

Balance In Older Adults May Improve with Hearing Aids

A 2014 study suggests that older people with hearing loss may find that their **balance improves when they use hearing aids**. The finding supports the idea that improving hearing in older folks with hearing loss may help **reduce risk of falls**.

The Laryngoscope journal, researchers from the Washington University school of Medicine in St. Louis, MO, describe how they found older patients with hearing loss appeared better able to balance when their poor hearing was enhanced with hearing aids.

For the study, the researchers chose people age 65-91 and used standard balance tests to measure the participants' postural balance with their hearing aids in both ears were switched on and when the aids were switched off.

"The participants appeared to be using the sound information coming through their hearing aids as an **auditory reference points or landmarks** to help maintain balance" researchers explained. Compare it to when we use our eyes to tell us where we are in space. If we turn off the lights, we tend to sway a bit—more than we do when we can see. This study suggests that opening your ears also gives you information used for balance.

First study to show sound directly helps maintain postural stability.

This very new study may be the first to show that sound itself—as opposed to the balance system of the inner ear—helps us maintain postural stability. As the participants underwent their balance tests with and without their hearing aids switched on, the researchers played white noise in the background—this generates sound rather like radio static.

One of the tests involved participants having their eyes covered, standing with their feet together on a thick foam pad. In another more challenging test participants had to stand on the floor with one foot in front of the other heel-to-toe, again with their eyes covered. The researchers measured how long the participants could stand in these positions without having to move their arms or feet, or need other help to maintain balance.

Improvement seen in those finding it harder to maintain stability.

Some of the participants could stand steady for 30 seconds or more—which is considered normal—whether their hearing aids were turned on or not. But participants who had difficulty maintaining stability this long performed better when they had their hearing aids turned on. Further, the improvement in balance was greater in the more challenging tests. In the foam pad test the average duration of stability was 17 seconds with the hearing aids off and 26 seconds with the aids turned on. In the more challenging heel-to-toe test the participants were able stand steady for 5 seconds with the hearing aids off and 17 seconds with their aids on.

The authors note that these differences are statistically significant even though this was a limited population. They acknowledge that one limitation of this study is that participants could tell when their hearing aids were on or off—and this could influence the results. However they did try to offset this by introducing an element of randomization—the participants performed the test with the aids off to start then next time on.

The authors are planning to expand this test to a much larger participant population.