Basics of HIV + TB

HIV Literacy Training

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Basics of HIV + TB

- HIV Transmission
- Immune System
- HIV replication
- Opportunistic Infections
- ARV and Adherence

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How do these words affect you?

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HIV

H uman

I mmunodeficiency

V irus

HIV-positive means you have the virus in your body

AIDS

A quired

I mmuno-

D eficiency

S yndrome

AIDS is when your immune system is damaged from HIV

AIDS is not a death sentence, with treatment you can stay well.

Transmission of HIV

Transmitted in 3 ways:

Sex

Blood

Mother-to-child

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Blood Transmission

Blood

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Sexual Transmission

Any sexual activity that involved transfer of infectious body fluids (semen, vaginal secretions, blood)

unprotected sexual intercourse

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STI's increases spread of HIV

- You cannot always see if your partner has an sexually transmitted infection (STI)
- They may not tell you
- They may not know
- An HIV-negative person with an STI is more vulnerable to becoming HIV infected
- An HIV+ person with an STI passes HIV more efficiently

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Genital Herpes

- Did you know 1 in 5 persons have genital herpes?
- Herpes causes painful genital sores
- Like HIV, there is no cure for herpes
- If you get herpes, you can expect a lifetime of recurrent ulcer outbreaks
- Only condoms decrease risk of STIs, including herpes & HIV

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Mother-to-Child Transmission

Mother-to-child

1

Pregnancy

2

Delivery

3

Breast feeding

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No Transmission of HIV

- HIV is not easily transmitted
- You can not get HIV from…

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These body fluids do NOT pass HIV

Tears

Saliva

Urine

Sweat

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Prevention

For all forms of sex, including oral and anal sex

If providing home care, including wounds

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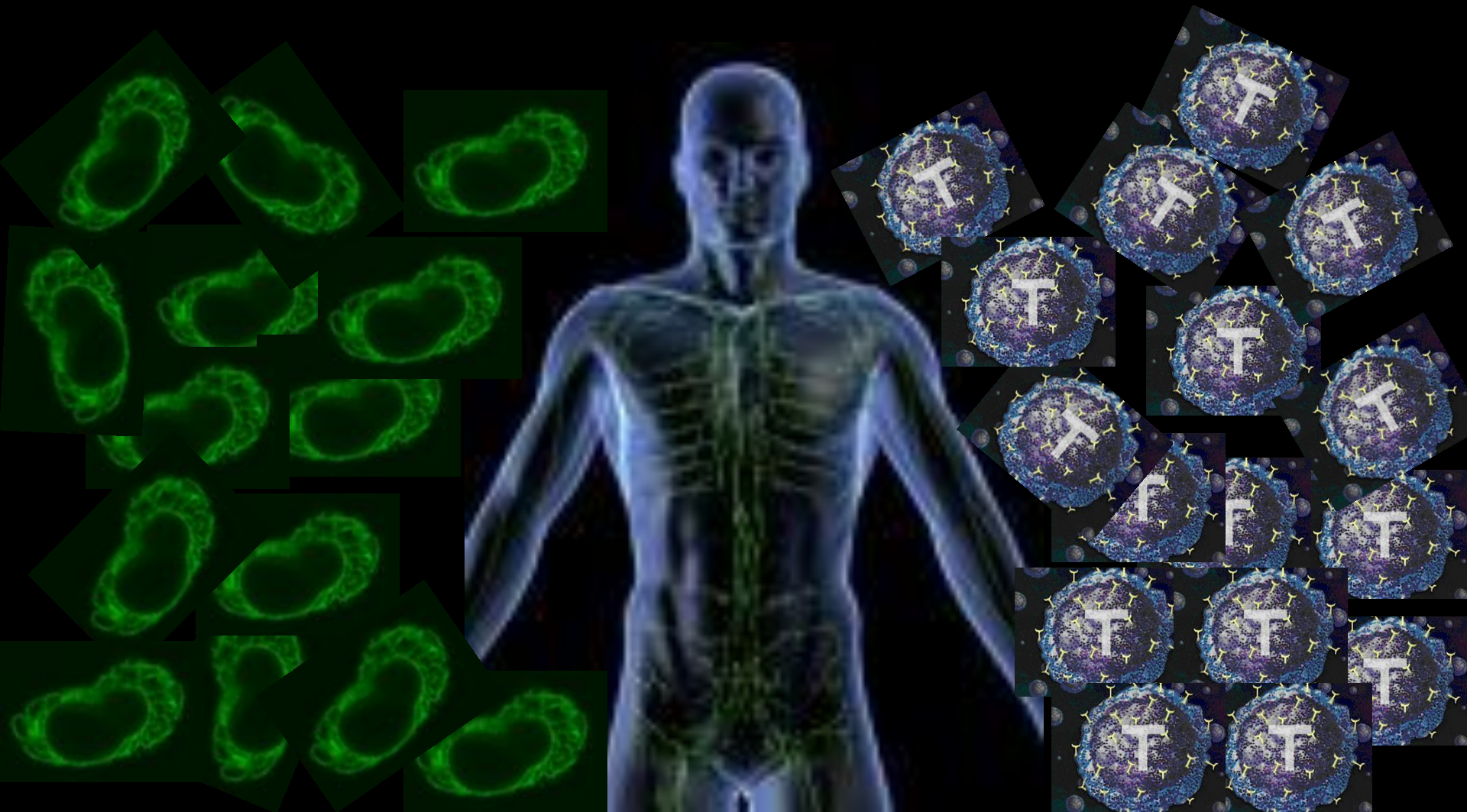
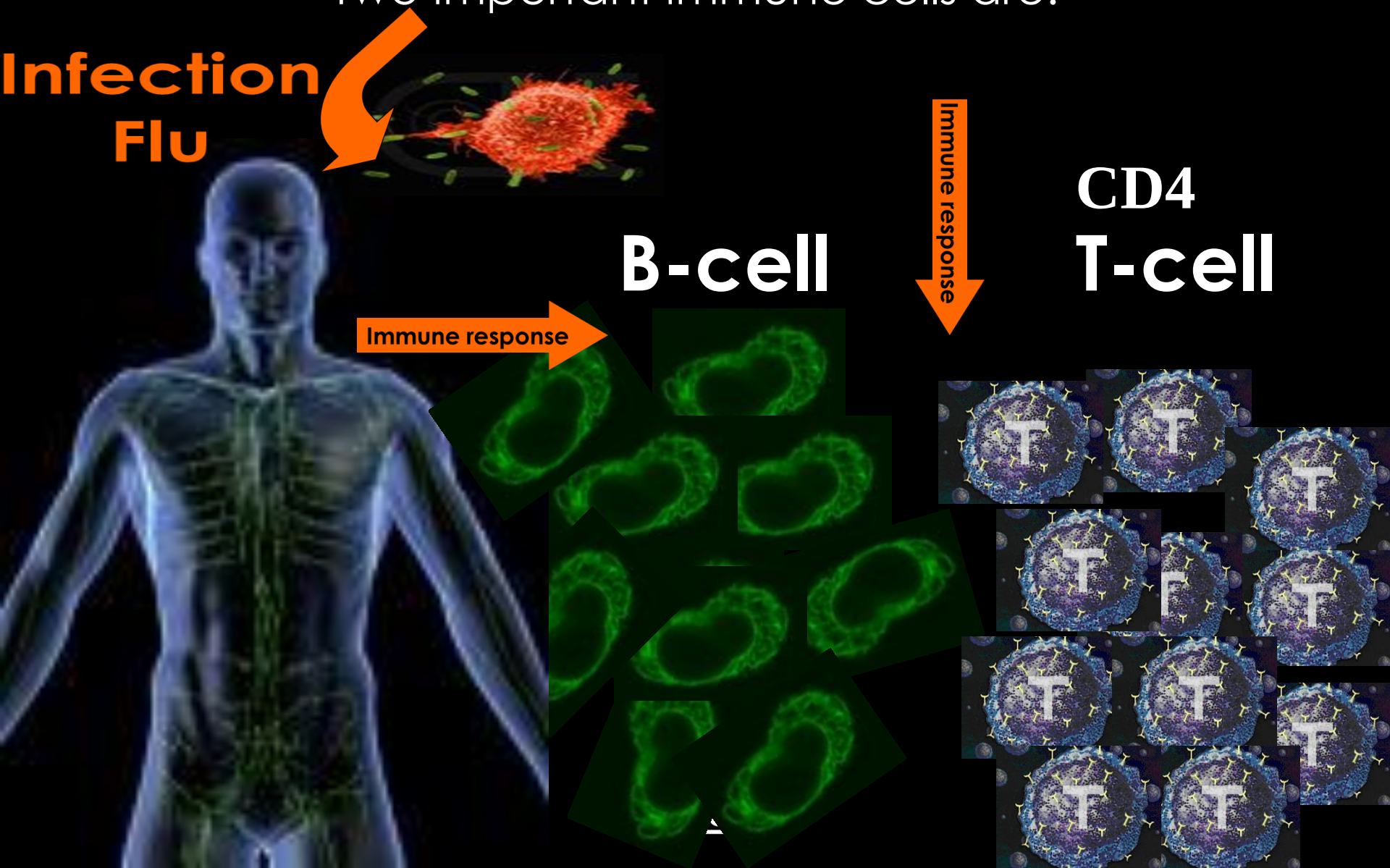
Our immune system

Our body is full of cells that protect us from sickness



There are many kinds of cells in our **immune system**
Two important immune cells are:

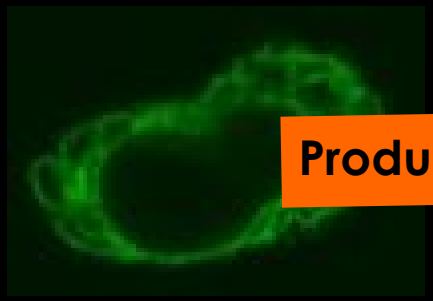


Infection
Flu

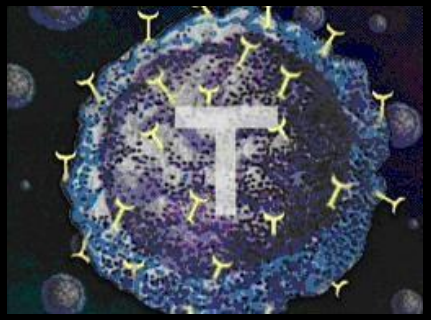
Anti-Flu anti-bodies

Attack flu

Produce Abs



B-cell



CD4 T-cell

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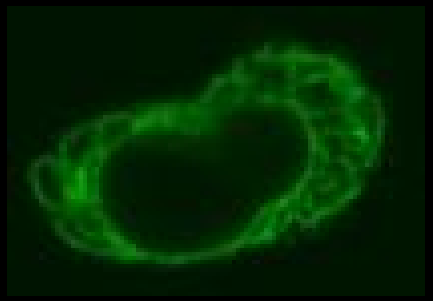
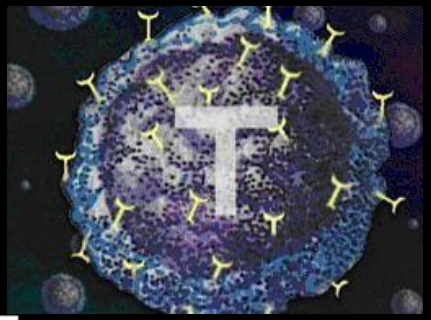
HIV

Immune response



B-cell

Immune response



CD4 T-cell

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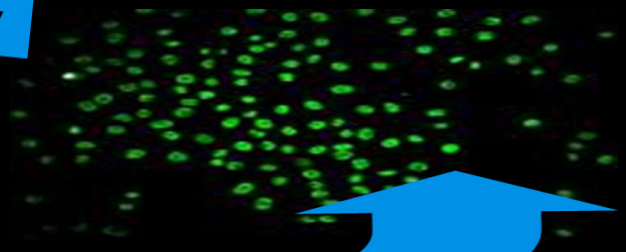
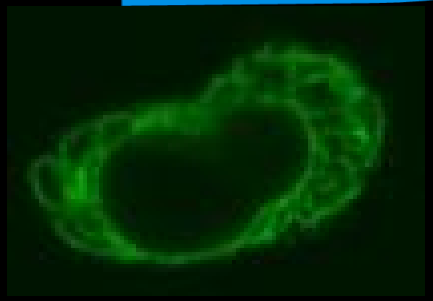
HIV

Attack HIV

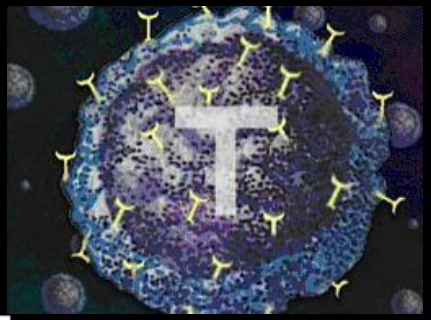
Anti-Flu anti-bodies



Produce Abs



B-cell



CD4 T-cell

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What happens inside the body when HIV infects us?

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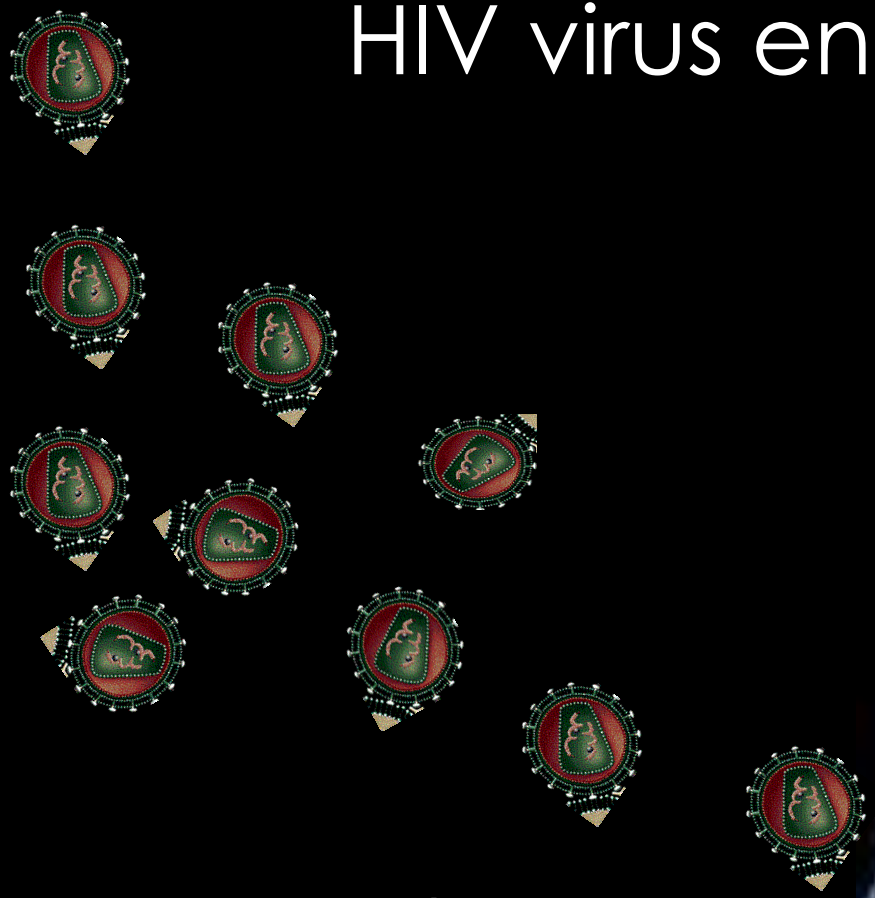
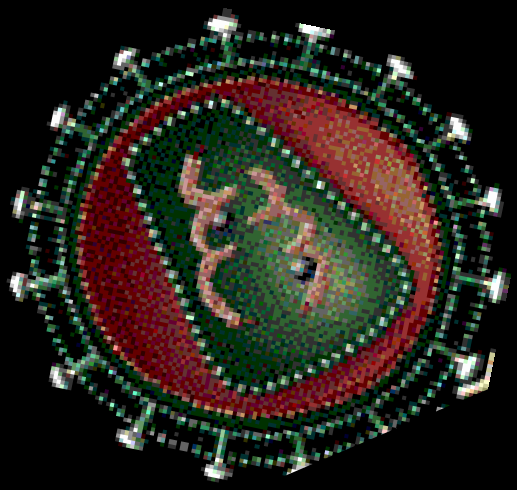
HIV virus enter our body…

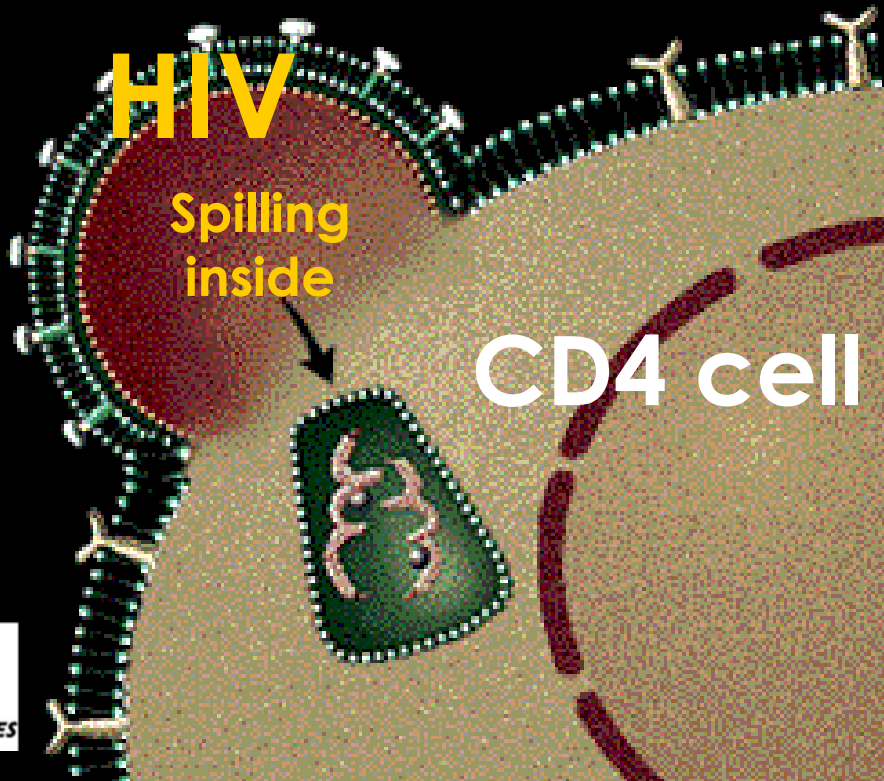


1. Blood
2. Sex
3. MTCT

Once HIV is inside the body, it enters the blood & attacks our CD4 cells

HIV infecting a CD4 cell





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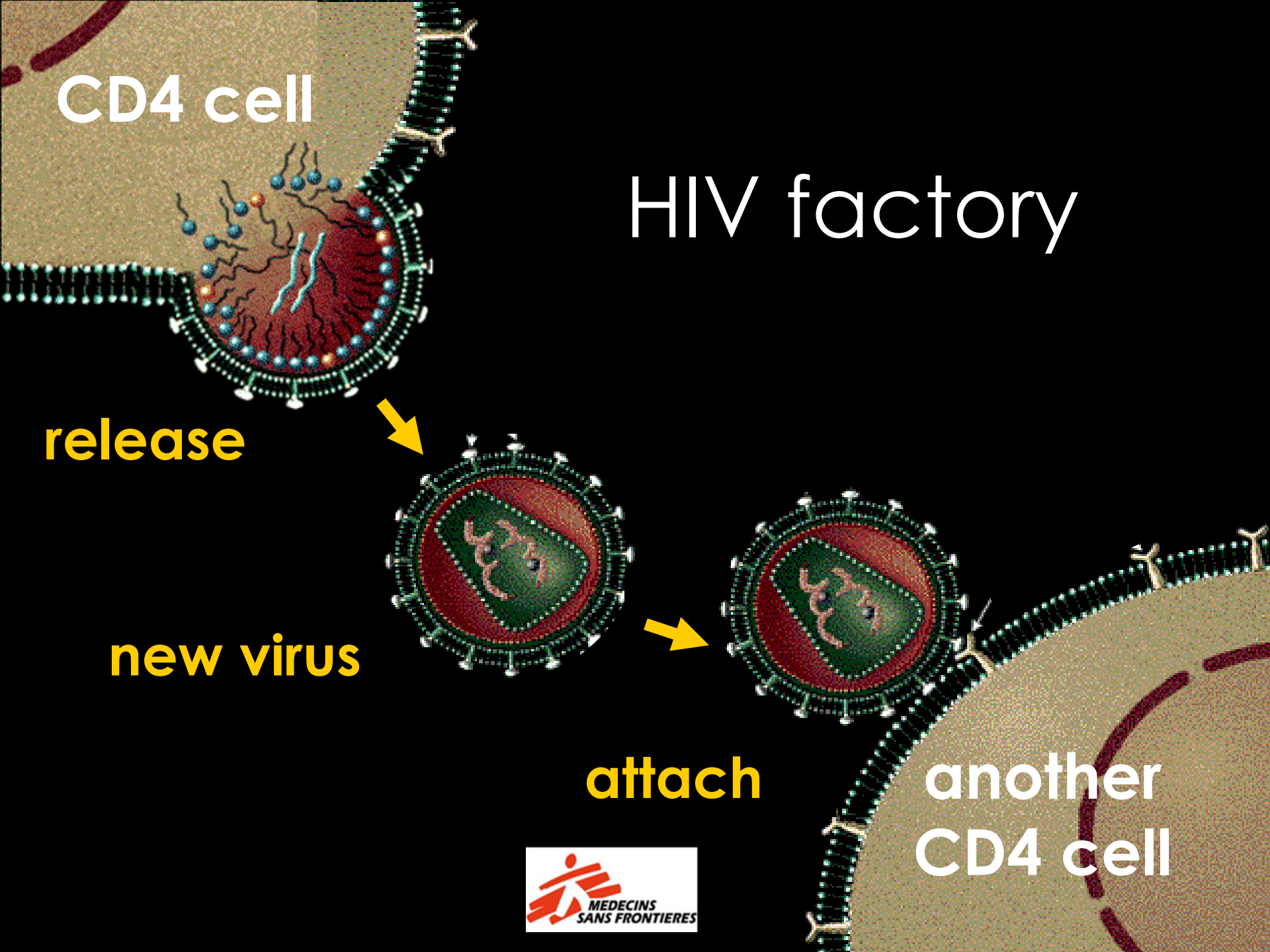
CD4 cell
HIV factory
release
new virus
attach
another
CD4 cell
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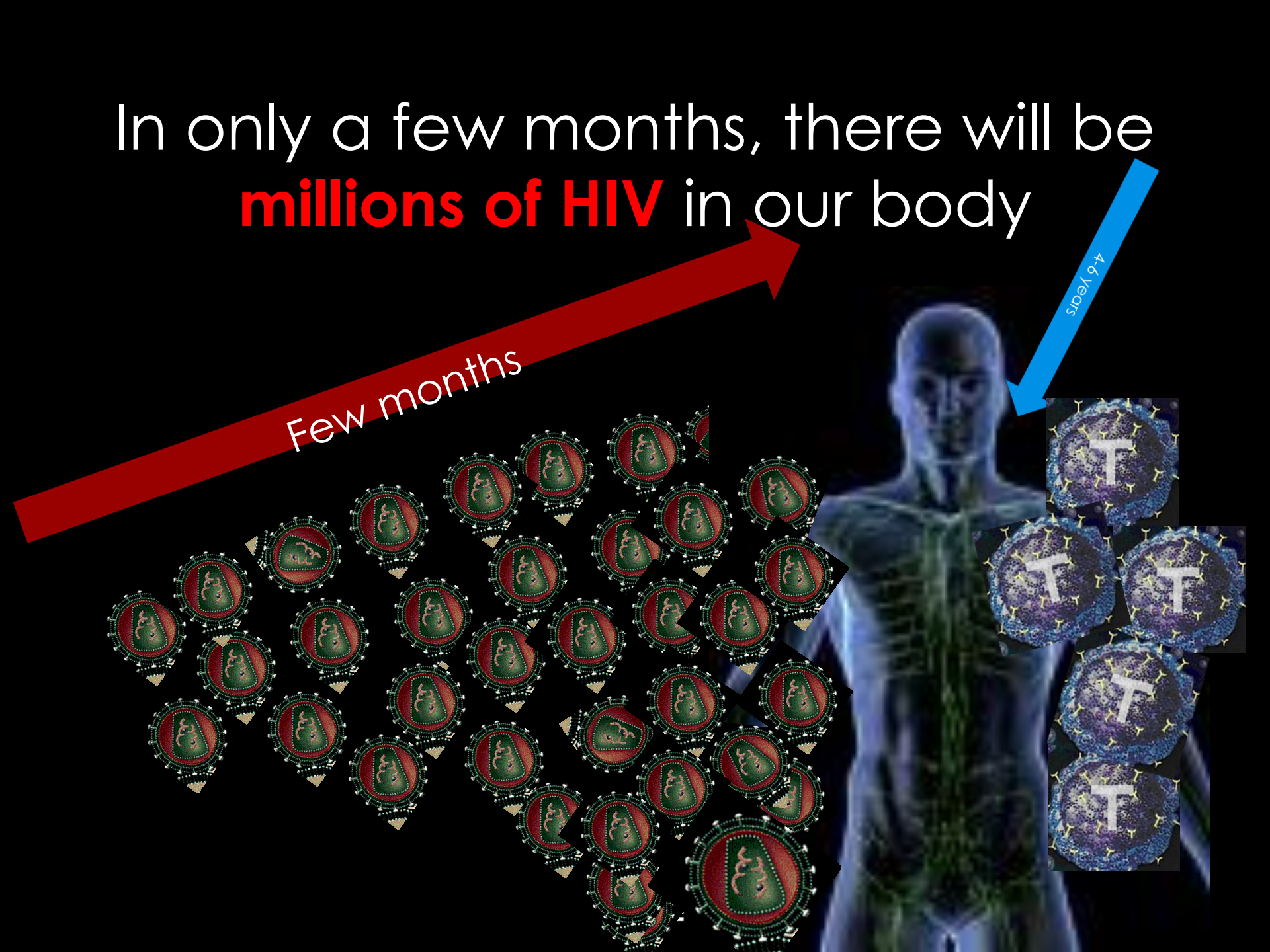
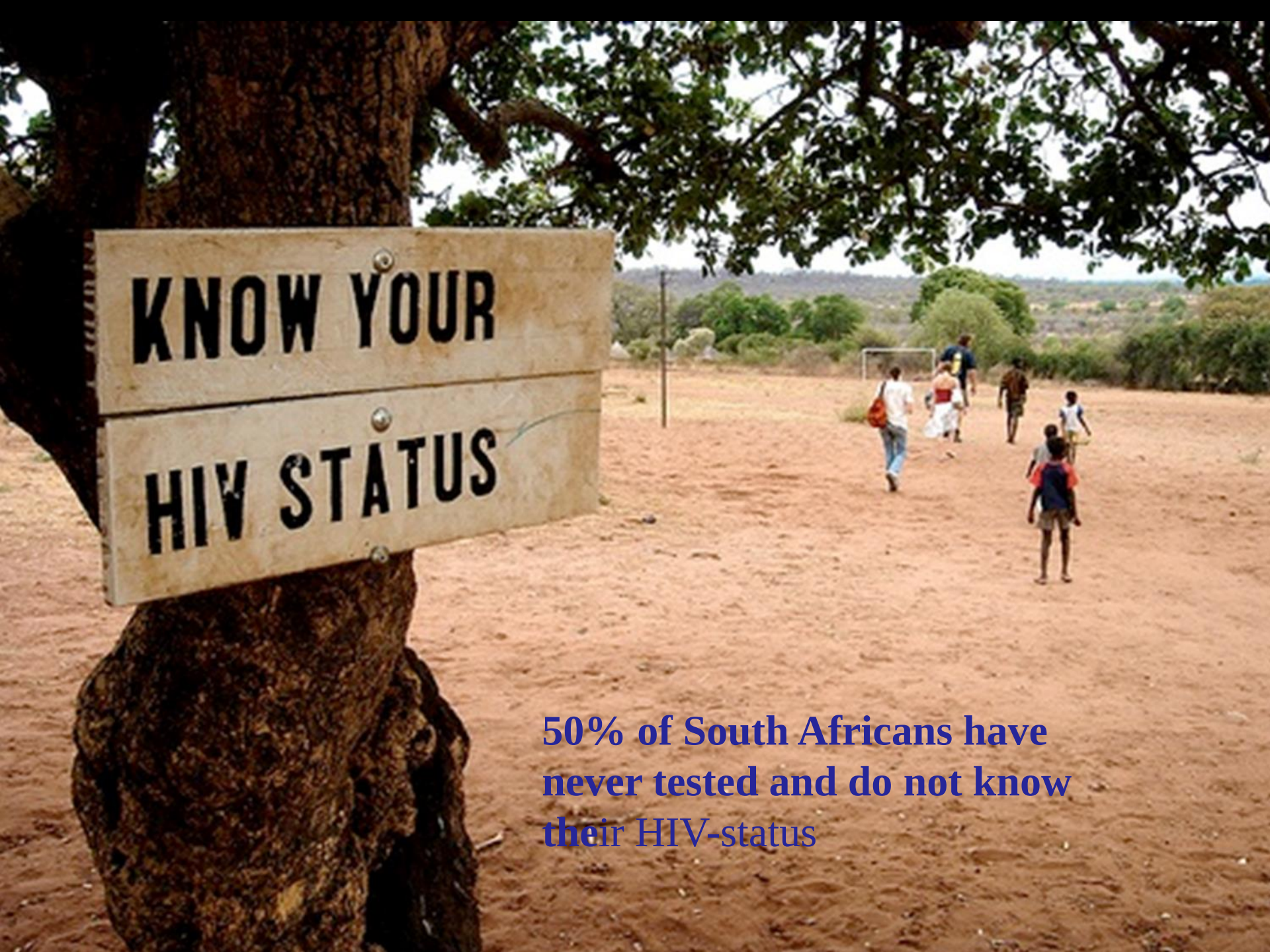
In only a few months, there will be **millions of HIV** in our body





50% of South Africans have never tested and do not know their HIV-status

How do we test HIV in south Africa

- **Rapid antibodies HIV test Kits**
  - **Two types (screening and confirmatory tests)**
- **Elisa (vein blood) laboratory test**
- **PCR (for children) laboratory test**

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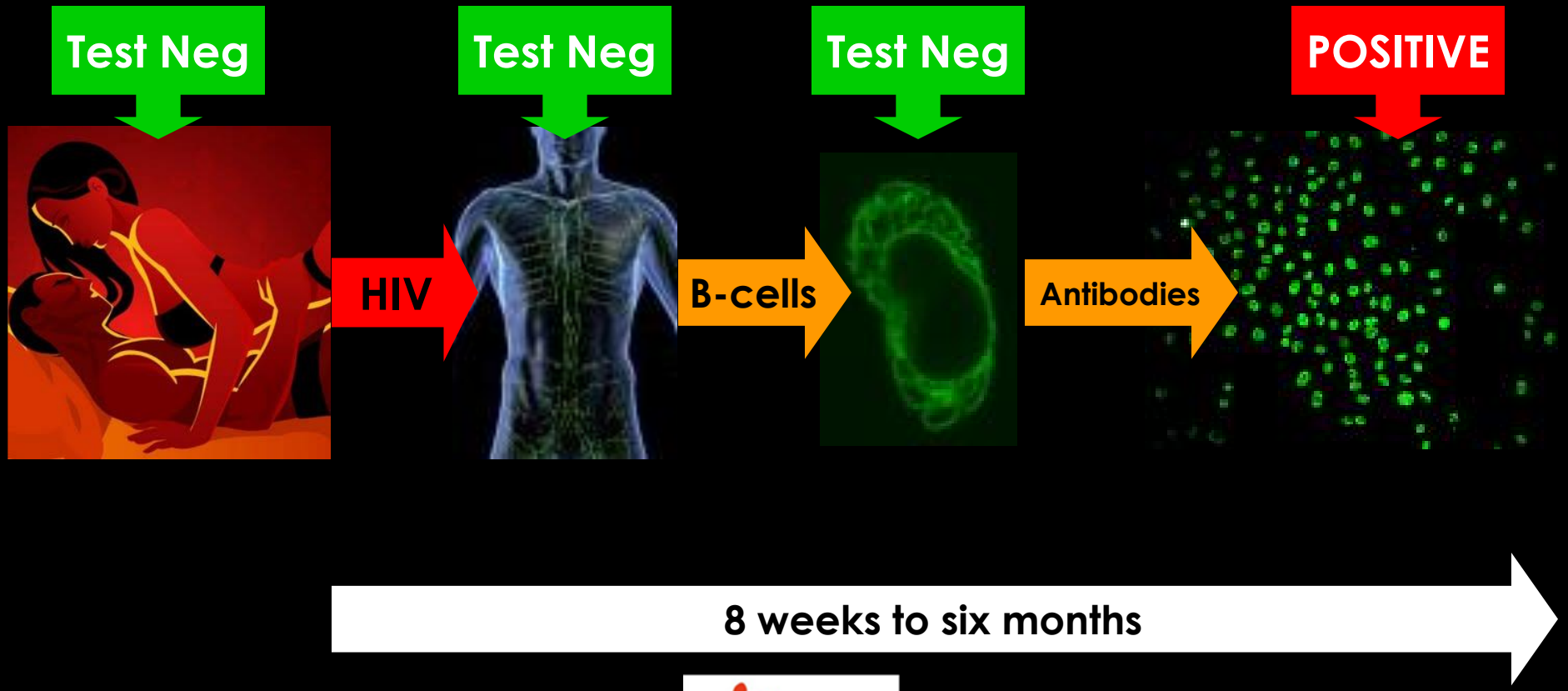
It takes 8 weeks-6months to make enough antibodies



What is ‘Window Period’

When a person is newly HIV infected and the HIV antibodies are undetected

She/he will test HIV-negative

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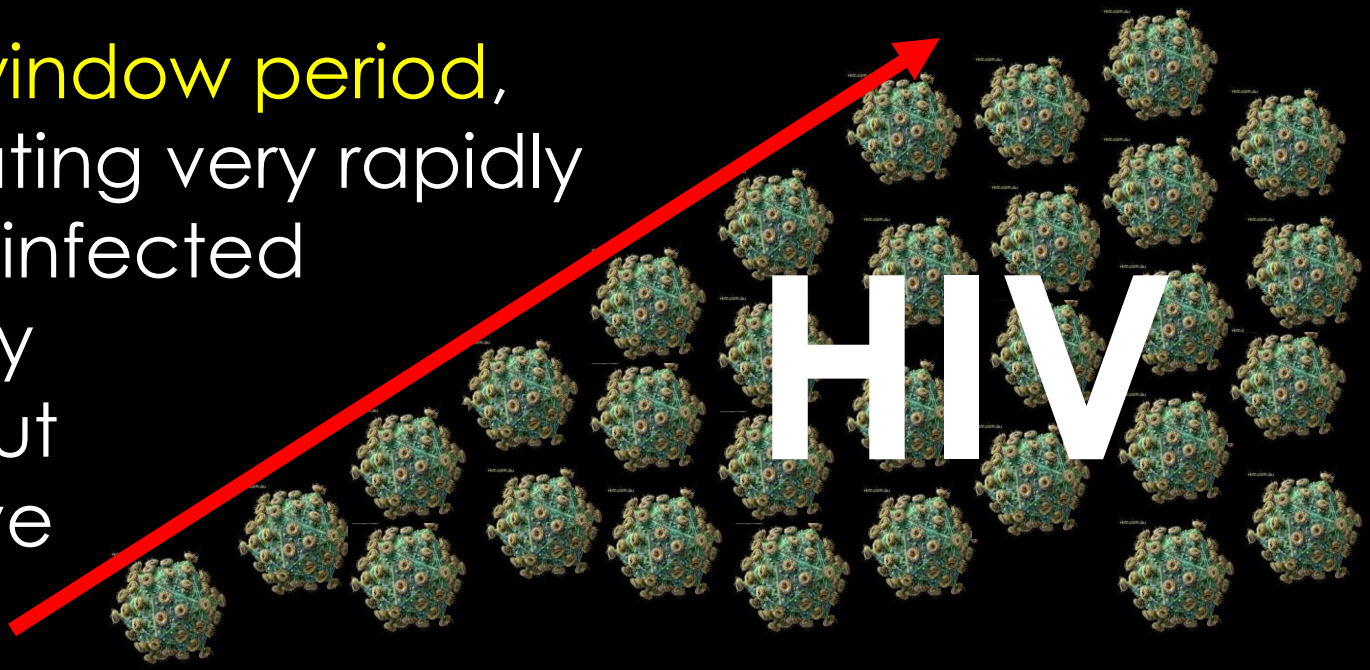
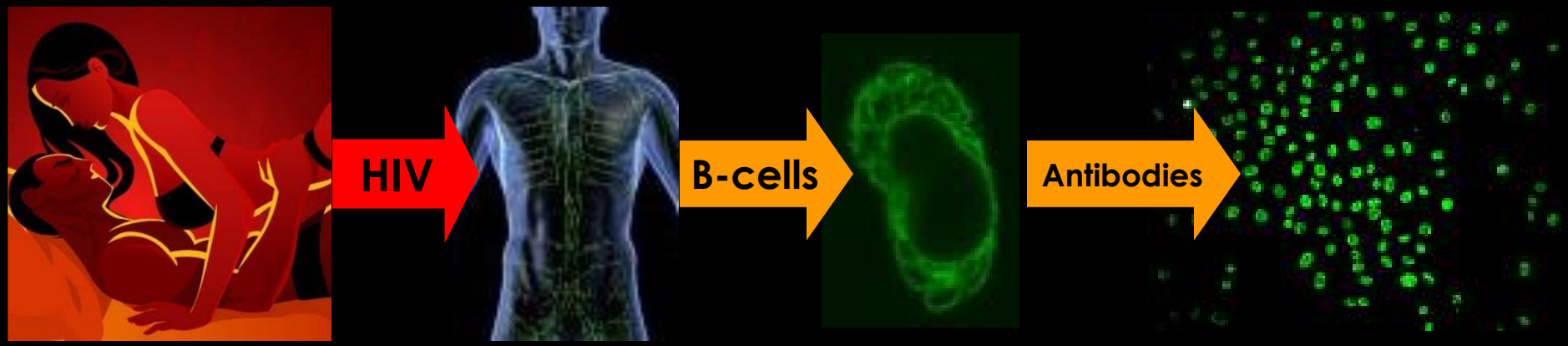
During the window period, HIV is replicating very rapidly & the newly infected person is very infectious, but tests negative





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Questions many patients have…

I tested HIV-positive. What does that mean?

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HIV-positive

- Means you have **virus in your body**
- You can remain **healthy for many years** and not knowing you have HIV in your body
- South Africa uses an **HIV rapid test**, that detects **antibodies to HIV**. The test does not measure actual virus

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I am HIV Positive – Can I start treatment now??

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When to start ARVS

- As soon as you test HIV Positive, you can start treatment.
- Even if you have never been sick, you are at high risk of infection because the immune system is very weak.
- It is essential for persons who tested HIV Positive and person who is on stage 3/4 to start ARV treatment soon.
- All HIV positive pregnant women start ARVs as soon as possible.

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What is an OI?

- **Opportunistic infection**
- An infection that takes the opportunity to cause **an illness** in a person who is immuno-compromised

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clinical stages of HIV

- **WHO Stage 1**
- Asymptomatic (no sickness)
- Swollen glands
- **WHO stage 2**
- Shingles/Herpes Zoster (in the last 5 years)
- Recurrent mouth sores & infections
- Recurrent upper respiratory infections
- Weight loss (less than 10% of body weight)
- *Example: Weighed 60kg → drop 6 kg or less*
- **WHO stage 3**
- Oral thrush
- Diarrhea (more than 4 weeks)
- TB (within the last 1 year)
- Fever (more 4 wk continuous or off/on)
- Bedridden < *50% of day during last month*
- Weight loss (more than 10% body weight)severe

WHO stage 4

- **PCP**
- **Oesophageal thrush**
- **Cryptococcal meningitis**
- **Diarrhea - *Cryptosporidiosis***
- **CMV retinitis**
- **Cervical cancer - *invasive***
- **HIV encephalopathy**
- *Impaired cognition / brain function*
- **Herpes ulcers** (more than 4 weeks)
- **Herpes in organs/systemic** (any duration)
- **Kaposi Sarcoma**
- **Toxoplasmosis** (brain)
- **TB extra-pulmonary**
- **Bedridden > *50% of day during last month***
- **HIV wasting** = lose > 10% body weight **+**
- *(diarrhea x 4wks)* **or** *(weakness/fever x 4wks)*

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About one third of HIV positive Patients in Africa have

Most HIV+ people who die, die from TB

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TB is a common Opportunistic infection that makes HIV worse

- TB decreases CD4
- TB makes you progress to AIDS more rapidly
- If you are co-infected with TB, you get more illnesses (OIs) than HIV+ persons without TB
- Mortality rate in patients TB co-infected is very high

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TB can occur at any CD4 count

TB is a mycobacterium (small bacteria)

TB spread through the air

TB does not spread from blankets or clothes

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TB – Symptoms

Cough

Longer than 24 hours

AND

Night sweats & fever

Weight loss

Fatigue

No appetite

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Protecting Yourself from TB

Keep doors & windows open at home

Cover your mouth when coughing

Open windows in the taxi

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How to Test TB



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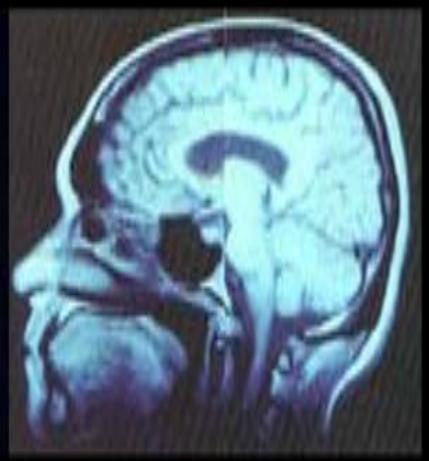
TB can go anywhere in our body

This is called **Extra-pulmonary TB**

Lymph nodes (glands)

Liver & Intestines

Bones especially the spine



Brain

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TB is curable

- TB treatment differs from each type of TB
- It can be from 06months up 24months
- It is divided into two :
- oral medication and injectable
- PTB
- DRTB
- Extrapalmonary TB

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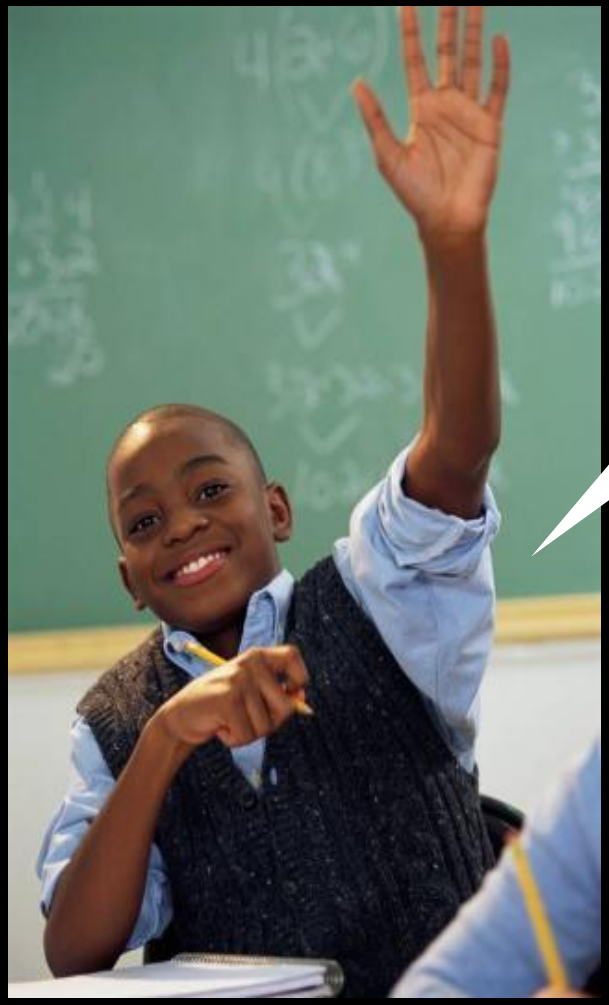

What is a
VIRAL LOAD?

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Antiretroviral Therapy

HIV Literacy Training:

What are ARVs?

Drugs that stop HIV from growing or multiplying

They will help you stay healthy

ARVs do not cure HIV

They must be taken everyday for a lifetime

Taking ARVs

1 pill

3 drugs in one pill, taken once a day

OR

3 pills

You must take all 3 or they will not stop HIV

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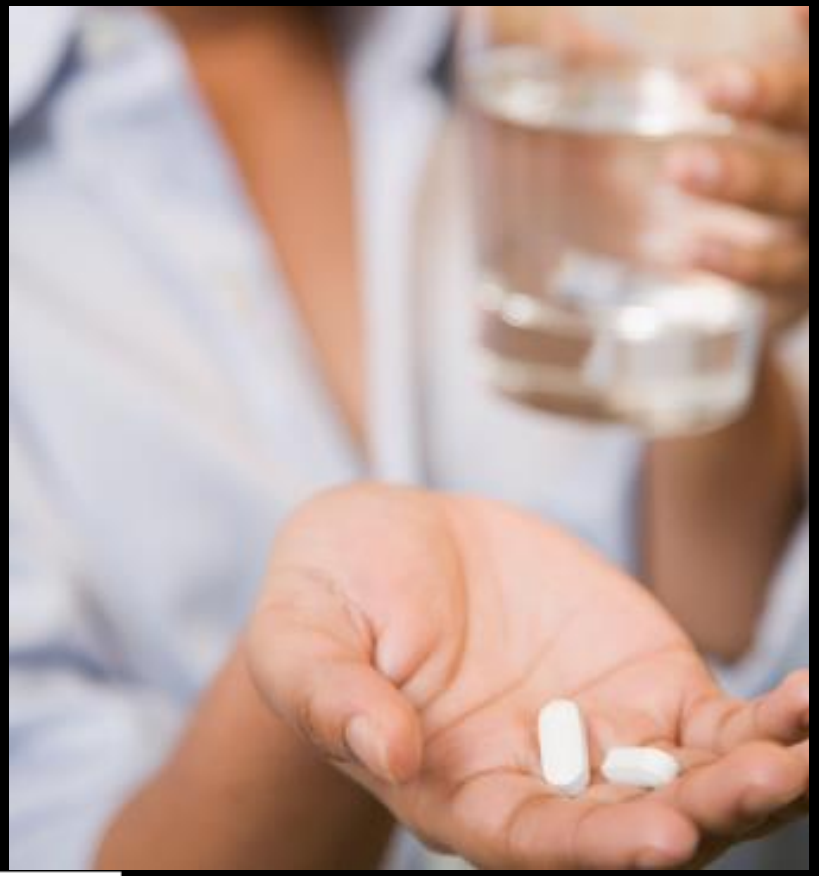
New patients

1 pill

3 drugs in one pill,
taken once a day



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South Africa has 2 lines of ARVs

1st Line

OR

or

or

2nd Line

ARVs can have side-effects. Any kind of drug can have side effects. Even some traditional & herbal medicines have side effects

- Not everyone has side effects from ARVs
- Most side-effects are mild & go away
- Some side-effects take longer to develop
- A few can be serious, but they are not common

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Making your Treatment Plan

Choosing the time to drink your pills that is best for you…

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Don't choose a time when you are busy…

Cooking

Going to work

Past your bedtime

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'Treatment Failure'

- If you 'fail' on a 1st Line regimen, you may be switched to a 2nd line regimen
- **'Failure'** means the drugs stop working.
  - Virologic Failure: your viral load goes up and becomes 'detectable'
  - Immunologic Failure: your CD4 count falls
  - Clinical Failure: You get sick again with AIDS defining illnesses
- The most common reason for 'failure' is not taking your ARVs adherently.

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