

# Sleep-Disordered Breathing in the National Football League is not a Trivial Matter

Comment on Rice et al. SLEEP 2010;33(6):819-824.

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We read with interest the recent paper by Rice et al.,<sup>1</sup> which looks at a sample of 137 current NFL players using ambulatory monitoring for the determining the prevalence of sleep disordered breathing. The authors concluded that the prevalence of sleep disordered breathing was modest at best, and the results seemed to suggest that there is no need for concern in the young population. In the discussion, they contrast their results with those of our earlier paper,<sup>2</sup> and the implication is that our study was neither comprehensive nor generalizable to the players in general. This is disturbing since they have misrepresented our study by stating, “In a single-team study, with players from high (n = 38) and low (n = 14) risk for having sleep apnea, George and colleagues estimated the cross-sectional NFL prevalence of an AHI of at least 10 to be 14% (95% CI, 2%-25%). In this 6-team sample of 137 individuals, we found the prevalence at that cutoff (RDI ≥ 10) to be 8% (95% CI, 4.1%-13.9%).”

However, our paper clearly states the methods (and shows in Figure 1) that we drew our sample from 8 teams (20 teams were invited but 12 declined to participate). We used a standard two-stage risk stratification sampling technique as had been used in major epidemiological studies of sleep apnea.<sup>3,4</sup> The confidence intervals of our estimates are admittedly larger due to the smaller sample size, but this was because we employed the gold standard of full overnight polysomnography, and this level of testing had a negative effect on participation.

The authors further conclude that “sleep disordered breathing did not account for excess cardiovascular risk factors,” suggesting again that there is no need to worry about this diagnosis in these individuals. We find this worrisome since size, BMI and sleep apnea are closely associated, and even the authors in

this and their other recent paper<sup>5</sup> point out that there is an increase in hypertension and that “...increased size measured by BMI was associated with increased CVD risk factors.”<sup>5</sup> Moreover a prevalence of sleep apnea of between 8% (the authors estimate) and 14% (our previous estimate) is not trivial.

It is well established that sleep disordered breathing is an independent risk factor for hypertension, and the presence of both of these in professional athletes should not be overlooked or minimized, particularly since there is now evidence that such factors are markedly increased in retired NFL players.<sup>6</sup>

## DISCLOSURE STATEMENT

Dr. George is on the medical advisory board of Sleep Tech, Wayne, NJ. Mr. Kab has indicated no financial conflicts of interest.

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Submitted for publication November, 2010

Submitted in final revised form November, 2010

Accepted for publication November, 2010

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