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Audiovisual speech perception in children with autism spectrum disorders and typical development

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For typically developing perceivers, visual speech information influences what listeners hear. When the place of articulation of visual and auditory speech tokens are incongruent, perceivers often report hearing a visually influenced response (the "McGurk effect", McGurk & MacDonald, 1976). Children with autism spectrum disorders (ASD) appear to be less susceptible to the McGurk effect than their typically developing peers (e.g. Mongillo, Irwin, Whalen, Klaiman, Carter & Schultz, in press). Given the gaze aversion characteristic of children with ASD, eye-tracking methodology was employed to extend our previous research on the McGurk effect to examine: 1) sensitivity to mismatched auditory and visual speech (McGurk), 2) visual gain in the presence of auditory noise, and 3) detection of auditory and visual asynchrony. Children with ASD and their chronological age-matched and verbal mental age-matched typically developing controls (ranging in age from 7-12 years) were assessed. Implications for the development of audiovisual speech processing in typically developing and children with ASD will be discussed. [Work supported by NIH].