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Researchers to speed up recovery times

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Elite athletes and recreational exercisers alike could soon be enjoying quicker recovery times thanks to research into exercise-induced fatigue.

The study of human nutrition and metabolism stands to benefit elite athletes in their daily training programmes and during intensive periods of competition, as well as the wider population of people who are exercising to improve their health and fitness.

It's the latest in a series of studies by Dr James Betts and his team which aim to better understand the mechanisms of fatigue during exercise. They are particularly looking at the effects of repeated bouts of demanding exercise which don't allow an adequate break for full physical recovery.

"We aim to inform athletes' recovery routines both when training frequently in the lead-up to the Olympics but also during the Games itself, when there is a need to complete many fixtures or events within a short period," said Dr Betts.

The research team is monitoring repeated exercise bouts and the effects of various nutritional interventions to discover which ones are most effective at supporting the recovery processes.

"It's fascinating that many entirely familiar whole-body responses and behaviours remain so poorly understood in terms of their underpinning physiological mechanisms," said Dr Betts. "Fatigue in humans and particularly within skeletal muscle is a prime example of this. Media

coverage isn't always accurate and many people are often surprised to realise how little we do actually know. This makes it both interesting and worthwhile to find out.

"What's exciting with this study is that we are making so many varied measurements in the same piece of research, from measuring the concentration of key hormones in blood, and energy levels within muscle, to monitoring changes in central nervous system activation."

The team believes that aside from its applications for elite athletes, the research will help recreational exercisers to keep on track. "We are all acutely aware of our physical limitations, whether in terms of how fast we can run to catch a bus or how much time and how many breaks we need to budget to complete daily tasks. If our work can help to produce better guidelines and strategies that speed recovery it's also likely to help people sustain an exercise plan, because if they feel better quicker they're less likely to return to sedentary lifestyles."

Provided by University of Bath

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