

# REVEALED - Study outlines the key to injury prevention and improved performance



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Conor Lehane of Cork is treated for an injury

**Michelle Biggins**

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Pre-season planning begins in October for many GAA inter-county teams. Management, coaches and athletes come together to devise strategies to achieve success in the new season. There is an emphasis on strength and conditioning, injury prevention, training weekends, recovery sessions and the scheduling of matches.

My research began with pre-season testing of three GAA inter-county teams, both football and hurling. I was screening teams for hamstring muscle injuries as part of my master's in the University of Limerick when my supervisor, Dr Kieran O'Sullivan, encouraged me to explore the sleep and well-being of these athletes. I was fascinated with the findings and decided to change direction and pursue a PhD to investigate sleep in elite athletes.

Our sleep study was simple in design. We gave our three teams, 69 elite male Gaelic footballers and hurlers, a set of validated questionnaires related to sleep, general health, stress and mood. The sleep questionnaire is a research tool that enabled us to classify the players as 'poor sleepers' or 'good sleepers'. Questions were asked around the time taken to fall asleep, the quality of sleep and duration, sleep disturbances and daytime dysfunction. We then compared the general health and well-being of the poor sleepers and the good sleepers.

We found almost half (47.8 per cent) were poor sleepers, and those who were poor sleepers had significantly lower general health, increased stress and lower mood. This clearly is not what we want in elite athletes who aim to push the limits of their minds and bodies in pursuit of sporting success. Our study was not without limitations; especially, the self-report nature of the questionnaires. However, if nearly 50 per cent of our athletes are telling us they aren't getting enough sleep, we have a problem.

The implications of poor sleep in athletes are grim. Poor sleep is related to slower reaction times, compromised physical performance, increased risk of illness and injury, lower mood and decreased ability to learn and remember new skills. Poor sleep is not unique to players in the GAA. Poor sleep has also been reported in elite athletes in numerous sports such as swimming, rugby, cricket, ice hockey and track and field. This is thought to be related to training times, competition stress/anxiety, muscle soreness, caffeine use, technology and travel.

Improving sleep in athletes by increasing the duration of their sleep has shown some promising results. Researchers encouraged athletes to increase their sleep duration from six to eight hours to ten per night for a period of six weeks. This resulted in increased sprint and reaction times, greater energy and improved mood in their athletes. There is a reason why the top sports teams around the world such as Barcelona, Manchester United and many NFL teams are all prioritising and facilitating sleep for their athletes.



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Michelle Biggins. Photo: Hany Marzouk

Simply telling our athletes to get more sleep is likely to be ineffective, as we know information alone rarely results in behaviour change. We need to educate our athletes and coaches on the problems associated with poor

sleep, highlight the potential benefits of improved sleep and work through perceived barriers in achieving ongoing good quality sleep. We need to encourage good sleep habits in our athletes, such as consistent bed and wake times, strategic use of caffeine, timely naps and decreased screen time in the hour before bed.

As with all areas of science, more research is needed. As part of a research group in University of Limerick, we have a follow-up study where we monitored the sleep habits of an inter-county team for a period of six months. We are also working on projects with our international athletes assessing their sleep before and during long-haul travel and at international competition.

Last week's draws for next year's GAA championships will have focused teams as pre-season planning and scheduling begins. There's a lot of talk of the importance of recovery sessions between matches. Recovery in sport often translates as ice baths, pool sessions, compression garments, massage and foam-rolling - all of which have a place - but there is no recovery without sleep. As a coach, if you want your athletes to consistently train hard without the interruption of illness and injury, you need to prioritise sleep. As an athlete, if you want increased sprint and endurance times, greater energy, mood and motivation, and decreased risk of injury and illness, you need to prioritise sleep. May the rested team win.

- Michelle Biggins is a chartered sports physiotherapist who has worked at the last two Olympic Games. She is currently doing her PhD on Sleep in Elite Athletes in University of Limerick

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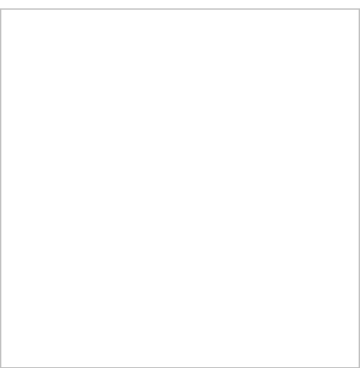
## This final defeat the hardest one yet for Mayo - O'Shea

[Donnchadh Boyle](#) Aidan O'Shea sits in front of the assembled media as International Rules captain but the interview is just a few questions old before talk turns to Mayo.



## Standard on the rise at Cumann na mBunscol

**Rónán Mac Lochlainn** The commitment and application may be the same but the quality on show at the Cumann na mBunscol finals day continues to increase as 12 finals were decided in Croke Park yesterday.



## Two spots still up for grabs on Kernan's Rules squad

**Donnchadh Boyle** Ireland International Rules manager Joe Kernan has left two places up for grabs in his squad after Cork's Paul Kerrigan and Tyrone's AFL starlet Conor McKenna were forced to pull out of next month's...