



Better Hearing Through Research

In a hearing study conducted with researchers at Northwestern University, and funded by the National Institutes of Health and Bose¹

Bose CustomTune™ technology was clinically proven to provide audiologist-quality customization.

The research also found:

- CustomTune™ users were happier with sound quality compared to prescription-fit users¹
- On average, there was no difference in hearing-in-noise performance or hearing benefit between Bose CustomTune™ and prescription-fit.¹

1. Validation of a Self-Fitting Method for Over-the-Counter Hearing Aids

Sabin AT, Van Tasell DJ, Rabinowitz B, Dhar S. Trends in Hearing. January 2020. doi:[10.1177/2331216519900589](https://doi.org/10.1177/2331216519900589)

MANUSCRIPT SUMMARY

Background

In common practice, hearing aids are fitted by a clinician who measures an audiogram and uses it to generate prescriptive gain and output targets.

Study objectives

This study investigated an alternative fitting method where users select their own signal processing parameters using an interface consisting of two wheels that optimally map to simultaneous control of gain and compression in each frequency band via a pragmatic real-world (take home) field trial.

Methods

Seventy-five participants with hearing loss were fitted using clinical best practices (audiogram, fit to target, real-ear verification, and subsequent fine tuning). Then, in their everyday lives over the course of a month, participants either selected their own parameters using this new (CustomTune™) interface (Self group; n = 38) or used the parameters selected by the clinician with limited control (Audiologist Best Practices group; n = 37).

Results

On average, the gain selected by the Self group was within 1.8 dB overall and 5.6 dB per band of that selected by the audiologist. Participants in the Self group reported better sound quality than did those in the Audiologist Best Practices group. In blind sound quality comparisons conducted in the field, participants in the Self group preferred the parameters they selected over those selected by the clinician. Finally, there were no differences between groups in terms of standard clinical measures of hearing aid benefit or speech perception in noise.

Conclusions

Overall, the results indicate that it is possible for users to select effective amplification parameters by themselves using a simple interface that maps to key hearing aid signal processing parameters.

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¹ Sabin AT, Van Tasell DJ, Rabinowitz B, Dhar S. Validation of a Self-Fitting Method for Over-the-Counter Hearing Aids. *Trends in Hearing*. January 2020.

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