Supplementary table 1. Comprehensive search strategy in all searched databases.

PubMed

[1]	"Exercise" [Mesh] OR "Exercise" OR "Exercises" OR "Physical Activity" OR "Activities, Physical" OR "Activity, Physical" OR "Physical Activities" OR "Exercise, Physical" OR "Exercises, Physical" OR "Physical Exercise" OR "Physical Exercises" OR "Acute Exercise" OR "Acute Exercises" OR "Exercise, Acute" OR "Exercises, Acute" OR "Exercise, Isometric" OR "Exercises, Isometric" OR "Isometric Exercises" OR "Isometric Exercise" OR "Exercise, Aerobic" OR "Aerobic Exercise" OR "Aerobic Exercises" OR "Exercises, Aerobic" OR "Exercise Training" OR "Exercise Trainings" OR "Training, Exercise" OR "Trainings, Exercise" OR "Exercise Therapy" [Mesh] OR "Therapy, Exercise" OR "Exercise Therapies" OR "Therapies, Exercise" OR "Rehabilitation Exercise" OR "Exercise, Rehabilitation" OR "Exercises, Rehabilitation" OR "Rehabilitation Exercises" OR "Remedial Exercise" OR "Exercise, Remedial" OR "Exercises, Remedial" OR "Remedial Exercises"
[2]	"Hematopoietic Stem Cells" [Mesh] OR "Hematopoietic Stem Cells" OR "Progenitor Cells, Hematopoietic" OR "Hematopoietic Progenitor Cells" OR "Cell, Hematopoietic Progenitor" OR "Cells, Hematopoietic Progenitor" OR "Hematopoietic Progenitor Cell" OR "Progenitor Cell, Hematopoietic" OR "Stem Cells, Hematopoietic" OR "Cell, Hematopoietic Stem" OR "Cells, Hematopoietic Stem" OR "Hematopoietic Stem Cell" OR "Stem Cell, Hematopoietic" OR "Colony-Forming Units, Hematopoietic" OR "Colony Forming Units, Hematopoietic" OR "Colony-Forming Unit, Hematopoietic" OR "Hematopoietic Colony-Forming Unit" OR "Hematopoietic Colony-Forming Units" OR "Unit, Hematopoietic Colony-Forming" OR "Units, Hematopoietic Colony-Forming" OR "Transplantation, Homologous" [Mesh] OR "Transplantation, Homologous" OR "Transplantation, Allogeneic" OR "Homografting" OR "Homologous Transplantation" OR "Allogeneic Transplantation" OR "Allografting" OR "Transplantation, Autologous" [Mesh] OR "Transplantation, Autologous" OR "Autotransplantation" OR "Autotransplantations" OR "Autografting" OR "Autograftings" OR "Autologous Transplantation" OR "Autologous Transplantations" OR "Transplantations, Autologous"
[3]	"Pediatrics" [Mesh] OR "Pediatrics" OR "Child" [Mesh] OR "Child" OR "Children" OR "Adolescent" [Mesh] OR "Adolescent" OR "Adolescents" OR "Adolescence" OR "Teens" OR "Teen" OR "Teenagers" OR "Teenager" OR "Youth" OR "Youths" OR "Adolescents, Female" OR "Adolescent, Female" OR "Female Adolescent" OR "Female Adolescents" OR "Adolescents, Male" OR "Adolescent, Male" OR "Male Adolescent" OR "Male Adolescents"
[4]	1 AND 2 AND 3

Cochrane

#1	MeSH descriptor: [Exercise] explode all trees
#2	MeSH descriptor: [Exercise Therapy] explode all trees
	#3 #1 or #2
#4	MeSH descriptor: [Transplantation, Homologous] explode all trees
#6	"Hematopoietic Stem Cells"
	#7 #4 or #5 or #6
#8	MeSH descriptor: [Adolescent] explode all trees
#9	MeSH descriptor: [Pediatrics] explode all trees
#10	MeSH descriptor: [Child] explode all trees
#11	MeSH descriptor: [Child, Preschool] explode all trees
	#12 #8 or #9 or #10 or #11

	#13 #3 and #7 and #12

LILACS

	Hematopoietic Stem Cells
AND	Exercise
AND	Child

Continuation

Continuation - **Supplementary table.**

PEDro

	Hematopoietic Stem Cells
AND	Exercise
AND	Child

EMBASE

#26	'adolescent'
#25	'adolescent'/exp
#24	'child'/exp
#23	'child'
#22	'pediatrics'
#21	'pediatrics'/exp
#20	'autotransplantation'/exp
#19	'autologous hematopoietic stem cell transplantation'
#18	'autologous hematopoietic stem cell transplantation'/exp
#17	'autotransplantation'
#16	'allotransplantation'
#15	'allotransplantation'/exp

#14	'cord blood hematopoietic stem cell extract'
#13	'cord blood hematopoietic stem cell extract'/exp
#12	'hematopoietic stem cell'
#11	'hematopoietic stem cell'/exp
#10	'kinesiotherapy'
#9	'kinesiotherapy'/exp
#8	'acute exercise'
#7	'acute exercise'/exp
#6	'physical activity'
#5	'physical activity'/exp
#4	'aerobic exercise'
#3	'aerobic exercise'/exp
#2	'exercise'
#1	‘exercise’/exp
	#30 #27 AND #28 AND #29
	#29 #21 OR #22 OR #23 OR #24 OR #25 OR #26
	#28 #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20
	#27 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10

Supplementary table 2. Overall level of evidence.

Certainty assessment							Summary of Results				
№ of participants (studies) Follow-up	**Risk of bias**	**Inconsistecy**	**Indirect Evidence**	**Inaccuracy**	**Post bias**	**Overall certainty of evidence**	**Study Event Rates (%)**		**Relative Effect (95% IC)**	**Potential absolute effects**	
							With Control	**With Exercise**		**Risk with Control**	**Difference of risk with Exercise**
Functional capacity (assessed with: Six-minute walk test)											
75 (2 ECRs)	serious[a]	serious [b]	not serious	very serious [c]	None	⊕◯◯◯ VERY LOW	38	37			MD 44.63 meters higher (20.86 lowest to 110.13 higher)

Functional capacity (assessed with: Timed up and down stairs test)											
38 (2 ECRs)	serious[d]	not serious	not serious	serious[e]	None	⊕⊕◯◯ LOW	19	19			MD 1.23 Seconds lower (2.27 lower to 0.2 lower)
Muscular strength											
38 (2 ECRs)	serious [d]	not serious	not serious	serious [e]	None	⊕⊕◯◯ LOW	San Juan et al. (2008) used the 6RM test to evaluate the dynamic strength of muscle strength, but this test was applied only in the IG, but there was a significant improvement in performance after training. Yet Kabak et al. (2016) evaluated muscle strength through the handgrip test and observed significant differences assessed before HSCT, at hospital discharge and one month after transplantation. In this study, PE increased muscle strength after transplantation, but did not exceed CG values.				
Quality of life											
16 (1 ECR)	serious [f]	not serious	not serious	serious [e]	None	⊕⊕◯◯ LOW	San Juan et al. (2008) found significant improvements on the comfort and resilience of children and self-report of parents on satisfaction and achievement, these being the main benefits promoted by PE.				

CI: Confidence interval; **MD:** Mean difference; **6RM:** six-repetition maximum; **HSCT**: Hematopoietic stem cell transplantation; **IG:** Intervention Group; **CG:** Control Group; **PE:** Physical Exercise

Explanations

a. Wallek et al. (2017)- Does not describe randomization, allocation, blinding and intention-to-treat analysis. Kabak et al. (2016)- Non-randomized clinical trial that has a moderate risk for confounders.
b. b. $I^2 = 83\%$
c. Broad confidence interval and small sample size.
d. The studies are non-randomized clinical trials and have a moderate risk for confounders.
e. Small sample size.
f. Non-randomized clinical trial and moderate risk for confound.