

2021 SUMMARY OF ADVANCES

in Autism Research



The Interagency Autism Coordinating Committee (IACC) is a federal advisory committee that provides advice to the Secretary of Health and Human Services. The IACC includes federal agency representatives and public members representing the autism community. The IACC selected their top 20 most significant autism research advances published in 2021. The articles are divided into categories that correspond to categories in the *IACC Strategic Plan*. This is an easy-read version that has short summaries of each research article. The full publication is available here: <https://iacc.hhs.gov/publications/summary-of-advances/2021/>.

SCREENING AND DIAGNOSIS

- Hispanic and Black children are less likely to receive combined screening and monitoring for developmental disabilities. [\[LINK\]](#)
- Family navigation services can help reduce racial and ethnic disparities in autism evaluation and diagnosis. [\[LINK\]](#)
- Autism screening tests do not need to be scored differently for boys versus girls. [\[LINK\]](#)

BIOLOGY

- Infants that are later diagnosed with autism exhibit differences in social communication skills at 9 to 12 months of age. [\[LINK\]](#)
- Among infant siblings of children with autism, those later diagnosed with autism vocalize less at 12 months than their neurotypical peers. [\[LINK\]](#)
- Regression in early communication skills does not have a long-term impact on the future language skills of children with autism. [\[LINK\]](#)

GENETIC AND ENVIRONMENTAL FACTORS

- Genes associated with autism impact activity in certain parts of the brain more in boys than in girls. [\[LINK\]](#)
- Low vitamin D levels in pregnancy may be a contributing factor in the development of autism. [\[LINK\]](#)



INTERVENTIONS

- Children with both autism and ADHD take more medication than those with only autism or only ADHD and may have distinct care needs. [\[LINK\]](#)
- Use of an oxytocin nasal spray in children and adolescents with autism does not result in improved social interactions or behavior. [\[LINK\]](#)
- An intervention teaching parents how to encourage social skills in infants showing early behaviors associated with autism can reduce their child's future likelihood of an autism diagnosis. [\[LINK\]](#)

SERVICES AND SUPPORTS

- Early COVID-19 service disruptions affected children on the autism spectrum and their families to varying degrees, showing the need for in-person, virtual, or hybrid healthcare and family support services based on family preferences and needs. [\[LINK\]](#)
- Autistic students experience racial and income-based disparities in special education eligibility and school-based services. [\[LINK\]](#)
- Autistic children have between \$3,930 to \$5,621 more in annual health care costs than non-autistic children. [\[LINK\]](#)

LIFESPAN

- Many older autistic adults without intellectual disabilities report having more symptoms associated with Parkinson's disease, such as stiffness and slow movements. [\[LINK\]](#)
- In one state-wide study, over half of adults with autism on waiting lists for HCBS had unmet service needs, with levels of need particularly high among African Americans, Hispanics, and adults over the age of 21. [\[LINK\]](#)
- Medicaid data suggests early-onset dementia is more prevalent among adults with autism compared to the general population. [\[LINK\]](#)
- Various factors, including daily living skills, family, and school-based supports can influence employment outcomes for transition-age youth on the autism spectrum. [\[LINK\]](#)

RESEARCH INFRASTRUCTURE AND PREVALENCE

- CDC's Autism and Developmental Disability Monitoring Network data from 2018 estimated that 1 in 44 eight-year-old children in the U.S. have a diagnosis of autism. [\[LINK\]](#)
- CDC's Autism and Developmental Disability Monitoring Network data from 2018 estimate that 1 in 59 four-year-old children in the U.S. have a diagnosis of autism and that children are being identified earlier. [\[LINK\]](#)