

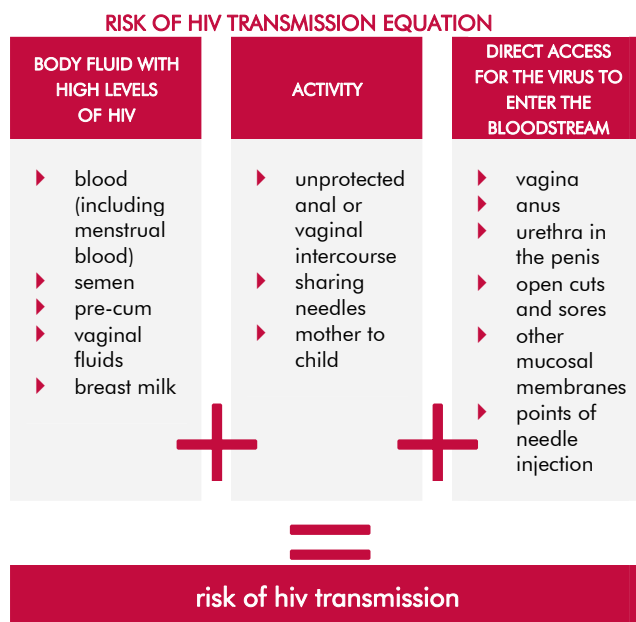
HOW DOES HIV TRANSMISSION HAPPEN?

HIV is transmitted through the following activities:

- ▶ Unprotected sex – oral, vaginal and anal
- ▶ Sharing needles – tattooing, steroid or injection drug use
- ▶ During pregnancy – birth or breastfeeding from mother to child

WHAT IS THE 'TRANSMISSION EQUATION'?

Some activities are considered more high risk than others, such as unprotected sex or sharing needles, versus sex with a condom or using a new or sterilized needle. A good way to understand 'HIV risk' is to consider the following transmission equation which helps to illustrate what three things are required to potentially transmit HIV.



The three necessary components for risk of HIV infection are:

- ▶ A body fluid with a high concentration of HIV
- ▶ An activity through which that fluid can come into contact with the body
- ▶ Direct access for the body fluid to enter into another person's body

WHICH FLUIDS HAVE POTENTIAL TO TRANSMIT HIV?

- ▶ Blood (including menstrual blood)
- ▶ Pre-cum
- ▶ Semen
- ▶ Vaginal fluids
- ▶ Breast milk

WHICH FLUIDS CANNOT TRANSMIT HIV?

Saliva, urine, sweat and tears do not present a risk for HIV transmission. Tears and saliva do contain small traces of HIV but not in a sufficient quantity to transmit the virus.

WHICH SEXUAL ACTIVITIES HAVE POTENTIAL TO TRANSMIT HIV?

High-risk activities:

- ▶ Unprotected vaginal sex
- ▶ Unprotected anal sex
- ▶ Vaginal or anal sex with inconsistent condom use
- ▶ Vaginal or anal sex with incorrect condom use
- ▶ Sharing sex toys without a new condom for each use or without cleaning them sufficiently

Low risk activities:

- ▶ Unprotected oral sex on a man (oral-penile contact: risk even without ejaculation)
- ▶ Unprotected oral sex on a woman (oral-vaginal contact)
- ▶ Unprotected oral-anal contact

WHAT NEEDLE-SHARING ACTIVITIES HAVE POTENTIAL TO TRANSMIT HIV?

- ▶ Injection drug use with shared needles
- ▶ Tattooing with shared/non-sterilized needles
- ▶ Tattooing with shared ink
- ▶ Piercing with shared/non-sterilized needles
- ▶ Insulin injection (diabetes) or other health care procedures with shared/already used needles

WHICH SEXUALLY BASED ACTIVITIES DO NOT TRANSMIT HIV?

- ▶ Hugging, holding hands, kissing, massaging, touching and caressing
- ▶ Body rubbing and petting
- ▶ Dirty talk
- ▶ Masturbating by yourself
- ▶ Masturbating with someone else on unbroken skin
- ▶ Using unshared sex toys or sex toys that have been properly cleaned/sterilized
- ▶ Urination, ejaculation or defecation on unbroken skin
- ▶ Injection using new or unshared sterile equipment

ENTRY INTO THE BLOODSTREAM

Broken skin, cuts and sores are potential entry points for HIV. Cuts or sores in the genital area (often a result of vigorous sex without lubricant or an existing sexually transmitted infection) can create entry points for body fluids that contain HIV. This is why both the use of non-oil based lubricants and having sexually transmitted infections treated is recommended. Note that even tooth brushing can cause small cuts and sores within the mouth which can also increase the risk of HIV transmission via unprotected oral sex.

CAN HIV SURVIVE OUTSIDE OF THE BODY?

Once HIV has been exposed to air or water, it cannot exist. Therefore HIV can NOT be transmitted via toilet seats, shared utensils, shared towels or bed sheets.

WHAT ABOUT THE PROBABILITY OF HIV TRANSMISSION?

It is difficult to estimate the exact risk of HIV transmission for each person in any given situation. This is why the above transmission equation is a useful tool for everyone to use in order to assess their own risk for potential HIV infection. It is also important to keep in mind that some factors may increase the risk of HIV infection:

- ▶ Having a sexually transmitted infection such as herpes or syphilis, even without genital sores, puts you at higher risk of transmitting HIV or becoming infected with HIV through sexual contact.
- ▶ Persons newly infected with HIV have higher levels of HIV in the blood and are significantly more infectious during that acute infection period.
- ▶ Persons having unprotected sexual relationships with more than one partner within a brief interval of time are more likely to get infected and to pass HIV to others.

ONLINE RESOURCES

- ▶ **San Francisco AIDS Foundation:** www.sfaf.org/aids101/transmission.html
- ▶ **CDC HIV Transmission:** www.cdc.gov/hiv/resources/factsheets/transmission.htm
- ▶ **The Body: Comprehensive HIV/AIDS Resource:** www.thebody.com