

Publication**Effects of Aerobic Exercise on Cognitive Performance Among Young Adults in a Higher Education Setting****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 4378452**Author(s)** Ludyga, Sebastian; Gerber, Markus; Brand, Serge; Pühse, Uwe; Colledge, Flora**Author(s) at UniBasel** [Ludyga, Sebastian](#) ; [Gerber, Markus](#) ; [Brand, Serge](#) ; [Pühse, Uwe](#) ; [Colledge, Flora](#) ;**Year** 2018**Title** Effects of Aerobic Exercise on Cognitive Performance Among Young Adults in a Higher Education Setting**Journal** Research Quarterly for Exercise and Sport**Volume** 89**Number** 2**Pages / Article-Number** 164-172**Mesh terms** Cognition; Cross-Over Studies; Executive Function; Exercise, psychology; Female; Humans; Male; Memory, Long-Term, physiology; Memory, Short-Term, physiology; Reaction Time, physiology; Running, psychology; Young Adult

Purpose: Acute benefits of aerobic exercise on executive functioning have been reported frequently under laboratory conditions. However, to date, a beneficial effect on long-term memory has been less well supported and no data are available regarding nonlaboratory conditions in young adults. The aim of the current study was to investigate acute effects of aerobic exercise on cognitive functioning in a university classroom setting. Method: Using a cross-over design, 51 participants performed a bout of moderately intense running (RUN) and read an article while seated (CON). Afterwards, they completed free-recall tests, followed by a Flanker task and an n-back task. Results: Participants in the RUN condition compared with those in the CON condition showed shorter reaction time on the inhibition task, $F(1, 50) = 5.59$, $p = .022$, $\eta^2 = .101$, and recalled more words in the immediate- and delayed-recall tests, $F(1, 50) = 8.40$, $p = .006$, $\eta^2 = .144$. Conclusion: The present findings suggest that a moderately intense bout of aerobic exercise benefits verbal short-term and long-term memory as well as inhibitory control among students in a classroom setting.

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