

Table S1: Results of Statistical Analysis

| Participant Groups | | | | | | | |
|--------------------|------------------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|--------------------------|
| | HC (n=125) | PLW-UVD(I) (n=49) | PLW-UVD(C) (n=45) | PLW-Mild- MS(L) (n=64) | PLW-Mild- MS(H) (n=79) | PLW-Mod-MS(L) (n=64) | PLW-Mod-MS(H) (n=79) |
| Variable | median (interquartile range) | | | | | | |
| VOR Gain | 0.97 (0.90 - 1.02) | 0.35 (0.31 - 0.40) | 0.80 (0.75 - 0.84) | 0.90 (0.84 - 0.94) | 0.95 (0.90 - 1.00) | 0.43 (0.29 - 0.59) | 0.66 (0.54 - 0.78) |
| GPE | 0.5 (-0.3 - 0.9) | 7.0 (6.0 - 8.2) | 2.4 (2.0 - 3.1) | 1.2 (0.6 - 2.2) | 0.5 (0.0 - 1.2) | 9.5 (7.6 - 11.7) | 4.9 (3.0 - 7.7) |
| Frequency | 1.0 (0.0 - 1.0) | 2.0 (1.0 - 2.0) | 1.0 (1.0 - 2.0) | 1.0 (1.0 - 2.0) | 1.0 (1.0 - 2.0) | 1.0 (0.8 - 2.0) | 2.0 (1.0 - 2.5) |
| Latency | 151.0 (72.0 - 261.0) | 178.7 (159.0 - 198.0) | 166.7 (101.5 - 196.0) | 244.0 (195.5 - 293.0) | 230.0 (183.0 - 305.0) | 168.0 (113.5 - 217.0) | 240.0 (193.3 - 291.3) |
| Peak Velocity | 99.9 (48.0 - 141.8) | 169.7 (127.8 - 209.9) | 96.7 (73.2 - 149.1) | 78.2 (54.3 - 113.3) | 58.7 (19.9 - 101.3) | 63.0 (49.7 - 74.5) | 159.8 (122.9 - 221.4) |

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These data for vestibular and compensatory oculomotor metrics are presented as median (inter-quartile range). HC = healthy control. PLW-UVD(I) = people living with unilateral deafferentation, ipsilesional side. PLW-UVD(C) = people living with unilateral deafferentation, contralesional side. PLW-Mild-MS(L) = people living with mild multiple sclerosis, side with lower VOR gain. PLW-Mild-MS(H) = people living with mild multiple sclerosis, side with higher VOR gain. PLW-mod-MS(L) = people living with moderate multiple sclerosis, side with lower VOR gain. PLW-moderate-MS(H) = people living with moderate multiple sclerosis, side with higher VOR gain. VOR = vestibulo-ocular reflex. GPE = gaze position error.

Table S1: Results of Statistical Analysis (Continued)

| | Overall | Pairwise Comparisons | | | | | | | | | | | | | | | | | | |
|-----------------|---------|---|-------------|-----------------|-----------------|----------------|----------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|-------------------------|------------------------|------------------------|------------------------|--------|
| | | HC v UVD(I) | HC v UVD(C) | HC v Mild-MS(L) | HC v Mild-MS(H) | HC v Mod-MS(L) | HC v Mod-MS(H) | UVD(I) v Mild-MS(L) | UVD(I) v Mild-MS(H) | UVD(C) v Mild-MS(L) | UVD(C) v Mild-MS(H) | UVD(I) v Mod-MS(L) | UVD(I) v Mod-MS(H) | UVD(C) v Mod-MS(L) | UVD(C) v Mod-MS(H) | Mild-MS(L) v Mild-MS(H) | Mild-MS(L) v Mod-MS(L) | Mild-MS(H) v Mod-MS(L) | Mild-MS(H) v Mod-MS(H) | |
| Variable | | p-values from a Kruskal-Wallis test with pairwise comparisons, adjusted using Holm's method | | | | | | | | | | | | | | | | | | |
| VOR Gain | <0.001 | <0.001 | <0.001 | <0.001 | 0.338 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.248 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | |
| GPE | <0.001 | <0.001 | <0.001 | <0.001 | 0.428 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.004 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | |
| Frequency | <0.001 | <0.001 | 0.003 | <0.001 | 0.074 | 0.001 | <0.001 | 0.032 | <0.001 | >0.999 | 0.74 | 0.57 | >0.999 | >0.999 | 0.086 | 0.329 | >0.999 | 0.013 | 0.609 | <0.001 |
| Latency | <0.001 | >0.999 | >0.999 | <0.001 | 0.008 | >0.999 | <0.001 | <0.001 | 0.005 | <0.001 | 0.011 | >0.999 | <0.001 | >0.999 | <0.001 | >0.999 | <0.001 | >0.999 | 0.005 | >0.999 |
| Peak Velocity | <0.001 | <0.001 | >0.999 | 0.695 | 0.02 | 0.003 | <0.001 | <0.001 | <0.001 | 0.247 | 0.006 | <0.001 | >0.999 | <0.001 | <0.001 | 0.107 | 0.065 | <0.001 | >0.999 | <0.001 |

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