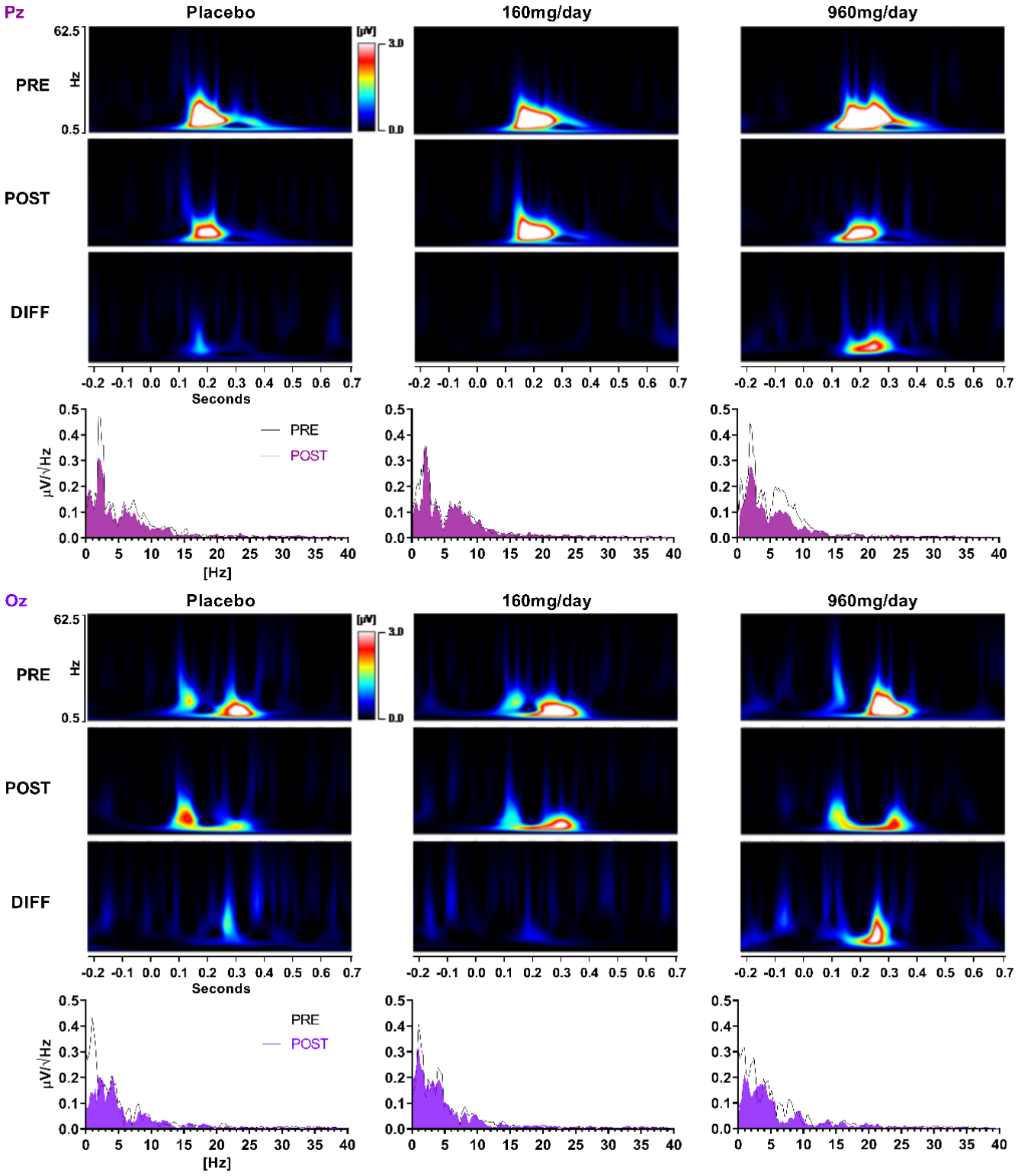

Supplementary Figure 4. Grand-Averaged Time-Frequency Spectrograms for Upper-Body Stimuli. Phase-locked spectral activity was examined with spectrograms of grand-averaged ERP waveforms using wavelet analysis (Mexican Hat, resolution = 1.0Hz, Teager-Kaiser). For each treatment, pre- and post-exercise spectrograms depict 0.5-62.5Hz activity from -200 to 700ms for channels that demonstrated the largest evoked potentials and oscillatory activity: Pz and Oz. Difference spectrograms are plotted on the bottom axis. Spectrogram activity is interpolated and scaled against pre-exercise placebo values specific to each sensor. Full-spectrum activity is provided at the bottom of each panel, with pre- and post-exercise activity overlaid. ERP: event-related potential.

At Pz, pre-exercise activity was concentrated from 100-300ms at alpha frequency and most pronounced for 960mg (**Pz**). At Oz, there was initial alpha activity from 100-160ms, followed by theta activity from 150-375ms (**Oz**). For placebo, post-exercise activity reductions were concentrated around 250-300ms at alpha/beta frequencies. For 160mg, there was little difference between timepoints. For 960mg, activity reductions were more broadly distributed from 150-300ms and concentrated at alpha frequency.