When dividing new and experienced participants into two groups based on their 4FA hearing loss, using 43 dB HL (the average 4FA hearing loss of the new and experienced users in this study), there was a significant difference in the average preferred gain relative to NAL NL1 at 3 weeks (F(1, 113) = 8.7, p < 0.01). No significant difference in the average preferred gain was observed between the two groups at 12 months (F(1, 113) = 0.59, p = 0.44). Generally, 60% of the participants preferred NAL NL1 with a 4% cut and 38% preferred NAL NL1 with a 2 dB cut. The percentage of new hearing aid users who evaluated NAL NL1 with a 4% cut who preferred the program has currently decreased from 10% at 3 weeks to 0% at 12 months. Of the participants who have completed the loudness testing, those who maintained a preference for the same program through 12 months post fitting and who completed loudness testing with the NAL NL1 program were excluded from the analysis.

New participants who have completed speech recognition testing at all appointments, or for the first time, with NAL NL1 over the first 12 months post fitting. The increase in preferred gain for new hearing aid users is shown in figure 8. The increase in preferred gain for new hearing aid users appears to explain the slower convergence to more gain by those with a more severe hearing loss.

The increase in preferred gain for new hearing aid users may be due to their perception that they need more gain to hear for the first time. The increase in preferred gain for new hearing aid users is also consistent with the findings of Horwitz et al. (1997) who found that new hearing aid users preferred more gain than experienced users.

Conclusions:

Based on preliminary data the following conclusions may be made:

1) There is no significant difference in performance across sessions for the 15 new participants who have completed speech recognition testing at all appointments, or for the first time, with NAL NL1 over the first 12 months post fitting. There is no significant change in preferred overall gain relative to NAL NL1.

2) Both new and experienced hearing aid users, on average, prefer less gain than prescribed by NAL NL1, more so in the high frequencies than in the low frequencies. For the new hearing aid users, the preferred gain is significantly lower than in the experienced users (t(15) = 3.42, p < 0.05).

3) The percentage of new hearing aid users who preferred NAL NL1 with a 4% cut and one preferred NAL NL1 with a 2 dB cut. The percentage of new hearing aid users who evaluated NAL NL1 with a 4% cut who preferred the program has currently decreased from 10% at 3 weeks to 0% at 12 months. Of the participants who have completed the loudness testing, those who maintained a preference for the same program through 12 months post fitting and who completed loudness testing with the NAL NL1 program were excluded from the analysis.

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