Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of different methods of kinesio taping on hand grip strength and endurance of athletes

Protocol summary

Summary

From biomechanical point of view, the human hand has many functions, but the most important action of hand is griping. Grip was created as a result of the opposition of the thumb to the other fingers. Its importance is such that the other joints of the upper limb are at service of hand to determine its desired position . Grip strength in certain sports such as rock climbing, tennis, squash, badminton, table tennis, wrestling, judo, weightlifting, riding, fencing, etc. is very important. Kinesio tape is an adhesive tape with elastic properties which placed on the skin surface and can be pulled between 20 to 40 percent of its length. Researchers have suggested different effects for Kinesio tape including the protection of tissues, pain control, improving joint range of motion, increasing proprioceptive efficiency, improving muscle function by normalizing the muscular tension , facilitating the passive movement patterns, improve blood and lymph circulation and reduce swelling, improve performance through its support of weak muscles, and improving body kinematic and posture. Since Kinesio tape has been increasingly used by professional athletes in our country and also due to discrepancies in the kinesio tape effect on increasing muscle strength, a study was designed to examine the impact of kinesio tape on the hand grip strength and endurance in professional squash athletes. Inclusion criteria for the study included the following: Professional Squash Male & Female right hand dominant athletes , between 16-30 years with BMI (Body Mass Index) in the range of 20 to 25and do not use weight training for upper limbs in the recent 2 weeks. History of systemic disorders and positive data for injuries of the upper limb are among the study exclusion criteria. Intervention in this study is done by using three type kinesio tape in both the flexors and extensors areas of the forearm . 1-Kinesio tape with 50% stretch 2-Kinesio tape without stretch (placebo) 3-Without Kinesio tape Before the intervention, papers are provided which are written the type of kinesio tape on them. The type of Kinesio tape applied on the forearm is randomly selected for each athlete based on the paper which is selected by him/her. A hand dynamometer will be used to assess the main variables of the study, Grip Strength and Grip Endurance. It is worth noting that this study was conducted on a group of athletes. The three different types of kinesio tape (listed above) will be used for each athlete and the grip strength and endurance will be measured at above mentioned intervals.

General information

Acronym

Effect of kinesio taping on hand grip

IRCT registration information

IRCT registration number: **IRCT201406175486N4**
Registration date: **2014-10-14, 1393/07/22**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2014-10-14, 1393/07/22

Registrant information

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Iran University of Medical Sciences

Expected recruitment start date
2014-10-23, 1393/08/01
Expected recruitment end date
2015-10-23, 1394/08/01
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effect of different methods of kinesio taping on hand grip strength and endurance of athletes

Public title
The effect of different methods of kinesio taping on hand grip strength and endurance of athletes
Purpose
Other
Inclusion/Exclusion criteria
Inclusion Criteria : * Professional Squash Male & Female Athletes * Between 18-40 years * Dominant right hand. * BMI (Body Mass Index) in the range of 20 to 25 * Do not use weight training for upper limbs in the recent 2 weeks Exclusion Criteria : • History of systemic disorders • Positive data for nerve and muscle damages • Ligamentous injuries of the upper limb joints • Ligamentous laxity • History of fractures of the upper limb • Using steroids, drugs, alcohol • The athlete's desire to withdraw the study • Incomplete evaluation programs
Age
From **16 years** old to **30 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **30**
Randomization (investigator's opinion)
N/A
Randomization description
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Single
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Iran University of Medical Sciences
Street address
Hemmat highway-Iran University of Medical Sciences
City
Tehran
Postal code
Approval date
2014-09-29, 1393/07/07
Ethics committee reference number
24467

Health conditions studied

1

Description of health condition studied
The study of hand grip of athletes with kinesiotape
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Grip Strength
Timepoint
Before taping, immediately after taping and also after 30, 60 minutes later, and after removing Kinesiotape
Method of measurement
With dynamometer

2

Description
Grip Endurance
Timepoint
Before taping, immediately after taping and also after 30, 60 minutes later, and after removing Kinesiotape
Method of measurement
With dynamometer

Secondary outcomes

empty

Intervention groups

1

Description
The study was conducted on a group of athletes.The three different types of kinesio tape (listed below) will be used for each athlete and the grip strength and endurance will be measured at the mentioned intervals(before applying kinesio tape , immediately after kinesio taping , during kinesio taping and after removing kinesio tape). Intervention : Using Kinesiotape in forearam in

both the flexors and extensors areas of the forearm which will be conducted in three phases: 1-Kinesiotape with 50% stretch 2-Kinesiotape without stretch 3-Without Kinesiotape To determine the length of the Kinesiotape with 50% stretch , The forearm of subject will be put in supinated position with extension of elbow then the distance between medial epicondyle of elbow to anterior line of wrist is measured and multiplied by 0/83 to obtain the correct Kinesiotape length.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Sports Medicine Department, Rasoole Akram Hospital

Full name of responsible person

Dr Azar Moezy - Dr Linda Salmai Ghasemzadegan

Street address

Rasoule Akram Hospital, Sattarkhan Ave, Niayesh St,

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research -Iran University of Medical Sciences

Full name of responsible person

Ms Zahra Azvan

Street address

Hemat Highway-Iran University of Medical Sciences -

City

Tehran

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Vice Chancellor for Research -Iran University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Dr Azar Moezy

Position

PhD, assistant prof.

Other areas of specialty/work

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty
Study Protocol
empty
Statistical Analysis Plan
empty
Informed Consent Form
empty
Clinical Study Report
empty
Analytic Code
empty
Data Dictionary
empty