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#### RESOURCE CENTER - Sports Medicine

As part of our continuing effort to service and educate our membership, each Thursday the U.S. Soccer Communications Center will send out an informative article from one of its departments. Once a week, you will receive an article/paper/essay that will hopefully enhance your enjoyment and knowledge of the game of soccer - on and off the field.

This week we look at a study done on all of the injuries that occurred in the first year of Major League Soccer. Dr. Don Kirkendall, who often works with the U.S. Men's National Team, examines the study's findings and their meaning to soccer players. In this study we will learn much about the causes of injuries in soccer, when they occur and much more. We learn that more injuries occur to players between ages 25-30, and that the ankle is the most injured site. The following article will teach you much more about the type of injuries that occur in soccer.

#### Major League Soccer Injury Study, by Dr. Don Kirkendall

A report came out after the first season of Major League Soccer that summarized the MLS experience in their first season. The group responsible for tracking the injuries was out of the San Jose area (East Bay Sports Medicine and Orthopedic Associates). These kinds of reports are important as valuable data is obtained that may be used for training improvement, rules changes, and injury reduction.

Before going into details, there are some limitations to using such data to compare to your own circumstances. For instance, these players are professionals whose job is dependent on performance and are extremely committed to training and competition. Any step up in competition brings new challenges, not the least of which is the speed, level of contact, skill, fitness and tactics. The age and experience of the pro players is also vastly different to you, as well as practice time. Most club players reading this do not have formal daily practice, have as many preseason practices, or have the level of medical supervision afforded to the professionals. What the youth teams do have is more games relative to practices.

That said, let's see what happened. We know the MLS has 10 teams and the active roster is 20 players, but with injuries and 'otherwise displaced players' (a kind way of saying 'cut?'), a total of 237 players were members of these 10 teams in year one of the league. The age range was 18-38 years of age with an average of 27-years-old. An injury is recorded as something reported to the trainer or physician and was classified as minor (interrupted participation for less than 1 week), moderate (over 1 week, but less than 1 month) and major (over 1 month).

An 'incident' was an injury resulting in no time loss (not discussed in the paper). A total of 199 games (preseason through playoffs) were played and the average training time was an average of 105 minutes a day. They practiced 8 times longer than they competed (some youth teams that ratio is just over 1:1). Injuries by position were based on a 4-4-2 alignment and by age as under 25 (67 injuries), 25-30 (129 injuries) and over 30 (38 injuries). The season was divided into 5 distinct sections (preseason, early, mid, late and postseason). Time of injury during practice or game was not reported (but should have been). I will offer some comparison of some of our own work on youth (ages 12-18) and the medical literature for comparison.

A total of 256 injuries were recorded for a gross rate of injury rate of 1.08 injuries per player. Overall, that suggests that each player sustained at least one injury (remember that is a statistic, not what actually happened to each player). Data from the Premier League in England is even higher at about 1.4 injuries per player.

Your team might go through a whole season and never see a single injury. 60% of the injuries were minor and 61% occurred during games. Roughly 15% of all injuries were major. Our data on youth show that games account for around 90% of all injuries. That is because most club teams don't practice as much as the pros. Midfielders were the most frequently injured, followed by defenders, strikers and the goalkeeper. In our youth data and most published work, defenders were the most frequently injured. Interestingly 4% of the reported injuries were to staff (managers, coaches, assistant coaches, etc). The risk of injury in a game was over 2 times that of practice. Age was no factor in injuries.

There was a gradual increase in injuries with the length of the season (13% in the preseason compared to 29% in the late season). Injuries in the Premier League were concentrated in the preseason and November (due to additional 'cup' games). Injuries were, of course, focused on the legs with the knee the most injured site followed by the ankle.

Most reports list the ankle as the most injured site. Pulled (strained) muscles were mostly to the groin, hamstring and quad. This is almost the exact opposite of studies done in Scandinavia. Knee injuries were mostly MCL sprains and these happened 3 times as often as injuries to the cartilage. Knee injuries led to the greatest time loss and most operations.

What you probably see is that the game you play leads to fewer injuries than the game the professionals play. If you ever get the chance to see a professional game at field level, take it. You don't get an appreciation for the speed of the game or the intensity of impacts from TV or the stands. You probably will be impressed that not more players are hurt. Moving up in class leads to greater risk of injury.

One of the best ways to prevent injuries is to improve your physical condition and skill, as the fittest and most skilled players tend to be the least injured.

The study shows us that injuries in soccer do occur - even at the game's highest level with some of the world's top athletes. However, the information in the above study is taken from a study done on professional athletes, and that such statistics differ with recreational and select youth teams.

For more information on injuries and soccer, please contact Hughie O'Malley, U.S. Soccer's Manager of Sports Medicine Administration. Hughie can be reached at [homalley@ussoccer.org](mailto:homalley@ussoccer.org) or at (312) 528 1225.

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