

What's new in autism spectrum disorder? Harvard Review of Psychiatry presents research update

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Recent years have seen exciting progress in key areas of research on autism spectrum disorders (ASD): from possible genetic causes, to effective treatments for common symptoms and clinical problems, to promoting success for young people with ASD entering college. Updates on these and other advances in ASD research are presented in the March special issue of [Harvard Review of Psychiatry](#).

"Autism is one of the most challenging disorders to treat and the public health concerns associated with the disorder are numerous due to its burden on the individual, on the family and on society," write guest editors Drs Jean A. Frazier of University of Massachusetts Medical School and Christopher J. McDougle of Harvard Medical School. The special issue provides a timely update on research into the causes, important clinical issues, and evidence-based treatments for ASD.

Updates on ASD Research in Six Key Areas

Leading experts provide state-of-the-art reviews on six topics: the genetics of ASD; the use of psychoactive drugs; symptoms of special clinical problems, including obesity, gastrointestinal problems, and sensory issues; and transitioning to college.

Genetics. Over the last few years, there have been "unprecedented advances" in understanding the genetic causes of ASD. Hundreds of

genes conferring varying degrees of ASD risk have been identified to date. Many of these genes also appear to be risk factors for related neurodevelopmental disorders and psychiatric problems. While many unanswered questions remain, it may soon be possible to make specific genetic diagnoses in children with ASD.

Psychoactive medications. Despite limited evidence, psychotropic drugs are widely used to manage behavior problems and mental health disorders in children with ASD. For medication classes—including antidepressants and stimulants—effectiveness may differ for youth versus adults with ASD. New treatments affecting specific neurotransmitters and the hormone oxytocin are under development, and may help in targeting the "core symptoms" of ASD.

Obesity. Obesity is a common problem with a major impact on the health of children with ASD. Some ASD-related genes may also promote obesity; the same is true for antipsychotic drugs used to help manage behavior problems. Other contributing factors may include sleep disorders and barriers to getting enough exercise. Childhood obesity and related health issues may be a "significant threat" to the health and quality of life of children with ASD.

Gastrointestinal issues. Children with ASD also have high rates of gastrointestinal symptoms and disorders. Some genes linked to ASD may also play a role in gastrointestinal disturbances, with a possible link to immune system dysfunction. There's also emerging evidence of a potential "gut-brain" connection, with gastrointestinal dysfunction contributing to the development or severity of ASD symptoms.

Sensory symptoms. Children with ASD have various abnormalities of sensory function, including both over- and under-responsivity as well as "sensory seeking behavior." Although the neurobiology of these [sensory symptoms](#) remains unclear, some researchers suggest they are related to

known abnormalities of brain structure and function. Recent studies show that sensory symptoms are related to other ASD-related symptoms and behaviors; more research is needed to demonstrate the effectiveness of "sensory integration therapy" and other occupational therapy approaches.

Preparing for college. The final article highlights the need for new approaches to meeting the needs of "high-functioning" ASD patients entering college. Students "on the spectrum" transitioning to college are at risk of both academic and social problems, and may benefit from accommodation and supports. Based on a growing body of research, a set of recommendations for developing more effective transition plans for children with ASD are proposed.

Along with the editors of *Harvard Review of Psychiatry*, Drs Frazier and McDougal hope their special issue will provide a useful update for clinicians caring for the growing numbers of individuals and families living with ASD. They conclude, "Clearly, more research is needed on every level for the field to help support and treat individuals on the spectrum so that they can optimize their developmental trajectory and as adults become integral members of our work force."

Provided by Wolters Kluwer Health

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