Supplementary material

Exercise alone impacts short-term adult visual neuroplasticity in a monocular deprivation paradigm

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Methods

To test our primary hypotheses regarding the immediate effect of each intervention, we compared the baseline binocular rivalry characteristics (combination of 3 runs) to the combination of the three consecutive runs collected at 0, 3 and 6 minutes ('0-9 minutes') and 9, 12 and 15 minutes ('9-18 minutes') in the main text. Group data at each individual timepoint (measured at baseline and 0, 3, 6, 9, 12, 15, 30, 45, 60 and 90 minutes after each intervention) are presented below. Individual data are presented in a spreadsheet in Supplementary Material B.
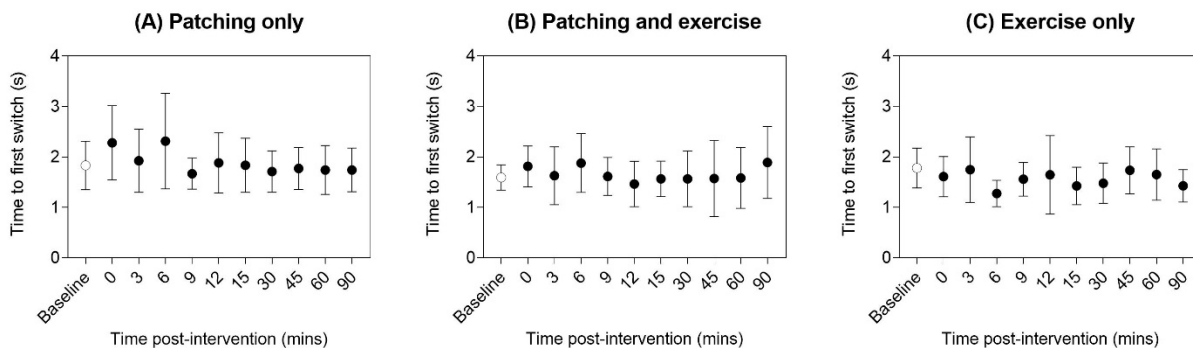

Figure S1. *Time to first switch for the three interventions: (A) patching only, (B) patching and exercise, and (C) exercise only. Mean ± 95% confidence intervals of the mean are shown for each timepoint: baseline (unfilled symbol) and 0, 3, 6, 9, 12, 15, 30, 45, 60, 90 minutes after each intervention.*
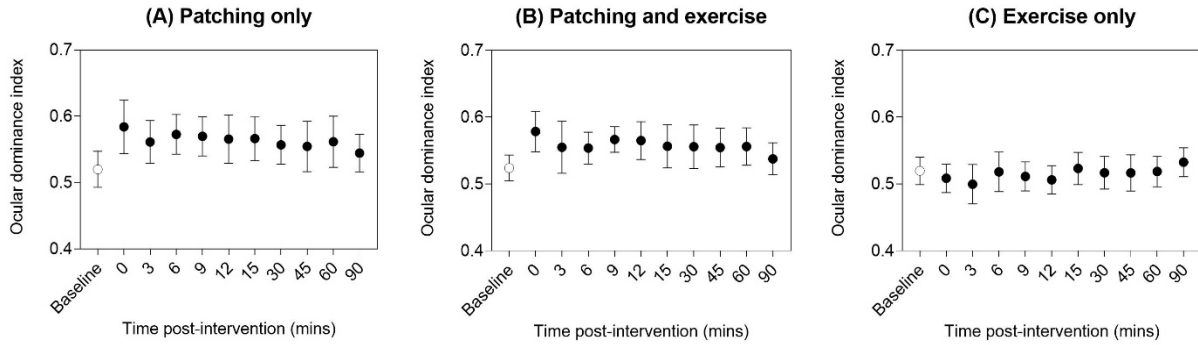
Figure S2. *Ocular dominance index for the three interventions: (A) patching only, (B) patching and exercise, and (C) exercise only. Mean ± 95% confidence intervals of the mean are shown for each timepoint: baseline (unfilled symbol) and 0, 3, 6, 9, 12, 15, 30, 45, 60, 90 minutes after each intervention.*
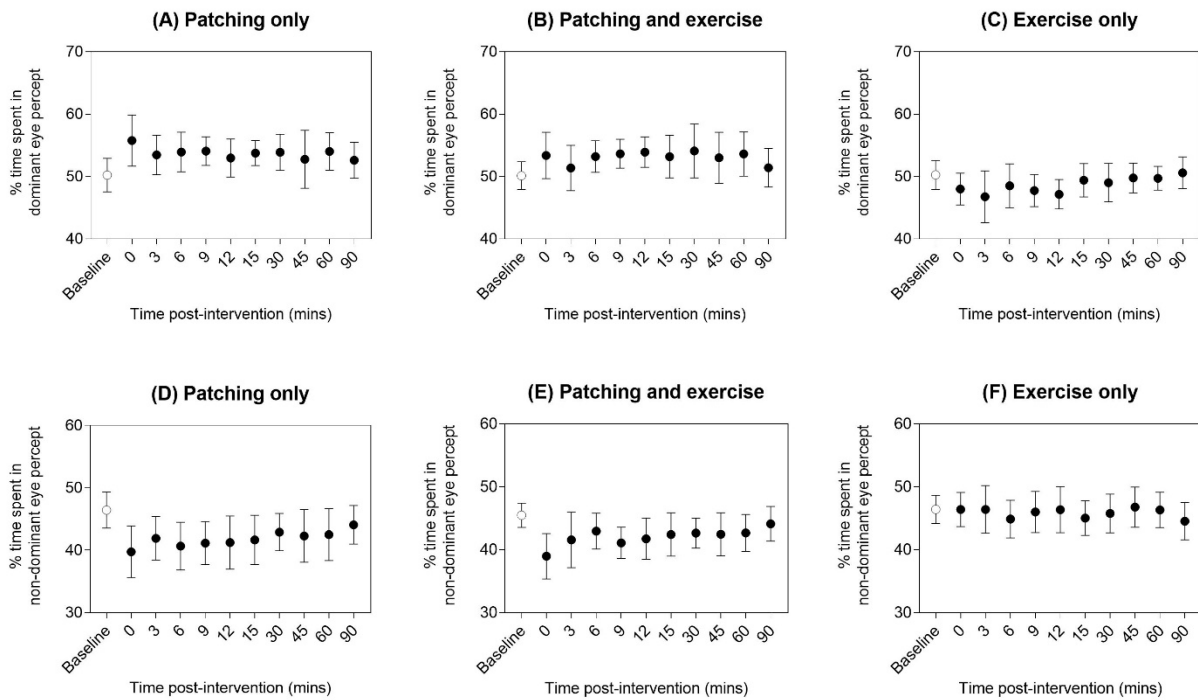

Figure S3. *Percentage of time spent in the deprived (dominant) eye percept for the three interventions: (A) patching only, (B) patching and exercise, and (C) exercise only. Percentage of time spent in the non-deprived (non-dominant) eye percept for the three interventions: (D) patching only, (E) patching and exercise, and (F) exercise only. Mean ± 95% confidence intervals of the mean are shown for each timepoint: baseline (unfilled symbol) and 0, 3, 6, 9, 12, 15, 30, 45, 60, 90 minutes after each intervention.*
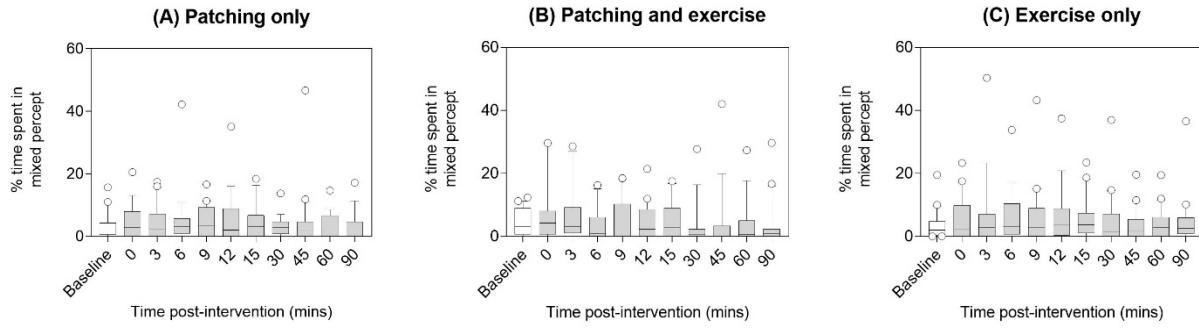
Figure S4. *Percentage of time spent in mixed percept for the three interventions: (A) patching only, (B) patching and exercise, and (C) exercise only. Boxplots show the median and 25th and 75th percentiles, whiskers are the 10th and 90th percentiles, and symbols indicate the outliers for each timepoint: baseline (unfilled bar) and 0, 3, 6, 9, 12, 15, 30, 45, 60, 90 minutes after each intervention.*
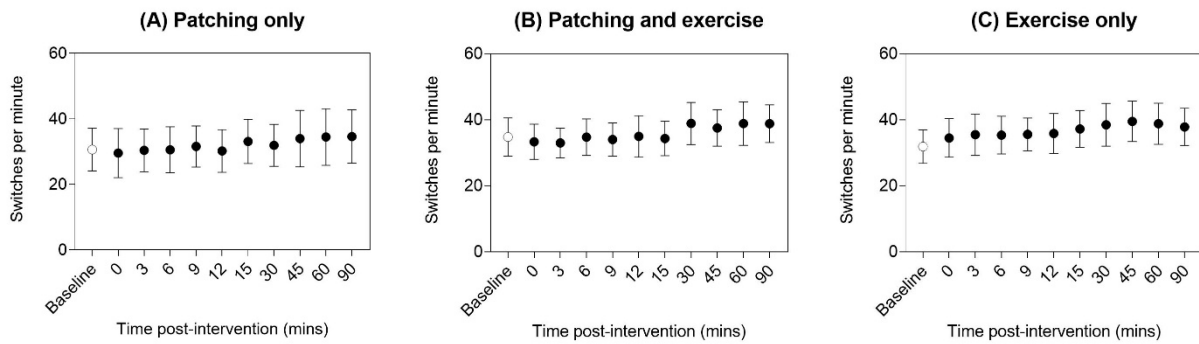

Figure S5. *Switch rate for the three interventions: (A) patching only, (B) patching and exercise, and (C) exercise only. Mean ± 95% confidence intervals of the mean are shown for each timepoint: baseline (unfilled symbol) and 0, 3, 6, 9, 12, 15, 30, 45, 60, 90 minutes after each intervention.*
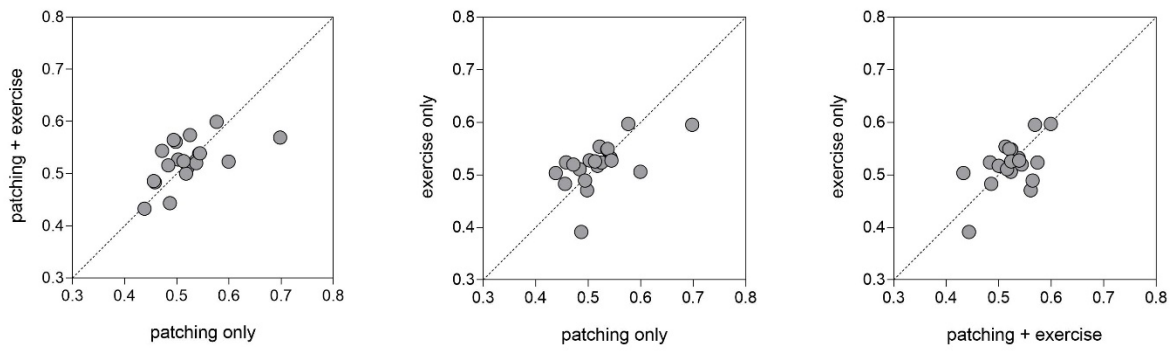
Figure S6. Baseline ocular dominance index at each session (patching only, patching + exercise, exercise only) to show test-retest reliability. Symbols represent individual data and the dashed line indicates the line of unity.