

Smoking initiation and nicotine craving in adolescence: Testing gene-environment interactions

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

Summary

ID

NL-OMON33097

Source

ToetsingOnline

Brief title

Gene-environment interactions in the occurrence of nicotine craving

Condition

- Other condition

Synonym

smoking, substance use

Health condition

middelengebruik (nicotine)

Research involving

Human

Sponsors and support

Primary sponsor: Radboud Universiteit Nijmegen

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

Intervention

Keyword: Adolescence, Craving, Genes, Smoking

Outcome measures

Primary outcome

At each wave feelings of craving will be measured among adolescent smokers (or ex-smokers) using previously validated indicators for latent craving, cue-induced craving, current craving, and craving that comes on at a predictable interval after the last cigarette.

Secondary outcome

At each measurement parental and peer smoking will be assessed.

Study description

Background summary

Among adolescent novice smokers, nicotine dependence can develop rapidly. Of all dependence symptoms, craving is the most reported and the most prominent barrier for smoking cessation. The occurrence and development of craving in adolescent novice smokers has hardly been investigated. In research on substance dependence, attention for the causative roles of gene-environment interactions is increasing. The proposed study would be the first to identify specific genetic and environmental mechanisms that underlie the emergence of craving among novice smokers.

Study objective

In this study, two central tenets of the Sensitization-Homeostasis Model (SHM) will be tested. The first tenet is that the liability of developing nicotine dependence derives from nicotine's ability to stimulate neural pathways responsible for craving. In particular, activity in the dopaminergic system

appears to be associated with craving initiation. Variations in dopamine-related genes can cause differences in dopaminergic functioning in the brain, resulting in inter-individual differences in craving. The second tenet of the SHM is that environmental cues, such as seeing people smoke, can increase craving for nicotine. Based on the notions of the SHM, this study aims to elucidate the interaction between genetic influences and environmental influences on the emergence and progression of craving among adolescent novice smokers.

Study design

This study will have a six-wave longitudinal design. Self-report questionnaires will be completed in which information on adolescents' own smoking behaviour will be collected, as well as information on the exposure to smoking cues in daily life, such as smoking of their parents and friends. At the first wave, DNA samples will be collected by means of saliva and at each wave feelings of craving will be assessed among (ex)smokers.

Study burden and risks

Because participants are only asked to fill out questionnaires and to provide a small saliva sample only at the first wave, there is no risk and only a very small burden.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adolescents (12-15 years)

Adolescents (16-17 years)

Inclusion criteria

Adolescents in their first year of high school

Exclusion criteria

No elementary school children or high school students past their first year

Study design

Design

Study type: Observational non invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Basic science

Recruitment

NL

Recruitment status: Recruiting

Start date (anticipated): 09-01-2010

Enrollment: 1000

Type: Actual

Ethics review

Approved WMO

Date: 07-07-2009

Application type: First submission

Review commission: METIGG: Medisch Ethische Toetsingscommissie Instellingen
Geestelijke Gezondheidszorg (Utrecht)

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	NL27940.097.09