# Hearing with two ears: Enhancement strategies for bilateral hearing in hearing-impaired subjects

Published: 30-01-2019
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To investigate the effect of new hearing aid processing techniques on speech understanding and sound localization in bimodal listeners

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

## Summary

### ID

NL-OMON46333

**Source**
ToetsingOnline

**Brief title**
Bimodal Enhancement Strategies

### Condition

- Hearing disorders

**Synonym**
profound deafness; postlingual hearing loss

**Research involving**
Human

### Sponsors and support

**Primary sponsor:** Radboud Universiteit Nijmegen
**Source(s) of monetary or material Support:** Advanced Bionics,bedrijf: Advanced Bionics

## Intervention

**Keyword:** Bimodal hearing, Cochlear Implant, Hearing aid, Sound localization

## Outcome measures

### Primary outcome

difference in sound localization and speech understanding in the different

experimental conditions compared to a baseline

### Secondary outcome

-

# Study description

### Background summary

Hearing-impaired listeners with a cochlear implant in one ear and a hearing aid in the other ear continue to face significant challenges in daily life, especially in sound localization or listening in noisy environments. We hypothesize that hearing performance of this group can be improved by a better fitting and programming of the hearing devices. These tehcniques could also be beneficial for users of bilateral hearing aids.

### Study objective

To investigate the effect of new hearing aid processing techniques on speech understanding and sound localization in bimodal listeners

### Study design

Acute tests with within-subject comparisons

### Study burden and risks

The risks of this study are negligible. All experiments occur in an acute setting and participants continue to wear their personal devices outside of the experiments. We do not expect a direct benefit for the participants of this study.

# Contacts

**Public**
Radboud Universiteit Nijmegen

Toernooiveld 210
Nijmegen 6525 EC
NL
**Scientific**
Radboud Universiteit Nijmegen

Toernooiveld 210
Nijmegen 6525 EC
NL

# Trial sites

## Listed location countries

Netherlands

# Eligibility criteria

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

## Inclusion criteria

Group A (10 subjects): Wears a cochlear implant in 1 ear and has residual hearing contralateral ear
Group B (10 subjects): wears bilateral hearing aids and has auditory thresholds that fit cochlear implant eligibility criteria

## Exclusion criteria

prelingual deafness
non-use of Hearing Aid

# Study design

## Design

**Study type:** Observational non invasive

| | |
|---|---|
| Masking: | Open (masking not used) |
| Control: | Uncontrolled |
| Primary purpose: | Treatment |

## Recruitment

NL

| | |
|---|---|
| Recruitment status: | Recruitment stopped |
| Start date (anticipated): | 08-08-2019 |
| Enrollment: | 10 |
| Type: | Actual |

# Ethics review

Approved WMO

| | |
|---|---|
| Date: | 30-01-2019 |
| Application type: | First submission |
| Review commission: | CMO regio Arnhem-Nijmegen (Nijmegen) |

# 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 | NL67392.091.18 |

# Study results

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| --- | --- |
| Date completed: | 20-10-2022 |
| Results posted: | 24-02-2021 |
| Actual enrolment: | 20 |

**Summary results**
Trial is onging in other countries

**First publication**
01-01-1900