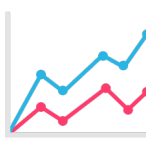


Hearables : Hype or Reality ?



What Manufacturers Say
Advanced features **promise** better speech perception.



What We Know
Only **3 studies** show **7 to 14 %** improvement in speech-in-noise perception for mild to moderate hearing loss.^{1,2,3}

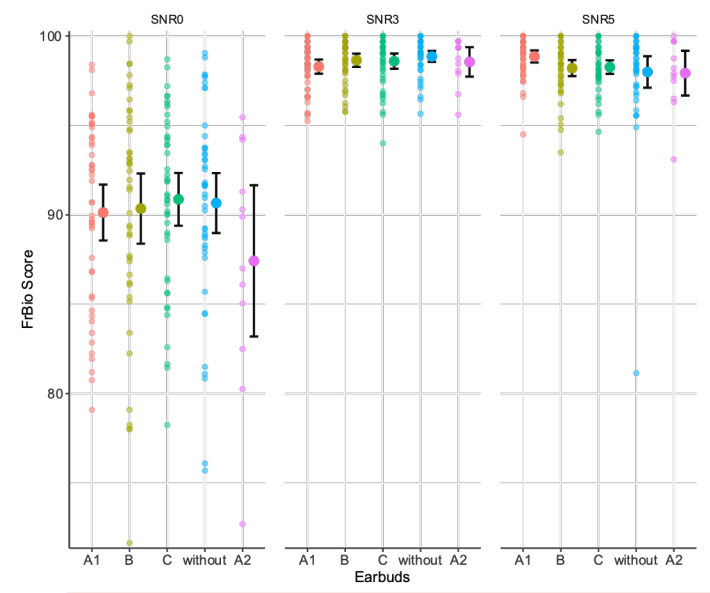


Missing Information
No studies for people with normal hearing, who are the main audience for these devices.



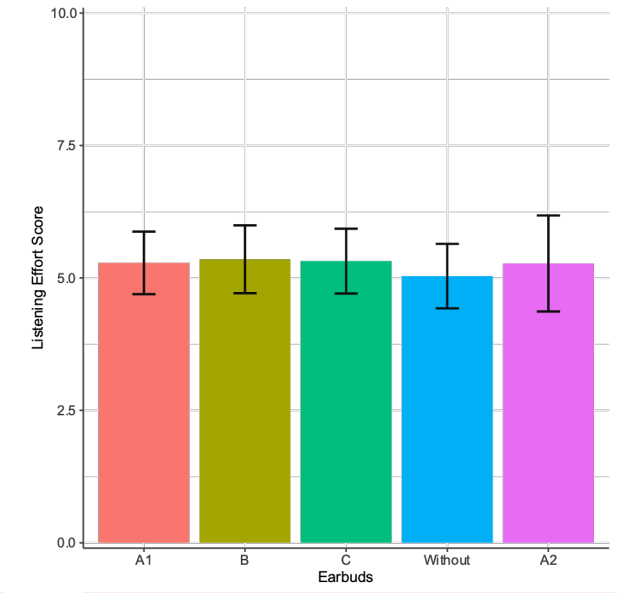
Need for Research
More data is needed on **real-world performance** to inform users.

Figure 1. Speech in noise recognition score for each hearable devices and no device



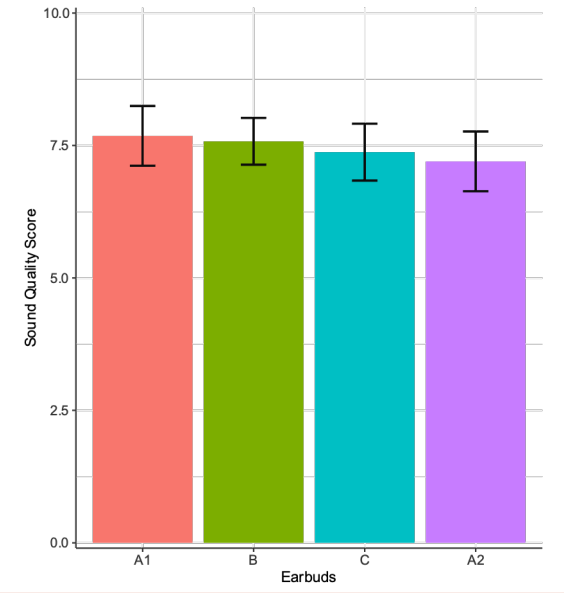
- No differences in performance between aided and unaided conditions
- No differences between devices

Figure 2. Perceived listening effort for each hearable device and no device



- No difference in perceived listening effort between the various modes.
- No significant differences in the participants' ratings of hearing quality

Figure 3. Perceived sound quality for each hearable device



Methods

Participants
45 Normal-hearing healthy controls

Speech in Noise Measurement
FrBio (French version of AzBio)⁴
Immersion 360° system⁵

Devices

- Apple Airpods Pro (A1, A2)
- Samsung's Galaxy Buds2 Pro (B)
- Jabra's Elite 7 Pro (C)
- No device (without)

Conditions

Noise Level	Environment
+5 dB SNR	Restaurant
+ 3 dB SNR	Bowling Alley
+0 dB SNR	Busy Restaurant

Conclusions

These findings suggest that hearable devices did not provide the expected benefits under the tested conditions.

- No benefits in speech recognition or perceived listening effort for hearable devices compared to unaided conditions.
- No differences in performance, perceived listening effort, or perceived sound quality between the various devices
- No degradation of auditory capabilities with any hearable device
- Expected results in normal-hearing individuals

Sarah Sadi, M.Aud

- ✉ Sarah.sadi.1@ulaval.ca
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