



**MEDICAL AND
HEALTH SCIENCES**
SCHOOL OF POPULATION HEALTH

Department of Audiology
Faculty of Medical and Health Sciences
School of Population Health

Level 2, Building 507, School of
Population Health
Faculty of Medical and Health
Sciences
Grafton Campus
22-30 Park Ave
Grafton
audiology@auckland.ac.nz

The University of Auckland
Private Bag 92019
Auckland 1142
New Zealand

PARTICIPANT INFORMATION SHEET

Project Title: The impact of cochlear implantation on cognitive function in adults

Researcher: Connie Loi, Master of Audiology student, University of Auckland

Principle Investigator (Supervisor): Dr. David Welch, Department of Audiology, School of Population Health, University of Auckland

Project Description and Invitation

This research aims to investigate the association between hearing ability and cognitive function in adults. We will be assessing aspects of cognitive function including working memory, attention, encoding, auditory processing, verbal comprehension and mental manipulation. We will obtain this information by inviting you to complete some cognitive tasks that are similar to puzzle-like tasks, and also using your existing hearing data from your clinical records (if applicable).

We aim to compare the outcomes of these measures between four groups of participants: adults who currently have cochlear implants, adults awaiting cochlear implantation, adults who have normal hearing, and adults who have normal hearing with simulated hearing loss.

We would like to invite you to participate in this study if you are currently using a cochlear implant (for 6 months or more), are currently on the waiting list for cochlear implantation, or if you are an adult whose hearing is normal.

For participants with normal hearing, we will administer a short hearing screening (up to 15 minutes) at the start of session. For the testing, we will randomly assign you into either the control group or hearing loss simulation group. Hearing loss simulation will be carried out through recordings of the

student researcher's speech, where the recordings will be presented electronically through a filter created by a computer. The filter creates a distortion (e.g reduced frequency resolution) and reduces the sound level of the recordings to a degree that is similar to a severe hearing loss. The distorted recordings will then be presented to the participants through insert earphones that are widely used in audiology clinics.

For cochlear implant users and those who are currently on the cochlear implantation waiting list, we will also obtain existing hearing data from clinical records at the Hearing House for research purposes. During the session, we will ask a few questions including:

- Date of birth and or age
- Duration of hearing loss since onset (if applicable)
- Implantation date and duration (if applicable)

Location, Duration, Reimbursement:

Testing will take place at **Building 507 of The University of Auckland Grafton Campus**, located at **22-30 Park Ave, Grafton**. Testing will take up to 2 hours of your time (including rest breaks) in a one-off session. You will be reimbursed with a \$10 petrol or supermarket voucher for your participation in the research, regardless of whether or not you complete all parts of testing.

Data Collection, Retention, and Privacy

With your consent, data will be stored confidentially in digital form on a password-protected computer, and will be retained indefinitely for research purposes. Results from this research information which may reveal your identity will not be presented at any time. The summarised findings will be published in a Master's thesis and may be potentially used in scientific literature and/or presentations.

Right to Withdraw from Participation

Participation in this study is entirely voluntary. If for any reason you choose not to continue participating, at any point, you have the right to withdraw yourself and any information you have provided during the session, up until one month after recruitment.

Outcomes of Study

All participants will have the opportunity to view the results from this study. As with all publications of the work, this will be a summary of findings and no individuals will be identified. If you would like to receive this summary report after completion of the study, please indicate by circling 'Yes' on the consent form.

For normal hearing participants, if a hearing loss is found during hearing screening, we will recommend you to see an audiologist for a full diagnostic hearing assessment and/or other specialist who may be able to assess and help with your hearing loss.

Contact details:

If you have any concerns or questions regarding this study, please contact the following:

Connie Loi, Co-investigator, Master of Audiology student, University of Auckland

E-mail: cloi408@aucklanduni.ac.nz

David Welch, Principal investigator (supervisor), Department of Audiology, School of Population Health, University of Auckland.

E-mail: d.welch@auckland.ac.nz

Contact phone: (09) 923 8404

Prof. Robert Scragg, Head of School, School of Population Health, University of Auckland.

E-mail: r.scragg@auckland.ac.nz

Contact phone: (09) 923 6336

If you have any questions or concerns regarding ethical concerns, you may contact the following:

The Chair, The Auckland Health Research Ethics Committee (AHREC), The University of Auckland, Research Office, Private Bag 92019, Auckland 1142.

E-mail: ahrec@auckland.ac.nz

Contact phone: (09) 373 7599 x 83711

Approved by the Auckland Health Research Ethics Committee on 14/10/2021 for three years.

Reference number AH22816.