

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

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

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON24648

Bron

NTR

Verkorte titel

N/A

Aandoening

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)

Ondersteuning

Primaire sponsor: drs. M.D.F. van Eijdsden-Besseling

Overige ondersteuning: selffunding research:

drs. M.D.F. van Eijdsden-Besseling

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

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

Toelichting onderzoek

Achtergrond van het onderzoek

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 secondary parameter is CO₂ production (VCO₂; ml/min)

Doel van het onderzoek

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

Onderzoeksopzet

N/A

Onderzoeksproduct en/of interventie

Postural exercise therapy.

Contactpersonen

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1. Brass/wind instrumentalists;
2. CANS in past year;
3. Postural exercise therapy in past year.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

1. Therapy more than 1 year ago;
2. Respiratory diseases;
3. Other musculoskeletal injuries such as fibromyalgia/rheumatoid arthritis.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Toewijzing:	N.v.t. / één studie arm
Blinding:	Open / niet geblindeerd
Controle:	Geneesmiddel

Deelname

Nederland	
Status:	Werving gestart
(Verwachte) startdatum:	21-09-2009
Aantal proefpersonen:	18
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies

Datum: 03-08-2009

Soort: Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 33276

Bron: ToetsingOnline

Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

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

Resultaten

Samenvatting resultaten

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.