

Autism, Physical Health Conditions, and a Need for Reform

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Currently, 1 in 44 children receive an autism diagnosis by the age of 8 years in the United States¹; despite improvements in recognition of autism, autistic people still have poor long-term outcomes regarding their health and health care. Overall, autistic people are dying much younger than expected,^{2,3} with several studies now suggesting that autistic people are, on average, dying 12 to 30 years younger than others.³ Unfortunately, risk of dying by suicide is also elevated among autistic people,²⁻⁴ with as many as 1 in 3 reporting a previous suicide attempt.⁴ However, the growing literature on premature mortality also points to physical health problems that are currently underresearched and underexplored.^{2,3} In particular, there is a paucity of research on the chronic physical health problems among autistic people as they age, with only a handful of studies assessing chronic health burden among those older than 35 years. A new study published in this issue of *JAMA Pediatrics* by Dhanasekara and colleagues⁵ provides important context for clinicians across specialties, as all clinicians will have autistic patients.¹



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This innovative article “Association Between Autism Spectrum Disorders and Cardiometabolic Diseases: A Systematic Review and Meta-analysis,” serves to fill an important gap in knowledge by meta-analyzing data from 34 previous studies, bringing together autistic individuals across the life span and across the world.⁵ Unfortunately, its findings indicate that autistic people are far more likely to experience cardiovascular and metabolic conditions than nonautistic peers, including approximately 1.5 times increased risk of heart disease, 1.6 times increased risk of diabetes, and 1.7 times increased risk of dyslipidemia.⁵ In other words, on average, for every 10 nonautistic people that will develop heart disease, diabetes, or dyslipidemia, 15 or more autistic people will develop each of these conditions.

Using a robust analysis method, the study provided further detail that autistic people are 1.6 and 2.5 times more likely to have type 1 and type 2 diabetes, respectively.⁵ This finding may seem surprising, given the different pathophysiological mechanisms for each. However, previous studies show that autistic individuals have higher rates of autoimmune diseases (such as type 1 diabetes), though the mechanisms by which this is occurring are not well understood.⁶ Separately, the links to type 2 diabetes presented in the study intimate that a combination of genetic and lifestyle-related factors may also contribute to risk of cardiometabolic diseases among autistic people.⁷

The study also highlighted particular risks for autistic children, as they were at approximately 2.8 times increased risk of diabetes and 2.5 times increased risk of hypertension com-

pared to age-matched nonautistic children.⁵ Additional exploratory analysis also suggests that autistic children, autistic individuals living outside the United States, and non-White autistic individuals may be at particularly high risk of developing diabetes.⁵ Clinicians should be aware of these specific risk factors for autistic patients and should implement preventive measures where appropriate to reduce these risks.

Finally, the study established that autistic people have higher levels of triglycerides and lower levels of high-density lipoprotein cholesterol than nonautistic peers⁵; unfortunately, these patterns are consistent with increased risk of both heart disease and stroke. While this study provides important and clinically relevant results, its quality is inherently limited by the quality of the studies that it meta-analyzed. This is highlighted by the fact that the present study could not consider the influence of intellectual ability, body mass index, psychotropic medication use, or increasing age on these outcomes—expressly because the original 34 studies did not consistently provide these data. New research should address these gaps and focus on identifying whether these factors serve to mediate or moderate risk of chronic disease in a different way for autistic people than for others.

For several years, there has been a narrative that autistic people may be more likely to have specific health problems, including epilepsy/seizure disorders, sleep problems, and gastrointestinal conditions. In contrast, this new publication adds to a growing body of literature suggesting that autistic people have a much broader range of physical health problems than previously thought.^{6,8} This frameshift is critical to ensuring high-quality health care—and particularly preventive care—among autistic people, with clear implications for reducing risk of premature death and improving quality of life.

While this meta-analysis alone cannot provide information about the contributing factors to these increased risks, there are important avenues of research and clinical practice that can be considered. Autism is a highly heritable, polygenic condition, meaning that it is oftentimes hundreds of small changes across both rare and common variants in the genome that contribute to the likelihood that someone is autistic.⁹ Similarly, cardiovascular and metabolic conditions have strong genetic components.⁷ At present, few studies are considering genetic overlap between autism and cardiometabolic conditions; thus, future research should consider this area.

Additionally, lifestyle factors play a key role in managing risk of developing cardiovascular and metabolic problems. Although many people in the general population struggle with maintaining healthy diet, exercise, and sleep patterns, research indicates that these areas may be particularly challenging for autistic children and adults^{10,11}; thus far, one study has

illustrated that these lifestyle factors play a critical role in the excess risk of cardiovascular diseases among autistic males.¹¹ Clinicians need to think carefully about how to intervene with health education to empower autistic people, while also recognizing the real challenges that trauma and mental health conditions can pose for maintaining healthy lifestyle behaviors.

A 2019 study in the United Kingdom established that autistic people were more likely to experience 47 of the 60 adverse life events examined.¹² This vulnerability spanned the areas of education, employment, finances, social services contact, criminal justice system contact, experiencing violence in childhood and adulthood, domestic abuse, mental health conditions, and lack of social support.¹² Autistic people were significantly more likely to report that during childhood they experienced physical abuse by adults and children, emotional abuse by adults and children, social exclusion, and bullying.¹² It is crucial that policy makers, educators, and clinicians work collaboratively to safeguard against adverse childhood experiences to reduce long-term risks of both mental and physical health conditions. To provide an appropriate standard of care, clinicians must take into consideration the challenges that these vulnerabilities pose, as well as the structural barriers that autistic people face in accessing high-quality health care.

Autistic people are not satisfied with the current provision of health care that they are receiving, and they are experiencing challenges with very fundamental aspects of health care access.^{13,14} A study from 2022 illustrated that for every 10 non-autistic people who endorsed the following statements, only

2 autistic people affirmed that they (1) could describe how their symptoms feel in their body, (2) could describe how their pain feels, (3) could explain what their symptoms are, (4) usually understand what their health care professional means when discussing their health, (5) know what is expected of them when they go to see their health care professional, or (6) are provided with appropriate support after receiving a diagnosis of any kind.¹⁴ Clinicians must be aware of these challenges and work to provide reasonable adjustments to care. Although there are not currently any evidence-based adjustments that have been shown to improve health care access, both autistic people and health care professionals want more training on autism within health care systems.^{13,15} Autistic people have also stated that taking extra time in appointments, providing guidance on how to prepare for visits and navigate the health care system, ensuring continuity of care, and offering alternative forms of communication (eg, written or chat-based) would help to improve their health care quality.^{13,15}

In sum, the results from this systematic review and meta-analysis require clinicians and researchers alike to radically rethink the health care provision that is currently provided to autistic people. More support for both mental and physical health care across the life span should be offered and new research on how to improve outcomes is critical. Providing appropriate screening for conditions and support for healthy lifestyle habits during childhood is integral; early intervention in these areas is essential for ensuring that autistic people are able to live healthy, long, and fulfilling lives.

ARTICLE INFORMATION

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