

Research Roundup

Travel direction tied to baseball teams' performance

Researchers at Northwestern University found jet lag from cross-country eastward travel may affect the performance of Major League Baseball teams based on a study of winning percentages and other statistics spanning 20 seasons.



According to the study, teams were 3.5 percent less likely to win when they traveled east across at least two time zones, while no significant differences were found in winning percentage when the teams traveled west.

The research looked at whether jet lag differentially affects the home and away teams and whether it affects all or only specific features of performance, and if so, which ones? Their findings showed that most major jet lag effects were evident after eastward but not westward travel which supports the hypothesis that observed effects

are due to a failure of the circadian clock to synchronize to the environmental light-dark cycles and not due to general travel effects. Furthermore, the findings regarding eastward travel reflected that of previous studies including a 10-year retrospective study of circadian advantage in baseball published in 2009 and an analysis of other professional sport teams traveling eastbound.

New research takes closer look at links with sport specialization, overuse injuries

A study published in *The American Journal of Sports Medicine* looked at the association between high levels of sport specialization with injuries, specifically overuse injuries, independent of age, sex, or the amount of weekly sport training time. Researchers from the University of Wisconsin studied questionnaire responses from 989 girls and 1022 boys ages 12 to 18 about their sport specialization status, yearly and weekly sport participation volume, and injury history. The sample included athletes in more than 14 different sports.



According to the lead researcher, they found that significant associations exist between sports specialization and injury. Specifically, athletes reporting a previous injury was 45 to 91 percent higher among highly specialized players compared with those who did not specialize, and 26 to 85 percent higher in young athletes who exceeded sport volume recommendations of months per year and hours per week compared to those who met the recommendations. Researchers also noted specialization prevalence peaked at about age 15, and girls are more likely to be classified as highly specialized.

“There are approximately 60 million youths ages six to 18 participating in sports and in our sample, 37.5 percent (754) were highly specialized which agrees with previous research,” the researchers said. “If these rates are applied to a national population, potentially more than 20 million young athletes are highly specialized in a sport and at an increased risk for a sport injury. Using the injury prevalence rates from our study for the different specialization categories, more than two million potential injuries could be prevented by adhering to sport volume recommendations and prescribing appropriate rest periods,” they added.