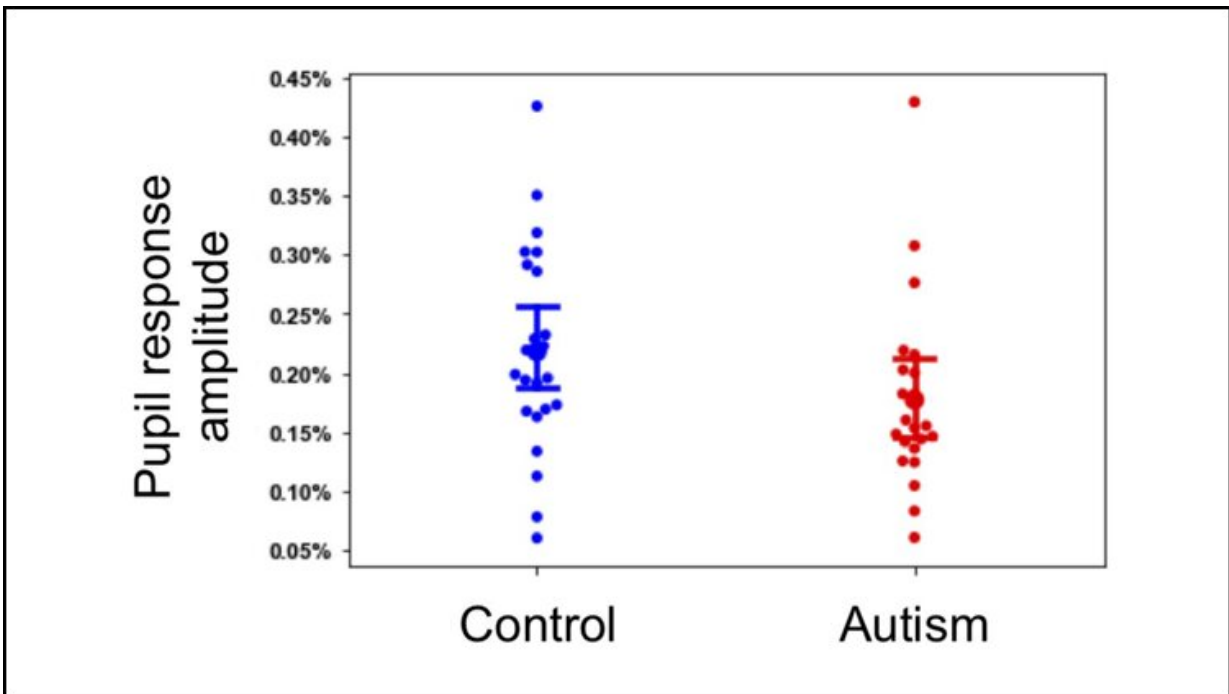


Changes in brain attention may underlie autism

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People with autism have less pupil dilation compared to controls while they are distracted, revealing dysregulated activity in the locus coeruleus. Credit: Granovetter et al., *JNeurosci* 2020

New research in *JNeurosci* explores how a particular region of the brainstem might explain differences in attention in people with autism.

In day-to-day life, we are confronted with an abundance of information,

and have to be able to selectively attend to the most relevant aspects of our environment. A region of the brainstem called the locus coeruleus is involved in controlling attention. Because people with [autism spectrum disorder](#) show differences in how they regulate their attention, Granovetter et al. explored how the locus coeruleus behaves in individuals with autism. Researchers had participants perform an attention-demanding task and monitored their pupil dilation, which provides information about locus coeruleus activity.

Adult participants watched letters flash on a screen and pushed a button if the same letter appeared twice in a row. They then repeated this task with a distraction—auditory tones played at random times.

All participants performed equally well on the [task](#), but participants with autism had atypically smaller pupil dilations compared to controls during the more distracting condition, suggesting a dysregulation in [locus coeruleus](#) activity.

This dysregulation might explain exaggerated responses to [environmental stimuli](#) as well as fixated behaviors and interests that characterize autism spectrum disorder.

More information: Uncharacteristic Task-Evoked Pupillary Responses Implicate Atypical Locus Coeruleus Activity in Autism, *JNeurosci*, [DOI: 10.1523/JNEUROSCI.2680-19.2020](https://doi.org/10.1523/JNEUROSCI.2680-19.2020)

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