

Electronic Supplementary Material Table S1

Table S1. Search strategy (code line) for each database and background of search history.

Date of the search	July, 2017	July, 2019	September, 2021
Databases	PubMed	PubMed, WOS (Core Collection), Scopus	PubMed, WOS (Core Collection ^a), Scopus
Keywords	“plyometric”, “training”	“ballistic”, “complex”, “cycle”, “explosive”, “force”, “plyometric”, “shortening”, “stretch”, “training”, “velocity”	“ballistic”, “complex”, “cycle”, “explosive”, “force”, “jump”, “plyometric”, “power”, “shortening”, “stretch”, “training”, “velocity”
Database fields for the search	All	PubMed: all WOS: all Scopus: title, abstract, keywords	PubMed: all ^b WOS: all ^b Scopus: title, abstract, keywords ^b
Restrictions for the search	None	None	None
Examples of search strategy code line	Pubmed: "plyometric exercise"[MeSH Terms] OR ("plyometric"[All Fields] AND "exercise"[All Fields]) OR "plyometric exercise"[All Fields] OR ("plyometric"[All Fields] AND "training"[All Fields]) OR "plyometric training"[All Fields] WOS: (ALL=(plyometric)) AND ALL=(training) SCOPUS: TITLE-ABS-KEY (plyometric AND training)		
^a : except for the keywords “jump” and “power” searched in all WOS databases.			
^b : except for the keywords “jump” and “power” searched in the database field TITLE.			

Electronic Supplementary Material S 2

Supplementary material 2. Exclusion reasons for studies included in the preliminary qualitative synthesis.

Study	Reason
Aminae et al. (2017) [1]	Exercise interventions perform different numbers of total jumps (e.g., 972 vs 135) and combined with different types of training (e.g., no resistance training vs resistance training)
Arazi et al. (2012) [2]	Exercise interventions compared two types of surfaces (e.g., mat vs aquatic).
Blazevich et al. (2003) [3]	Exercise interventions combined with other different types of training and was impossible to determine why improvements occur (e.g., squat + sprint vs forward hack squat + sprint vs sprint).
Carlson et al. (2009) [4]	The study presents methodological limitations, and the subjects' characteristics are poorly described, was impossible to determine why improvements occur.
Chakshuraksha and Apanukul [5]	Exercise interventions used the same type of jump (e.g., CMJ) and combined with other different types of training (e.g., resistance training complex vs resistance training complex with accentuated eccentric loading).
Chaouachi et al. (2014) [6]	Exercise interventions combined with other types of training, and it was impossible to determine why improvements occur (e.g., none vs balance training).
Chmielewski et al. (2016) [7]	Anterior cruciate ligament reconstruction patients were the sample of the study. Exercise interventions used the same type of jumps and varied training intensity (e.g., low vs high).
Ciacchi and Bartolomei (2018) [8]	Exercise interventions combined with other types of training made it impossible to determine why improvements occurred (e.g., hang-clean vs half squat).
Coratella et al. (2018) [9]	Exercise interventions perform a different number of total jumps (e.g., 800vs 656)
Elias et al. (2018) [10]	Exercise interventions variables were too different to compare the type of jumps: number of total jumps (e.g., 1600 vs 3080), intensity (e.g., max vs decrease during tapering) and progressive overload (e.g., volume + technique vs volume + technique + intensity)
Escobar et al. (2020) [11]	Exercise interventions used the same type of jump (e.g., squat jumps, CMJs and single-leg CMJs) and combined with other different types of training (e.g., squat + deadlifts + leg press vs squat + leg press).
Escobar et al. (2022) [12]	Exercise interventions used the same type of jumps and perform a different number of total jumps (e.g., 2160 vs 540)
Escriva-Selles and Gonzalez-Badillo [13]	Several differences between groups to make comparison (e.g., number of total jumps, intensity, progressive overload, combined one group with RT etc.)
Fathi et al. (2019) [14]	No clearly reported type of jump training, additionally, exercise interventions combined with other types of training, and it was impossible to determine why improvements occur (e.g., resistance training vs none).
Fatourus et al. (2000) [15]	Exercise interventions combined with other types of training, and it was impossible to determine why improvements occur (e.g., resistance training vs none).
Fowler et al. (1995) [16]	Several differences between groups to make the comparison (e.g., number of total jumps, 222 loaded jump squats vs 105 loaded jump squats + 399 pendulum jumps, intensity, progressive overload, combined with RT and other with RT and feedback, etc.)
Gauffin et al. (1989) [17]	Exercise interventions perform a different number of total jumps (e.g., 1440 vs 1320)
Gonzalo Skok et al. (2017) [18]	Exercise interventions involving jump training programs representing less than 50% of the total training load when delivered in conjunction with other training interventions (e.g., backward lunges, defensive-like shuffling steps, side-step, crossover cutting, lateral crossover cutting and lateral squat).
Hammami et al. (2019) [19]	Several differences between experimental groups make comparisons difficult (e.g., number of total jumps, combined training, tapering, etc.). Additionally, the statistical presentation of the information was poorly reported.

Helland et al. (2017) [20]	Comparison between exercise groups in the number of total jumps was too different (e.g., 635 vs 760) and combined training was different (e.g., RT + feedback vs RT).
Hortobagyi et al. (1991) [21]	Comparison between exercise groups in the number of total jumps was too different (e.g., 2280 vs 820). (PDF not found)
Huang et al. (2021) [22]	Exercise interventions combined with other types of training, and it was impossible to determine why improvements occur (e.g., none vs balance training). Consequently, the number of total jumps between groups was different (e.g., 2652 vs 1776).
Huang et al. (2014) [23]	Exercise interventions combined with other types of training, and it was impossible to determine why improvements occur (e.g., none vs balance training). Consequently, the number of total jumps between groups was different (e.g., 2736 vs 1776).
Huang and Lin (2010) [24]	Exercise interventions combined with other types of training, and it was impossible to determine why improvements occur (e.g., none vs balance training).
Jafari et al. (2013) [25]	All exercise interventions participated in the same training program. In general, type of training is poorly described.
Jiménez-Reyes et al. (2019) [26]	Impossible to make comparisons due to the highly individualized training program regarding training variable moderators.
Jiménez-Reyes et al. (2017) [27]	Not clearly reported the type of jump training along the exercise intervention groups.
Kamalakkannan et al. (2011) [28]	Both exercise intervention groups perform the same type of jump training. Comparison of this study is with or without resistance aquatic plyometric training.
Kamandulis et al. (2012) [29]	Only one exercise intervention group, impossible to make comparisons.
Kamandulis et al. (2012) [30]	Both exercise intervention groups perform the same type of jump training. Several differences between groups to make comparison (e.g., number of total jumps, intensity, training duration, etc.)
Kasmi et al. (2021) [31]	This study compared a group that performed jump training with other that performed jump training + eccentric training. Groups performed different number of total jumps (e.g., 1040 vs 384)
Katsikari et al. (2020) [32]	Only one exercise intervention group, impossible to make comparisons.
Keller et al. (2020) [33]	Several differences between groups to make the comparison (e.g., number of total jumps, 640-1120 vs 608-740, progressive overload, combined with COD and other no combined, etc.)
Kukric et al. (2012) [34]	This study compared a group that performed jump training with other that performed jump training + resistance training. Groups performed different number of total jumps (e.g., 1920 vs 4200)
Lievens et al. (2021) [35]	Exercise intervention groups perform the same type of jump training, except for one group that performed only 4 of 8 drills of the other groups. Several differences between groups to make comparison (e.g., number of total jumps, intensity, progressive overload, etc.)
Lindberg et al. (2021) [36]	This study compared a group that performed jump training + balance strength training with other that performed jump training + velocity training. Groups performed different number of total jumps (e.g., 1700 vs 2000).
Lloyd et al. (2016) [37]	This study compared a group that performed jump training with other that performed jump training + resistance training. Groups performed different number of total jumps (e.g., 958 vs 486)
Lyttle et al. (1996) [38]	Several differences between groups to make the comparison (e.g., number of total jumps, 496- vs 31, progressive overload, combined with RT and other upper body plyometrics, etc.)
Mero et al. (2021) [39]	Effects of jump training cannot be isolated, as the lack of detailed information about jump training.
Myklebust et al. (2003) [40]	Mix a lot of type of trainings and jump training is not clearly reported, impossible to make comparisons.
Ogiso and Miki (2020) [41]	Effects of jump training cannot be isolated, one group performed electromyostimulation + RT probably vs no additional training.
Pamuk et al. (2022) [42]	The number of total jumps was too different (e.g., 2424 vs 1944)
Radnor et al. (2017) [43]	This study compared a group that performed jump training with other that performed jump training + resistance training. Groups performed different number of total jumps (e.g., 958 vs 486)

Ramirez-Campillo et al. (2018) [44]	Differences in combined training: RT unilateral vs RT bilateral.
Rhea et al. (2008) [45]	Several differences between experimental groups make comparisons difficult (e.g., number of total jumps, combined training, frequency, load, intensity, etc.). Methodological approach has many confusions.
Rhea et al. (2008) [46]	Several differences between experimental groups make comparisons difficult (e.g., number of total jumps, combined training, frequency, load, intensity, etc.). Methodological approach has many confusions.
Saez de Villareal et al. 2015 [47]	Authors applied 3 training interventions with different nature and characteristics (different volumes; exercises; environments such as water versus land, etc...), this make difficult to compare training outcomes.
Saez de Villareal et al. 2013 [48]	Authors applied 3 training interventions with different volumes (e.g., 936 vs 321 vs 615), this make difficult to compare training outcomes (e.g., loaded vs unloaded and cyclic vs acyclic).
Saez de Villareal et al. 2011 [49]	Authors applied 3 training interventions with different volumes (e.g., 936 vs 321 vs 615), this make difficult to compare training outcomes (e.g., loaded vs unloaded and cyclic vs acyclic).
Sanchez-Sanchez et al. 2021 [50]	Both exercise intervention groups perform the same type of jump training. One performed during 3 weeks and the other performed during 6 weeks.
Sánchez-Sixto et al. (2021) [51]	This study compared a group that performed jump training with other that performed jump training + resistance training. Groups performed different number of total jumps (e.g., 330 vs 512)
Simpson et al. (2001) [52]	This study compared an individualized vs non-individualized intensity with the same type of jumps. Groups performed different number of total jumps (e.g., 720 or less vs 216)
Siti et al. (2014) [53]	Groups performed different number of total jumps (e.g., 2520 vs 2808 vs 4140) and makes impossible comparison.
Smilios et al. (2013) [54]	Groups performed different number of total jumps (e.g., 360 repeated jumps + 300 loaded jumps vs 360 repeated jumps + 480 loaded jumps vs 360 repeated jumps) and makes impossible comparison.
Zaras et al. (2014) [55]	This study showed different types of tapering but used the same type of jump training with differences between total number jumps (e.g., 300 vs 540).

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