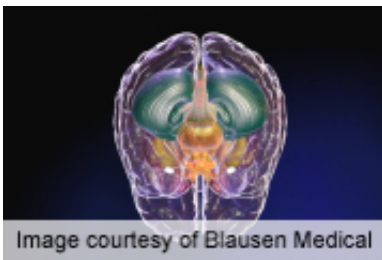


# Altered neural activation in children exposed to fetal alcohol

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There is evidence of impaired behavioral and neural processing of sequential information in fetal alcohol spectrum disorders, according to a study published online Oct. 24 in *Alcoholism: Clinical & Experimental Research*.

(HealthDay)—There is evidence of impaired behavioral and neural processing of sequential information in fetal alcohol spectrum disorders, according to a study published online Oct. 24 in *Alcoholism: Clinical & Experimental Research*.

Jessica W. O'Brien, from San Diego State University, and colleagues performed functional magnetic resonance imaging on children and adolescents (ages 8 to 18 years) with ([alcohol](#)-exposed [AE]) and without (CON) histories of heavy prenatal exposure to alcohol while they performed a go/no-go task. A predictive cue preceded the no-go stimulus in 87 percent of trials.

The researchers found that, while the groups did not differ in

demographic variables or on most measures of task performance, following cued stimuli, the AE group demonstrated a lower hit rate to go stimuli and more conservative response bias than the CON group. Relative to go trials, in the left precuneus, cingulate gyrus, anterior cingulate, and right medial frontal gyrus, AE participants demonstrated more activation during no-go trials (inhibition). The AE group demonstrated less activation in the left precentral and postcentral gyrus compared to the CON group during cue-dependent response inhibition.

"Consistent with previous studies of response inhibition, the AE group demonstrated greater frontal and parietal activation when attempting to inhibit prepotent responses than the CON group, despite similar rates of commission errors," the authors write.

**More information:** [Abstract](#)  
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