



# HIV/AIDS Today

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## HIV Transmission

This week's edition of HIV/AIDS Today reviews the routes by which HIV is transmitted.

### SEXUAL ACTIVITY

HIV is most commonly transmitted through unprotected sexual activity, including vaginal and anal sex. The risk of becoming infected with HIV through unprotected oral sex is low, but it is possible.<sup>i</sup>

### SHARED EQUIPMENT FOR INJECTION DRUG USE

HIV can be transmitted via the shared use of injection drug equipment with a person who is infected with the virus. Since the beginning of the HIV epidemic, one-third of all AIDS cases within the United States have been among injection drug users.<sup>ii</sup> For injection drug users who continue to inject drugs, the once-only use of sterile needles and syringes prevents HIV transmission.

### MOTHER-TO-CHILD TRANSMISSION

In the absence of an intervention, there is at least a 25% chance of a mother with HIV transmitting HIV to her infant. This risk is reduced to less than 2% with the initiation of antiretroviral therapy during pregnancy, at the time of birth, and to the newborn. The risk of mother-to-child transmission is 20% to 45% if an HIV-positive woman breastfeeds.<sup>iii</sup> For resource-poor countries, in which breastfeeding is standard, antiretroviral therapy during late pregnancy or labor and delivery and to the infant can decrease transmission to about 8% to 15%.

### ENDNOTES

<sup>i</sup> Centers for Disease Control and Prevention. *Relative Risk for Transmission from a Person Living with HIV* (online at <http://www.cdc.gov/hiv/topics/treatment/PIC/provider.htm>).

<sup>ii</sup> Centers for Disease Control and Prevention, National Center for HIV, STD and TB Prevention, Divisions of HIV/AIDS Prevention *Drug-Associated HIV Transmission Continues in the United States* (March 11, 2002) (online at <http://www.cdc.gov/hiv/pubs/facts/idu.htm>).

<sup>iii</sup> World Health Organization. *Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infection in Infants: Towards Universal Access. Recommendations for a public health approach* (online at <http://www.who.int/hiv/pub/guidelines/pmtct/en/>).

<sup>iv</sup> Centers for Disease Control and Prevention, National Center for HIV, STD and TB Prevention, Divisions of HIV/AIDS Prevention *How safe is the blood supply in the United States?* (online at <http://www.cdc.gov/hiv/pubs/faq/faq15.htm>).

<sup>v</sup> Centers for Disease Control and Prevention. *Are patients in a health care setting at risk of getting HIV?* (online at <http://www.cdc.gov/hiv/resources/qa/qa29.htm>).

<sup>vi</sup> Centers for Disease Control and Prevention, *Which Body Fluids Transmit HIV?* (Dec. 15, 2003) (online at <http://www.cdc.gov/hiv/pubs/faq/faq37.htm>).

<sup>vii</sup> Centers for Disease Control and Prevention, National Center for HIV, STD and TB Prevention, Divisions of HIV/AIDS Prevention *HIV and Its Transmission* (online at <http://www.cdc.gov/hiv/pubs/facts/transmission.htm>). CDC has investigated one case of HIV infection that may be attributed to contact with blood during open-mouth kissing.

When feasible, the substitution of infant formula for breast feeding is recommended.

### BLOOD SUPPLY AND MEDICAL SETTINGS

HIV can be transmitted via transfusions of infected blood or blood products. Screening and testing have all but eliminated this route of HIV transmission in the U.S., but it remains a concern in other countries.<sup>iv</sup> HIV can also be transmitted via accidental exposure to body fluids in a medical setting. Due to infection control procedures including universal precautions, HIV transmission in medical settings is extremely rare in the U.S.<sup>v</sup>

### SECONDARY TRANSMISSION RISK

The specific risks listed in this factsheet can also indirectly facilitate the spread of the HIV epidemic beyond the initial risk group. For example, a sexual partner of an HIV-positive person who was infected from sharing drug equipment is at risk for infection as well.

### NO RISK

HIV is not transmitted via air, water, or insects, and there have been no documented cases of HIV transmitted via the sweat, saliva, or tears.<sup>vi</sup> Similarly, there is no risk of transmission by kissing, engaging in day-to-day casual contact, or eating food prepared by someone with HIV.<sup>vii</sup>