Study provides insights on the effects of exercise on cognitive performance

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A new *British Journal of Psychology* study has looked at the details behind how cognitive performance may improve during aerobic exercise.

Electroencephalography readings were taken as 24 participants performed a visual working memory task while at rest and during exercise involving different postures: seated on or pedalling a stationary bicycle, as well as standing or walking on a treadmill. (Visual working memory is the ability to maintain visual information to serve the needs of ongoing tasks.)

The investigators found that both aerobic exercise and upright posture improved visual working memory compared with passive and seated conditions. Their analyses also suggest where the neural origins of these observed effects take place.

"Our findings hold implications not only for the field of cognitive psychology, wherein our knowledge has been primarily derived from seated, resting participants, but also for our understanding of cognitive performance at large. Although modern society has evolved to become more and more sedentary, our brains may nevertheless perform best while our bodies are active," said lead author Dr. Thomas Töllner, of Ludwig-Maximilians-University Munich.

More information: Gordon Dodwell et al, Electroencephalographic evidence for improved visual working memory performance during standing and exercise, *British Journal of Psychology* (2018). DOI: 10.1111/bjop.12352

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