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injuries:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>Not Reported</p> | <p>“Most Ankle Injuries occurred in the dominant limb”: <b>Ankle Sprains</b> (n = 729, dominant 542, non-dominant 187); <b>Ankle Posterior Impingement</b> (n = 25, dominant 16, non-dominant 9); <b>Ankle Anterior Impingement</b> (n = 7, dominant 5, non-dominant 2). <b>Ankle Sprain Injury Rate:</b> Injury rates were significantly higher in dominant ankles (dominant 0.51/1000 hours, non-dominant 0.18/1000 hours, RR 2.90, 95% CI 2.45–3.42; p &lt; 0.0001)</p> |

## APPENDIX

| Study                            | Study Type & Population  | Limb Dominance  | Injury  | Injury Data by Dominance  | Specific Injury Data   |
|----------------------------------|--|---|---|---|--|
| Werner <i>et al.</i> 2009 [89]   | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from 23 European clubs participating in UEFA Champions League competition during the testing period (Timeline: 7 seasons from 2001/02 to 2007/08)</p> <p><b>Whole Sample:</b><br/>1065 male professional soccer players (age <math>26 \pm 4</math> [16–40] years; total exposure 566,000 hours; training exposure 475,000 hours; match exposure 91,000 hours)</p> <p><b>Injured Sample:</b><br/>628 hip/groin injuries sustained (518 cases had leg dominance reported for subsequent analysis)</p> | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Players who reported using right and left foot equally were excluded</p> | <p><b>Injury Definition:</b><br/>Hip/groin injury defined as injury located to the hip joint or surrounding soft tissues or at the junction between the anteromedial part of the thigh, excluding the proximal part of the adductor muscle bellies, and the lower abdomen resulting from playing football and leading to a player being unable to fully participate in future training or match play (time-loss injury)</p> <p><b>Type(s):</b><br/>Hip and Groin Injuries</p> <p><b>Body Part(s):</b><br/>Hip/Groin</p> | <p><b>DOM Injuries:</b><br/>295 (56.9%)</p> <p><b>NON-DOM Injuries:</b><br/>223 (43.1%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/><math>p = 0.89</math></p>            | No additional data   |
| Witvrouw <i>et al.</i> 2003 [90] | <p><b>Study Type:</b><br/>Prospective Cohort</p> <p><b>Population Pool:</b><br/>Soccer players from 14 professional clubs in Belgium (Timeline: During 1999/00 competitive season)</p> <p><b>Whole Sample:</b><br/>146 male professional soccer players (height <math>179.5 \pm 5.6</math> cm; weight <math>74.5 \pm 11.1</math> kg)</p> <p><b>Injured Sample:</b><br/>67 players (45.9%) sustained lower extremity muscle injuries (hamstrings, <math>n = 31</math>; quadriceps, <math>n = 13</math>; adductors, <math>n = 13</math>; calf muscles, <math>n = 10</math>)</p>                      | <p><b>Dominance Definition:</b><br/>Preferred kicking leg</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>   | <p><b>Injury Definition:</b><br/>Any tissue damage caused by soccer participation that kept a player out of practice or a game</p> <p><b>Type(s):</b><br/>Muscle Strains</p> <p><b>Body Part(s):</b><br/>Lower Extremities</p>  | <p><b>DOM Injuries:</b><br/>Not Reported</p> <p><b>NON-DOM Injuries:</b><br/>Not Reported</p> <p><b>AMBI Injuries:</b><br/>Not Reported</p> <p><b>BILATERAL Injuries:</b><br/>Not Reported</p> <p><b>Significance:</b><br/>Not Reported</p> | No significant differences in any muscle group: <b>Hamstring</b> ( $p = 0.47$ ), <b>Quadriceps</b> ( $p = 0.41$ ), <b>Adductor</b> ( $p = 0.44$ ), <b>Gastrocnemius</b> ( $p = 0.55$ ) |
| Wong-On <i>et al.</i> 2017 [91]  | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from 4 first division Spanish clubs (Timeline: 4 seasons)</p> <p><b>Whole Sample:</b><br/><i>Identical to Injured Sample</i></p> <p><b>Injured Sample:</b><br/>16 male professional soccer players who had sustained an obturator muscle injury (age <math>25.5 \pm 5.0</math> [18–36] years; BMI <math>23.0 \pm 0.9</math> kg/m<sup>2</sup>)</p>  | <p><b>Dominance Definition:</b><br/>Not Reported</p> <p><b>Right:</b><br/>8 (50.0%)</p> <p><b>Left:</b><br/>8 (50.0%)</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p>  | <p><b>Injury Definition:</b><br/>Obturator injuries assessed by clinical history of hip or butt pain following a match or training session, physical examination findings of pain during internal or external hip rotation with flexed hip (passive or against resistance), and confirmed with magnetic resonance imaging</p> <p><b>Type(s):</b><br/>Obturator Muscle Strains</p> <p><b>Body Part(s):</b><br/>Hip</p>   | <p><b>DOM Injuries:</b><br/>7 (43.75%)</p> <p><b>NON-DOM Injuries:</b><br/>9 (56.25%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>Not Reported</p>                       | <b>Mechanism of Injury:</b> five patients reported pain following repetitive kicks or kicking in an unstable position, of which four injured their dominant side                       |

APPENDIX

| Study                  | Study Type & Population  | Limb Dominance   | Injury   | Injury Data by Dominance   | Specific Injury Data |
|------------------------|--|--|--|--|----------------------|
| Woods et al. 2004 [92] | <p><b>Study Type:</b><br/>Prospective</p> <p><b>Population Pool:</b><br/>Soccer players from 91 of 92 professional English clubs (Timeline: From July 1997–May 1999)</p> <p><b>Whole Sample:</b><br/>2375 male professional soccer players</p> <p><b>Injured Sample:</b><br/>796 hamstring strain injuries sustained</p> | <p><b>Dominance Definition:</b><br/>Predominant foot for kicking</p> <p><b>Right:</b><br/>Not Reported</p> <p><b>Left:</b><br/>Not Reported</p> <p><b>Ambidextrous/Mixed:</b><br/>Not Reported</p> | <p><b>Injury Definition:</b><br/>Time-Loss Injury:<br/>A recordable injury was defined as one sustained during training or competition that prevented the injured player from participating in normal training or competition for more than 48 hours</p> <p><b>Type(s):</b><br/>Hamstring Strains</p> <p><b>Body Part(s):</b><br/>Hamstrings</p> | <p><b>DOM Injuries:</b><br/>Approx. 422 (53%)</p> <p><b>NON-DOM Injuries:</b><br/>Approx. 358 (45%)</p> <p><b>AMBI Injuries:</b><br/>N/A</p> <p><b>BILATERAL Injuries:</b><br/>N/A</p> <p><b>Significance:</b><br/>No Significance</p> | No additional data   |

\*Abstract Only

DOM = Dominant Limb

NON-DOM = Non-Dominant Limb

AMBI = Ambidextrous/Mixed-Footed Dominance

N/A = Not Applicable

ACL = Anterior Cruciate Ligament