Exposure to HIV During Gestation May Prompt Poorer Neurodevelopment

However, the analysis that identified this connection is subject to various limitations.

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Children who are exposed to HIV or contract the virus from their mothers in utero are more likely to have poorer neurodevelopment than those born to HIV-negative mothers, Reuters Health reports. A recent study also found a link between early-life antiretroviral (ARV) exposure and such impairment.

Publishing their findings in the journal Pediatrics, researchers conducted a systematic review of published medical literature to examine the association between being born with HIV or being exposed to the virus during gestation (without contracting the virus) and being born to an HIV-negative mother.

The researchers identified 45 studies conducted around the world published between 1990 and 2017. They narrowed down their inquiry to 11 studies that included data about children's neurodevelopment.

Compared with children born to HIV-negative mothers, HIV-positive and HIV-exposed children had lower scores on measures of cognitive development and motor skills.

The children born to HIV-positive mothers who were themselves given antiretrovirals (ARVs) also had poorer cognitive and motor-skill development. However, the study authors indicate that this finding should be met with caution and requires greater context. Other studies have found that providing early ARV treatment to newborns actually improves their neurodevelopment. Not to mention the fact that treating babies for HIV promptly after birth improves their growth and immune function and lowers their risk of death.

In 28 out of 31 studies, the HIV-positive children had worse neurodevelopment than other children.

This analysis is limited by the fact that the papers analyzed were published over such a long period of time. ARV treatment has improved dramatically over the past 20 years, so it is possible that the authors of this new paper were not able to account for how newer HIV medications as well as better overall control of HIV in individuals might mitigate the apparent harmful links between HIV and ARV exposure and neurodevelopment seen in the paper's findings.

It is possible that any worse neurodevelopmental outcomes associated with exposure to ARV were driven by various environmental factors, such as poverty, for which the research papers were not able to control.

To read the study abstract, click here.

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