



# HIV Transmission Explained: Everything You Need to Know

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## INTRODUCTION

Human Immunodeficiency Virus (HIV) is a retrovirus that attacks the immune system, weakening the body's ability to fight infections and diseases. Understanding how HIV is transmitted is crucial in preventing its spread and controlling the epidemic. Despite significant advancements in treatment and awareness, misinformation about HIV transmission still exists. This article explores the primary ways HIV is transmitted, factors that increase the risk, misconceptions, and strategies for prevention. HIV is transmitted when specific bodily fluids from an infected person come into contact with a mucous membrane, damaged tissue, or directly enter the bloodstream. The primary modes of transmission include unprotected sexual contact, the most common route of HIV transmission worldwide. The virus can be transmitted through factors that increase the risk of sexual transmission, including direct blood-to-blood contact, such as an HIV-positive mother passing the virus to her child during pregnancy. Without intervention, the risk of mother-to-child transmission can be as high as 30-45 percent, but with proper medical care, this risk can be reduced to less than 2 percent. Healthcare workers may be exposed to HIV through direct contact with blood, but the risk is low, especially with proper use of personal Protective Equipment (PPE) and adherence to standard safety protocols.

## DESCRIPTION

Despite widespread education efforts, several myths persist about how HIV is transmitted. It is important to clarify that HIV cannot be transmitted through the several factors influence the likelihood of HIV transmission. Higher viral load in an HIV-positive person increases the risk of transmission. Anal sex poses a higher risk than vaginal sex, while oral sex carries the least risk. STIs such as syphilis, herpes, and gonorrhea increase susceptibility to HIV infection. Consistent condom use and medical interventions significantly reduce transmission risk. Preventing HIV transmission requires a combination of medical, behavioral, and public health interventions. Open

communication with partners about HIV status. PEP is an emergency treatment for individuals who may have been exposed to HIV. It involves taking antiretroviral drugs within 72 hours of potential exposure and continuing for 28 days. Needle exchange programs to provide clean syringes, Supervised drug consumption facilities, Access to addiction treatment and rehabilitation. Prevention of Mother-to-Child Transmission (PMTCT) HIV screening for pregnant women. Antiretroviral therapy (ART) during pregnancy and breastfeeding. Safe delivery practices, such as C-section when necessary. Use of formula feeding instead of breastfeeding in high-risk cases. Rigorous screening of blood donations. Strict donor selection criteria for organ transplants. Use of universal precautions in medical settings.

## CONCLUSION

Organizations such as the World Health Organization (WHO), UNAIDS, and the Centers for Disease Control and Prevention (CDC) have been at the forefront of efforts to curb HIV transmission. Long-Acting PrEP Injectable PrEP formulations that provide protection for weeks or months. Gene Therapy research exploring potential gene-editing techniques to cure or prevent HIV. Understanding HIV transmission is fundamental to preventing new infections and combating the epidemic. While great progress has been made in reducing transmission rates, continued efforts in education, medical research, and public health interventions remain essential. By adopting preventive measures, increasing awareness, and supporting affected communities, we can work towards a future with significantly reduced HIV transmission and ultimately, an HIV-free world.

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## CONFLICT OF INTEREST

The author declares there is no conflict of interest.

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