***Supplementary Material***

**The effect of small incision lenticule extraction on contrast sensitivity**

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# 1 Supplementary Tables

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table S1.** P-values for Comparisonof CS between different time points at each SF | | | | |
| external noise | SF (cpd) | time point (I) | time point (J) | *AD*(I-J) |
| zero | 0.5 | posttest 1 | pretest | 0.315\*\* |
|  |  | posttest 2 | pretest | 0.504\*\*\* |
|  |  |  | posttest 1 | 0.189\* |
|  | 0.67 | posttest 1 | pretest | 0.423\*\*\* |
|  |  | posttest 2 | pretest | 0.646\*\*\* |
|  |  |  | posttest 1 | 0.224\*\* |
|  | 1 | posttest 1 | pretest | 0.644\*\*\* |
|  |  | posttest 2 | pretest | 0.921\*\*\* |
|  |  |  | posttest 1 | 0.276\*\*\* |
|  | 1.33 | posttest 1 | pretest | 0.756\*\*\* |
|  |  | posttest 2 | pretest | 1.072\*\*\* |
|  |  |  | posttest 1 | 0.317\*\*\* |
|  | 2 | posttest 1 | pretest | 0.833\*\*\* |
|  |  | posttest 2 | pretest | 1.210\*\*\* |
|  |  |  | posttest 1 | 0.377\*\*\* |
|  | 2.67 | posttest 1 | pretest | 0.711\*\*\* |
|  |  | posttest 2 | pretest | 1.131\*\*\* |
|  |  |  | posttest 1 | 0.420\*\*\* |
|  | 4 | posttest 1 | pretest | 0.411\*\*\* |
|  |  | posttest 2 | pretest | 0.807\*\*\* |
|  |  |  | posttest 1 | 0.397\*\*\* |
|  | 5.33 | posttest 1 | pretest | 0.206\*\* |
|  |  | posttest 2 | pretest | 0.564\*\*\* |
|  |  |  | posttest 1 | 0.358\*\*\* |
|  | 8 | posttest 1 | pretest | 0.052 |
|  |  | posttest 2 | pretest | 0.282\*\* |
|  |  |  | posttest 1 | 0.229\*\* |
|  | 16 | posttest 1 | pretest | 0.000 |
|  |  | posttest 2 | pretest | 0.005 |
|  |  |  | posttest 1 | 0.005 |
| low | 0.5 | posttest 1 | pretest | -0.190\* |
|  |  | posttest 2 | pretest | -0.114 |
|  |  |  | posttest 1 | 0.075 |
|  | 0.67 | posttest 1 | pretest | -0.121 |
|  |  | posttest 2 | pretest | -0.030 |
|  |  |  | posttest 1 | 0.091 |
|  | 1 | posttest 1 | pretest | 0.139 |
|  |  | posttest 2 | pretest | 0.290\*\* |
|  |  |  | posttest 1 | 0.151\* |
|  | 1.33 | posttest 1 | pretest | 0.343\*\* |
|  |  | posttest 2 | pretest | 0.511\*\*\* |
|  |  |  | posttest 1 | 0.168\* |
|  | 2 | posttest 1 | pretest | 0.571\*\*\* |
|  |  | posttest 2 | pretest | 0.757\*\*\* |
|  |  |  | posttest 1 | 0.186\*\* |
|  | 2.67 | posttest 1 | pretest | 0.616\*\*\* |
|  |  | posttest 2 | pretest | 0.816\*\*\* |
|  |  |  | posttest 1 | 0.200\*\* |
|  | 4 | posttest 1 | pretest | 0.484\*\*\* |
|  |  | posttest 2 | pretest | 0.718\*\*\* |
|  |  |  | posttest 1 | 0.234\*\* |
|  | 5.33 | posttest 1 | pretest | 0.338\*\*\* |
|  |  | posttest 2 | pretest | 0.594\*\*\* |
|  |  |  | posttest 1 | 0.256\*\* |
|  | 8 | posttest 1 | pretest | 0.165\*\* |
|  |  | posttest 2 | pretest | 0.368\*\*\* |
|  |  |  | posttest 1 | 0.203\* |
|  | 16 | posttest 1 | pretest | 0.001 |
|  |  | posttest 2 | pretest | 0.057 |
|  |  |  | posttest 1 | 0.057 |
| high | 0.5 | posttest 1 | pretest | -0.186\*\* |
|  |  | posttest 2 | pretest | -0.080 |
|  |  |  | posttest 1 | 0.106\*\* |
|  | 0.67 | posttest 1 | pretest | -0.172\*\*\* |
|  |  | posttest 2 | pretest | -0.069 |
|  |  |  | posttest 1 | 0.102\*\* |
|  | 1 | posttest 1 | pretest | -0.043 |
|  |  | posttest 2 | pretest | 0.042 |
|  |  |  | posttest 1 | 0.086\* |
|  | 1.33 | posttest 1 | pretest | 0.122\* |
|  |  | posttest 2 | pretest | 0.210\*\* |
|  |  |  | posttest 1 | 0.088\*\* |
|  | 2 | posttest 1 | pretest | 0.300\*\*\* |
|  |  | posttest 2 | pretest | 0.413\*\*\* |
|  |  |  | posttest 1 | 0.114\*\*\* |
|  | 2.67 | posttest 1 | pretest | 0.368\*\*\* |
|  |  | posttest 2 | pretest | 0.502\*\*\* |
|  |  |  | posttest 1 | 0.134\*\*\* |
|  | 4 | posttest 1 | pretest | 0.352\*\*\* |
|  |  |  | posttest 2 | -0.167 |
|  |  | posttest 2 | pretest | 0.519\*\*\* |
|  |  |  | posttest 1 | 0.167\*\*\* |
|  | 5.33 | posttest 1 | pretest | 0.285\*\*\* |
|  |  | posttest 2 | pretest | 0.467\*\*\* |
|  |  |  | posttest 1 | 0.182\*\* |
|  | 8 | posttest 1 | pretest | 0.178\*\* |
|  |  | posttest 2 | pretest | 0.335\*\*\* |
|  |  |  | posttest 1 | 0.158\* |
|  | 16 | posttest 1 | pretest | 0.037 |
|  |  | posttest 2 | pretest | 0.096\* |
|  |  |  | posttest 1 | 0.060 |

*Note. AD* represents average difference.\**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table S2.** P-values for comparison of CS improvement between different SFs | | | | | | | | | | | |
| time point | external noise | SF (cpd) | 0.67 | 1 | 1.33 | 2 | 2.67 | 4 | 5.33 | 8 | 16 |
| posttest 1 | zero | 0.5 | 0.002 | 0.000 | 0.000 | 0.001 | 0.013 | 0.463 | 0.360 | 0.010 | 0.001 |
|  |  | 0.67 |  | 0.000 | 0.000 | 0.004 | 0.056 | 0.928 | 0.096 | 0.002 | 0.000 |
|  |  | 1 |  |  | 0.014 | 0.112 | 0.637 | 0.102 | 0.006 | 0.000 | 0.000 |
|  |  | 1.33 |  |  |  | 0.340 | 0.680 | 0.006 | 0.000 | 0.000 | 0.000 |
|  |  | 2 |  |  |  |  | 0.006 | 0.000 | 0.000 | 0.000 | 0.000 |
|  |  | 2.67 |  |  |  |  |  | 0.000 | 0.000 | 0.000 | 0.000 |
|  |  | 4 |  |  |  |  |  |  | 0.000 | 0.000 | 0.000 |
|  |  | 5.33 |  |  |  |  |  |  |  | 0.003 | 0.009 |
|  |  | 8 |  |  |  |  |  |  |  |  | 0.131 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | low | 0.5 | 0.093 | 0.005 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.039 |
|  |  | 0.67 |  | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.081 |
|  |  | 1 |  |  | 0.000 | 0.000 | 0.000 | 0.001 | 0.071 | 0.813 | 0.137 |
|  |  | 1.33 |  |  |  | 0.000 | 0.001 | 0.114 | 0.962 | 0.141 | 0.003 |
|  |  | 2 |  |  |  |  | 0.180 | 0.168 | 0.018 | 0.001 | 0.000 |
|  |  | 2.67 |  |  |  |  |  | 0.006 | 0.002 | 0.000 | 0.000 |
|  |  | 4 |  |  |  |  |  |  | 0.000 | 0.000 | 0.000 |
|  |  | 5.33 |  |  |  |  |  |  |  | 0.000 | 0.000 |
|  |  | 8 |  |  |  |  |  |  |  |  | 0.006 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | high | 0.5 | 0.382 | 0.010 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  |  | 0.67 |  | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  |  | 1 |  |  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.060 |
|  |  | 1.33 |  |  |  | 0.000 | 0.000 | 0.001 | 0.021 | 0.410 | 0.142 |
|  |  | 2 |  |  |  |  | 0.003 | 0.228 | 0.785 | 0.057 | 0.000 |
|  |  | 2.67 |  |  |  |  |  | 0.583 | 0.073 | 0.002 | 0.000 |
|  |  | 4 |  |  |  |  |  |  | 0.003 | 0.000 | 0.000 |
|  |  | 5.33 |  |  |  |  |  |  |  | 0.000 | 0.000 |
|  |  | 8 |  |  |  |  |  |  |  |  | 0.002 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| posttest 2 | zero | 0.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.075 | 0.714 | 0.131 | 0.000 |
|  |  | 0.67 |  | 0.000 | 0.000 | 0.000 | 0.003 | 0.322 | 0.619 | 0.023 | 0.000 |
|  |  | 1 |  |  | 0.002 | 0.018 | 0.143 | 0.470 | 0.041 | 0.001 | 0.000 |
|  |  | 1.33 |  |  |  | 0.093 | 0.594 | 0.049 | 0.001 | 0.000 | 0.000 |
|  |  | 2 |  |  |  |  | 0.066 | 0.000 | 0.000 | 0.000 | 0.000 |
|  |  | 2.67 |  |  |  |  |  | 0.000 | 0.000 | 0.000 | 0.000 |
|  |  | 4 |  |  |  |  |  |  | 0.000 | 0.000 | 0.000 |
|  |  | 5.33 |  |  |  |  |  |  |  | 0.000 | 0.000 |
|  |  | 8 |  |  |  |  |  |  |  |  | 0.002 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | low | 0.5 | 0.027 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.121 |
|  |  | 0.67 |  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.003 | 0.351 |
|  |  | 1 |  |  | 0.000 | 0.000 | 0.000 | 0.000 | 0.011 | 0.485 | 0.032 |
|  |  | 1.33 |  |  |  | 0.000 | 0.001 | 0.015 | 0.360 | 0.167 | 0.000 |
|  |  | 2 |  |  |  |  | 0.048 | 0.334 | 0.016 | 0.000 | 0.000 |
|  |  | 2.67 |  |  |  |  |  | 0.005 | 0.001 | 0.000 | 0.000 |
|  |  | 4 |  |  |  |  |  |  | 0.000 | 0.000 | 0.000 |
|  |  | 5.33 |  |  |  |  |  |  |  | 0.000 | 0.000 |
|  |  | 8 |  |  |  |  |  |  |  |  | 0.000 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | high | 0.5 | 0.526 | 0.018 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.021 |
|  |  | 0.67 |  | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.012 |
|  |  | 1 |  |  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.289 |
|  |  | 1.33 |  |  |  | 0.000 | 0.000 | 0.000 | 0.000 | 0.056 | 0.057 |
|  |  | 2 |  |  |  |  | 0.001 | 0.016 | 0.247 | 0.183 | 0.000 |
|  |  | 2.67 |  |  |  |  |  | 0.530 | 0.338 | 0.005 | 0.000 |
|  |  | 4 |  |  |  |  |  |  | 0.005 | 0.000 | 0.000 |
|  |  | 5.33 |  |  |  |  |  |  |  | 0.000 | 0.000 |
|  |  | 8 |  |  |  |  |  |  |  |  | 0.000 |