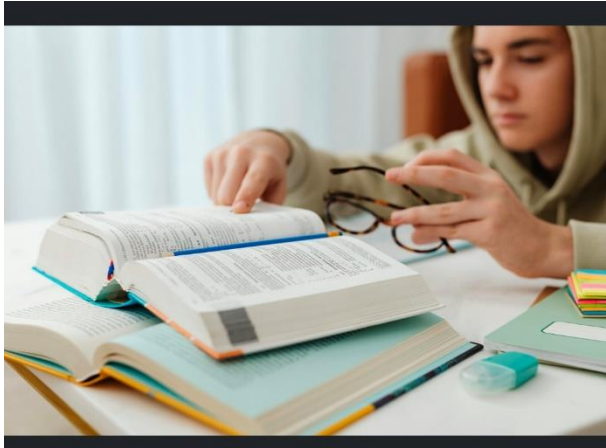


Meningococcal disease leaves long-term impact on adolescent survivors, research reveals

by [University of Adelaide](#)



Credit: Photo By: Kaboompics.com from Pexels

New research from the University of Adelaide, Australia, has found almost 60% of adolescent Invasive Meningococcal Disease (IMD) survivors have long-term psychological conditions in subsequent years.

The study by Professor Helen Marshall AM and team from the University of Adelaide's Robinson Research Institute recruited 41 people who had meningococcal disease between two and 10 years ago, and examined their neurocognitive function, psychological well-being, and quality of life.

Results from participants who were between the ages of 15 and 24 when they contracted meningococcal were compared against those from 51 control participants, with the findings published in [Pediatric Infectious Disease Journal](#).

Invasive meningococcal disease is the broad definition for conditions including strains of meningococcal, meningitis and sepsis, which all come from the same bacteria. There were 136 cases of IMD in Australia in 2024, 29 of which were in South Australia.

Around 54% of participants aged 15–25 required intensive care admission.

"Almost 60% of participants who had IMD had at least one psychological disorder, compared to 31% of the control participants, with alcohol dependence and PTSD the most common," says Professor Marshall.

IMD did not affect overall IQ or general quality of life

IMD did not affect overall IQ or general quality of life scores when compared with peers who had not had the disease.

While there were minimal differences between the groups' levels of impairment of working memory, those who had IMD did fare slightly poorer in terms of mathematical reasoning (15% having mild or moderate impairment compared to 4% in those without IMD).

"This math-specific impact may reflect the hierarchical nature of math skill acquisition and its lower incidental learning opportunity (i.e., less reinforced in [daily activities](#) versus literacy); consequently, disrupted schooling could have a more pronounced impact on the math subtests we did," says Dr. Mark McMillan, first author of the paper.

Assessments conducted by a physician indicated ongoing physical sequelae such as ongoing seizures, motor impairment, unilateral hearing loss, and mobility impairment in 15% of IMD cases.

"While functionality was comparable between groups for most domains, IMD cases reported significantly more difficulties in energy and drive, daily routine, walking and emotions compared to [control participants](#)," says Dr. McMillan.

The need for more support

Professor Marshall said the study highlighted the need for more support for those who survive IMD.

"Social work support, in collaboration with the educational providers, may help alleviate the burden on survivors navigating this post-IMD period in terms of their disrupted schooling," she said.

"The longer-term impact of IMD on [mental health](#) is a significant problem which is a consistent theme of this study and others.

"These findings underscore the need for coordinated post-discharge care for IMD survivors, including psychological support and social work services to assist with vocational or educational reintegration, regardless of physical recovery at discharge."

More information: Mark McMillan et al, Long-term Impact of Invasive Meningococcal Disease in Australian Adolescents and Young Adults, *Pediatric Infectious Disease Journal* (2025). [DOI: 10.1097/inf.0000000000004962](https://doi.org/10.1097/inf.0000000000004962)

Journal information: [Pediatric Infectious Disease Journal](#)

Provided by [University of Adelaide](#)

-[medicalxpress.com](#), October 7, 2025