

Effect of Exercise *Barrier Hop and Jump to Box* To Improvement Power Muscle Kampung Jawa Regency Men's Volleyball Club Legs Greater Sumbawa in 2025

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Abstract

Ball volleyball is one of the branch a popular sport in Indonesia. Volleyball is also expected capable make it fragrant Name nation and state at *the event* International. Purpose study This For know There is or whether or not influence exercise *barrier hop and jump to box* to improvement power muscle legs volleyball club son of Kampung Jawa, Sumbawa Besar Regency in 2025 ". The sample used totaling 16 people, the data collection method uses method test actions as method the main thing , namely with stage test beginning before do exercise use *jump to box* and *barrier hop* (pre-test) and after exercise (post-test). Research test instrument For measuring muscle power legs with the vertical jump test , while method data analysis with use analysis statistics with t- test formula . From the results data analysis where treatment use *jump to box* there is significant influence where t- count more big from t- table ($4.849 > 1.895$) so based on In the above analysis , Ho is rejected and Ha is accepted. so conclusion from study This that is there is " The Effect of Exercise *Barrier Hop And Jump To Box* To Improvement Power Muscle The Leg of the Men's Volleyball Club of Kampung Jawa, Sumbawa Besar Regency in 2025" . Meanwhile, data analysis where treatment use *barrier hop* there is significant influence where t- count more big from t- table ($5.789 > 1.895$) so based on In the above analysis , Ho is rejected and Ha is accepted. so conclusion from study This that is There is Effect of Exercise *Barrier Hop And Jump To Box* To Improvement Power Muscle The Leg of the Men's Volleyball Club of Kampung Jawa, Sumbawa Besar Regency in 2025 .

Keywords : Exercise *Jump To Box* , *Barrier Hop*, Improvement Power Muscle Legs

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Introduction

Volleyball is one of the branch a popular sport in Indonesia . Volleyball is also expected capable make it fragrant Name nation and state at *the event* International . However fact show that volleyball achievements in West Nusa Tenggara in particular relatively Still low his achievements . In volleyball , it is needed various element condition physical , such as : strength , speed , agility , balance , power explosive / *power* and others . All component That needed For support activity game such as : *service, blocking, smash, and passing* . Height leap in a way the optimal vertical will be make it easier a athlete do *blocking* or *smash* .

With condition maximum physical condition one of very important factor influence ability a athletes in the branch the sport he is involved in . For develop condition physique somebody athlete can done a number of method different exercises . Exercise models is something effort For increase abilities and skills in a person athlete. Dangan good and varied methods expected can reach optimal performance . The main factor physique in exercise For increase Power explosion (*explosive power*) is focus on form strength muscle legs . Types of exercises that can used For increase power muscle legs is exercise plyometrics .

In principle exercise plyometrics based on the principle pre stretch muscles involved in a stage settlement on response or absorption shock from tension that is exerted muscle when work . Based on form exercise plyometrics member movement down , practice For increase leap without prefix can done with give training that can increase far and high jump , okay without tool and with tool . This is due to , practice plyometrics refers to the marked

exercises with contractions strong muscles as a fast and dynamic load response For stretching the muscles involved .

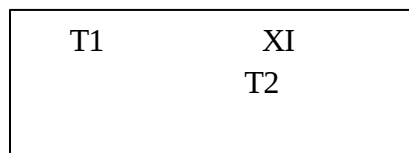
Volleyball club Putra Kampung Jawa, Sumbawa Besar Regency , is one of the activity units that Enough active in activity volleyball practice . Every activity process besides train techniques and tactics . Based on description or the description above about problem , then from That need existence study For increase *power* Muscle Legs on volleyball club said . The exercises that will be given For increase *power* Muscle Legs in the form of exercise plyometrics with entitled :” Effects of *Barrier Hop* Training And *Jump To Box* To Improvement *Power* Muscle The Legs of the Men's Volleyball Club of Kampung Jawa, Sumbawa Besar Regency in 2025 ”

Method

This research uses an experimental method with a quantitative approach. Experimental research requires selecting an appropriate design or pattern that aligns with the variables in the hypothetical problem being tested. Before assessing a sample, a *pre-test* is administered. to measure the initial conditions (T1), then the experimental group was given treatment (X) and then given a final test or *post-test* (T2).

The research design was carried out using *the Group Pre Test-Post Test Design* (Sugiyono , 20 21). Before being given treatment, the results of the treatment can be known more accurately because it can be compared with the conditions before the treatment. However, in this design there is no control group so the results of the increase after being given treatment are not necessarily from the treatment because it could be caused by other factors. From a methodological perspective, This design is in accordance with the reference and meets the requirements for this type of experimental research. This study aims to determine whether or not there is an effect of *barrier hop training. and jump to box* to increase *the power* of the leg muscles of the football club Kampung Jawa Boys Volleyball Sumbawa Besar Regency .

The research design is as follows:



Research Design (Maksum, 2009: 49)

Information:

T1 and T3 = *Pre-test* (initial leg muscle power test)

XI = *Treatment* (*jump to box* treatment)

XII = *Treatment* (*barrier hop* treatment)

T2 and T4 = *Post-test* (final leg muscle power test)

So that the differences in results due to the treatment given can be known with certainty (Maksum, 2009: 49). The data analysis technique used in study This is technique quantitative data analysis , meaning data that is tangible numbers numbers (Rianto, 2001: 104), Suitable data analysis techniques used For testing hypothesis is a T-test with level significant 5%. After the data is collected , the data will then be analyzed with procedure as following :

$$t = \frac{\sum d}{\sqrt{\frac{N \cdot \sum d^2 - (\sum D)^2}{(N - 1)}}$$

Information :

$\sum d$ = The difference between each partner score (*Post Test-Pre Test*)
 N = Number samples used

(Sugiyono , 2022)

Research result

From the results analysis of existing data significant , that : There is influence exercise jump to box and barrier hop against improvement *power* muscle legs at the volleyball club Son of Kampung Jawa, Sumbawa Besar Regency in 2025. With existence influence exercise jump to box against improvement *power* muscle legs , then exercise This must done in a way continuous , and exercise jump to destination box mainly is For practice leg and thigh muscles Because muscles trained body is muscle thigh part front , thigh part back , and muscles calf with use jump to box position body become stable Because exercise This give improvement *power* muscle leg components good physique influenced by the method training that leads to target exercise coordination , flexibility , speed , accuracy , and strength . All of them form exercise physique the each other related One with other things This Because *power* generated from coordination between Power explosion muscle with speed , because speed obtained from flexibility and power explosion maximum muscle can produced from exercise fitness physical Based on form indoor practice study This is *jump to box* and *barrier hop* are form proper exercise in increase ability Power explosion muscle legs so that players who have Power explosion muscle nice legs so ability in do the resulting smash and block very Good .

Conclusion

Based on the research results and discussion, researchers can conclude :

1. *jump to box* training on increasing leg muscle *power* . football club Kampung Jawa Boys Volleyball Sumbawa Besar Regency in 2025 .
2. *barrier hop* training on increasing leg muscle *power* . football club Kampung Jawa Boys Volleyball Sumbawa Besar Regency in 2025 .

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