

New study shows taurine supplements may improve performance recovery

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A recent Massey University study looked at post-exercise taurine supplementation in humans, its effect on muscle damage markers, and subsequent performance recovery. Credit: Massey University

New research recently published in the *Antioxidants* journal, suggests taurine supplementation taken after exercise, may help improve the rate of muscle recovery.

The study, carried out by [exercise](#) science PhD student Yanita McLeay, involved testing ten healthy males in Palmerston North, between July and October 2016.

Ms McLeay says taurine, a powerful endogenous antioxidant (generated within cells of the human body), has previously been shown to have beneficial effects on [muscle damage](#) markers and [recovery](#) when taken for a few days to several weeks before strenuous eccentric-based exercise. Activities such as running and jumping involve many eccentric contractions where the muscle lengthens while under tension, particularly when landing.

"To date, no studies have looked at the effects of

supplementing taurine over the days following exercise, on [performance](#) recovery. My study aimed to determine whether supplementing a normal diet with taurine over three days following strenuous eccentric exercise, reduced muscle damage and improved recovery," she says.

The ten males recruited for the study completed 60 eccentric contractions of the bicep muscle, at maximal effort. Following this, they were supplemented with either taurine or a placebo containing rice flour capsules.

"Over the following three mornings, study participants had blood tests to analyse the muscle damage marker creatine kinase, and carried out performance measures on the isokinetic dynamometer, which measures muscular force and power. They also continued to consume the capsules in the morning and evening.

"The process was then repeated two weeks later on the alternate arm and with the alternate supplement, so the study was really well controlled. Significant decreases were seen in all performance measures from pre to 24-hour post exercise for both the taurine and the placebo, but for one important test, taurine proved significantly more effective in recovering initial muscle performance than the placebo," she says.

This is the first study to look solely at post-exercise taurine supplementation in humans, its effect on muscle damage markers, and subsequent performance recovery over three days.

"Our data suggests taurine supplementation, twice daily for three days following eccentric exercise-induced [muscle damage](#), can enhance the rate of performance recovery of the biceps in healthy males at least. This may be a result of taurine's antioxidant and cytoprotective [when chemical compounds provide protection to cells from harmful agents] roles within skeletal muscle. The

implications for taurine as a recovery supplement for athletes competing in eccentric-based sports is intriguing, but more research is needed before sports people should be going out and buying it," she says.

More information: Yanita McLeay et al. The Effect of Taurine on the Recovery from Eccentric Exercise-Induced Muscle Damage in Males, *Antioxidants* (2017). [DOI: 10.3390/antiox6040079](https://doi.org/10.3390/antiox6040079)

Provided by Massey University

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