A diuretic known as bumetanide may mitigate some of the behavioral abnormalities associated with autism, according to a new study published this week in Translational Psychiatry.

Autism is an early-onset developmental disorder characterized by social disability, communication impairment, repetitive behaviour and restricted interests. The inhibitory neurotransmitter GABA is known to produce excitatory actions in various disorders because of elevated intracellular chloride. Eric Lemonnier, Yehezkel Ben-Ari and colleagues hypothesized that this may be the case in autism and performed a double-blind randomized clinical trial using a chloride importer antagonist called bumetanide known to reduce intracellular chloride and to reinforce the inhibitory actions of GABA. They report in 60 autistic and asperger children (3-11 years old) that bumetanide reduces symptoms associated with autism in less severely affected children, determined by independent evaluators, with minimal side effects. Generally, parents described the bumetanide-treated children as more “present” with enhanced communication with their environment.
The authors suggest that bumetanide is a promising novel therapeutic agent to treat autism; however, larger trials are warranted to better determine the population best suited for this treatment, as well as more research regarding its mechanism of action.

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