Speech intelligibility in noise with and without advanced signal processing

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The study objected to tree hypotheses which had to be evaluated: speech intelligibility is dependent of type of background noise, speech intelligibility is dependent of the noise level, and compression can improve the speech intelligibility in...

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

Summary

ID

NL-OMON32418

Source
ToetsingOnline

Brief title
speech intelligibility in noise

Condition

- Other condition

Synonym
hearing impairment, speech perception in noise

Health condition

gehoor aandoeningen

Research involving
Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum
Source(s) of monetary or material Support: Stichting Aero

Intervention

Keyword: compression, noise reduction, Speech intelligibility

Outcome measures

Primary outcome

stationairy and non-stationairy background noise, and compression

Secondary outcome

n.v.t.

Study description

Background summary

The speech intelligibility in normal hearing and hearing impaired listeners is to be tested in quiet, stationary noise, and non-stationary noise with and without advanced signal processing algorithms. Recent studies have shown that signal processing algorithms such as compression can improve the speech intelligibility in normal hearing listeners in non-stationary background noise. To what extent this is applicable for listeners with a hearing impairment is unknown.

Study objective

The study objected to tree hypotheses which had to be evaluated: speech intelligibility is dependent of type of background noise, speech intelligibility is dependent of the noise level, and compression can improve the speech intelligibility in normal and hearing impaired listeners in non-stationary background noise.

Study design

The speech intelligibility is measured in stationairy and non/stationairy background noise with and without advanced signal processing algorithms.

Study burden and risks

n.v.t.

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

hearing impaired

Exclusion criteria

age > 80 years

Study design

Design

Study type:	Observational non invasive
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Single blinded (masking used)
Control:	Active
Primary purpose:	Other

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-04-2008
Enrollment:	80
Type:	Anticipated

Medical products/devices used

Generic name:	hearing aids
Registration:	Yes - CE intended use

Ethics review

Approved WMO

Application type:	First submission
Review commission:	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	ID
CCMO	NL22184.018.08