

Transmission of HIV-1.

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Abstract

Breast-feeding substantially increases the risk of HIV-1 transmission from mother to child, and although peripartum antiretroviral therapy prophylaxis significantly decreases the risk of mother-to-child transmission around the time of delivery, this approach does not affect breast-feeding transmission. Increased maternal RNA viral load in plasma and breast milk is strongly associated with increased risk of transmission through breast-feeding, as is breast health, and it has been suggested that exclusive breast-feeding could be associated with lower rates of breast-feeding transmission than mixed feeding of both breast- and other milk or feeds. Transmission through breast-feeding can take place at any point during lactation, and the cumulative probability of acquisition of infection increases with duration of breast-feeding. HIV-1 has been detected in breast milk in cell-free and cellular compartments; infant gut mucosal surfaces are the most likely site at which transmission occurs. Innate and acquired immune factors may act most effectively in combination to prevent primary HIV-1 infection by breast milk.