HIV / AIDS

HIV Transmission and Risks

HIV is transmitted through the following body fluids:

- Blood
- Semen
- Pre-cum
- Rectal fluids
- Vaginal fluids
- Breast milk

There are several ways this can happen:

- Unprotected sex with someone who is HIV positive. Unprotected sex refers to sexual contact that does not involve the use of condoms or biomedical prevention (i.e., treatment as prevention (TasP), pre-exposure prophylaxis (PEP) or post-exposure prophylaxis (PrEP).
- Sharing needles, syringes or other injection equipment with someone who is HIV positive.
- Mother-to-child transmission. Babies born to HIV-positive women can contract the virus before or during birth or through breast feeding after birth.
- Transmission in health care settings. Health care professionals have contracted HIV in the workplace, usually after being stuck with needles or sharp objects containing HIV-positive blood.
Transmission via donated blood or blood-clotting factors. However, this is now very rare in countries where blood is screened for HIV antibodies, including in the United States.

Common Myths About How HIV Is Spread
You are NOT at risk for HIV if you:

- Are bitten by a mosquito or any other bug or animal.
- Eat food handled, prepared or served by somebody who is HIV positive.
- Share toilets, telephones or clothing with somebody who is HIV positive.
- Share forks, spoons, knives or drinking glasses with somebody who is HIV positive.
- Touch, hug or kiss a person who is HIV positive.
- Attend school, church, restaurants, shopping malls or other public places where there are HIV-positive people.

HIV is not transmitted though saliva, urine, feces, vomit or sweat.

Sexual Transmission of HIV
In the United States, sexual contact is the most common route of HIV transmission. According to the Centers for Disease Control and Prevention (CDC), nearly 70 percent of the estimated number of new HIV infections in 2014, were among men who have sex with other men (MSM). The term “MSM” is important because many men who have sex with men do not necessarily identify themselves as gay or bisexual. HIV transmitted through sexual activity among heterosexuals accounted for nearly 23 percent of new infections; most of these cases were among women who contracted the virus from men. People who inject drugs accounted for 7 percent of new infections, though about 40 percent of those were MSM, so it isn’t possible to know for sure whether those men contracted HIV by sharing injection equipment or through sex.

According to data from UNAIDS, MSM accounted for 12 percent of new infections globally in 2015. Sex workers accounted for 5 percent of new infections; people who inject drugs accounted for 8 percent of new infections.

The reason why sexual activity is a risk for HIV transmission is because it allows for the exchange of body fluids. Researchers have consistently found that HIV can be transmitted via blood, semen and vaginal secretions. It is also true that HIV has been detected in saliva, tears and urine. However, HIV in these fluids is found only in extremely low concentrations. What’s more, there hasn’t been a single case of HIV transmission through these fluids reported to the CDC.

Specific Sexual Practices: What Are the Risks?
Studies have repeatedly demonstrated that certain sexual practices are associated with a higher
risk of HIV transmission than others.

Vaginal Intercourse
Unprotected vaginal intercourse is the most common mode of HIV transmission worldwide. In the United States and many other developed nations, it is the second most common mode of sexual HIV transmission (after anal intercourse among MSM).

Studies have demonstrated that male-to-female HIV transmission during vaginal intercourse is significantly more likely than female-to-male HIV transmission. In other words, HIV-positive men are much more likely to transmit the virus to HIV-negative women through vaginal intercourse than HIV-positive women are to HIV-negative men.

There are a few reasons for this. First, there are more men than women in the United States living with HIV, meaning that it’s much more likely for a female to have sex with an HIV-positive male than for a male to have sex with an HIV-positive female. Second, women have a much larger surface area of mucosal tissue—the lining of both the vagina and cervix can chafe easily and is rich in immune system cells that can be infected by HIV—than men. For men, HIV must enter through a cut or abrasion on the penis or through the lining of the urethra inside the tip of the penis.

Research suggests that men who are uncircumcised have a higher risk of contracting HIV as well as a higher risk of transmitting the virus if they are already HIV positive. However, it is important to stress that men who are circumcised can still contract or transmit the virus.

Men or women who have sexually transmitted infections (STIs), such as genital herpes or syphilis, are more likely to transmit the virus if they are HIV positive or to contract the virus if they are HIV negative.

Anal Intercourse
Unprotected anal intercourse is associated with a high risk of HIV.

Being the receptive partner—the bottom—during unprotected anal intercourse puts you at a much higher risk for HIV, but it’s possible for either partner to get HIV. The reason for this is that semen containing HIV can come into contact with anal mucosal tissues, which can absorb HIV during anal intercourse. And the risk of HIV transmission isn’t necessarily reduced if the insertive partner, or top, pulls out before ejaculation. Studies have demonstrated that pre-ejaculate (pre-cum) can contain high amounts of HIV and can result in transmission during anal intercourse.

The insertive partner is at lower risk, but it is possible for HIV to enter through a cut or abrasion on the penis or through the lining of the urethra inside the tip of the penis or through certain cells on the foreskin.

Studies suggest that unprotected insertive anal sex is roughly four to 14 times less risky than unprotected receptive anal sex.
Penile-Oral Sex
The risk of penile-oral sex causes the greatest amount of confusion in terms of risk—and it raises the greatest number of questions. But most experts agree that fellatio (blow jobs) is not an efficient route of HIV transmission.

Because unprotected fellatio allows body fluids from one person to come into contact with the mucosal tissues or open cuts, sores or breaks in the skin of another person, there is a “theoretical risk” of HIV transmission, meaning that passing an infection from one person to another is considered possible. But the likelihood of it happening is rare, as there are only a few documented cases. These instances all involved MSM—men who were the receptive partners (the person doing the sucking) during unprotected oral sex with an HIV-positive man. There haven’t been any instances of HIV transmission among female receptive partners during unprotected oral sex. And there hasn’t been a single documented case of HIV transmission to an insertive partner (the person being sucked) during unprotected oral sex, either among MSM or heterosexuals.

Oral-Vaginal Sex
Like fellatio, this is also considered a low-risk activity. Reports document one case of female-to-female transmission of HIV via cunnilingus and another case of female-to-male transmission of HIV via cunnilingus. Both of these cases involved transmission from receptive partner (the one receiving oral sex) to the insertive partner (the one performing oral sex). There haven’t been any documented cases of HIV transmission from the insertive partner to the receptive partner.

Oral-Anal Sex
Oral-anal sex is often referred to as analingus. Analingus, or rimming, is not considered to be an independent risk factor for HIV. However, it has been shown to be a route of transmission for hepatitis A and B, as well as parasitic infections like giardiasis and amebiasis.

Digital-Anal or Digital-Vaginal Sex
Digital-anal or digital-vaginal sex is the clinical term for fingering either the anus or the female genitals (including the vagina). While it is theoretically possible that someone with an open cut or fresh abrasion on his or her finger or hand could contract HIV if coming into contact with blood in the anus or vagina or vaginal secretions, there has never been a documented case of HIV transmission via fingering.