

Children with ME show evidence of persistent infection

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University of Dundee scientists investigating Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME) in children have found abnormalities in blood cells involved in inflammation.

Indicative of a possible viral [infection](#), they are similar to those previously identified in adults with the condition.

Samples taken from youngsters contained higher than normal levels of [free radicals](#), molecules which can damage cells, tissues and organs via a process called oxidative stress. Also, a much greater number of neutrophils, the most common type of white blood cells, were found to be at the end of their life cycle. The high turnover of neutrophils indicates the body's need to fight infection.

Increased oxidative stress can arise from a variety of factors, such as a lack of [antioxidants](#), like vitamins C and E, in the [diet](#), but can also occur when white blood cells are chronically stimulated, for instance, by an infection. The combination of this [stress](#) and the quantity of [white blood cells](#) points to ongoing [inflammation](#) which may be a response to an infection.

Published in *Archives of Pediatrics & Adolescent Medicine*, the findings could be linked to a risk of cardiovascular problems like heart disease and stroke, though researchers highlight the need for more studies to build upon their work.

Dr. Gwen Kennedy, at the University of Dundee, who led the team said: "These results are of great importance; not only do they show an underlying, detectable defect in the behaviour of the children's immune cells, they also confirm our previous findings in adults."

Dr. Neil Abbot, of ME Research UK, one of the charities which funded the research said: "Although the cause of ME is unknown, more than half of all patients say their illness started with an infection. It is therefore fascinating to discover evidence of a persistent or reactivating viral infection. The study undoubtedly adds greater scientific weight to the existence of a condition which, sadly, many still fail to acknowledge in spite of its severity."

Jane Colby, of the Young ME Sufferers (Tymes Trust), another of the funders said: "The medical profession must now take the consequences of ME in children seriously, and research into prevention and treatment must be given a high priority. Children with ME are too often treated with scepticism by the healthcare system, and even denied their right to suitable education and other support."

Provided by University of Dundee

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