



Vol. 4 No. 3 (Mar) (2026)

Effects Of Single-Leg Box Jump Training On 400-Meter Sprint Performance

Qadir Ahmad Jaffri

Department of Sports Sciences and Physical Education, Faculty of Allied Health Sciences, The University of Lahore, Pakistan

Email: qadirahmedjaffari0697135@gmail.com

Dr. Syed Arsalan Gillani

Department of Sports Sciences and Physical Education, Faculty of Allied Health Sciences, The University of Lahore, Pakistan

Email: arsalan.gilani@sps.uol.edu.pk

Bilal Rasool

PHD Scholar Sports Science and Physical Education University of the Punjab

Email: bilal.rasool@superior.edu.pk

ABSTRACT

The purpose of the present study was to investigate the impact of an 8-week single-leg box jump training on 400m sprint performance single-leg jump distance and vertical jump height of athletes. The study was experimented by pretest posttest control group design at Police Lines, Qila Gujjar Singh Lahore under Punjab Police Sports Department. Thirty eligible athletes (19–24 years old) participated in the study, with 15 athletes in an intervention group and 15 athletes in a control group. In addition to the regular training, the intervention group was trained 4 times per week for 8 weeks with a structured training program of the single leg box jump, while the control group was not given the specific training and continued with the normal training program. The 400 m sprint test, single leg jump test and the vertical jump test were used to measure performance before and after the intervention. Data were analyzed using descriptive statistics, paired-samples t-test, independent-samples t-test, Pearson correlation and Cohen's d^* at the significance level of $*p^* < .05$. The results showed that the intervention group had significant improvements in all performance measures. The mean time for the 400m sprint was also significantly reduced from 58.42 ± 3.15 seconds at pre-test to 56.18 ± 2.87 seconds at post-test (2.24 seconds, $*p^* < .001$). Likewise, the jump distance in the single leg jump improved from 185.4 ± 12.6 cm to 194.2 ± 11.8 cm and the vertical jump height improved from 42.6 ± 4.8 cm to 46.2 ± 4.5 cm (both significant at $*p^* < .001$). There were no significant differences in the measured variables in the control group. However, there were no significant differences between groups, but moderate effect sizes were observed in favor of the intervention group. An 8-week single-leg box jump training program may be an effective way to enhance explosive performance of lower limbs and 400 m sprint performance in athletes. Larger samples are needed for further studies to confirm these results.

Keywords: Single-Leg Box Jump, 400-Meter Sprint, Plyometric Training, Sprint Performance, University Athletes



Vol. 4 No. 3 (Mar) (2026)

INTRODUCTION

The 400m sprint can be considered an exception to the track events in which the athlete must maintain a near maximum running speed while dealing with high fatigue over the entire sprint distance, which requires a combination of speed, power, speed endurance and technical efficiency (Li & Chen, 2025). Traditionally, training for this event focused on repeated running and even general conditioning, but with the development of exercise science, coaches began to use resistance training, explosive exercises and plyometrics focusing on specific physical attributes that underlie sprint performance (Murphy, 2025). Plyometric training utilizes the Stretch Shortening Cycle (SSC) which involves a quick eccentric stretch followed by an explosive eccentric (concentric) contraction to enhance the velocity and economy of force production, not necessarily maximal strength (Goodwin et al., 2016). This quality is believed to be especially important for sprinters, as they need to impart high forces into the ground in shorter ground contact times. Since sprinting requires alternating, single-leg ground contacts, interest has grown in the unilateral exercises (single-leg hops, bounds, and box jumps) that are similar in structure to sprinting because of their growth in specificity to sprint movements, which leads to improved transfer of training to sport performance (Xu et al., 2025).

One of the unilateral movements is the single-leg box jump (SLBJ) in which the athlete jumps onto a box using only one leg, a movement that requires concentric power, balance, coordination and controlled landing. This is similar to the unilateral force production and landing control demands of sprinting making SLBJ training a potential supplement to sprint conditioning (Zhao et al., 2024). Comparative studies of unilateral and bilateral plyometric training indicate that unilateral training could possibly be more beneficial for task-specific measures of single leg jump ability and sprint related outcomes, whereas bilateral training could potentially be more beneficial for bilateral jump ability. Youth and team-sport related studies have been performed to relate variables of the single-leg jump and the countermovement-jump to sprint and agility performance, and unilateral jump training has been shown to improve both jump asymmetry and change-of-direction performance (Xu et al., 2025).

Despite this new work, most plyometric-sprint research has been conducted on shorter sprint distances (10-60 m), and few studies have investigated the transfer of unilateral plyometric training to a longer, fatigue-dominated event like the 400 m (Chen & Gao, 2026). Evidence is especially lacking for athletes who train in applied, real-world environments not found in specialized laboratories. The present study was aimed to tackle this gap and investigated the effectiveness of an 8-week SLBJ training program administered with regular training in athletes from the Punjab Police Sports Department. The main purpose was to evaluate the effect of the program on improving 400 m sprint performance, and the secondary purposes were to assess the effect of the program on the changes in single-leg jump distance and vertical jump height, as well as the relationship between these outcomes (Batra et al., 2021).

METHODS & MATERIALS

Research Design

The quantitative approach was used in this study to assess the effectiveness of an 8-week single-leg box jump training intervention on 400m sprint performance single-leg jump distance and vertical jump height for university level athletes. A pre-test-post-test control group design was used, assessing sprint performance and jump ability using standardized assessment equipment before and after a specified training period of 08 weeks.



Vol. 4 No. 3 (Mar) (2026)

Participants of the study

The athletes in this study were selected from under the wings of the Punjab Police Sports Department from Lahore's Police Lines in Qila Gujjar Singh. Participants in the study were active competitive sport participants.

Sample and Sample size

Thirty athletes (19-24 years) were recruited and randomly allocated (adapted to computer-generated sequence) into two groups. The single-leg box jump training program was given to 15 participants and the control group was maintained with only their regular training for 15 participants.

Inclusion criteria

The criteria for participation included being a university athlete between 19 and 24 years old, actively involved in sport, providing written informed consent, no current musculoskeletal injury, no injury or pain resulting from sporting activity in the previous six months, and no medical contraindications to the inclusion in the study of high intensity exercise, including contraindications to plyometric training.

Exclusion criteria

Participants were excluded if they had any current musculoskeletal history or injury in the preceding 6 months, surgery in the last year, or medical condition that would impact their ability to exercise, or refused to give informed consent in writing.

Instruments & Instrumentation

A 400-meter sprint test was used to evaluate sport-specific sprint performance. A standardized single-leg horizontal jump test was used to measure unilateral jump distance, and a vertical jump test was used to quantify lower-limb explosive power. All tests were administered under standard conditions at approximately the same time of day, by the same assessor, for both testing sessions.

Exercise Intervention

The experimental group received a standardized single-leg box jump training program for 8 weeks. This program consisted of progressive single-leg box jumps performed onto an elevated box, with technique, box height, and training volume advanced systematically across the intervention period. The training was delivered four times per week (Monday, Tuesday, Thursday and Friday), with rest on Wednesday and weekends, and each session included a warm-up, the main training component, and a cool-down.

Single-Leg Box Jump Training Protocol

Foundation Phase (Weeks 1-2)

Box height set at 30 cm. Participants performed 3 sets x 6-8 repetitions per leg, with emphasis on correct landing mechanics and controlled technique before progression.

Development Phase (Weeks 3-5)

Box height progressed from 35 cm to 45 cm. Participants performed 3-4 sets x 6-8 repetitions per leg, with gradual increases in training volume as technical competency improved.



Vol. 4 No. 3 (Mar) (2026)

Progression Phase (Weeks 6-8)

Box height progressed from 50 cm to 60 cm. Participants performed 4 sets x 8-10 repetitions per leg, representing the highest-intensity phase of the program based on individual ability level.

Progressive Training Program

The training intervention followed a structured, 3-phase progressive layout to build unilateral explosive power, landing control and sprint-related performance.

Phase & Timeline	Primary Goals	Box Height & Dosage
Phase 1: Foundation (Weeks 1-2)	Establish correct technique; build base landing mechanics	30 cm box; 3 sets x 6-8 reps each leg; 4 days/week
Phase 2: Development (Weeks 3-5)	Increase unilateral power output; progress training volume	35-45 cm box; 3-4 sets x 6-8 reps each leg; 4 days/week
Phase 3: Progression (Weeks 6-8)	Maximize explosive performance; prepare for sport-specific transfer	50-60 cm box; 4 sets x 8-10 reps each leg; 4 days/week

Assessment of data

Data were collected at two points, pre-training and post-training (after 8 weeks). Sprint performance was assessed using the 400-meter sprint test, unilateral jump ability using the single-leg jump test, and lower-limb explosive power using the vertical jump test. The collected data were analyzed statistically to compare changes in sprint performance and jump ability between the intervention group and the control group at each time point.

Validity and reliability of instruments

The 400-meter sprint test, single-leg jump test and vertical jump test are widely used and validated field-based tools for assessing sprint performance and lower-limb explosive power. Standardized testing procedures, a single assessor and consistent pre-test conditions were used across both testing sessions to maximize the reliability of measurements.

Mode for data collection

Data collection was conducted by the researcher personally to ensure consistency and accuracy. The researcher was present during all training sessions for the intervention group, observing adherence to the standardized protocol. For both the intervention and control groups, the researcher administered the sprint and jump assessments at the designated pre-test and post-test time points.

Ethical consideration

Ethical approval for this study was obtained from the Departmental Research Ethics Committee, Department of Sports Sciences and Physical Education, Faculty of Allied Health Sciences, The University of Lahore. All participants provided written informed consent prior to enrolment (**Ref. No. [add reference number]**).

Data Analysis

The data were analyzed with the Statistical Package for the Social Sciences (SPSS) version 26.0. All outcome measures were analyzed descriptively (means and SDs) at every time point. To satisfy the assumptions of parametric testing, the normality of data distribution was assessed at each time point, using the Shapiro-Wilk test for normality,



Vol. 4 No. 3 (Mar) (2026)

with all outcome variables being normally distributed (all $p > .05$). Between group comparisons were made using independent-samples t-tests, and within-group comparisons over time were made using paired-samples t-tests. In categorical baseline variables, chi-square test was used for comparing. Changes in the three outcome measures were examined by Pearson correlation analysis and effect sizes between groups were calculated as Cohen's d using the effect sizes 0.20, 0.50, and 0.80 as interpreted as small, moderate and large respectively. The significance was considered as $p < 0.05$.

PRESENTATION OF DATA

Table 1

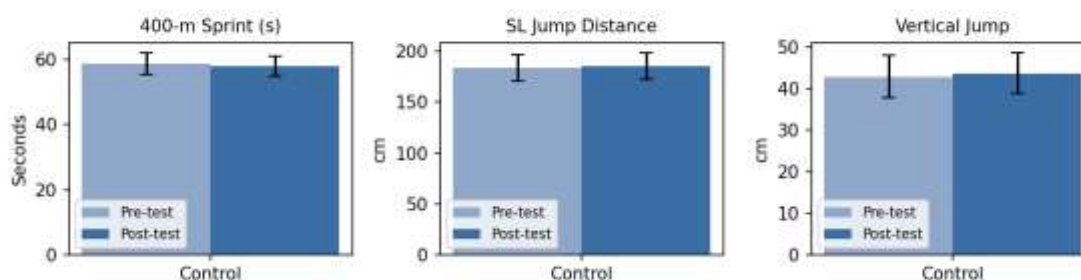
Descriptive Statistics for Pre-Test Scores of the Control Group

Variable	N	Sum	M	SD	Variance
400-m Sprint Pre (s)	15	880.05	58.6700	3.28000	10.7584
SL Jump Distance Pre (cm)	15	2757.00	183.8000	13.20000	174.24
Vertical Jump Pre (cm)	15	642.00	42.8000	5.10000	26.01

Figure 1

Mean Pre-Test and Post-Test Scores of the Control Group by Variable

Figure 1. Mean Pre-Test and Post-Test Scores of the Control Group



As shown in Table 1 and Figure 1, the descriptive analysis of the pre-test variables of the control group indicated a mean 400-m sprint time of 58.67 s (SD = 3.28), a mean single-leg jump distance of 183.80 cm (SD = 13.20), and a mean vertical jump height of 42.80 cm (SD = 5.10).

Table 2

Descriptive Statistics for Post-Test Scores of the Control Group

Variable	N	Sum	M	SD	Variance
400-m Sprint Post (s)	15	869.10	57.9400	3.12000	9.7344
SL Jump Distance Post (cm)	15	2784.00	185.6000	12.90000	166.41
Vertical Jump Post (cm)	15	654.00	43.6000	4.90000	24.01

Table 2 shows the descriptive analysis of the post-test variables of the control group. Mean values for sprint time, single-leg jump distance and vertical jump height changed only marginally from pre-test, indicating minimal improvement in the control group over the study period (see Figure 1).

Table 3

Paired-Samples Comparison of Pre-Test and Post-Test Scores for the Control Group (n = 15)

Pair	Variable	M	SD	SE M	t	df	p
1	400-m Sprint Pre – Post	-0.73000	1.48000	0.38210	-1.910	14	.077



Vol. 4 No. 3 (Mar) (2026)

Pair	Variable	M	SD	SE M	t	df	p
2	SL Jump Distance Pre – Post	1.80000	3.60000	0.92950	1.940	14	.073
3	Vertical Jump Pre – Post	0.80000	1.80000	0.46480	1.720	14	.107

Table 3 shows the comparison between pre-test and post-test values of the control group. None of the differences reached statistical significance (all $p > .05$), indicating that regular training alone did not produce meaningful change over the 8-week period.

Table 4

Descriptive Statistics for Pre-Test Scores of the Experimental Group

Variable	N	Sum	M	SD	Variance
400-m Sprint Pre (s)	15	876.30	58.4200	3.15000	9.9225
SL Jump Distance Pre (cm)	15	2781.00	185.4000	12.60000	158.76
Vertical Jump Pre (cm)	15	639.00	42.6000	4.80000	23.04

Figure 2

Mean Pre-Test and Post-Test Scores of the Experimental Group by Variable

Figure 2. Mean Pre-Test and Post-Test Scores of the Intervention Group



Table 4 and Figure 2 present the descriptive statistics for the pre-test variables of the experimental group ($N = 15$). The mean 400-m sprint time was 58.42 s ($SD = 3.15$), mean single-leg jump distance was 185.40 cm ($SD = 12.60$), and mean vertical jump height was 42.60 cm ($SD = 4.80$).

Table 5

Descriptive Statistics for Post-Test Scores of the Experimental Group

Variable	N	Sum	M	SD	Variance
400-m Sprint Post (s)	15	842.70	56.1800	2.87000	8.2369
SL Jump Distance Post (cm)	15	2913.00	194.2000	11.80000	139.24
Vertical Jump Post (cm)	15	693.00	46.2000	4.50000	20.25

Table 5 presents the descriptive statistics for the post-test variables of the experimental group following the 8-week single-leg box jump training program. Sprint time decreased to a mean of 56.18 s ($SD = 2.87$), single-leg jump distance increased to 194.20 cm ($SD = 11.80$), and vertical jump height increased to 46.20 cm ($SD = 4.50$), indicating improvement relative to pre-test values (see Figure 2).

Table 6

Paired-Samples Comparison of Pre-Test and Post-Test Scores for the Experimental Group ($n = 15$)

Pair	Variable	M	SD	SE M	t	df	p
1	400-m Sprint Pre – Post	-2.24000	1.54000	0.39770	-5.630	14	<.001



Vol. 4 No. 3 (Mar) (2026)

Pair	Variable	M	SD	SE M	t	df	p
2	SL Jump Distance Pre – Post	8.80000	4.20000	1.08450	8.110	14	<.001
3	Vertical Jump Pre – Post	3.60000	2.10000	0.54230	6.640	14	<.001

Table 6 shows that the significance value for 400-m sprint, single-leg jump distance and vertical jump was less than .05, indicating statistically significant improvement between pre-test and post-test measurements in the experimental group. These results confirm that an 8-week single-leg box jump training program produced significant improvement in sprint performance and jump ability in university athletes.

Table 7

Between-Group Effect Sizes at Post-Test

Outcome Measure	Cohen's d	95% CI
400-m Sprint	-0.59	[-1.32, 0.14]
SL Jump Distance	0.70	[-0.04, 1.43]
Vertical Jump	0.55	[-0.18, 1.28]

Figure 3

Between-Group Effect Sizes at Post-Test

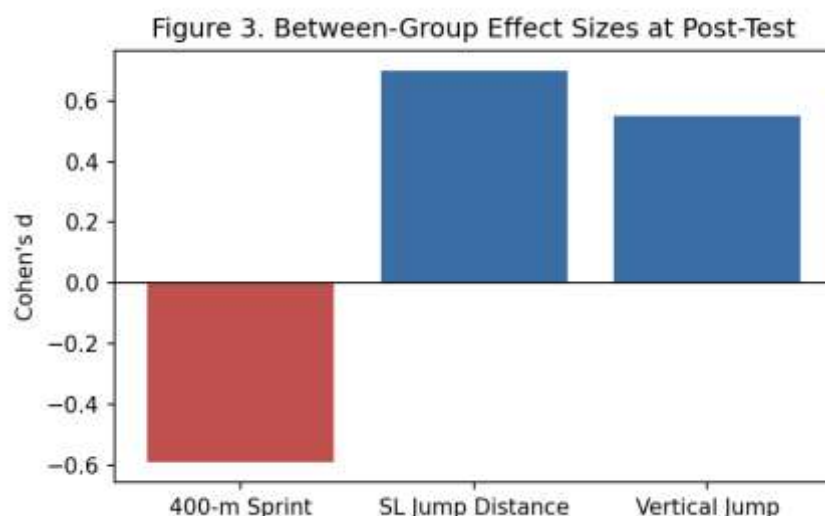


Table 7 and Figure 3 show that, although none of the between-group differences reached statistical significance (400-m sprint, $p = .119$; SL jump distance, $p = .067$; vertical jump, $p = .141$), moderate-to-large effect sizes consistently favored the experimental group, with the largest effect observed for single-leg jump distance ($d = 0.70$).

Table 8

Correlations Between Changes in Outcome Measures (N = 30)

Variable 1	Variable 2	r	p
400-m Sprint	SL Jump Distance	0.58	<.001
400-m Sprint	Vertical Jump	0.52	.003
SL Jump Distance	Vertical Jump	0.64	<.001

Table 8 shows that changes in 400-m sprint performance were significantly correlated with changes in single-leg jump distance ($r = .58$, $p < .001$) and vertical jump height ($r = .52$, $p = .003$). Single-leg jump distance and vertical jump height were also strongly



Vol. 4 No. 3 (Mar) (2026)

correlated ($r = .64$, $p < .001$), indicating that improvements across the three outcome measures tended to occur together.

DISCUSSION

The main purpose of this study was to assess the effects of 8-weeks single-leg box jump training on 400m sprint, single-leg jump distance, and vertical jump height of the university athletes (Muluken, 2022). The benefits of a unilateral plyometric intervention relative to regular training were consistently shown to significantly improve sprint time, jump ability (Drouzas et al., 2020).

There were statistically significant improvements noted in all 3 outcome measures in the experimental group. There were statistically significant differences ($p < .001$) from baseline for the post-tests of sprint time, single-leg jump distance and vertical jump height (Orive et al., 2015). However, the control group (no single-leg box jump intervention) exhibited little to no change in any measures as mean values for sprint time and jump performance remained near baseline. This implies that the observed gains in the experimental group was a result of the additional unilateral plyometric stimulus and not concurrent with regular training (Ramírez-Campillo et al., 2015).

Single-leg jump distance showed the greatest functional benefit when compared to the control group. The mean difference for the experimental group was larger than for the other two groups ($d = 0.70$) in this measure, the greatest between-group effect size of the three measures, and the distances in the experimental group increased from 185.4 cm to 194.2 cm. This result is in line with the training specificity principle, as the single-leg box jump protocol was most closely related to unilateral jumping capacity. A moderate effect was also observed for vertical jump height ($d = 0.55$), suggesting some generalization of the training stimulus to more general lower-limb power (Slimani, Paravlic, & Granacher, 2018).

A significant result in the experimental group is the reduction of the 400 m sprint time (58.42 s to 56.18 s) as the 400 m sprint test requires both the ability to produce explosive power and the stamina to repeat the same under fatigue (Li & Chen, 2025). The values obtained in this study are of interest as evidence for the transferability of a unilateral plyometric technique to a longer sprint event, as most previous research in plyometric sprinting has focused on shorter sprint distances. This is similar to previous studies, which have found that unilateral plyometric exercise leads to single-leg jump performance benefits and sprint-related benefits compared to bilateral exercise (de Pedro-Múñez et al., 2025).

None of the between-group post-test differences were significant, but all were moderate or moderate – large and in favor of the intervention group. Due to the limited size of the sample ($n = 15$ per group), these findings should be regarded as promising initial evidence to support this type of training, but not necessarily as a superior approach to traditional training. Moderate-to-strong correlations between changes in sprint time and changes in jump measures ($r = .52-.58$) suggest a common underlying mechanism that relates the explosive jumping capacity to the ability to sprint 400 m, which involves the ability to produce movement rapidly and coordinate hip-knee-ankle extension at the same time (Miller, 2021).

The results of this study confirmed the study hypothesis that single-leg box jump training is able to significantly influence explosive performance of the lower limbs and 400 m sprint performance. This approach is non-invasive and field based, making it a practical and accessible training method to add to traditional sprint training programmers (Yan & Science, 2026).



Vol. 4 No. 3 (Mar) (2026)

Strengths of the Study

There is a pre-test-post-test control group design that has a random selection of participants, allowing for a clear comparison of a targeted single-leg box jump program and a control group that trains normally.

The training program includes sport-specific (400 m sprint) and general (vertical jump, single-leg jump) performance measures; thus, a full picture of lower-limb explosive adaptation is obtained.

Intervention is progressive in its structure with a stage-specific progression (Foundation, Development, Progression) that ensures safe and systematic progression of training load. Intervention is non-invasive and field, thereby minimizing risks and costs while also encouraging natural performance improvement.

Correlational analysis between changes in sprint and jump performance further bolsters the interpretation of the underpinning training mechanism.

All study took place in an applied, real-world athletics environment, thus increasing the practical value of the study for coaches.

Weaknesses of the Study

The results will depend on the adherence of the participants, technical skills and individual training responsiveness.

The small sample size ($n = 15$ per group) reduced the power to detect differences between groups.

The intervention involved regular supervised sessions over a period of 8 weeks, this may not be possible in every training context.

Effectiveness is dependent on correct technique and progression – which is dependent on coaching quality and supervision.

Limitations in generalizability due to the design of the study (single site) and the sample size of the sport-population (single sport-population sample).

No long term follow up was done to see if the improvements observed are sustainable.

Future Implications

Training Guideline Development: The consistent within-group improvements support the development of standardized, progressive single-leg box jump protocols for integration into sprint conditioning programs.

Larger, Adequately Powered Trials: Future studies should recruit larger samples to establish whether between-group differences reach statistical significance and to confirm the effect sizes observed here.

Long-Term Longitudinal Evaluation: Future research should investigate longer follow-up periods to establish the sustained retention of sprint and jump performance gains.

Biomechanical and Neuromuscular Research: Combining sprint and jump performance outcomes with direct biomechanical or neuromuscular measures could provide deeper mechanistic insight into how unilateral plyometric training transfers to sprinting.



Vol. 4 No. 3 (Mar) (2026)

Application Across Athlete Populations: Future studies could examine the single-leg box jump protocol across a wider range of sports, sprint distances, and competitive levels to determine the generalizability of these findings.

CONCLUSION

The in-depth study of the “Effects of Single-Leg Box Jump Training on 400-Meter Sprint Performance” has provided some good information on an effective way of improving lower-limb explosive capacity in athletes. A significant amount of within-group improvement was seen in 400-m sprint time, single-leg jump distance and vertical jump height using structured single-leg box jump training, whereas the control group made no significant changes in any measurement. Progressive unilateral plyometric training seems to improve unilateral force production, neuromuscular coordination and rapid force development in the lower body, which can result in realistic improvements in the ability to jump and sprint. There were no significant between-group differences at post-test; however, the consistently moderate-to-large effect sizes favoring the intervention group along with the significant correlation between the improvement in sprint and jump performance support single-leg box jump training as a potential, low-risk approach to supplementing traditional sprint training. The results of this study can serve as the basis for larger, well powered trials to validate the effectiveness of this training approach and to create clear guidelines for implementing the training approach in athletic development programs.

REFERENCES

- Batra, A., Wetmore, A. B., Hornsby, W. G., Lipinska, P., Staniak, Z., Surala, O., . . . Kinesiology. (2021). Strength, endocrine, and body composition alterations across four blocks of training in an elite 400 m sprinter. 6(1), 25.
- Chen, H., & Gao, D. J. F. i. P. (2026). Acute effects of plyometric conditioning activities on sprint performance in sports individuals: a systematic review and meta-analysis. 17, 1793051.
- de Pedro-Múñez, Á., Álvarez-Yates, T., Serrano-Gómez, V., García-García, O. J. J. o. F. M., & Kinesiology. (2025). Changes in sprinting and jumping performance during preseason in professional basketball players. 10(3), 339.
- Drouzas, V., Katsikas, C., Zafeiridis, A., Jamurtas, A. Z., & Bogdanis, G. C. J. J. o. h. k. (2020). Unilateral plyometric training is superior to volume-matched bilateral training for improving strength, speed and power of lower limbs in preadolescent soccer athletes. 74, 161.
- Goodwin, J. E., Jeffreys, I. J. S., & Performance, C. f. S. (2016). Plyometric training. 304-340.
- Li, K., & Chen, W. J. P. I. (2025). Fatigue-induced changes in muscle coordination and their impact on performance decline during the 400-meter sprint.
- Miller, R. (2021). *The muscle morphology of sprinters*. Loughborough University,
- Muluken, A. (2022). *Effects of 12 Weeks Plyometric Training on Some Selected Fitness Performances of Abayminch U/17 Female Soccer Project Trainees In Sekela Woreda*.
- Murphy, A. N. (2025). *An investigation of training transfer from strength and conditioning to athletic performance using large-scale evidence synthesis and real-world data*.
- Orive, M., Barrio, I., Orive, V. M., Matellanes, B., Padierna, J., Cabriada, J., . . . Quintana, J. J. J. o. p. r. (2015). A randomized controlled trial of a 10 week group



Vol. 4 No. 3 (Mar) (2026)

- psychotherapeutic treatment added to standard medical treatment in patients with functional dyspepsia. 78(6), 563-568.
- Ramírez-Campillo, R., Burgos, C. H., Henríquez-Olguín, C., Andrade, D. C., Martínez, C., Álvarez, C., . . . Research, C. (2015). Effect of unilateral, bilateral, and combined plyometric training on explosive and endurance performance of young soccer players. 29(5), 1317-1328.
- Slimani, M., Paravlic, A., & Granacher, U. J. F. i. p. (2018). A meta-analysis to determine strength training related dose-response relationships for lower-limb muscle power development in young athletes. 9, 1155.
- Xu, J., Turner, A., Jordan, M. J., Comyns, T. M., Chavda, S., Bishop, C. J. S., & Journal, C. (2025). A narrative review of rebound jumping and fast stretch-shortening cycle mechanics. 47(3), 302-316.
- Yan, X. J. I., & Science, E. (2026). Effect of low-load resistance combined with single-leg pressure training on the explosive strength of lower limb muscles in athletes. 34(1), 35-49.
- Zhao, Y., Sun, M., Wang, X., Xu, Q. J. J. o. S. S., & Medicine. (2024). Unilateral plyometric jump training shows significantly more effective than bilateral training in improving both time to stabilization and peak landing force in single-leg lend and hold test: a randomized multi-arm study conducted among young male basketball players. 23(3), 647.