

NEWS

# Motor problems in autistic people may be grossly underestimated

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At least one in three autistic children has significant movement difficulties, according to a study of more than 2,000 children<sup>1</sup>. And yet only about 1 percent of autistic children have a diagnosed movement condition.

The study, the largest of its type, suggests that movement difficulties in autistic people are being systematically overlooked.

“That’s not due to any sinister intent, it’s just that we get a bit blinkered on looking for the core features of autism,” says lead investigator **Andrew Whitehouse**, professor of autism research at the Telethon Kids Institute in Perth, Australia.

Motor impairments have been documented in autistic people since the earliest descriptions of the condition. About 50 to 80 percent of autistic people are thought to have some sort of **movement problem**, such as clumsiness or an unusual gait, but the exact prevalence varies from study to study.

“We have been talking about motor difficulties in kids with autism for a long time, but no one had really done a study like this with this kind of sample size, which is great,” says **Robin Kochel**, associate director for research at the Texas Children’s Hospital Autism Center in Houston, who was not involved in the study.

The new findings indicate that movement problems are just as common among autistic children as intellectual disability is. And like intellectual disability, experts say, they belong among the factors clinicians use to define the exact nature of a person’s autism diagnosis.

“It’s a call to begin to take these movement challenges more seriously,” says **Jana Iverson**, professor of psychology at the University of Pittsburgh in Pennsylvania, who was not involved in the study. “Difficulties with movement and motor skills are really common in autism and really very much part and parcel of the profile.”

## Alarming findings:

Whitehouse and his colleagues analyzed records from diagnostic evaluations for 2,084 autistic children aged 6 years or younger. The records come from the **Western Australian Register for Autism Spectrum Disorders**, which includes information about most people diagnosed with autism in Western Australia since 1999.

The researchers assessed the children’s motor skills using scores on a standard parent questionnaire called the Vineland Adaptive Behavior Scales.

They found that 35 percent of the children have ‘low’ motor skills, meaning they score at least two standard deviations below typical children of the same age. Another 44 percent have ‘moderately low’ motor skills, defined as one standard deviation below the norm.

Only 24 of the children had diagnoses of motor conditions, such as cerebral palsy or low muscle tone.

“We were quite alarmed by that finding,” says **Melissa Licari**, a postdoctoral fellow on Whitehouse’s team. “Motor difficulties are overlooked during standard diagnostic practice.”

Autistic children who repeat words or movements tend to have lower motor scores than other autistic children, the team found. The finding suggests that **repetitive behaviors** and motor development are linked in some way.

“It would be interesting to tease that out more,” Kochel says.

The researchers had data on intellectual ability for about half the children in the study. They found that children with intellectual disability are more likely to have motor difficulties than those without it.

Motor difficulties in autistic children may be missed because parents do not voice concerns about the issues, Kochel says. Clinicians may need to specifically ask parents about motor skills.

Researchers should collect detailed, objective data on motor skills in autistic children to determine which types are most prevalent and pose the greatest challenges, says **Rujuta Wilson**, assistant professor in pediatrics and psychiatry at the University of California, Los Angeles, who was not involved in the study.

“We need to start thinking about ways to evaluate certain types of motor impairments — balance difficulties, gait difficulties, coordination, low tone — and screen for them more routinely,” Wilson says.

Whitehouse plans to gather data on types of motor difficulties in children with autism and explore ways to treat these problems.

#### REFERENCES:

1. Licari M.K. *et al. Autism Res.* Epub ahead of print (2019) **PubMed**