

Supplementary Information

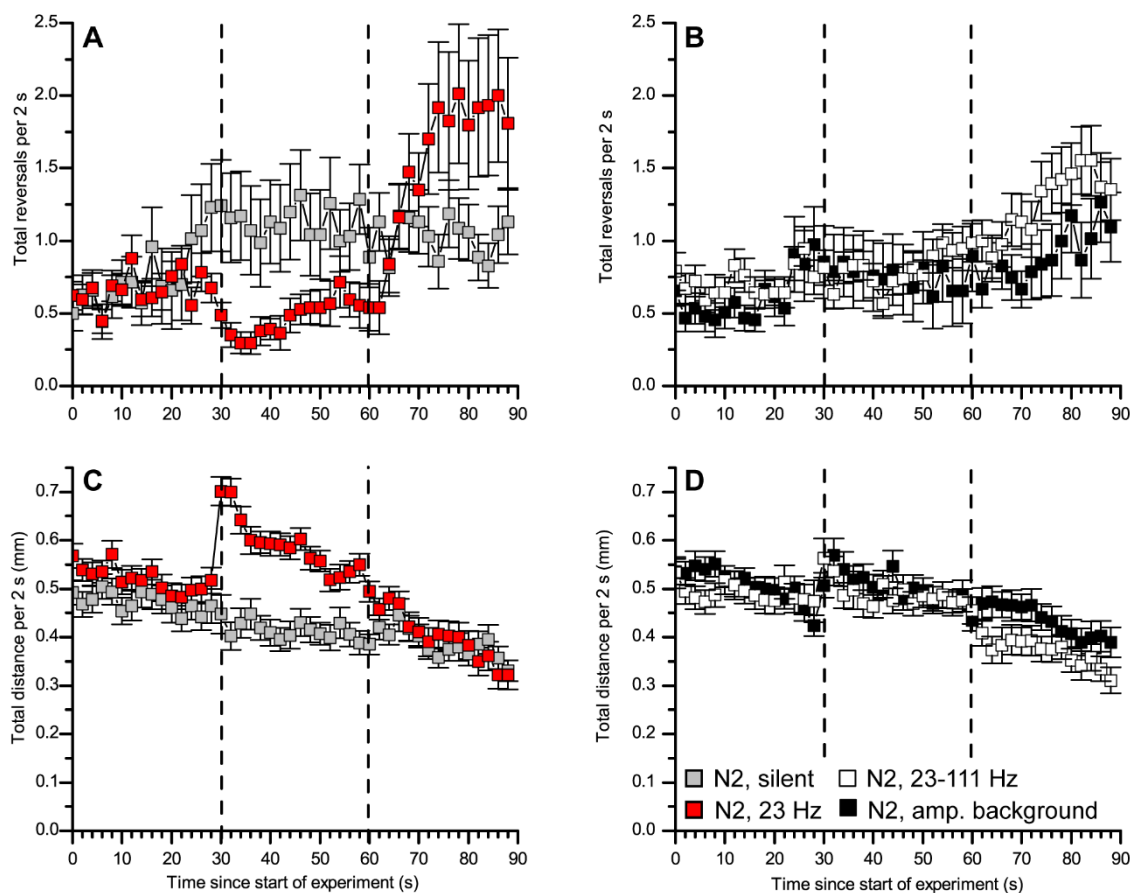


Fig. S1. Responses over time of wild-type (N2) strain worms to four vibration treatments. (A) and (B) mean number of reversals in a 2 second period, (C) and (D) mean total distance in a 2 second period. Grey is silent treatment (also shown in Fig. 2B and D, N=70), red is the 23 Hz treatment (also shown in Fig. 2B and D, N=74), black is the amplified background treatment (N=75) and white is the frequency-modulated 23-111 Hz treatment (N=76). Error bars give s.e.m. Dashed lines separate treatment period (30-60 seconds) from control periods.

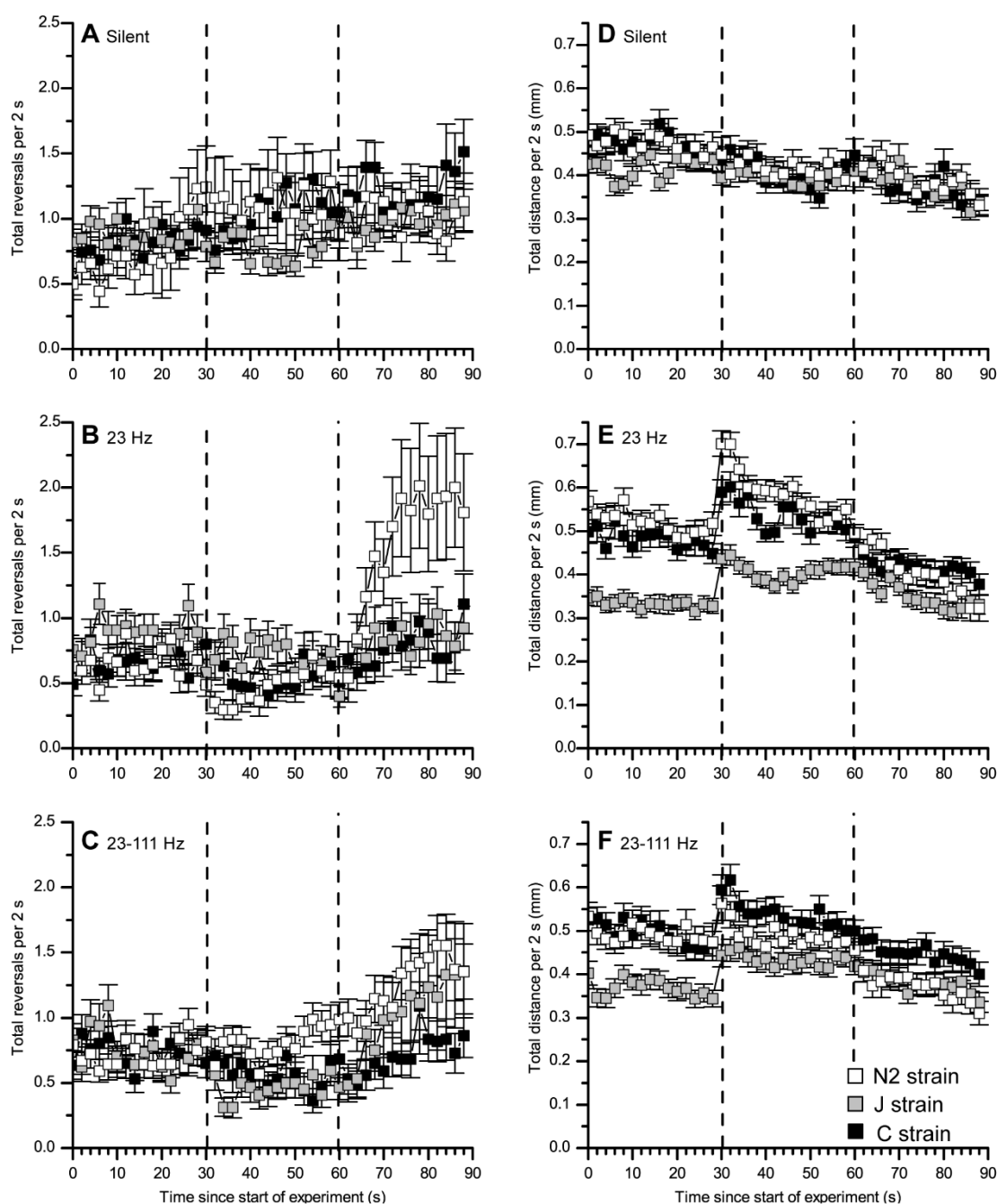


Fig. S2. Responses over time of wild-type (N2) and mechanosensory neurons deficient [C strain, *mec-3(e1338)*] and the ciliated neurons deficient [J strain, *daf-19(m86);daf-12(sa204)*] strain worms to three vibration treatments. (A-C) Mean number of reversals in a 2 second period, (D-F) mean total distance in a 2 second period. (A) and (D) silent treatment, (B) and (E) 23 Hz treatment, (C) and (F) frequency-modulated 23-111 Hz treatment. White gives wild-type (N2) strain, grey gives J strain (*daf-19;daf-12* mutant) and black gives C strain (*mec-3* mutant). Error bars give s.e.m. Dashed lines separate treatment period (30-60 seconds) from control periods. All data are also shown in Fig. 2B and D and Fig. 3B, C, E and F.

Table S1. Full data table from this study. The number of reversals and total distance travelled by all tracked worms over all 12 vibration treatments, three 30 second periods and three strains are given. A summary table of the average number of reversals and average total distance for each 30 second period is also given, as well as the outputs from the Mann-Whitney ranked sum tests.

[Click here to Download Table S1](#)



Movie 1. Behavioural tracks of wild-type (N2) strain worm under 23 Hz treatment. Movie shows tracks of four of the 74 worms tracked under the 23 Hz vibration treatment. First 30 seconds is control period 1 (no vibration, green), middle 30 seconds is the vibration treatment at 23 Hz (orange) and last 30 seconds is control period 2 (no vibration, purple). Only worms that moved within the area of interest for the full 90 seconds were tracked. White circle in middle has 2 mm diameter.