

## **Prevalence of Obstructive Sleep Apnea in Collegiate Football Players at Colorado State University**

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More than 54 million Americans between the ages of 30-69 have some level of obstructive sleep apnea (OSA). OSA increases the risk for several cardiometabolic diseases, depression, and a reduced quality of life. Risk factors for OSA include high body mass index (BMI), large neck size, narrowed airway, and male sex. Indeed, results from previous studies demonstrate higher prevalence of OSA and other sleep disorders in professional football players (50% of football players vs. 25% in the general population), as they present with many of these risk factors. These risk factors are also present in collegiate football players; however, the proportion of younger athletes impacted by OSA is unknown. In the current study, we tested the hypothesis that a higher prevalence of OSA already exists in collegiate football players compared to the general population.

Participants were recruited from the Colorado State University (CSU) football team in the fall of 2019. Following informed consent, anatomical evaluations were conducted to assess neck circumference and unique upper airway features. Participants also completed in-depth healthy history and sleep questionnaires. Participants were then provided instructions and a WatchPat 3000 device for in-home estimations of Apnea Hypopnea Index (AHI), blood oxygen saturation, and body position on 3 consecutive nights. WatchPat data were autoscored and evaluated by 2 sleep physicians.

Fifty-eight young, healthy men completed the study (BMI:  $29.0 \pm 5.5$  kg/m<sup>2</sup>; neck circumference:  $16.7 \pm 1.2$  in; mean $\pm$ SD). Based on WatchPat 3000 data analyses, 38% (n=22) of study participants had clinically defined mild to moderate OSA (mild: 5-15 AHI; moderate: 16-30 AHI).

Collegiate football players at CSU present with OSA at a higher rate than non-athletes, but lower than NFL players. It is unknown whether the presence of OSA in younger individuals is associated with elevated risk for development of cardiovascular disease and type 2 diabetes later in life.