Shiftwork and Nutrition

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON43752

Source
ToetsingOnline

Brief title
@meal study

Condition

- Other condition
- Appetite and general nutritional disorders

Synonym
Fatigue, Shiftwork Metabolic Syndrom

Health condition

cognitief funcitoneren

Research involving
Human

Sponsors and support

Primary sponsor: Wageningen Universiteit
Source(s) of monetary or material Support: NWO,FNV-Menzis

Intervention

Keyword: Alertness, Circadian rhythms, Nutrition, Shiftwork

Outcome measures

Primary outcome

The main study parameters will be dietary intake and objective alertness

measured as total lapses.

Secondary outcome

Other study parameters will be subjective alertness measured in a score,

intestinal complaints, day sleep duration and quality of day sleep.

Study description

Background summary

The biological clock modulates physiological processes in the human body as a function of time. Human function is defined by activity during day time, and inactivity during night time. Shift workers, and especially nightshift workers, are dealing with a mismatch with their biological clock. This results in increased health (intestinal complaints, overweight, cardiovascular problems, sleep problems) and safety risks. For example in the nursing profession it is common to work in shifts. A number of studies reported an association between fatigue and the prevalence of incidents and medical errors. It has been shown that meal composition and frequency can enhance shift work related fatigue, performance and other health related issues such as sleep quality and physical complaints. However, the number of studies conducted so far, investigating the role of nutrients on cognition and performance as a function of time-of-day is limited. Moreover, the quality of research is incomprehensive, because of small sample sizes and detailed information on macronutrient composition and types of food is missing. This detailed information is needed in order to set up a proper intervention study

Study objective

The primary objective of this study is to investigate the relationship between diet composition, meal timing, and meal frequency with cognitive performance in nurses during a night shift setting.

Secondary objectives of this study are 1) to investigate the relationship between diet composition, meal timing and meal frequency with alertness, day sleep length and sleep quality, and gastrointestinal complaints in nurses during a night shift setting, 2) to check whether food consumption and physical activtiy of nurses who work the night shift meets the dietary guidelines and the Dutch standard for physical activity and 3) to gain insight in the working conditions, such as aspects of safety, health, and wellbeing in relation to food habits of nurses from hospital Gelderse Vallei and hospital Rijnstate.

Study design

This observational study will be conducted in nurses who work the night shift. Nurses are asked to complete 2 general questionnaires at the beginning and end of the 10 month study period. During the study period, nurses are asked to complete 5 times a 10-min Psychomotor Vigilance Task, 3 times a 24-recall and a questionnaire about intestinal complaints, subjective alertness and day sleep.

Study burden and risks

Participation in the study will not bring any risks. Also patient safety will not be jeopardized. The burden will be minimized. The only burden is the time investment. In total it will take about 4 hours distributed over 10 months. In these 10 months, participants are asked to complete 2 questionnaires at the beginning and end of the study, 3 times a 24-hour recall after their night shift and 5 times a 10-min vigilance test during the night shift.
Due to the observational design of the study participants will not receive short term benefits of the study. Though, at the end of the study participants receive the results of the Eetscore. These results will give more insight in the quality of their dietary intake and physical activity.

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

Working the night shift for at least 6 months
At least 18 years at time of recruitment
Not older than 67 at time of recruitment

Exclusion criteria

Having worked the night shift for less than 6 months.
Daily usage of drugs that could cause sleep problems.
Daily usage of drugs that treat or reduce insomnia.
Use of daylight lamps on the workplace.
Not having a Dutch eating pattern.
Current participation in other medical research.
Reported unexplained weight loss or weight gain of > 5 kg in the month prior to pre-study screening.

Study design

Design

Study type: Observational non invasive

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	12-02-2016
Enrollment:	180
Type:	Actual

Ethics review

Approved WMO Date:	01-12-2015
Application type:	First submission
Review commission:	METC Wageningen Universiteit (Wageningen)
Approved WMO Date:	18-11-2016
Application type:	Amendment
Review commission:	METC Wageningen Universiteit (Wageningen)

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	NL54414.081.15