- Child development

Asthma linked to memory problems in children, research suggests

The Guardian Australia · 13 Nov 2024 · 55 · Denis Campbell Health policy editor

Children who have asthma can experience memory problems, according to research in the USthat is the first to link the two conditions.



The research also found that the earlier a child developed asthma, the greater the damage to their memory. The findings highlight the need to view asthma as a potential source of cognitive difficulty in children, the study's lead author said.

The breathing condition appears to affect children's episodic memory – the capacity to remember the specifics of everyday events, such as who was present and how the person felt. Children with asthma did worse on tests of their episodic memory than those who did not have it.

The findings, published on Monday in the medical journal Jama Network Open, are based on analysis of a sample of 473 children in the US who developed asthma early in their lives.

"This study underscores the importance of looking at asthma as a potential source of cognitive difficulty in children," said Prof Simona Ghetti, the lead author.

"We are becoming increasingly aware that chronic diseases, not only asthma but also diabetes, heart disease and others, may place children at increased risk of cognitive difficulties.

"We need to understand the factors that might exacerbate or protect against the risks."

The researchers did not assess how exactly asthma appeared to cause memory deficits. But potential explanations include asthma leading to prolonged inflammation and recurrent asthma attacks disrupting the supply of oxygen to the brain.

An estimated 260 million people worldwide, including 5.4 million in the UK, have asthma.

Nicholas Christopher-Hayes, the study's first author, said: "Childhood is a period of rapid improvement in memory and, more generally, cognition. In children with asthma that improvement may be slower."

The impact of asthma could even be so great that the memory loss it induces could lead to those who developed it in childhood having a higher risk of cognitive problems in later life, he added.

"Asthma might set children on a trajectory that could increase their risk to later develop something more serious like dementia as adults," he said.

Nick Hopkinson, a professor of respiratory medicine and the medical director of the charity Asthma + Lung UK, said: "The researchers found that children with asthma do less well on tests of memory. We can't be sure what the link is but we do know that early life stress and deprivation increase the risk of children developing asthma and of the asthma being more severe and less well controlled.

"So it could just be that the same things that worsen asthma also worsen memory, and the best thing is for government and society to take steps we know will work to reduce maternal and childhood deprivation."

He added: "It may also be a direct effect of asthma symptoms and asthma attacks disrupting learning, or a more subtle effect caused by inflammatory processes in the airways spilling over into the circulation and affecting other parts of the body.

"Either way, preventing the development of asthma and making sure that children with asthma get appropriate care so that their condition is as well controlled as possible is crucial."