Severe joint deformities in newborn babies could be caused by ZIKA virus

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ZIKA virus could cause a severe joint condition in new born babies - as well as Microcephaly, the defect which causes their heads to not form properly.

A study, published by The BMJ, provides details of a link between the Zika infection in the womb and a condition known as arthrogryposis.  
  
The condition causes joint deformities at birth, particularly in the arms and legs.  
  
Microcephaly, a rare birth defect where a baby is born with an abnormally small head, and other severe foetal brain defects are the main features of congenital Zika virus syndrome.   
  
Experts are still working to find out more about the other potential health problems which Zika can cause during a pregnancy.

Until recently there were no reports of an association between congenital viral infection and arthrogryposis.  
  
But, after the outbreak of microcephaly in Brazil associated with Zika virus, two reports suggested an association, but they did not describe the deformities in detail.  
  
A research team based in Recife, the Brazilian city at the centre of the Zika epidemic, decided to investigate the possible causes of the joint deformities.  
  
They studied detailed brain and joint images of seven children with arthrogryposis and a diagnosis of congenital infection, presumably caused by Zika virus.

Scientists found the children tested negative for the five other main infectious causes of microcephaly - toxoplasmosis, cytomegalovirus, rubella, syphilis and HIV.  
  
But all the children showed signs of brain calcification, a condition in which calcium builds up in the brain.  
  
The theory is that the Zika virus destroys brain cells, and forms lesions where the calcium is deposited.  
  
All the children underwent high definition scanning of the joints and surrounding tissues, but there was no evidence of joint abnormalities.  
  
The researchers were led to believe the arthrogryposis did not come from the joints themselves but was more likely to be of ’neurogenic origin’.

Dr Vanessa van der Linden, of the Association for Assistance of Disabled Children (AACD) in Recife and co-author of the study, said the process involves motor neurones - cells that control the contraction or relaxation of muscles - leading to deformities.

Dr van der Linden said: "They could develop musculoskeletal deformities secondary to neurological impairment."

The researchers concluded: “Congenital Zika syndrome should be added to the differential diagnosis of congenital infections and arthrogryposis."

Because it was an observational study, no firm conclusions can be drawn about the effect of the Zika virus on arthrogryposis. But the researchers suggest that condition might be related to the way motor neurons carry signals to the unborn baby's muscles, or to problems with arteries and veins.

The researchers said that further research is needed.

This comes after it was revealed [cases of Zika could soar in Rio if the temperature rises](http://www.express.co.uk/life-style/health/698125/Zika-virus-Rio-Olympics-2016-athletes-temperature).