Supplementary Material

Next to the reported decrease in curvature for distractors presented beyond the oculomotor range, we also observed a small but unexpected decrease in curvature for distractors in the nasal hemifield in the non-abducted position. Although the difference between close and remote distractors in this condition was non-significant, it was consistent across both Experiments. When combining data across Experiments it even reached significance (t(37)=2.61, p<0.05). We hypothesized that this effect was a consequence of the nose bridge blocking part of the visual field. While the image of the nose is not noticed during normal binocular vision, it does block a significant portion of the visual field when looking at the world with one eye closed. When looking straight ahead at a computer screen with one eye closed, one will notice that the peripheral part of the lower nasal hemifield can be obscured. When the eye is positioned in the abducted position it is rotated away from the nose, so the screen will always be fully visible. To test this notion an additional analysis was performed. Note that the nose will always block part of the lower visual field. Therefore we separated the data into trials with distractors in the upper and lower hemifield. If the decrease in curvature observed in the nasal hemifield is indeed a result of the nose obscuring the distractor, we expect this effect to be driven by trials with a distractor (and a saccade) in the lower hemifield.

The results of the analysis are in line with our hypothesis (see Supplementary Fig 1). The decrease in curvature for distractors in the nasal hemifield is driven by the trials in which a distractor was presented in the lower visual field (mean curvature for close distractor: 2.76°, remote distractor: 1.90°, t(27)=1.97, p=0.06). Trials in which distractors were presented in the upper hemifield showed no decrease in curvature (mean curvature for close distractor: 1.41°, remote distractor: 1.20°, t(27)=0.93, p=0.36). As can be inferred from the size of the error bars, this effect differs a lot across participants. For some, there was a strong decrease, for others no decrease at all. This might very well be related to the size of the nose bridge. The critical effect in the abducted position (nose not occluding anything) is present for both saccade directions (upward saccades: t(27)=2.21, p<0.05, downward saccades: t(27)=4.30, p<0.001).
Supplementary Fig 1: Separate analysis of upward and downward saccades. Left: Curvature away from distractors in the Temporal (left), and Nasal (right) hemifield for upward (top) and downward saccades (bottom). Orange dashed lines indicate curvature in the Non-Abducted condition; blue solid lines indicate curvature in the Abducted condition. The error bars represent 95% within-subject confidence intervals on the close versus remote distractor eccentricity comparisons. Right: Depending on the size of the nose bridge, the peripheral part of the lower nasal hemifield can be obscured in the non-abducted condition. This will only affect trials in which the saccade target and distractors are located in the lower hemifield.