



EXECUTIVE SUMMARY

# (Re)habilitation in Adults



Treatment process in patients referred to a cochlear implant centre

Preoperative Assessment	Surgery and In-patient Care	Postoperative care
Medical	Multidisciplinary Team	Fitting + Tuning
Audiological	Clinical Facilities	Rehabilitation + Assessment
Hearing Aid Evaluation		Follow-up + Long Term Maintenance
Communication		
Psychological Status		
Information + Counselling		

## Key points

- (Re)habilitation helps CI recipients obtain maximum possible benefit from their implants.
- Family (e.g. partner/spouse, adult children) of the CI recipients should be actively involved in the (re)habilitation process to maximize the outcome.
- A successful (re)habilitation process requires both standardized protocols that professionals involved in the (re)habilitation process adhere to AND a flexible customized approach to respond to the individual CI recipient's needs.
- (Re)habilitation support to adults can be provided either on an individual basis or on a group basis.
- Counselling is important to avoid unrealistic expectations regarding auditory perception, speech and language development, and educational progress.

### **Who?**

A multi-disciplinary approach to the care of implant recipients should include an aural rehabilitation specialist.

This professional is an individual with

- focused training the fields of speech-language pathology, deaf education, and/or audiology, and
- clinical experience in developing the audition, speech, language and/or communication skills of individuals with hearing loss.

### **When?**

Traditionally, rehabilitation is perceived as a cornerstone of follow-up care after implantation; however, a person-centered intervention approach demands a shared decision-making process which relies heavily on expectations, counseling, and even treatment provided during the pre-operative care stage. An optimal rehabilitation program begins before implantation once candidacy has been established.

### **Where?**

- Each CI centre offers person-centred care including flexible, traditional clinic-based services and/or remote rehabilitation through software applications (e.g., live synchronized online therapy, smartphone or tablet-based self-paced application, and asynchronous video sharing)
- Counselling is important to align and set realistic expectations regarding auditory perception, speech and language development, and occupational progress. Counselling should occur pre-operatively and post-activation in an ongoing manner.

## Team structure


- The (re)habilitation team ideally involves a multidisciplinary team comprising a team coordinator and rehabilitation therapists with different backgrounds.
- All team members should be regularly trained in developments in the field of cochlear implantation and in awareness of all aspects related to working with people with hearing loss.
- A successful (re)habilitation team may also benefit from the inclusion of professionals from other fields, e.g. a psychologist or social worker.
- The members of the (re)habilitation team should meet on a regular basis to ensure effective internal communication and high-quality service. They should maintain contact with the CI team, the referring agent, the GP, the local professionals, and other services if possible and if need be.

## Accommodation

- Proper and easily accessible accommodation should be provided to ensure undisturbed counselling and treatment.







## Preoperative assessment and counselling<sup>1</sup>

- The (re)habilitation team should provide information in a clear and understandable manner. This may also involve interpreters and/or written summaries in addition to verbal counselling.
- The counselling process should also include the aspect of device selection.
- Preoperative counselling to adults should involve assessment of the individual's communication and psychological status, information on associated organizations, and scheduling a final discussion for the end of the assessment period.



## Postoperative (re)habilitation and assessment

- Postoperative (re)habilitation should begin immediately after first fitting, in accordance with the CI recipient's individual needs.<sup>1</sup>
- Postoperative (re)habilitation is always recommended for CI recipients regardless of the nature of the implant (e.g. SSD), even for short-term period to foster comfort with the device, self-advocacy, communication strategies, and well-being in different listening situations.<sup>1</sup>
- Postoperative care of adults should focus on goal setting and therapy programmes. The therapy program should be customized to the CI recipient's goals.<sup>1</sup>
- In-patient (re)habilitation shortly after cochlear implantation may expedite improved postoperative hearing outcomes.<sup>2</sup>
- Remote (re)habilitation may be a welcome alternative to face-to-face sessions in long-term adult (re)habilitation.<sup>3</sup>
- Computer-based training programs may be an effective option for auditory rehabilitation in CI patients.<sup>4</sup>



## References

- <sup>1</sup> Martin J. Quality standards for (re)habilitation. Cochlear Implants Int. 2013. 14 Suppl 2:S34-8.
- <sup>2</sup> Bruschke S, Zeh R, Baumann U, et al. Frankfurter Konzept einer stationären Cochleaimplantat-Frührehabilitation : Untersuchung zur Durchführbarkeit als Anschlussheilbehandlung [Frankfurt concept of early inpatient rehabilitation after cochlear implant treatment : Feasibility for aftercare. German version]. HNO. 2024. 72(6), 412-422.
- <sup>3</sup> Carter JM, Killan CF, & Ridgwell JJ. Telehealth rehabilitation for adults with cochlear implants in response to the Covid-19 pandemic: platform selection and case studies. Cochlear implants international. 2022. 23(1), 43-51.
- <sup>4</sup> Völter C, Schirmer C, Stöckmann C, et al. Computerbasiertes Hörtraining in der Hörrehabilitation Erwachsener nach Cochleaimplantation [Computer-based auditory training for hearing rehabilitation of adult cochlear implant users]. HNO. 2020. 68(11), 817-827.

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