Influence of body posture on energy expenditure in brass and wind instrumentalists.

No registrations found.

Ethical review	Positive opinion
Status	Recruiting
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON24648

Source
NTR

Brief title
N/A

Health condition

Energy expenditure
Brass and wind instrumentalists
Postural exercise therapy according to Mensendieck / Cesar method
CANS (complaints arm, neck, shoulder)

Energiegebruik
Blaasmuzikanten
Houdingstherapie volgens methode Mensendieck / Cesar
KANS (klachten arm, nek, schouder)

Sponsors and support

Primary sponsor: drs. M.D.F. van Eijsden-Besseling
Source(s) of monetary or material Support: selffunding research:
drs. M.D.F. van Eijsden-Besseling
dhr. O. Girard, engineer-ergonomist

Intervention

Outcome measures

Primary outcome

Outcome is energy expenditure. This is measured by calculations of O2 en CO2 in the respiration chamber and expressed by using KJoules.

Secondary outcome

A secundary parameter is CO2 production (VCO2; ml/min).

Study description

Background summary

80% of professional music players develops musculoskeletal complaints during their career. The high physical demands of professional music players can be compared with athletes. Years of experience and literature studies show that postural exercise therapy can prevent and cure those complaints. Sports and fitness can help to prevent these complaints. Experience shows that an optimal body posture in music playing, in which there is a disconnection between the use of the muscles which are used for making music and the basic balance muscles, is more efficient from energetic point of view. Until now there is no evidence based research available proving this hypothesis.

The aim of this research is to try to link body posture in music playing with energy expenditure. Our hypothesis is that a correct body posture in brass and wind players is less energy consuming compared to an incorrect posture.

The research concerns a respiration chamber study. This is a pilot study in a cross-over design. The experimental subjects will be randomized in two groups. Group A starts making music for 1 hour in an incorrect posture, followed by a rest for half an hour, and subsequently making music for 1 hour in a correct position. Group B starts making music for an hour in a correct position, followed by a rest for half an hour and subsequently making music for 1 hour in an incorrect position.

The population consists of 18 musicians who play a brass or wind instrument and who have suffered from complaints of arm, neck and shoulder (CANS) in the near past. They were treated by a postural exercise therapist in the last year and are trained now to make music in

the correct body posture. They are still able to make music in the incorrect body posture.

The intervention is the correct music making posture compared to the incorrect music making posture.

Outcome is energy expenditure. This is measured by calculations of O2 en CO2 in the respiration chamber and expressed by using KJoules. A secundary parameter is CO2 production (VCO2; ml/min)

Study objective

A correct body posture in brass and wind players is less energy consuming compared to an incorrect posture.

Study design

N/A

Intervention

Postural exercise therapy.

Contacts

Public
Maastricht University
V. Baadjou
Maastricht University
Maastricht
The Netherlands
+31 (0)613050200
Scientific
Maastricht University
V. Baadjou
Maastricht University
Maastricht
The Netherlands
+31 (0)613050200

Eligibility criteria

Inclusion criteria

1. Brass/wind instrumentalists;

2. CANS in past year;

3. Postural exercise therapy in past year.

Exclusion criteria

1. Therapy more than 1 year ago;

2. Respiratory diseases;

3. Other muscoloskeletal injuries such as fibromyalgia/rheumatoid arthritis.

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Allocation:	Non controlled trial
Masking:	Open (masking not used)
Control:	Active

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	21-09-2009
Enrollment:	18
Type:	Anticipated

Ethics review

Positive opinion

Date:	03-08-2009
Application type:	First submission

Study registrations

Followed up by the following (possibly more current) registration

ID: 33276
Bron: ToetsingOnline
Titel:

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL1823
NTR-old	NTR1933
CCMO	NL28415.068.09
ISRCTN	ISRCTN wordt niet meer aangevraagd.
OMON	NL-OMON33276

Study results

Summary results
Eijsden-Besseling van MD, Staal JB, Attekum van A, de Bie RA, Heuvel van den WJA. No difference between postural exercises and strength and fitness exercises for early, non-specific, work-related upper limb disorders in visual display unit workers: a randomized trial. Australian Journal of Physiotherapy. 2008; Vol. 54 (2) pages 95-101.

Eijsden-Besseling van MD, Peeters FP, Reijnen JA& de Bie RA. Perfectionism and coping strategies as risk factors for the development of non-specific work-related upper limb disorders (WRULD). Occupational Medicine(London). 2004; 54 (2): 122-127.

JG Bloemsaat, GP van Galen, JM Ruijgrok, MDF van Eijsden-Besseling, RM Timmers.
Effects of cognitive load on forearm EMG response activity in individuals suffering from work related upper extremity disorder.
4th International Scientific Conference on Prevention of Work-related Musculoskeletal Disorders (pp 160) Amsterdam, 2001.