

Children who have autism far more likely to have tummy troubles

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Children with autism experience gastrointestinal (GI) upsets such as constipation, diarrhea and sensitivity to foods six-to-eight times more often than do children who are developing typically, and those symptoms are related to behavioral problems, including social withdrawal, irritability and repetitive behaviors, a new study by researchers at the UC Davis MIND Institute has found.

The researchers said that understanding the impact of GI problems in children with [autism](#) could provide new insight into more effective and appropriate autism treatments could decrease their GI difficulties that may have the potential to decrease their problem behaviors.

The investigation is the largest and the most ethnically diverse study comparing GI problems in children with autism, [developmental delay](#) and typical development, and among the first to examine the relationship between GI symptoms and problem behaviors in children with autism, the researchers said.

"Gastrointestinal Problems in Children with Autism, Developmental Delays or Typical Development" is published online today in the *Journal of Autism and Developmental Disorders*.

"Parents of children with autism have long said that their kids endure more GI problems, but little has been known about the true prevalence of these complications or their underlying causes," said Virginia Chaidez, the lead study author who was a postdoctoral student in the UC

Davis Department of Public Health Sciences at the time of the study.

"The GI problems they experience may be bidirectional," Chaidez said. "GI problems may create behavior problems, and those behavior problems may create or exacerbate GI problems. One way to try to tease this out would be to begin investigating the effects of various treatments and their effects on both GI symptoms and problem behaviors."

The study was conducted in nearly 1,000 children enrolled in the Childhood Autism Risks from Genetics and the Environment (CHARGE) Study in Northern California between April 2003 and May 2011. The children were between 24 and 60 months at the time when they were enrolled in the study. Their diagnoses were confirmed through assessments at the MIND Institute. Roughly half of the study population was white and one-third was Hispanic. The remaining participants were of other ethnic and racial backgrounds.

The study was conducted by asking the children's parents to complete two self-administered questionnaires, the CHARGE Gastrointestinal History Questionnaire (GIH) and the Aberrant Behavior Checklist (ABC). The GIH measures such disorders as abdominal pain, diarrhea, constipation and difficulty swallowing. The ABC measures challenging behaviors including irritability, lethargy/social withdrawal, repetitive behaviors (stereotypies), hyperactivity and inappropriate speech.

The researchers found that the parents of children with autism were six-to-eight times more likely to report frequent gaseousness/bloating, constipation, diarrhea and sensitivity to foods than were the parents of typically developing children. Similarly, parents of children with developmental delay were five times more likely to report constipation and far more likely to report difficulty swallowing.

"After years of parents raising concerns about such symptoms, the huge

differences we see between parental reports on children with autism spectrum disorder versus those on children with typical development puts to rest the idea that gastrointestinal problems among children with autism spectrum disorder are just an accumulation of case reports," said Irva Hertz-Picciotto, principal investigator for the CHARGE Study and a researcher affiliated with the MIND Institute. "Our data clearly show that gastrointestinal problems are very common in children with autism."

Among parents of children with autism, those who reported their child had abdominal pain, gaseousness/bloating, constipation and diarrhea also significantly more frequently noted irritability, social withdrawal, repetitive behavior and hyperactivity than did those without GI symptoms. The only behavior problem that was associated with a GI problem in children with developmental delay was hyperactivity and only among those children with diarrhea.

The researchers said that the study suggests that a chronic GI symptom, which can cause pain, discomfort and anxiety, could contribute to increased irritability and social withdrawal, particularly in children with deficits in social and communication skills. For children with autism, hyperactivity and repetitive behaviors may represent coping mechanisms for physical discomfort.

In children with autism who have problem behaviors a full GI evaluation could be beneficial, especially in children who are non-verbal. For this population, appropriate medical treatment may alleviate undiagnosed GI problems, and it is possible that there also could be some improvement in problem behaviors, the researchers said.

The researchers did not address the reasons why the [children](#) with autism and developmental delay experienced more GI difficulties in this study. They noted that their findings suggest that the subject warrants additional inquiry.

Provided by UC Davis

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