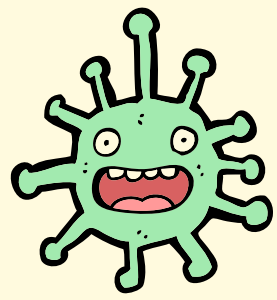
Be Safe From HIV!



What is HIV?

Human immunodeficiency virus is a **virus** that attacks the body's **immune system**. HIV attacks a specific type of immune system cell in the body called **CD4 T cells**. In 2020, there are around **38 million people** infected with HIV and the numbers are constantly increasing. (1)

How to protect yourself ?

Mother-to-child transmission:

- The mother **SHOULD** check her body before giving birth
- The Combination Antiretroviral Therapy (cART) had greatest success in helping the mother-to-child transmission rates to fall below 5% globally. (2)

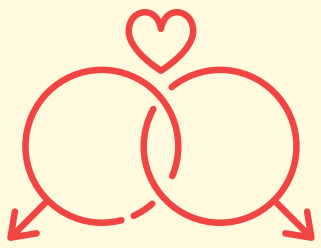
Sexual transmission:

- **SHOULD** Practice safe sex by using condoms (4)
- **SHOULD** Know the body condition of the sex partner (4)
- **SHOULD** Take **PrEP** (pre-exposure prophylaxis). PrEP can help people at risk for HIV to prevent getting HIV from sex (3) (Truvada® and Descovy® are the main two medications approved for use as PrEP)

Injection drug use:

- **DO NOT** share needles, syringes, or other drug injection equipment
- **DO NOT** have sex when high on drugs

Who is at higher risk?



- **MSM: Men Who Have Sex with Men**

Anal sex is the highest-risk sexual activity for getting HIV (3)

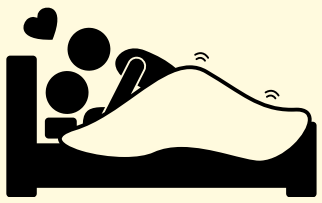
- **Black/African Americans and Hispanics/Latinos**

A larger population is infected due to environmental and socioeconomic reasons (5)

- **Transgender women**
- **Injection drug users**

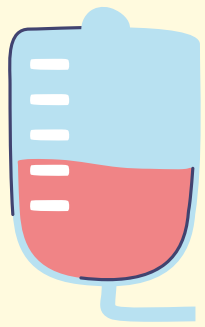
HIV could be transmitted through blood/sharing injection equipment (5)

HIV can be transmitted by:



Semen & Vaginal Fluid

Breast Milk



Blood

Is there a vaccine?

No vaccine yet!

HIV is unique since the produced immune response is low, the traditional way of creating a vaccine using weak or dead pathogens doesn't work.

The most successful vaccine trial was Thai RV144 in 2009 with **31.2%** efficacy rate. (6)

But, HIV can be controlled

There is no effective treatment for HIV. But we can control it with proper medical care.

The HIV medicine is **antiretroviral therapy(ART)**. ART can reduce the amount of HIV in blood, which is called viral load. (2)

ART is a lifelong treatment

1. Douek, D., Brenchley, J., Betts, M. et al. HIV preferentially infects HIV-specific CD4+ T cells. Nature 417, 95–98 (2002).
2. Autran, B., Taiwo, B., Katlama, C., Ghosn, J., Seedat, S., HIV. The Lancet; London Vol. 392, Iss. 10148, 2018)(1)
3. Carballo-diéguez, A., Greene, G., Swabb, G., Fought, A J., Hope, Thomas J., Preferences for Long-Acting Pre-exposure Prophylaxis (PrEP), Daily Oral PrEP, or Condoms for HIV Prevention Among U.S. Men Who Have Sex with Men, Scholarly Journals, AIDS and Behavior; New York Vol. 21, Iss. 5, (2017)
4. Ghosn, Jade; Taiwo, Babafemi; Seedat, Soraya; Autran, Brigitte; Katlama, Christine.The Lancet; London Vol. 392, Iss. 10148, (Aug 25, 2018): 685-697
5. National Institute on Drug Abuse, Advencing Addition Science, HIV/AIDS Research Report Who Is at Risk for HIV Infection and Which Populations Are Most Affected? (2010)
6. Rerks-Ngarm et al., 2009, S. Rerks-Ngarm, P. Pitisuttithum, S. Nitayaphan, J. Kaewkungwal, J. Chiu, R. Paris, N. Premsri, C. Namwat, M. de Souza, E. Adams, MOPH-TAVEG Investigators, Vaccination with ALVAC and AIDSVAX to prevent HIV-1 infection in Thailand, N. Engl. J. Med., Vol. 361, 2009, 2209-2220

AMINOVA Bakhshan(4155530)
CHAN Chung Yin (4004913)
LAM Wing Kiu(4088086)
TSANG Chi Hin(4174328)
YEUNG Tsz Wai(4051954)