

Quality sleep had no effect on the likelihood of injury in sporting study

April 29 2015, by Cristy Burne



"It takes people a long time to come down after a game, especially when athletes use caffeine and supplements to make sure they're really alert during a game," Mr Dennis says. Credit: Jimmy Harris

A good week's sleep had no effect on the likelihood of injury across the

Westcoast Eagles' 2013 AFL season, according to recent research.

Subiaco Football Club head of Strength and Conditioning Jackson Dennis monitored the [sleep patterns](#) of 22 Eagles' [players](#) across 2013, recording their [sleep duration](#) and efficiency for three nights before a game, the [night](#) of the game and the night after.

"We compared sleep in weeks when players did get injured to weeks when they didn't, and when it all went through the statistical models, we couldn't find any significant effects," Mr Dennis says.

He used Readiband actigraph wristbands to monitor players' sleep, a more practical option than polysomnography, which requires subjects to sleep overnight in specialised sleep laboratories.

"One of the luxuries of this study was that we had guys who were competing at an elite level, and they were wearing the actigraph, week-in, week-out," Mr Dennis says.

The wristbands work by recording sixteen 3D wrist movements per second, then processing this data using fatigue-modelling algorithms developed for the US military.

Elite athletes sleep less efficiently

Mr Dennis' data supports earlier findings that elite athletes sleep less efficiently than the general population.

"Generally because of the pain and inflammation, also the adrenalin effects," he says.

"It takes people a long time to come down after a game, especially when athletes use caffeine and supplements to make sure they're really alert

during a game.

"That's especially the case with a night game, which might not finish till 9.30 or 10pm, so it's really hard to then go home and sleep."

Although the study didn't find a statistical relationship between sleep and injury, it did unlock some secrets for the club.

"We got some really good practical information out of it," Mr Dennis says.

"The night before a game [players] actually sleep more...the night they've played a game, they sleep less.

"Everyone has their own sleep base value, and if you lose sleep the night of the game, you don't regain that sleep the next night."

Mr Dennis completed this research as part of his honours studies at UWA and is now studying a Masters of Science through Edith Cowan University.

"I really enjoy it...part of being in this industry is you have to be continually learning and doing research and reading research. You're not going to succeed if you don't do that."

More information: "Sleep patterns and injury occurrence in elite Australian footballers." DOI: dx.doi.org/10.1016/j.jsams.2015.02.003

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