METHODS: 110 male collegiate soccer players (mean±SD; age, 20±2y; body mass, 77±16.7kg; height, 179±9.63cm; VO2max, 4.0±0.74mLkg·min−1) participated in this study. During the 2016 and 2017 NCAA soccer seasons, the Pittsburgh Sleep Quality Index (PSQI), Profile of Mood States (POMS), Sports Anxiety Scale (SAS), and Disability in the Physically Active State (DPA) questionnaires were administered at various timepoints throughout the season. Groups were classified as those who reported good sleep quality (PSQI ≤4) and those who reported poor sleep quality (PSQI ≥5). Multi-level linear mixed models were used to assess differences between a fixed sleep quality factor. Individual and time point were added as random intercepts to account for variance associated with these factors. Statistical significance was set a priori p<0.05. Results are reported as mean difference (MD) and effect size (ES).

RESULTS: 47.4% of PSQI results yielded scores ≥5. Individuals with good sleep quality had significantly lower levels of depression (MD=−2.68, ES=−0.39; p<0.001), tension (MD=−1.36, ES=−0.33; p<0.001), anger (MD=−2.09, ES=−0.33; p<0.001), fatigue (MD=−1.95, ES=−0.56; p<0.01), confusion (MD=−1.26, ES=−0.38; p<0.001) and total mood disturbance (MD=−9.11, ES=−0.39; p<0.001) than those who reported poor sleep quality. Individuals who reported good sleep quality had significantly less concentration disruption (MD=−0.45, ES=−0.25; p=0.01) than those who reported poor sleep quality. Individuals who reported good sleep quality scored significantly lower on the DPA (MD=−2.73, ES=−0.26; p=0.01), indicating improved physical function and well-being. Individuals who reported poor sleep quality.

CONCLUSION: Poor sleep quality is prevalent (almost 50%) in this sample of collegiate soccer players. Athletes with poor sleep quality appear to have increased negative mental health outcomes and higher ratings on a disablement scale. Establishing student-athlete wellness monitoring programs may provide a tailored approach to improve the collegiate athlete experience.

1624 Board #3 May 30 1:30 PM - 3:30 PM The Influence of Match Congestion, Load and Wellness on Injury Risk in Collegiate Men's Soccer
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The impact of match congestion, training load (TL), perceived stress, fatigue and soreness on the odds of injury remains unclear.

PURPOSE: To examine the influence of: 1) days rest between matches on injury rate (IR) and odds of injury and; 2) TL on injury, perceived stress, fatigue and soreness.

METHODS: A prospective multi-site study tracked daily exposures, TL (distance and duration), injury and perceptual data from six Division I NCAA men’s soccer teams in one season. Overall and non-contact (NC) IRs expressed per 1000 athlete exposures (AEs), and odds ratios (OR) were determined by days before and after matches. Associations between injury and changes in both TL and perception were analyzed using a multilevel logistic regression.

RESULTS: 132 players experienced 116 injuries in 125 matches and 75 injuries in 301 practices. Overall match and practice IRs (per 1000AEs [95%CI]) were 47.9 [39.1, 56.6] and 12.7 [9.8, 15.5], respectively. Match IRs [range = 0.0 to 162.6; mean (±SD) = 39.0 ± 18.8] were highest 1 to 5 days between matches (IR= 57.9 [39.0, 76.8]). Players were at increased odds of being injured in a match with 1 to 5 days since the last match vs. 6+ days (OR [95%CI] = 1.85 [1.10, 3.12]). Practice IRs were highest in the preseason (IR = 26.8 [13.2, 40.3]). Players were at increased odds of be injured in practice 3 and 4 days before vs. 1 day before (OR = 6.19 [3.03, 12.66] and 3.89 [1.92, 7.88]). Players were at increased odds (p < 0.001) of feeling fatigue (5+ OR = 7.04 [3.75, 13.21]) and soreness (5+) (OR = 4.00 [2.17, 7.37]) in practice with 1 vs. 6 days since the last game. For each additional 3500m covered on a day, odds of NC injury, stress, soreness and fatigue increased (OR = 1.70 [1.38, 2.10], 1.16 [1.02, 1.31], 1.55 [1.40, 1.72], 1.69 [1.52, 1.89]), respectively. For each additional hour of activity on a day, odds of NC injury, stress, soreness and fatigue increased (OR = 1.83 [1.59, 2.12], 1.08 [0.97, 1.20], 1.28 [1.17, 1.39], 1.34 [1.22, 1.47]), respectively.

CONCLUSION: Days between matches and acute TL increases on a given day had a negative impact on odds of injury and perception. The odds of getting injured in a match were greater with 1 to 5 days vs. 6+ days between matches. These data may be used to inform and guide the NCAA in determining optimal scheduling and recovery.

1625 Board #4 May 30 1:30 PM - 3:30 PM Effect of Two Regimes of Sled Sprinting on 40m Sprint Performance in Collegiate Soccer Players
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Speed is one of the most important factors dictating athletic performance especially in field based team sports including soccer. Soccer performance coaches continue to design training programs to enhance this ability. In addition to lower body resistance training and plyometrics, one method that is frequently employed is resisted sprinting (RS). However, data concerning the efficacy of RS is equivocal and there is much debate over the proper resistance to prescribe. Previous research has been conducted at loads near 10% of body weight (BW), but recent studies suggest their optimal load for power output in RS is 70 - 80% BW.

PURPOSE: The purpose of this study was to compare the effects of two 5wk RS programs varying in load on sprint performance and jumping ability in male collegiate soccer players.

METHODS: At baseline, 20 collegiate male soccer players performed testing of 40m-sprint performance with split times at 10m and 20m and broad jump. They were matched and separated into a heavy RS group (n=10) or light RS group (n=10). Over a 5 wk period, they performed 10 sessions of progressive RS at 70-80% or 10-20% BW. Athletes simultaneously participated in 3 d/wk of full body resistance training and 2 d/wk of soccer specific conditioning. Sprint and jump testing performance tests were repeated 72 h after the final training session.

RESULTS: Results showed a significant effect of time for the 20m (p=0.005) and 40m distances (p=0.008) as well as for the broad jump (p=0.002). 10m sprint times remained unchanged (p > 0.05) and there was no groupTime interaction for any variable. Very large effects were seen for 20m (2.82 ± 0.1 s to 2.77 ± 0.11 s) and 40m performance (5.02 ± 0.2 s to 4.95 ± 0.2 s) in response to heavy RS training, with a huge effect seen for broad jump. Large effects were seen at the 20m (2.85 ± 0.07 s to 2.81 ± 0.1 s) and 40m (5.02 ± 0.15 s to 4.97 ± 0.2 s) distances after light RS training, with medium effects seen in 10m sprint times and broad jump.

CONCLUSION: A 5-week RS intervention significantly improves sprinting performance and broad jump in collegiate soccer players irrespective of magnitude of resistance, which suggests that both light and heavy RS is efficacious to enhance these outcomes.

1626 Board #5 May 30 1:30 PM - 3:30 PM The Dose-Response Relationship of Neuromuscular Training to Prevent Lower Extremity Injuries in Young Soccer Players. A Cluster Randomised Controlled Trial
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The regular execution of neuromuscular training has been shown to reduce injuries of the lower extremities in youth athletes. However, to date there are inconsistent results on the dose-response relationship of neuromuscular training.

PURPOSE: The aim of this study was to evaluate the optimal duration of neuromuscular training to prevent injuries of the lower extremities in young soccer players.

METHODS: 342 (15±4±1.7 years) male soccer players were included in the study, and cluster-randomized into two intervention groups. Both groups completed the same soccer specific warm-up program (FIFA 11+) twice a week, but for a different duration: one intervention group (INT10, n=175) twice a week for 10 minutes, the other (INT20, n=167) twice a week for 20 minutes.

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