

Effects of a conventional versus an alternative therapy program in male youth soccer players with jumper's knee

Submission date 09/06/2021	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered
		<input type="checkbox"/> Protocol
Registration date 24/06/2021	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
Last Edited 24/06/2021	Condition category Musculoskeletal Diseases	<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Jumper's knee, also known as patellar tendonitis, is a condition characterized by inflammation of the patellar tendon. This connects the kneecap (patella) to the shin bone (tibia). Jumper's knee weakens the tendon, and, if untreated, can lead to tears in the tendon.

This study tested the effects of a conventional (CON) versus alternative (ALT) therapy program on physical, psychological, and injury-/pain-related parameters in soccer players with Jumper's knee were examined.

Who can participate?

Children (14 - 16yrs) with Jumper's knee

What does the study involve?

Balance, strength, and stretching exercises were conducted for 20 weeks with sessions of 30 or 60 minutes.

What are the possible benefits and risks of participating?

Possible benefits of participating were improved performance and less follow-up injury; possible risks of participating were fatigue-related decrements in balance and strength performance.

Where is the study run from?

University of Duisburg-Essen (Germany)

When is the study starting and how long is it expected to run for?

December 2018 to November 2019

Who is funding the study?

Open Access Publication Fund of the University of Duisburg-Essen (Germany)

Who is the main contact?

Marc Niering, marc.niering@arcor.de

Contact information

Type(s)

Scientific

Contact name

Mr Marc Niering

ORCID ID

<https://orcid.org/0000-0002-4707-2701>

Contact details

Gladbecker Str. 182

Essen

Germany

45141

+49 2011837333

marc.niering@arcor.de

Additional identifiers

Clinical Trials Information System (CTIS)

Nil known

ClinicalTrials.gov (NCT)

Nil known

Protocol serial number

Nil known

Study information

Scientific Title

Effects of a conventional versus an alternative therapy program on physical, psychological and injury-related parameters in sub-elite male youth soccer players with jumper's knee

Study objectives

The ALT- compared to the CON-group will show significantly

1. Better physical and psychological performances
2. Lesser values of injury-/pain-related parameters over the course of a soccer season.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 06/12/2018, Human Ethics Committee at the University of Duisburg-Essen, Faculty of Educational Sciences (Universitätsstraße 2, 45141 Essen; +49 2011837237; ethik-psychologie@uni-due.de), ref: none provided

Study design

Interventional randomized controlled trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Therapy of jumper's knee in sub-elite soccer players

Interventions

After a pain-related rest period (13.3 ± 4.1 days) the CON-group performed unilateral eccentric leg squats (3 sets of 20) on a flat surface, unilateral eccentric leg squats (3 sets of 20) on a decline board, static quadriceps and hip flexor stretching exercise (3 sets of 60 s). The sessions were conducted two to three times a week, lasted about 30 minutes and were supervised by a physical therapist.

The ALT-group performed unilateral balance exercises (4 sets of 30), Nordic hamstring exercise (4 sets of 10), isometric split squats (4 sets of 60s), isometric sumo squats (4 sets of 60s) on different unstable devices, Further difficulties like juggling, kicking a soccer ball, weights (1-20kg), as well as unexpected perturbations were added to adjust the exercises. The ALT-group also performed static quadriceps, hip flexor and hamstring stretch (3 sets of 60s).

The sessions were conducted three to four times a week, lasted about 60 minutes and were supervised by an athletic coach.

Intervention Type

Behavioural

Primary outcome(s)

Immediately after intervention; 6w, 16w, 20w follow-up:

1. Muscle power (Drop Jump, Jump and Reach test)
2. Change of Direction Speed (acyclic sprint)
3. Speed (FTT15 test, 30-m sprint)
4. Endurance (Yoyo Intermittent Recovery Test Level 1)

Key secondary outcome(s)

Immediately after intervention; 6w, 16w, 20w follow-up:

1. Achievement Motivation (Achievement Motive Scales-Sport)

Completion date

10/11/2019

Eligibility

Key inclusion criteria

1. Age 14 - 16 years
2. Diagnosis of Jumper's knee using ultrasound

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Child

Lower age limit

14 years

Upper age limit

16 years

Sex

Male

Total final enrolment

34

Key exclusion criteria

Does not meet inclusion criteria

Date of first enrolment

16/12/2018

Date of final enrolment

02/01/2019

Locations**Countries of recruitment**

Germany

Study participating centre

University of Duisburg-Essen

Gladbecker Str. 182

Essen

Germany

45141

Sponsor information**Organisation**

University of Duisburg-Essen

ROR

<https://ror.org/04mz5ra38>

Funder(s)

Funder type

University/education

Funder Name

Universität Duisburg-Essen

Alternative Name(s)

University of Duisburg-Essen, UDE

Funding Body Type

Government organisation

Funding Body Subtype

Universities (academic only)

Location

Germany

Results and Publications

Individual participant data (IPD) sharing plan

The current data sharing plans for this study are unknown and will be available at a later date.

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes