Recovery

Published: 02-12-2008
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This study will investigate the possibility to use a physical and/or cognitive 2 bout exercise test to evaluate recovery/fitness of the subjects.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON32607

Source
ToetsingOnline

Brief title
Recovery

Condition

- Other condition

Synonym
overreaching

Health condition

inadequaat herstel (overreaching)

Research involving
Human

Sponsors and support

Primary sponsor: TNO
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: 2 bout test, Recovery, VO2 max

Outcome measures

Primary outcome

It is expected that sleep deprivation combined with strenuous exercise will increase the difference between the first and second bouts of cognitive and physical tests, which will result in differences in hormone level, oxidative stress and activity of the autonomic nervous system.

Secondary outcome

Oxidative stress parameters and immune function are followed in time to evaluate use of these as indicators for recovery. They will be compared with the results of differences in hormone levels and autonomic nervous system.

Study description

Background summary

Military people on a mission are subjected to physical exercise and cognitive tasks. During and between missions both tasks can lead to fatigue, but there are no objective tests to determine recovery / fitness of the military people. Objective tests to estimate the status of recovery / fitness of a person can be used as a tool to prevent a subject from more training (resulting in overtraining) or going on a mission.

Study objective

This study will investigate the possibility to use a physical and/or cognitive 2 bout exercise test to evaluate recovery/fitness of the subjects.

Study design

The study is designed as a repeated measurements test. All subjects will follow the same procedures. The study will be conducted within approximately 32 hours.

72 hours after the start of the experiment subjects will return to TNO for a sample of blood, urine and exhaled breath.

Intervention

All subjects will receive the following study procedures: a repeated two bout VO2max tests with cognitive tests and exhaled breath and blood pressure measurements. Subjects will not sleep during one night. During the night and during the next morning the subjects will perform a 10 minutes time trial on a bicycle ergometer.

Study burden and risks

Before the study, subjects will be screened, based on their medical history, to ascertain their health. After the screening, the subjects will visit TNO two times. Four VO2max tests within 24 hours combined with sleep deprivation and sub maximal exercise will induce fatigue and will not allow total recovery, but are not too strenuous for trained young and healthy subjects.

Contacts

Public
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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

- male
- 18-35 years of age at the start of the experiment
- well trained (at least training 2 times a week and participation in competative sports)
- non smoker (or stopped at least 2 years ago)
- familiar with VO2-max tests

Exclusion criteria

1 Participation in any clinical trial including blood sampling and/or administration of substances up to 30 days before Day 01 of this study
2 Having a history of medical or surgical events that may significantly affect the study.
3 Prescribed medication that may interfere with the study outcome
4 Alcohol consumption >28 units/week
5 Not having a general practitioner
6 Not willing to accept information-transfer concerning participation in the study, or information regarding his/her health, findings at anamnesis or physical examination and eventual adverse events to and from his general practition

Study design

Design

Study type: Interventional

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Recruitment stopped

Start date (anticipated):	02-12-2008
Enrollment:	8
Type:	Actual

Ethics review

Approved WMO Date:	02-12-2008
Application type:	First submission
Review commission:	METC Brabant (Tilburg)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

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

No registrations found.

In other registers

Register	ID
CCMO	NL26047.028.08