

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

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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. This hypotheses will...

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Tendon, ligament and cartilage disorders
Study type	Interventional

Summary

ID

NL-OMON33276

Source

ToetsingOnline

Brief title

Influence of body posture on energy expenditure in brass instrumentalists.

Condition

- Tendon, ligament and cartilage disorders

Synonym

CANS, work-related upper limb disorders

Research involving

Human

Sponsors and support

Primary sponsor: Medisch Universitair Ziekenhuis Maastricht

Source(s) of monetary or material Support: Persoonlijke bijdrage van een ergonoom en via onderzoeksgelden van projectsleider

Intervention

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

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 secondary 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.

Study objective

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. This hypotheses will be tested in our research.

Study design

The research concerns a respiration chamber study preceded by a literature study on the current knowledge about energy expenditure in wind and brass instrumentalists and a search for the pathophysiology of CANS in those instrumentalists.

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 1/2 hour in an incorrect posture, followed by a rest for an hour, and subsequently making music for 1/2 hour in a correct position. Group B starts making music for 1/2 hour in a correct position, followed by a rest for an hour and subsequently making music for 1/2 hour in an incorrect position.

Intervention

The intervention is the correct music making posture compared to the incorrect music making posture. For details about the posture see the appendix in the protocol.

Study burden and risks

There are no risks bound to the intervention. The change of posture has no risks. The risks of the respiration chamber concern the quality of the air. This is carefully monitored, so that in case of disturbance of air quality it is possible to react quickly. The investigation will stop then immediately. In case of emergency or panic the test person is able to open the doors from the inside of the room.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)

Elderly (65 years and older)

Inclusion criteria

brass / wind instrumentalists

CANS in past year

postural exercise therapy in past year

Exclusion criteria

therapy more than 1 year ago

respiratory diseases

other musculoskeletal injuries such as fibromyalgia / rheumatoid arthritis

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Allocation:	Randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Prevention

Recruitment

NL	
Recruitment status:	Recruitment stopped
Start date (anticipated):	22-09-2009
Enrollment:	18
Type:	Actual

Ethics review

Approved WMO

Date: 31-08-2009

Application type: First submission

Review commission: METC academisch ziekenhuis Maastricht/Universiteit Maastricht, METC azM/UM (Maastricht)

Approved WMO

Date: 28-10-2009

Application type: Amendment

Review commission: METC academisch ziekenhuis Maastricht/Universiteit Maastricht, METC azM/UM (Maastricht)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

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

ID: 24648

Source: NTR

Title:

In other registers

Register	ID
CCMO	NL28415.068.09
Other	NTR TC 1933
OMON	NL-OMON24648