

# Potential gastrointestinal manifestations of autism-risking genetic and environmental factors.

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## Introduction

Autism spectrum disorder symptoms are influenced by gastrointestinal factors. For subsets of people with ASD, gastrointestinal abnormalities such as increased intestinal permeability, altered intestinal microbiota composition, and dysregulated gastrointestinal motility and secretion have been identified. A well molecular connection of hyperserotonemia with ASD is due to gastrointestinal disturbances affecting the generation or metabolism of serotonin from gut enterochromaffin cells, the major producers of peripheral serotonin. Autism spectrum disorder (ASD) is characterised by social difficulties, social abnormalities, and stereotypic behaviours. Autistic people can have a number of medical comorbidities. ASD is a significant neurodevelopmental illness that is characterized depending on the existence and chronicity of basic behavioural symptomatology social life. Several genetic and environmental susceptibility factors have been identified that raise your chance of autism-like symptoms, however only a small percentage of ASD cases can be linked to a specific cause [1].

### *In autism, gastrointestinal problems*

ASD, GI distress has received a lot of attention. Frequent constipation, diarrhoea, and abdominal discomfort are the most common GI issues reported in subsets of autistic people. Many autistics experience gastroesophageal reflux, bloody stools, vomiting, and gaseousness. Increased gut permeable has been related to autism and is thought to have negative consequences not just for the integrity of the gastrointestinal system [2].

### *Genetic and environmental risk factors for autism effects*

ASD's biochemical causes are unclear, although they are thought to stem from a mix of genetic and environmental risk factors. Growing research reveals the genetic and environmental risk factors for ASD may lead severe GI problems. c-Met, a proto-oncogene that encodes MET receptor tyrosine kinase is one susceptibility gene that is particularly noteworthy in this regard. SLC6A4, which encodes the integral membrane transporter for the neurotransmitter serotonin, is another susceptibility gene for ASD that may be connected to GI dysfunction (SERT) [3].

### *In autism, the gut-brain connection*

GI problems can contribute to the presentation of core ASD

symptoms is appealing. Various direct and indirect processes may play a role in how GI tract molecular changes affect brain development and function. Autistic people's GI tracts have been found to have a variety of immunological abnormalities, including leukocyte infiltration, complement activation, lymphoid hyperplasia, and pro-inflammatory cytokine responses [4,5].

## Conclusion

ASD is tremendously heterogeneous both in terms of the existence and severity of diagnostic behavioural traits, but also in terms of the presence and severity of a variety of clinical comorbidities. Investigating whether gastrointestinal disorders affect brain and behaviour in autism animal models can identify interesting targets for biomolecular diagnostics and therapeutics.

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