

HIV-infected moms who breastfeed exclusively have lower levels of virus in breast milk

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HIV-infected women in sub-Saharan Africa who fed their babies exclusively with breast milk for more than the first four months of life had the lowest risk of transmitting the virus to their babies through breast milk, according to researchers at Columbia University's Mailman School of Public Health. Women who stopped breast feeding earlier than four months had the highest concentrations of HIV in their breast milk, and those who continued to breastfeed, but not exclusively, had concentration levels in-between the two practices. The findings are online in the journal *Science Translational Medicine*.

HIV-infected women typically have a 10% to 15% chance of transmitting the virus to their babies through breast milk. However, in sub-Saharan Africa where [infectious diseases](#) are rampant and often life-threatening, breastfeeding is essential for keeping infants healthy. Breast milk contains many important components that help developing immune systems fend off infectious diseases.

To test whether changes in breastfeeding routines affect levels of HIV in breast milk, Louise Kuhn, PhD, Mailman School professor of Epidemiology, and colleagues conducted a [randomized clinical trial](#) to examine the effectiveness of early weaning to reduce HIV transmission and [infant mortality](#). Over 950 HIV-infected women in Zambia were recommended to breastfeed their babies starting at birth for at least four months. At four months, half of the women were encouraged to stop

breastfeeding, while the other half was advised to continue. Breast milk was collected from all women at four and a half months. Throughout the study, infants were tested regularly for possible HIV transmission.

The researchers found the highest concentrations of HIV in the breast milk of women who stopped breastfeeding at 4 months. More than three-quarters (77%) of the women who had stopped breast feeding had detectable concentrations of HIV in their breast milk compared to 39.5% of those exclusively breastfeeding at four and a half months. The two groups of women had showed no differences two weeks earlier at four months.

Women who continued to breastfeed, but not exclusively, had higher breast milk HIV concentrations than those practicing exclusive breast feeding. The results offer evidence that even subtle changes in the frequency of breastfeeding during infancy can affect concentrations of HIV in [breast milk](#).

"Our results have profound implications for prevention of mother to-child [HIV transmission](#) programs in settings where breast-feeding is necessary to protect infant and maternal health," wrote Dr. Kuhn, who is also affiliated with the Gertrude H. Sergievsky Center at Columbia University Medical Center. "Our data demonstrate that early and abrupt weaning carries significant risks for infants."

Provided by Columbia University's Mailman School of Public Health

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