

# The effects of exercise on BDNF levels in adolescents: A Systematic Review with Meta-Analysis

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Table S1. Search strategies for each database.

Database	Search Strategies	Number of Articles
SCOPUS	("exercise") AND ("BDNF" OR "Brain Derived Neurotrophic Factor") AND ("adolescent" OR "teenager") AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "sh"))	(n = 574)
PUBMED	("exercise") AND ("BDNF" OR "Brain Derived Neurotrophic Factor") AND ("adolescent" OR "teenager")	(n = 550)
WEB OF SCIENCE	TS= ("exercise" AND "BDNF" OR "Brain Derived Neurotrophic Factor" AND "adolescent" OR "teenager" AND "clinical trials") NOT TS=animals Refinado por: TIPOS DE DOCUMENTO: (ARTICLE OR EARLY ACCESS) Índices=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI Tempo estipulado= Todos os anos	(n = 1128)
SCIENCEDIRECT	("exercise") AND ("BDNF" OR "Brain Derived Neurotrophic Factor") AND ("adolescent" OR "teenager") Refinado por: TIPOS DE DOCUMENTO: (ARTICLE OR EARLY ACCESS)	(n = 141)
COCHRANE	("exercise") AND ("BDNF" OR "Brain Derived Neurotrophic Factor") AND ("adolescent OR teenager")	(n =19)
EMBASE	(exercise) AND (BDNF OR Brain Derived Neurotrophic Factor) AND (adolescent OR teenager)	(n = 123)
SPORTDiscus	("exercise" AND "BDNF" OR "Brain Derived Neurotrophic Factor" AND "adolescent" OR "teenager" AND "clinical trials")	(n = 143)
CINAHL	("exercise" AND "BDNF" OR "Brain Derived Neurotrophic Factor" AND "adolescent" OR "teenager" AND "clinical trials")	(n = 220)

**Table S2.** Risk of bias in RCTs (Rob 2.0).

	<b>Randomization Process</b>	<b>Deviations from the Intended Interventions</b>	<b>Missing Outcome Data</b>	<b>Measurement of the Outcome</b>	<b>Selection of the Reported Result</b>	<b>Overall Bias</b>
Goldfield et al. (2018) [4]	Low	Low	Low	Low	Low	Low
Jeon and Ha (2017) [15]	Some concerns	Low	Low	Low	Low	Some concerns
Jeon and Ha (2015) [16]	Some concerns	Low	Low	Low	Low	Some concerns
Kim et al. (2015) [33]	Some concerns	Some concerns	Low	Low	Low	Some concerns

**Table S3.** Risk of bias in non-RCTs (ROBINS-I).

	<b>Confounding</b>	<b>Selection of Participants</b>	<b>Classification of Interventions</b>	<b>Departures from Intended Interventions</b>	<b>Missing Data</b>	<b>Measurement of Outcomes</b>	<b>Selection of Reported Results</b>	<b>Overall Judgment</b>
Lee et al. (2014) [34]	Serious	Low	Low	Low	Critical	Low	Low	Critical
Shim and Kim (2012) [35]	Low	Low	Moderate	Low	Low	Low	Low	Moderate