

## Scientists just beginning to understand autistic adults' unique health needs

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The researchers found that individuals with ASD had increased risks of developing several health complications, including various cardiovascular issues, hypothyroidism, and other neurological issues. Credit: Unsplash.com

In the 1990s, the prevalence of autism spectrum disorder (ASD) among children rose sharply. These children are now entering adulthood, yet physicians and scientists know very little about the health outcomes they might face. Most studies of health have focused on children and adolescents.

However, new research published this week by scientists at the University of Wisconsin–Madison found that older adults with ASD may be at greater risk than people without the disorder of developing several <u>health problems</u>, including cardiovascular, urinary, respiratory and



digestive issues.

"This is one of the few studies to look at <u>health</u> problems in a primarily middle-aged and older population of <u>individuals</u> with ASD," says lead author, Lauren Bishop-Fitzpatrick. "Knowing what <u>health issues</u> adults with autism are more likely to encounter is critical to provide them with effective care and develop prevention strategies."

With colleagues, Bishop-Fitzpatrick, assistant professor of social work and a researcher at the UW–Madison Waisman Center, used machine learning – a form of artificial intelligence – to analyze de-identified electronic health records of individuals who had received healthcare from the Marshfield Clinic in central Wisconsin and have since passed away.

They analyzed the health records of 91 individuals with ASD and more than 6,000 individuals without ASD from the same region as comparison. The ratio of patients with and without autism was roughly equal to 1:68, the most recent rate of ASD prevalence in the United States as calculated by the Centers for Disease Control and Prevention.

The researchers found that individuals with ASD had increased risks of developing several health complications, including various cardiovascular issues, hypothyroidism, and other neurological issues. They were at decreased risk of alcohol abuse, hypertension, and of developing metastatic cancers.

Based solely on information from patients' <u>electronic health records</u>, the researchers were also able to independently predict with 93 percent accuracy whether or not a specific individual had ASD.

"These findings can help us direct healthcare resources and work on prevention efforts more efficiently," says Bishop-Fitzpatrick. "For



example, knowing that adults with ASD may be at higher risk of developing cardiovascular disease, we can start adapting techniques and healthcare measures that are already in place for the general population to best help adults with ASD."

Learning more about the healthcare issues of adults with ASD could also help extend their lives. A 2016 study in Sweden found that individuals with ASD died at significantly younger ages – nearly 20 years earlier – compared to those without ASD.

The researchers hope their findings will lead to larger, more comprehensive studies that focus on the health issues faced by older individuals with ASD. Bishop-Fitzpatrick also plans to speak to individuals with autism and their families to understand their individual health issues and concerns at the same time that she works to understand these at the population level.

"Our goal is to create strategies and interventions that can help individuals with ASD live longer and healthier lives and to make sure they have the best quality of life for as long as possible," says Bishop-Fitzpatrick.

**More information:** Lauren Bishop-Fitzpatrick et al. Using machine learning to identify patterns of lifetime health problems in decedents with autism spectrum disorder, *Autism Research* (2018). DOI: 10.1002/aur.1960

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