Occupational noise-induced hearing loss in Dutch dental practitioners

Published: 22-12-2014 Last updated: 21-04-2024

The purpose of this study is to investigate the prevalence of hearing impairment amongst dentists who are working in the Netherlands.

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

Summary

ID

NL-OMON41906

Source ToetsingOnline

Brief title NIHL in dentists

Condition

• Hearing disorders

Synonym hearing impairment, Noise-induced hearing loss

Research involving Human

Sponsors and support

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

Intervention

Keyword: dentists, NIHL, screening, speech-in-noise

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Outcome measures

Primary outcome

Test results (SRT scores) will be analysed for descriptive statistics.

Secondary outcome

Secondary study parameters that will be studied are sex, age, handedness,

duration of working activity, use of loud dental equipment and subjective

judgment about the personal hearing ability and complaints about hearing. The

exposure to recreational noise and the use of hearing protection devices (HPDs)

will be inventoried as potential bias factors.

Furthermore the BOC test results will be compared to the outcomes of the

pure-tone audiometry, at least for the participants with a positive test result

on the BOC.

Study description

Background summary

During their daily clinical routines, dentists have been using loud equipment. Studies where sound pressure levels of dental equipment was measured have found levels up to 99,5 dB. Even though dental equipment exceeds noise levels of 85 dB(A), little is known about the time weighted average noise exposure of the Dutch dentists. Several factors suggest that dentists working in the Netherlands are at risk of developing occupational NIHL. Unfortunately, no objective data about the condition of their hearing is currently known.

Study objective

The purpose of this study is to investigate the prevalence of hearing impairment amongst dentists who are working in the Netherlands.

Study design

A cross-sectional study design will be followed to objectify the hearing ability of dental practitioners and a group of health care professionals that are not exposed to occupational noise (ideally general practitioners). Data collecting will consist of three parts, whereof two are taken online. Quantitative and objective data regarding speech reception in noise will be obtained by the participants* responses to an online hearing test. Qualitative or subjective data will be obtained using an online questionnaire. Depending on the outcome of the BOC, a subset of the participants that have an unfavourable outcome will be invited to take a pure-tone audiometry test to further explore the type and most likely cause of the hearing loss.

Study burden and risks

Since this study is observational, the burden for the patient is minimal. The majority of the participants will perform short and easy online tests that can be done at home at a day and time convenient to the participant. If a pure-tone audiometry test will be done, this will be similar or equal to those done in clinical practice.

Contacts

Public Academisch Medisch Centrum

Meibergdreef 9 Amsterdam 1105 AZ NL **Scientific** Academisch Medisch Centrum

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

Graduate dentists and health care professionals Working in general practice in the Netherlands Age 20 to 70 Native speaker of the Dutch language

Exclusion criteria

Language problems General disorders or use of medication that are known for influencing the hearing sensitivity Extensive exposure from leisure activities

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Diagnostic

Recruitment

NL	
Recruitment status:	Recruitment stopped
Start date (anticipated):	22-04-2015
Enrollment:	398
Туре:	Actual

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Ethics review

Approved WMO Date: Application type: Review commission:

22-12-2014 First submission METC Amsterdam UMC

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 CCMO ID NL51568.018.14