

Clinical Trial Protocol

Iranian Registry of Clinical Trials

07 Jul 2026

Evaluation of the effects of co-exposure to noise, heat and physical workload changes on some functional and physiological indices

Protocol summary

Summary

Numerous studies suggested that high workload play important roles in fatigue, memory loss, and inappropriate performance in both processing and judging situation and also inability to learn. Low workload on the other hand, leads depression and lack of perception in special situation. Numerous studies showed the association of workload and blood pressure. Based on the air traffic study conducted by Rous and Fag, significant association between systolic and diastolic blood pressure, heart rate and cortisol level with workload in males were found. Workload is categorized in two different types: physical and mental which is measured regarding individual response to the job, communications between people and technology. Additionally, the evolution of workload is measured based on not only functional but also physiological and biomechanical factors. Due to health statuses is one of the most significant contributor to worker productivity, the aim of this study was to measure the effects of exposure to both hazards and non- hazards levels of sound, heat and physical workload variation on functional (attention, memory and time of response) and physiological (body temperature, blood pressure and heart rate) indexes in controlled laboratory condition.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016022615016N2**

Registration date: **2016-05-12, 1395/02/23**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2016-05-12, 1395/02/23

Registrant information

Name

Zahra Zamanian

Name of organization / entity

Shiraz University of Medical Sciences, School of Public Health

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Recruitment status

Recruitment complete

Funding source

Shiraz University of Medical Sciences

Expected recruitment start date

2016-03-05, 1394/12/15

Expected recruitment end date

2016-06-04, 1395/03/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of the effects of co-exposure to noise, heat and physical workload changes on some functional and physiological indices

Public title

Evaluation of the effects of co-exposure to noise, heat and physical workload changes on some functional and physiological indices

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: An informed consent was obtained

from all participants before the test was started. Participants were selected if they were in a stable condition, without any history of coronary artery diseases, neuromuscular, diabetes, asthma, smoking, conclusion, epilepsy, musculoskeletal, caffeine or alcohol use just 12 hours before the test was started and also not being professional athletes, with visual threshold about 20 regarding SNELEN chart and hearing threshold nearly <25 dB. Exclusion criteria: Those who did not assigned the informed consent, and also those who, in any stage of the study, reviled to have history of coronary artery diseases, neuromuscular, diabetes, asthma, smoking, conclusion, epilepsy, musculoskeletal, caffeine or alcohol use just 12 hours before the test was started and being professional athletes, without visual threshold about 20 regarding SNELEN chart and hearing threshold <25 dB.

Age

From **20 years** old to **27 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **35**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Shiraz University of Medical Sciences

Street address

Zand Street,Center of University Building

City

Shiraz

Postal code

7193714134

Approval date

2010-09-23, 1389/07/01

Ethics committee reference number

94/549599

Health conditions studied

1

Description of health condition studied

memory

ICD-10 code

R41

ICD-10 code description

Other symptoms and signs involving cognitive functions and awareness

2

Description of health condition studied

Attention

ICD-10 code

F73

ICD-10 code description

Profound mental retardation

3

Description of health condition studied

Blood pressure and body temprature

ICD-10 code

Z01.3

ICD-10 code description

Examination of blood pressure and body temprature

Primary outcomes

1

Description

Body Temprature

Timepoint

before study and after intervention

Method of measurement

Termometer

2

Description

blood presure

Timepoint

before study and after intervention

Method of measurement

plood pressure device

Secondary outcomes

empty

Intervention groups

1

Description

NOISE: 65 and 95 dB WBGT: 22 and 32 WORK

LOAD:slope 10% velocity 7.1 mph :slope 14% velocity 4.3 mph

Category

Other

Recruitment centers**1****Recruitment center****Name of recruitment center**

School of Health, Shiraz University of Medical sciences

Full name of responsible person

Zahra Zamanian

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

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Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Shiraz 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**

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Web page address

empty

Sharing plan

Informed Consent Form

empty

Deidentified Individual Participant Data Set (IPD)

Clinical Study Report

empty

empty

Study Protocol

Analytic Code

empty

empty

Data Dictionary

Statistical Analysis Plan

empty