

## Performance Comparison of High-Precision and Alternative Solutions for Long-Range Jumpers



### Overview

This study aims to comprehensively assess the accuracy and precision of five different devices and by incorporating a variety of analytical approaches for measuring countermovement jump height: Qualisys motion system; Force platform; Ergojump; an Accelerometer, and self-made. This study aims to comprehensively assess the accuracy and precision of five different devices and by incorporating a variety of analytical approaches for measuring countermovement jump height: Qualisys motion system; Force platform; Ergojump; an Accelerometer, and self-made. The purpose of this study was threefold: (i) to compare CMJ performance between elite sprinters and high jumpers; (ii) to compare CMJ performance between elite male and female athletes in these two events; and (iii) to determine which CMJ take-off parameters correlated most strongly with jump. Centre of Research, Education, Innovation and Intervention in Sport (CIFI2D), Faculty of Sport, University of Porto, Rua Dr. Plácido da Costa 91, 4200-450 Porto, Portugal Porto Biomechanics Laboratory, University of Porto, 4200-450 Porto, Portugal Kurio 3D Compression LTD, Nottinghamshire NG18 5BR. Biomechanical Report for the IAAF World Indoor Championships 2018: Long Jump Men. Birmingham, UK: International Association of Athletics Federations. Camera layout for the men's long jump indicated by. carbon fiber prosthesis and to generate positive work from the muscles surrounding the hip joint. However use of the. However, Bartlett (1999) warns that that a high correlation does not imply a cause and effect relation between the technique variable and performance, and that the results of a cross sectional study cannot be generalised to a specific athlete. Technique intervention studies are another potentially. This study...

## Article Content

Jump testing: Looking at metrics that matter and

By linking lab-based assessments to real-world performance outcomes, organizations can create a feedback loop that enhances both individual

(PDF) Optimum take-off angle in the long jump

In this study, we found that the optimum take-off angle for a long jumper may be predicted by combining the equation for the range of a projectile

HIGH JUMP: ARE BODY HEIGHT AND BODY WEIGHT

High jump: Are body height and body weight good predictors of performance in elite high jumpers? Journal of Physical Education Research,

Machine Learning Prediction of Long Jump Performance Based on ...

These findings emphasize the pivotal role of biomechanical factors in predicting performance and offer data-driven insights for enhancing long jump outcomes for athletes and coaches.

Elevating athletic performance: Maximizing strength and power in long ...

Purpose This study aimed to evaluate the effects of low-intensity blood flow restriction (BFR) training and high-intensity resistance training (HI-RT) on the leaping performance of long

Countermovement jump performance in elite male and female

The purpose of this study was threefold: (i) to compare CMJ performance between elite sprinters and high jumpers; (ii) to compare CMJ performance between elite male and female athletes

Elevating athletic performance: Maximizing strength and power in long ...

The study set out to compare the effectiveness of low-intensity BFR training with high-intensity resistance training (HI-RT) in improving long-jumpers' explosiveness and strength.

Countermovement jump performance in elite male and female

To conclude, this is the first study to investigate and compare CMJ performance between elite male and elite female sprinters and high jumpers. The first key outcome was the lack of

THE EFFECT OF RUN-UP SPEED ON LONG JUMP PERFORMANCE

The results of the study were compared to previous cross-sectional and theoretical studies, and the implications for the speed training and strength training of long jumpers was examined.

## An Evaluation of the Accuracy and Precision of Jump

This study demonstrated that jump height measurement accuracy is both device and analytical-approach-dependent and that accuracy and precision

(PDF) An Evaluation of the Accuracy and Precision of Jump Height ...

This study aims to comprehensively assess the accuracy and precision of five different devices and by incorporating a variety of analytical approaches for measuring countermovement

## Performance Progression of Elite Jumpers: Early

Considering performance progression, significant group x transition rate for world-class track and field jumpers and to time interactions were observed for both

## SUBMISSION GUIDELINES FOR 2007 ISB CONGRESS

**INTRODUCTION** The running long jump distance is determined by the height of the center of mass (CM) at takeoff and horizontal and vertical velocity of CM at takeoff. Hay (1993) reported a positive

## BODY AERODYNAMICS: CONTRIBUTION TO LONG JUMP PERFORMANCE

The comparison of the actual and normalized data indicates that the absolute value of the results in long jump during last 24 years might be reconsidered. As another application of the developed model, a

How performance analysis of elite long jumping can

How performance analysis of elite long jumping can inform representative training design through identification of key constraints on

Biomechanical comparison of the long jump of athletes with and

World class long jumpers with a below the knee amputation use a fundamentally different technique for long jump.

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## BIOMECHANICAL REPORT

After the formulation of the technical challenge of this event, and the description of the two major styles (opposition between production and restitution), it was possible to compare the differences in

Integrating biomechanical and motor control principles in

Integrating biomechanical and motor control principles in elite high jumpers: A transdisciplinary approach to enhancing sport performance

The Best Jump Spikes for Track & Field of 2025: Long

The Best High Jump Spike The high jump event is a test of precision and execution. From the approach, to the takeoff, to the flight and landing, a high

(PDF) Countermovement jump performance in elite male

The purpose of this study was threefold: (i) to compare CMJ performance between elite sprinters and high jumpers; (ii) to compare CMJ

Effects of 8-week complex and resistance training on strength ...

Abstract This study aimed to compare the effects of complex training (CT) and resistance training (RT) on lower-limb strength and power performance in adolescent long jumpers.

Effect of 12-week Training Program on the Fitness and Performance of ...

Conclusion: The EG demonstrated significant improvements in fitness and long jump performance compared to the CG, showcasing the effectiveness of the 12-week training program.

Long jump: the are body height and body weight good

Their achieved best results were analyzed. Pearson correlation coefficient was used to determine the relationship between body height and body

The techniques of elite male long jumpers

A model was developed to identify the characteristics of long jumping technique that determine the distance of the jump. The performances of the finalists in the TAC (U.S. national)

V. Panoutsakopoulos and I. A. Kollias. (2009) Biomechanical analysis

Abstract The purpose of the present study was to compare the technique of top Greek male and female long jumpers and to examine their technique using as reference biomechanical characteristics of elite

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