

## **Inhibition of return to eye gaze develops in teenage**

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Gaze is an important cue in social interaction. Gaze direction can attract attention automatically and for adults can produce inhibition of return (IOR) - a slower response to an item at a previously attended location. We examined how early eye gaze can induce IOR by recruiting three typical developing groups: 6-8, 9-12, and 13-16 year-old. Gaze cues were delivered by photos of real faces but non-informatively to the target location (the presence of a start) with 200 ms, 1200 ms, or 2400 ms delay intervals. Results showed reliable gaze-induced IOR only in 9-12 and 13-16 age group, while 6-8 age group pay attention to gaze direction regardless of cue duration. Further, 13-16 age group showed gaze-induced IOR earlier in time course than expected. Consistent with the idea that eye gaze is an innate social cue from infancy, our results showed that the cueing effect of gaze were significant and stable from 6-year-old children to older teenagers. However, we found no gaze-induced IOR in 6-8-year-old children. Thus, our results suggest that gaze-induced IOR reflects developmental trend in social interaction.