

Case studies of children with cochlear implant rehabilitation therapy, in the Netherlands

Title of the case study: Tijs

General data on the case:

- **Biographical and case identification data** – Tijs is a 2-year-old boy who was born deaf. He has an older brother. He has received two implants. All of his family members are hearing.

Tijs' deafness was caused by the CMV virus (cytomegalovirus). At first they tried hearing aids, but the audiologist predicted that it wouldn't be enough. Tijs had minimal brain activity at 100dB. His parents explored the possibilities of CI. They also met with a teacher of sign language. This was challenging for them. Having learned that was fairly easy for Tijs to communicate made them embarrassed about their own insecurities. They also had the chance to meet other parents whose children had received an implant.

- Case history (Anamnesis):

- **Significant medical data** – hearing loss detected by Neonatal Hearing Screening; congenital deafness caused by the CMV virus
- **Significant psychological data** – hearing direction and hearing in noisy environments is well managed by the use of the CI. He can understand spoken language well. Parents use spoken Dutch combined with gestures and sign language.
- **Educational setting:** Tijs is too young for school, but the plan is for him to have a normal education. He currently attends a regular daycare.
- **Significant social data** – parents use spoken Dutch combined with gestures and sign language.
- **Age of fitting the first hearing aids and cochlear implants:** 11 months
- **How often and what kind of support/rehabilitation does the child/family receive?** At the moment Tijs exhibits a language and motor delay in his development. At the daycare, they offer support in sign language combined with spoken language. Progress is good. First words and sentences are developing. Tijs feels well.

The implantation

- **age when undergoing first cochlear implantation (left or right side):** at the age of 11 months Tijs received bilateral implants; the speech processor is worn under his clothes, not behind the ear
- **type of implant:** Advanced Bionics, Naida CI (also using aqua case)
- **number of implants (CI and hearing aids):** 2 implants
- **current average duration of the CI use (information from the audiologists):** he wears them most of the day; in the beginning, he took them out often.

What is the procedure for starting speech therapy after CI? (actors involved, what is needed)

After implantation, the speech and language therapist of the CI team starts the hearing training. This is the official rehabilitation program. Parents do not need to do anything for this; it is standard



The Speech Therapy used in the rehabilitation

The therapy is the standard rehabilitation hearing training, given by the speech and language therapist involved in the CI team. Sessions are more frequent at the beginning of the program and then their number decreases as therapy progresses.

Results

<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • <i>2 implants at a young age</i> • <i>parents are motivated</i> • <i>standard rehabilitation at a young age</i> • <i>parental guidance</i> • <i>attends a regular day-care</i> 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • <i>language and motor delay</i>
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • <i>the support programs used</i> • <i>the engagement of the family</i> 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • <i>taking the ci off in the beginning</i> • <i>losing part of the implant as a result of taking it off too often</i>

