

SCIENCE WORLD REPORT

Zika virus can be linked to Alzheimer's disease, can also affect adults

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Research shows that the Zika virus does not concentrate on pregnant women alone. A recent study finds that it can also affect ordinary adults. Another major discovery was that the effect of this virus could also result in Alzheimer's disease.

In February 2016, the World Health Organization has declared a Zika outbreak in the country. This mosquito-borne infection usually affects pregnant women and spreads out in their unborn child. The infection causes microcephaly on the fetus, which triggers brain malformation and other birth defects.

Experts have been concentrating on pregnant women alone, but several studies show that ordinary adults are at risk of being infected, too.

A new research revealed that the effect of Zika can be more dangerous. A study on mice engineered to mimic the human Zika infection showed that the virus attacks immature cells in the adult brain. These cells are important for learning and memory. Scientists said that the loss of 'progenitor' stem cells may lead to the shrinking of the brain and a type of cognitive decline usually seen in people with Alzheimer's disease.

Professor Sujan Shresta, a member of the team from the La Jolla Institute of Allergy and Immunology in California, USA, said: "Zika can clearly enter the brain of adults and can wreak havoc. But, it's a complex disease, it's catastrophic for early brain development, yet the majority of adults who are infected with Zika rarely show detectable symptoms." She also added that the virus' effect is only subtle among adults and at least, people now know what to look for.

Professor Joseph Gleeson, from Rockefeller University, stated that adults infected by Zika may not be as safe as people think. He suggested that the enterprise for public health will not only monitor pregnant women but also adults that are exposed to the virus. With the use of biomarkers, the study is the first to look at the way Zika attacks the adult brain. The fluorescent biomarker tags would indicate which area of the brain the virus invaded. Researchers noticed that the attacks are mostly centered in parts of the brain that are responsible for learning and memory. According to independent.co.uk, professor Gleeson described the team's result as dramatic. "In the parts of the brain that lit up, it was like a Christmas tree," he said.

"It was very clear that the virus wasn't affecting the whole brain evenly like people are seeing in the fetus. In the adult, it's only these two populations that are very specific to the stem cells that are affected by the virus. These cells are special, and somehow very susceptible to the infection. Based on our findings, getting infected with Zika as an adult may not be as innocuous as people think," he continued.

Meanwhile, though experts still do further research on how findings in the mouse are applicable to humans, scientists are still open for the possibility that exposure to the virus has long-term effects on the adult's brain. Gleeson also shared, "In more subtle cases, the virus could theoretically impact long-term memory or risk of depression, "but tools do not exist to test the long-term effects of Zika on adult stem cell populations" as reported by The Telegraph.