

## AT THE AIS, YOUNG ATHLETES ARE LOSING SLEEP OVER A NEW EXPERIMENT DESIGNED TO FORGE THE NEXT GENERATION OF CHAMPIONS.

It sounds like a recipe for disaster: keep a bunch of teenagers awake for 24 hours, then ask them to perform at the peak of their powers. Anyone who has ever seen the morning-after scenes during a Schoolies Week celebration knows the absurdity of the concept.

So it's surprising that just such an experiment is being conducted at the Australian Institute of Sport (AIS) in the name of science, psychology and future international success. In the wee hours, while most of us are sensibly sleeping, teams of teens are being kept wide awake with video games, DVDs, tenpin bowling, pizza and, just possibly, cattle prods. The AIS has turned to sleep deprivation to encourage elite performance. And, if you can keep your eyes open long enough to read about it, they believe it's working.

The long nights suffered by some of our leading young athletes are due mainly to Gavin Freeman, the AIS's senior performance psychologist. Freeman (a young father, which may or may not explain how he came up with the sleepless night idea) wanted to create an exercise that subjected athletes to positions of extreme discomfort and anxiety.

"Athletes set themselves limits of what they can and can't do," says Freeman. "Their perceptions of what they think they can do versus what they actually *can* do are usually very different. We used fatigue as a variable - we kept the athletes up all night - to show them

that at times when they believe they can't do something, when push comes to shove, they *can* do it. And not only can they do it, they can perform at a very high physical level, too."

To put his plan into practice, Freeman had to get the nod from different coaches. So far, he's arranged the no-sleep-over for athletes from rugby union, rugby league, volleyball, archery and water polo. In all cases, the athletes were young, emerging talents, too raw to have experienced many of the myriad stresses associated with elite competition, international travel and high-level sports training.

In the trials, Freeman and the coaches agreed on a series of skill drills and physical performance tests appropriate for each particular sport. For example, the league players had to do three passing drills testing accuracy, speed and response, then a shuttle run to test endurance.

The tests were first completed as part of a routine assessment, before the athletes had any idea Freeman was about to show up and tell them that in three nights' time they wouldn't be needing their pyjamas.

"We planned the two testing days close together, so there could be no major improvement in skills or fitness to impact on the results," says Freeman.

Importantly, before the second round of tests, he asked the athletes how they believed they would perform after no sleep. Most

anticipated their results would be down by as much as two-thirds. The actual results, however, turned that thinking on its head. "What we found was a significant increase in performance," says Freeman.

Results show that in the rugby league tests, the speed of the performed skills improved, the number of dropped passes decreased, the accuracy of passing increased, and 12 of the 16 athletes recorded better distances in their shuttle runs.

Details of the water polo testing show a similar improvement in skills and physical performances after the players were

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# WINNING

deprived of sleep. The other sports also showed no decrease in performance after sleeplessness.

The psychologist in Freeman has his own ideas about what occurred. He notes that the athletes may have performed better at the second test because they were under less stress to perform well than the first time around; they already assumed that their results would be off, so why worry? He doesn't downplay the role of good old determination, either.

"All the academic literature available suggests 24 hours of sleep

deprivation has an [adverse] effect on the body," he says. "But that's gained from clinical studies; they don't take into account the level of application and motivation you'll find in athletes to do their best."

Australian junior water polo representative Rhys Howden, 18, of Brisbane, took part in the trial. He says he and his team-mates spent most of their all-nighter messing around in a room by their training pool. They did the no-sleep testing in the early morning and, like their

psychologist, were surprised by the results.

"It just showed us even if you have one night before a game when you can't sleep or something else goes wrong, you can still train and perform to the best of your ability," he says.

But note: this is no Andrew Symonds Principle. Freeman isn't preaching that if you really, really want to star in that midweek mixed netball final next Tuesday, best to get the all-night party started at your place about 11pm Monday. The practice is all about preparation for peak performance, not achieving peak performance.

"I'd never suggest that this is used as an actual tool for

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competition," warns Freeman. "It's designed to challenge perception, to break through mental barriers which can negatively impact performance. It's another aspect to preparing athletes for competitive situations they'll likely experience in the course of their careers.

"The aim was to demonstrate to the athletes that they're able to cope with much more in the way of distractions and inconveniences than they believed they'd be able to. We couldn't be sure this would be supported by our findings, but it has been."

Freeman says the trial helps athletes build confidence, so they come to believe they can cope with any negative or distracting situations they find come competition time.

"Whether we're talking about jet lag, niggling injuries, fatigue or other areas which can distract and detract, this demonstrates that the perception of a situation is not necessarily the reality of the situation," he says. "The application is an experimental model: you can't teach someone how to cope with something unless they have actually been through it.

"The most encouraging thing I heard was when the water polo boys went away on a tour of Europe after having done the test. When one of the non-AIS players started grumbling about jet lag during their first session in the pool, one of his team-mates told him not to worry, that he'd been through worse and that he could play through it if he kept with it. The new player reacted to that confidence. That's a great result for the model we used."

- Travis Cranley



# ON EMPTY