Occlumatic White Paper

Audio Service fittings with Occlumatic results in 24% fewer returns.

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Audio Service

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Antecedent

Hearing one's own voice through an external source — whether a loudspeaker, audio recording, or processed via hearing aids — can sound unnatural. This effect is experienced even by people with normal hearing when they listen to a recording of themselves.

For hearing aid wearers, adapting to the sound of their own voice can take time and may cause distraction. This can make it harder to focus on conversations or environmental sounds around them.

Solution

Since 2017, Audio Service hearing aids have included the Occlumatic feature designed to:

- Detect the wearer's voice in real time.
- Process it independently from other voices and environmental sounds.
- Attenuate the own voice signal to provide a more comfortable, natural perception.

This approach helps wearers focus on external conversations instead of being distracted by the sound of their own voice.

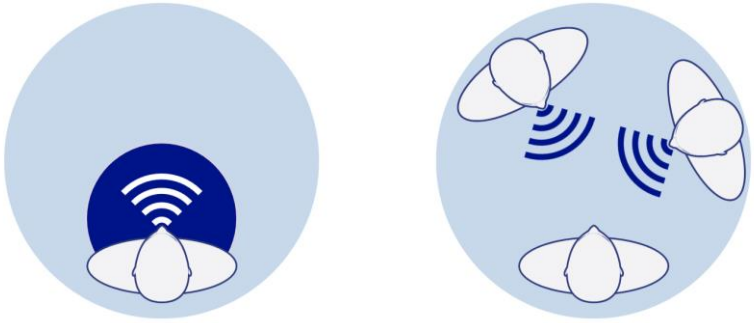

Figure 1. Representation of the voice detection feature. Detection of the wearer's own voice with Occlumatic (left) and other voices from the conversation partners (right).

Various studies over the years have confirmed the positive impact of the Occlumatic feature, especially in first-fit appointments [1, 2].

Data also suggests that enabling this feature can reduce discomfort with own voice perception, even when closed acoustic couplings are used [3].

After 8 years of market availability the Hearing Care Professionals (HCPs) have become more familiar with the fitting process and the associated training in fitting software.

Procedure

A data analytic study was conducted to assess the impact of the Occlumatic feature after a prolonged period of use.

Study Design:

- 3,013 wearers were given a 60-day trial before deciding to keep or return the hearing aids free of charge.
- Pseudonymized data from fitting software was cross-referenced with returned hearing aid serial numbers, confirming wearers confidentiality.

Study Scope:

- Data collected across different WSA retail facilities in America.
- Initial fittings performed between June 2024 and August 2025.
- Returned device reports collected up to October 2025.

Inclusion Criteria:

- Bilateral fittings.
- Hearing aids at higher Tech Levels with Occlumatic capability.
- No in-the-ear devices.
- No additional demographic or audiometric filtering applied.

Analysis

The results show a reduced return rate when the Occlumatic feature was trained and enabled. Fittings with Occlumatic had about 24% fewer returns compared to fittings without the feature.

Sub-category analysis suggests the strongest benefits for first-time wearers compared to experienced wearers, as well as for subjects with preserved low-frequency hearing thresholds.

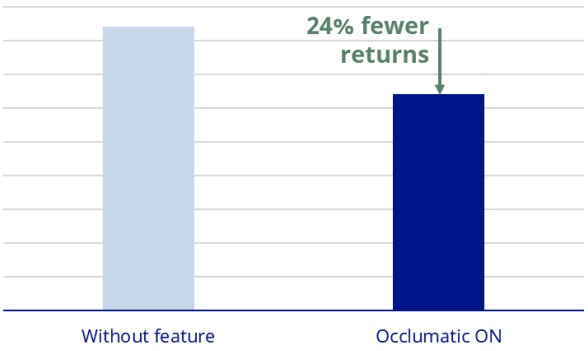

Figure 2. Reduction in return rate for fittings enabled with Occlumatic compared to fittings without the feature.

Results

The study suggests that the use of Occlumatic feature is associated with lower return rates, which may indicate higher long-term wearer satisfaction.

Not all HCPs consistently train the Occlumatic feature during the first-fit appointment; the data highlights an untapped potential for reduced return rates and increased wearer's satisfaction through broader Occlumatic adoption.

References

1. Høydal EH. A new own voice processing system for optimizing communication. Hearing Review. 2017;24(11):20-22.
2. Powers T, Froehlich M, Branda E, Weber J. Clinical study shows significant benefit of own voice processing. Hearing Review. 2018;25(2):30-34.
3. Froehlich, M., Powers, T., Branda, E., & Weber, J. (2018, April). Perception of own voice wearing hearing aids: why "natural" is the new normal. AudiologyOnline, Article 22822. Retrieved from www.audiologyonline.com

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www.audioservice.com