

HIV Explained: The Human Immunodeficiency Virus



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In this week’s issue of The Pathology Press, we interview Dr. Miguel E. Quiñones-Mateu to discuss HIV, a complex and widely impactful infectious disease. He walks us through the causes, symptoms, and treatment options for HIV, while highlighting the nuances involved in diagnosis and long-term management. This guide offers clear, accessible insights into everything you need to know about HIV.

Overview of HIV and AIDS

Human Immunodeficiency Virus (HIV) is a virus that attacks the body’s immune system, specifically CD4+ T cells, which help fight infections¹. If untreated, HIV reduces the number of these cells, making the body more vulnerable to infections and certain cancers. Acquired Immunodeficiency Syndrome (AIDS) is the most advanced stage of HIV infection¹. It occurs when the immune system has been severely damaged — often measured by a very low CD4+ count or the presence of specific opportunistic illnesses². While effective treatments have transformed HIV into a manageable condition, without treatment HIV will progress to AIDS². HIV/AIDS remains relevant today because: tens of millions of people still live with HIV worldwide, new infections continue yearly, and access to prevention and treatment varies widely, and stigma, inequality, and funding cuts threaten progress².

Origin of HIV

HIV is believed to have originated from simian immunodeficiency viruses (SIVs) — viruses that infect African primates³. Multiple cross-species transmissions occurred when SIV from primates infected humans, likely through exposure to infected blood during hunting and butchering of wild animals³. Although HIV existed earlier, the first recognized AIDS cases were reported in the United States in 1981, marking the beginning of global awareness and public health responses².

Types of HIV

HIV-1 The most prevalent type globally, is closely linked to SIV found in chimpanzees.

Group M (Major): Causes the vast majority of HIV infections worldwide. Most global subtypes (A–K) come from this group³.

Group O (Outlier): Rare, mainly in West and Central Africa³.

Group N (Non-M, Non-O): Very rare, mostly reported in Cameroon³.

Group P: Extremely rare, with only a small number of documented cases³.

HIV-2 Less widespread and generally less aggressive, originated from sooty mangabeys in West Africa, with groups A & B mainly³.

Difference Between HIV & AIDS

HIV is a virus that infects and destroys immune cells, particularly CD4+ T cells, and it can be effectively managed with antiretroviral therapy (ART), allowing people to live many years without progressing to AIDS if properly treated¹. AIDS is a clinical syndrome that results from advanced HIV infection and represents the late stage of the disease, characterized by severe immune deficiency; it is diagnosed when the immune system is critically impaired, often marked by very low CD4+ T cell counts and the presence of opportunistic infections¹.

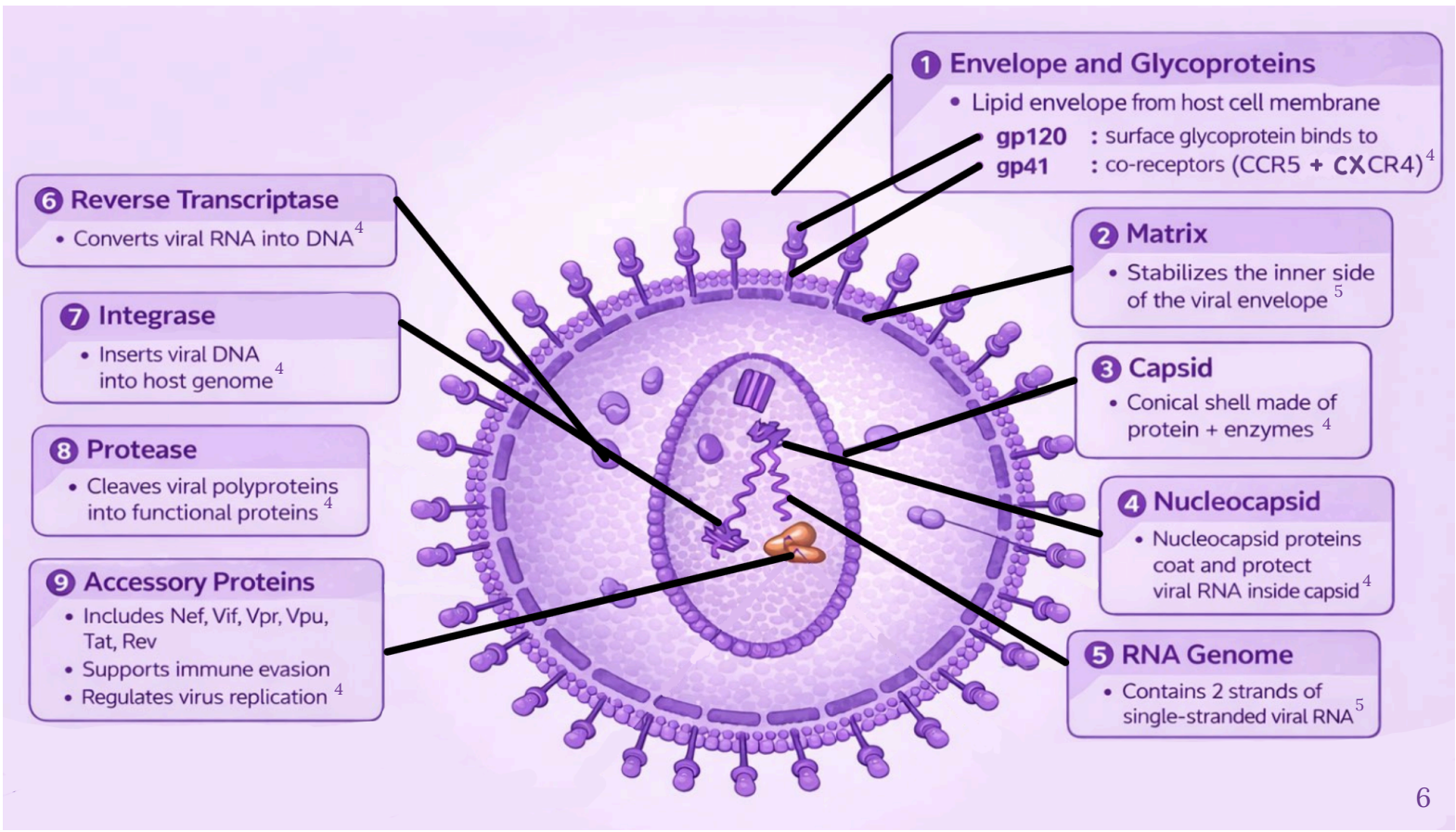
How does AIDS develop?

AIDS is diagnosed when the CD4 cell count falls below 200 cells per mm³ or when severe immune related conditions develop. These include opportunistic infections such as pneumonia, chronic diarrhea, eye infections, and meningitis, commonly caused by Cryptococcus, reactivation of cytomegalovirus, Toxoplasma gondii in the brain, disseminated Mycobacterium avium complex, and Pneumocystis jirovecii pneumonia². AIDS-defining cancers may also occur, including Kaposi’s sarcoma, advanced cervical cancer, and certain non-Hodgkin and brain lymphomas. Neurological complications such as HIV encephalopathy (AIDS dementia) or progressive multifocal leukoencephalopathy (PML) caused by the JC virus can develop². Additional features include severe weight loss (HIV wasting syndrome) and AIDS-related lung diseases, such as pulmonary lymphoid hyperplasia or lymphoid interstitial pneumonia, particularly in children².

What are some of the common symptoms of HIV?

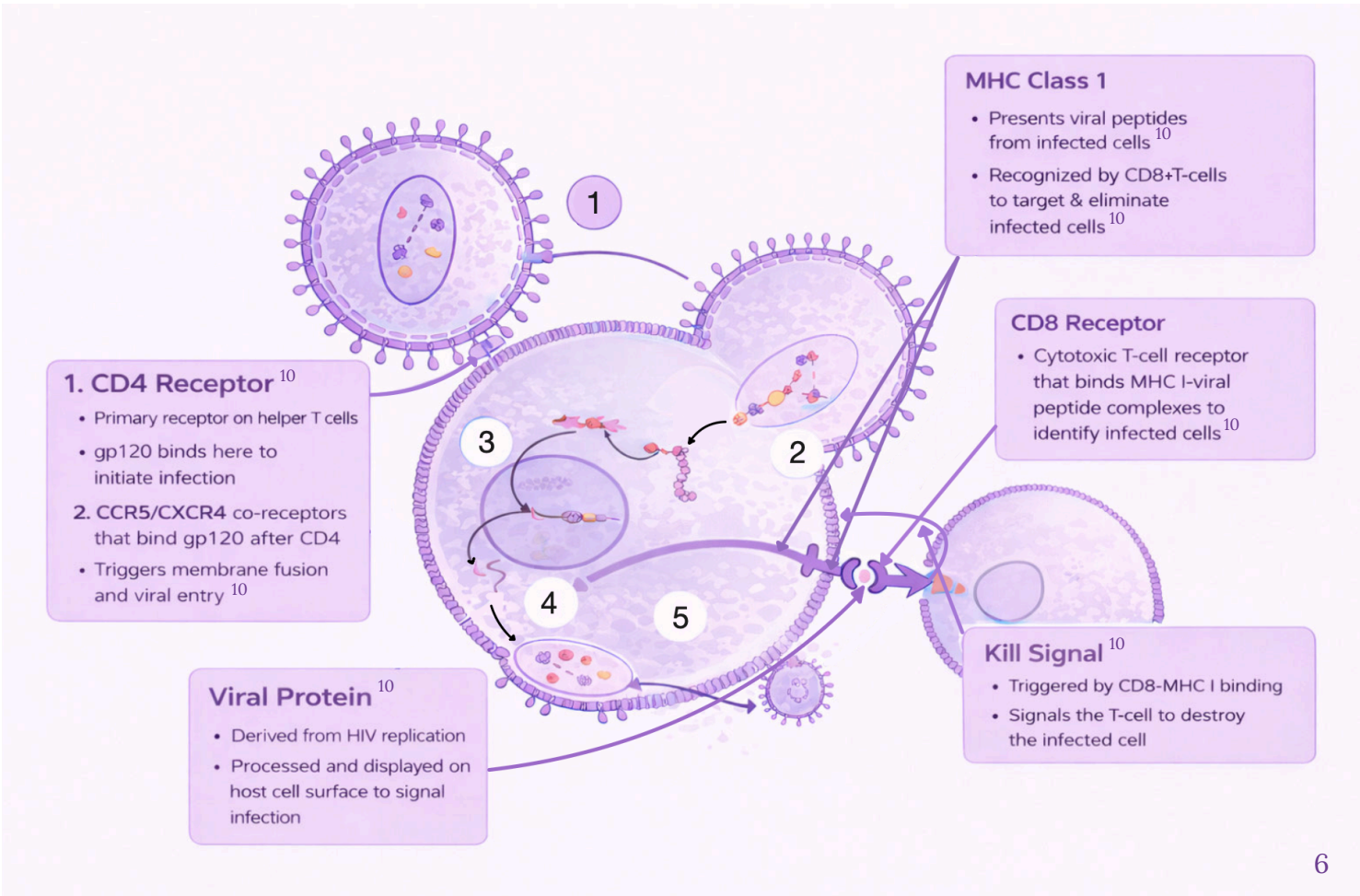
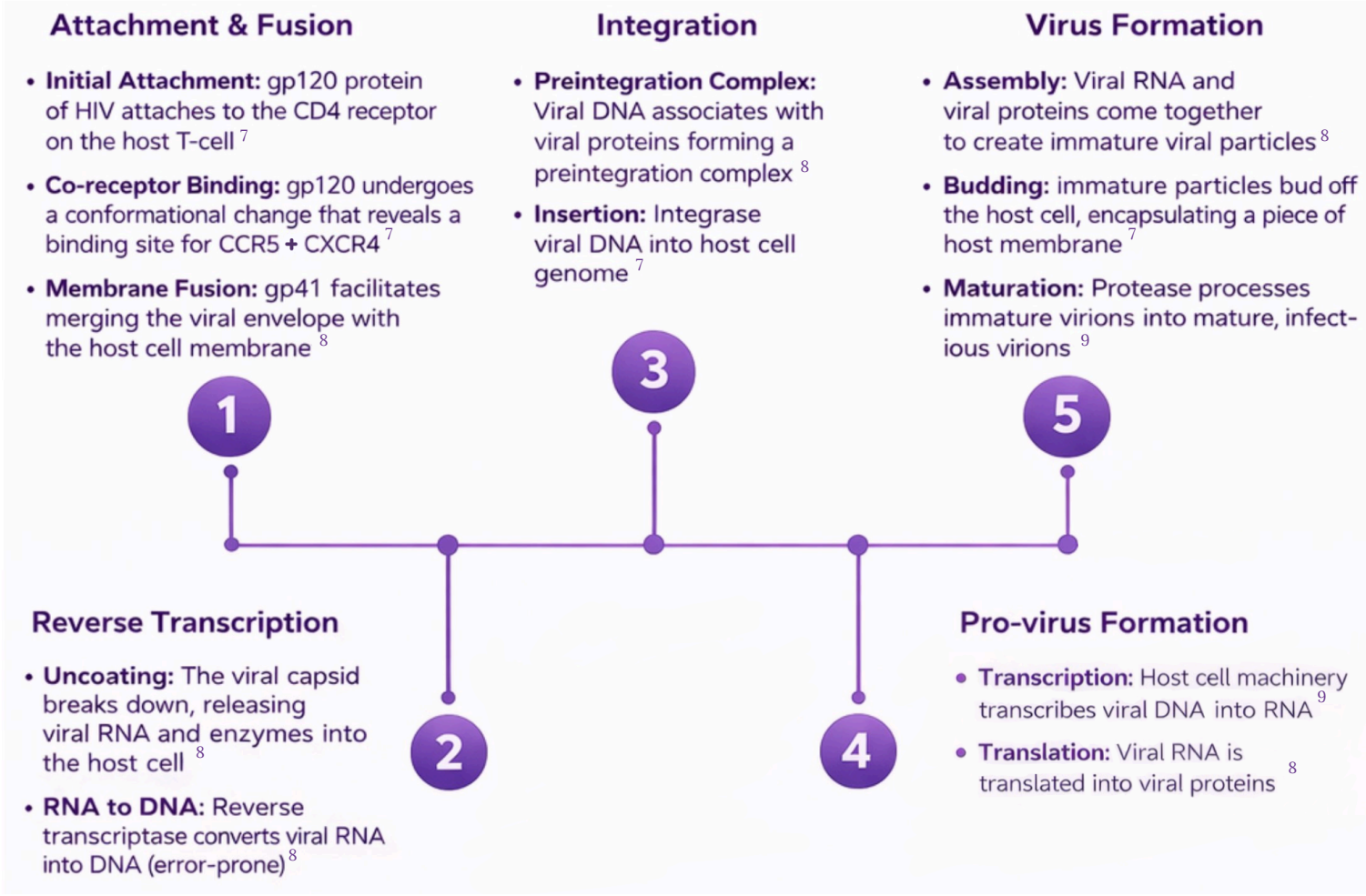
Often transient flu-like symptoms such as a fever, sore throat, rash, nausea and vomiting, diarrhea, fatigue, swollen lymph nodes, muscle aches, headaches, and joint pain³. Early stage infection can progress to meningitis, developing varicella-zoster (shingles), seborrheic dermatitis (dandruff), new or worsening psoriasis, and minor infections³. Ulcers can develop around the mouth and herpes outbreaks (oral/genital)³. Diarrhea, fever, unexplained weight loss, joint and muscle pain, fatigue³. Old tuberculosis infections may reactivate even before AIDS develops³. As well, further decline of CD4 cells results in a person at higher risks for AIDS³.

HIV STRUCTURE



6

HIV INFECTION MECHANISM



6

How Is HIV Transmitted?

HIV is transmitted through direct contact with certain body fluids from a person with a detectable viral load. Fluids are; blood, semen & pre-seminal fluid, rectal fluids, vaginal fluids, breast milk, born to a mother with HIV^{11, 12}.

STATISTICS

Populations at risk for HIV

Populations most at risk for HIV include men who have sex with men, people who inject drugs, sex workers and their clients, and transgender people¹³. Risk is also higher among individuals with multiple sex partners or inconsistent condom use, as well as infants born to mothers with untreated HIV¹³. Additionally, people living in regions with high HIV prevalence, particularly sub-Saharan Africa-face an increased risk due to broader structural and healthcare factors¹⁵.

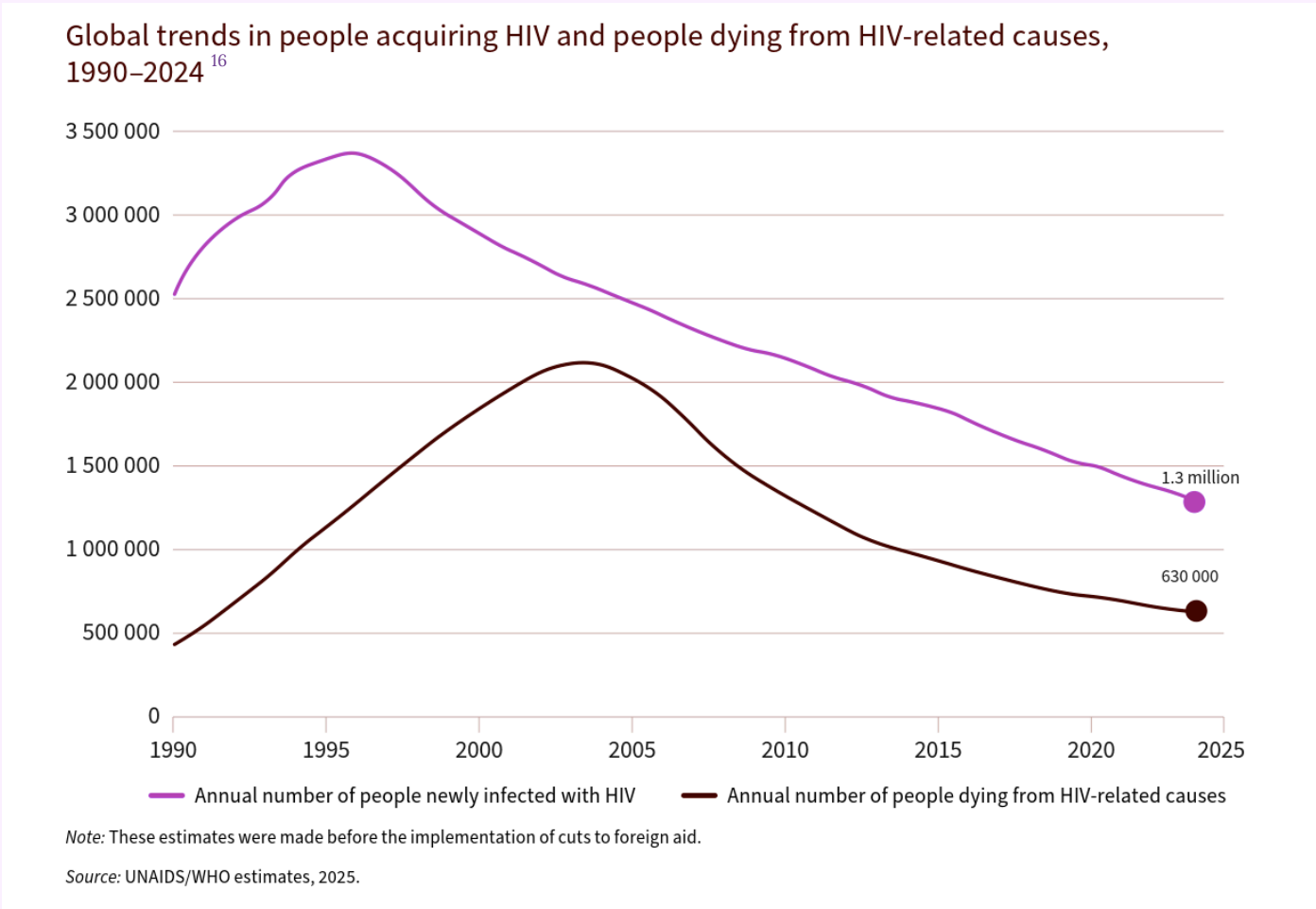
Global Trends

The graph below shows global HIV trends from 1990 to 2024¹⁶. New HIV infections rose sharply in the early 1990s, peaking in the mid-to-late 1990s at over 3 million per year, then steadily declined to about 1.3 million by 2024¹⁶. HIV-related deaths increased through the late 1990s and early 2000s, peaking around 2004–2005 at just over 2 million annually, before dropping significantly to about 630,000 in 2024¹⁶. Overall, the trends reflect major progress in HIV prevention, testing, and especially treatment (ART), leading to fewer new infections and substantially reduced mortality worldwide.

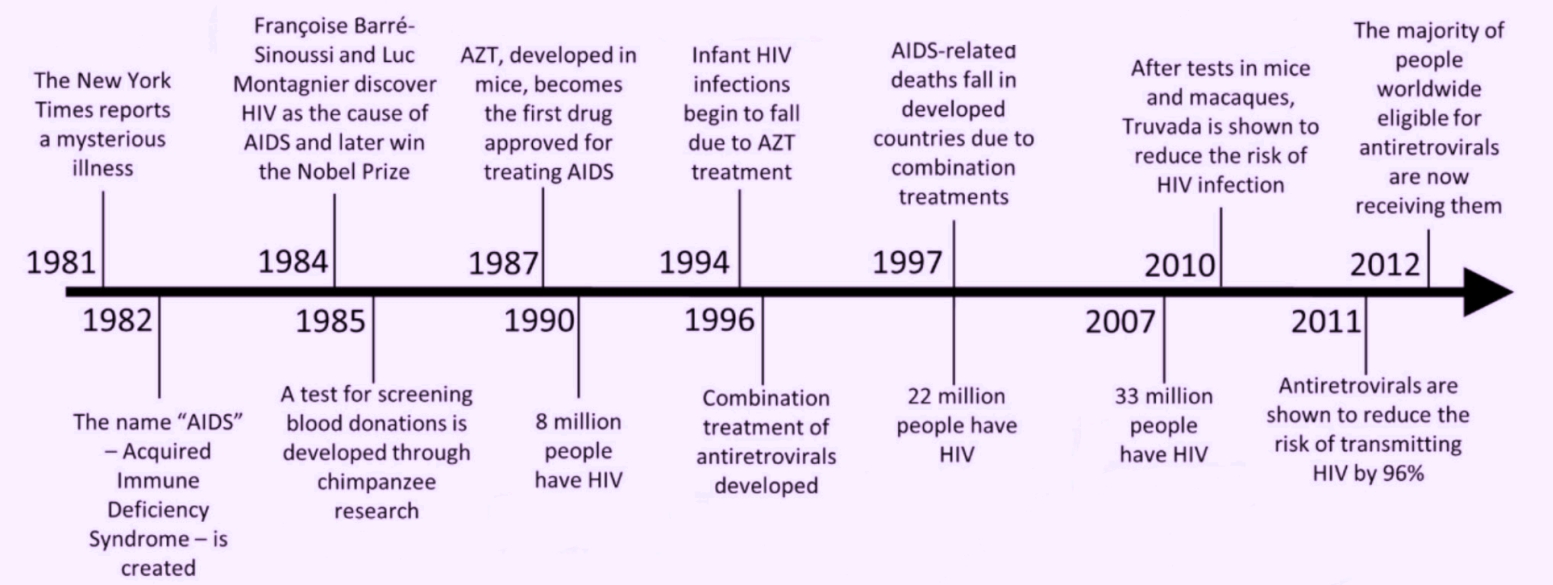
Global and Local Prevalence Statistics

According to the World Health Organization, approximately 40.8 million people were living with HIV worldwide at the end of 2024, and an estimated 0.7% of adults aged 15–49 globally are living with the virus¹³. Since the epidemic began, more than 90 million people have been infected and about 44 million have died from HIV-related causes. In 2024 alone, there were approximately 1.3 million new infections and 630,000 deaths worldwide, highlighting the ongoing global impact of HIV¹³.

In Canada, approximately 65,000 people are living with HIV, and new diagnoses continue to occur each year¹⁴. In 2023, there were 2,434 new HIV diagnoses, representing a rate of about 6.1 per 100,000 people. In Ontario, tens of thousands of individuals are living with HIV, and Toronto has one of the highest proportions of diagnoses in the province¹⁴. These figures demonstrate that HIV remains a significant public health priority even in high-income countries such as Canada.



THE HISTORY OF HIV



From 1981 to 2012, the timeline traces HIV/AIDS from early reports of a mysterious illness to the identification of HIV, development of antiretroviral therapies, declining deaths, and advances in prevention¹⁷. It highlights the growing global burden of HIV and expanding access to treatment and effective prevention strategies worldwide¹⁷. From 2012 to now 2026, new long-acting injectable treatments and prevention options have improved adherence, while global goals now focus on ending HIV as a public health threat by 2030¹⁷.

HIV PREVENTION

Diagnosis of HIV/AIDS

HIV is diagnosed using blood or oral fluid tests that detect HIV antibodies, HIV antigens (p24), or viral nucleic acid (RNA)¹⁸. Most screening uses 4th-generation combination tests, which can detect infection as early as 2–4 weeks after exposure¹⁸. If a screening test is positive, confirmatory follow-up testing is done¹⁸. Early diagnosis enables prompt treatment, improves long-term outcomes, and reduces transmission¹⁹.

HIV Risk Factors

HIV risk factors include having unprotected sex, multiple sexual partners, sharing needles or injection equipment, genetic factors, and limited access to testing or prevention services^{20,21}. Risk is higher in communities with higher HIV prevalence and among individuals without regular healthcare, comprehensive sexual education, or access to prevention tools like condoms and PrEP^{19,20}.

HIV Prevention Measures

- 1.Safer Injection Practices:** To reduce HIV transmission risk among people who inject drugs. Always use new, sterile needles and injection equipment instead of sharing with others. This not only prevents HIV but also protects against other infections²⁰.
- 2.Safer Sex Practices:** Condoms and barrier methods protect against HIV and other sexually transmitted infections (STIs)²⁰.
- 3.Regular STI and HIV testing:** Help with early detection and prevention planning¹⁹.

PrEP (Pre-Exposure Prophylaxis) – Preventing HIV Before Exposure

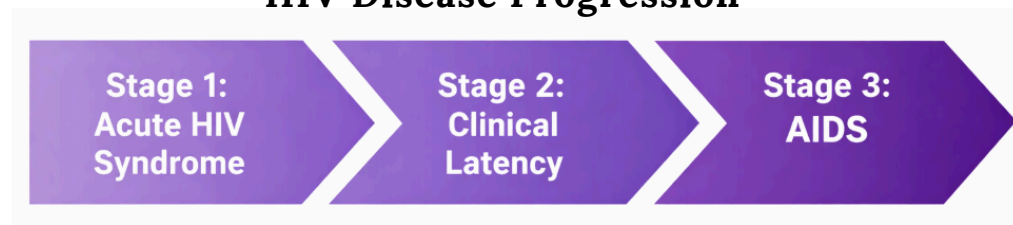
PrEP is a prescription antiretroviral medicine taken by people without HIV to reduce their chance of becoming infected if exposed to the virus through sex or injection drug use²². When taken as prescribed, PrEP can reduce HIV risk from sex by about 99% and at least 74% among people who inject drugs²³. PrEP drugs block the HIV life cycle so the virus cannot establish an acute infection if someone is exposed to HIV^{22,24}.

Forms of PrEP:

Daily oral pre-exposure prophylaxis (PrEP) includes combination antiretroviral pills such as tenofovir/emtricitabine, which are taken once per day to reduce the risk of HIV infection^{23,24}. These medications work by inhibiting viral reverse transcriptase, preventing HIV from replicating if exposure occurs²⁴. In addition to daily oral pills, long-acting injectable options are being approved and introduced in some countries. For example, cabotegravir is an injectable integrase inhibitor that can be administered every two months for HIV prevention^{9,24}. Another emerging option is lenacapavir, a long-acting capsid inhibitor that has been studied for both HIV treatment and prevention, offering the possibility of dosing at much longer intervals^{9,24}. These long-acting formulations improve adherence by reducing the need for daily medication.

HIV TREATMENT

HIV Disease Progression



HIV disease progression occurs in three main stages: acute HIV infection, clinical latency, and AIDS¹⁹. Without treatment, viral replication gradually depletes CD4⁺ T cells, weakening immune defenses and increasing susceptibility to opportunistic infections¹⁹. The rate of progression varies widely between individuals. Genetic factors play an important role in this variability²¹. For example, people with the CCR5-Δ32 mutation have reduced susceptibility to HIV infection, as the virus uses the CCR5 co-receptor to enter cells²¹. Certain HLA (human leukocyte antigen) alleles, such as B*57 and B*27, are associated with better immune control of HIV and slower disease progression, while other variants are linked to faster progression²¹. Together, host genetics, viral strain, and early access to antiretroviral therapy shape long-term outcomes.

PEP (Post-Exposure Prophylaxis) – After Potential HIV Exposure

PEP involves taking antiretroviral medicines after a possible exposure to HIV to prevent infection²². It is most effective when taken within 72 hours after exposure²³. The standard course is a daily oral pill for 28 days with regular HIV screenings during the period²³. PEP is used after unprotected sex with someone of unknown or positive/untreated HIV status, after needlestick injuries, or other high-risk exposures^{22,23}.

Duration of HIV/AIDS

HIV is unfortunately a lifelong illness with no known cure²⁴. Advances in testing and treatment are being made, eliminating the view of HIV/AIDS as a fatal disease²⁰. HIV is a chronic condition that can be controlled with medications and healthy life style choices.

ART (Antiretroviral Therapy) & Viral Suppression

Antiretroviral therapy refers to the use of combination HIV medicines to suppress the virus in people living with HIV²⁴. The goal is to reduce HIV to very low levels in the body. ART matters as it keeps people living with HIV healthy by reducing the amount of virus (viral load) in blood and bodily fluids²⁴. Thus, it helps prevent HIV transmission when viral load is reduced to undetectable levels²⁴.

U=U (Undetectable = Untransmittable)

U=U means “Undetectable = Untransmittable,” which is a public health message based on substantial scientific evidence showing that people living with HIV who maintain an undetectable viral load cannot sexually transmit HIV to others^{22,24–27}. Note that HIV presence can still be detected by antibody tests²⁸. Achieving an undetectable viral load requires consistent use of ART²⁴.

SOCIAL ISSUES

Stigma and Discrimination

HIV stigma refers to negative attitudes and beliefs about people living with HIV (PLHIV), often rooted in misinformation about transmission and moral judgments about affected groups, as recognized by organizations such as Centers for Disease Control and Prevention²⁹. Stigma can take several forms, including public stigma, which involves stereotypes, avoidance, and social rejection³⁰; self-stigma, which involves internalized shame and guilt among PLHIV^{29,31}; and institutional discrimination, which includes denial of services, exclusion from employment or education, and discriminatory policies, as identified by UNAIDS³⁰. Discrimination may manifest as verbal abuse, gossip, social exclusion, denial of health or social services, and legal barriers such as travel restrictions or mandatory disclosure laws³⁰. Stigma can also persist in healthcare settings, where individuals living with HIV may experience differential treatment or substandard care, as discussed in the Journal of Ethics^{32,33}. The consequences of stigma include reduced quality of life, anxiety, depression, and lower self-esteem^{30,31}, and global health organizations including UNAIDS recognize HIV-related stigma as a major human rights issue that undermines effective HIV responses and violates rights to dignity, healthcare, work, and privacy³⁰.

Barriers to HIV Testing and Treatment

1. Fear of Stigma Reduces Testing:

Anticipated stigma (fear of discrimination if diagnosed) delays people from getting tested. Some people avoid testing because they fear being labeled or ostracized by their community^{30,34}.

2. Impact on Treatment Access:

Stigma can lead to late diagnosis, poor linkage to care, and reduced adherence to antiretroviral therapy (ART)³⁵. Even when treatment is available, anticipated or experienced stigma in healthcare settings discourages consistent engagement with medical services³⁶.

3. Compounding Barriers:

Certain groups (e.g., people who inject drugs, sex workers, LGBTQ+ individuals) face intersectional stigma, meaning stigma related to HIV combines with stigma tied to race, sexuality, or drug use which further limits uptake of prevention and care services³⁶.

Cultural and Societal Perspectives

HIV-related stigma is deeply rooted in social misconceptions about transmission, fear of contagion, and moral judgments surrounding sexuality and substance use³⁷. Historically, HIV has been associated with behaviors that many communities consider taboo, which has contributed to shame, silence, and blame directed at those living with the virus³⁷. These stigmatizing attitudes can strain family and community relationships, leading to rejection, gossip, and social isolation^{30,37}. Over time, individuals may internalize this stigma, resulting in self-blame, withdrawal from social support networks, delays in seeking care, and concealment of their HIV status^{34,37}. Compounding these challenges, cultural norms around sexuality often make open discussions about HIV prevention strategies, such as condom use or PrEP, difficult, limiting the effectiveness of public health messaging and reinforcing cycles of misunderstanding and risk^{30,37}.

Why Addressing Stigma Matters

Stigma poses a major barrier to achieving public health goals related to HIV, as it discourages people from seeking testing, engaging in care, and adhering to treatment, ultimately undermining efforts to reduce new infections and achieve universal treatment coverage^{37,38}. Although UNAIDS has set ambitious global targets, including the goal of “zero discrimination” by 2030³⁸, progress toward these objectives has been slowed by the persistence of stigma at individual, community, and institutional levels³⁸. Reducing stigma is closely linked to improved quality of life for people living with HIV, as supportive environments are associated with better mental health outcomes, stronger social support, and improved engagement in care^{38,39}. Additionally, the use of non-stigmatizing language and affirming communication by healthcare providers, educators, and media can help foster safer, more inclusive spaces where individuals feel comfortable accessing prevention, testing, and treatment services, strengthening the overall effectiveness of public health interventions³⁸⁻⁴⁰.

HIV-ASSOCIATED COMPLICATIONS

HIV infection leads to a wide range of secondary complications due to progressive immune suppression, particularly the depletion of CD4⁺ T cells⁴¹. In the nervous system, this can result in conditions such as HIV-associated dementia (HAD), which causes severe cognitive decline, and HIV-associated neurocognitive disorder (HAND), which presents with milder impairments in memory and attention, HIV can also directly infect brain immune cells, leading to HIV encephalitis and chronic neuroinflammation^{42,43,44}. Opportunistic infections such as toxoplasmosis and progressive multifocal leukoencephalopathy (PML), caused by John Cunningham virus reactivation, further contribute to neurological damage⁴⁵. Beyond the brain, individuals with HIV are highly susceptible to opportunistic infections, including tuberculosis, Pneumocystis jirovecii pneumonia (PCP), candidiasis (oral thrush), and cryptococcal meningitis, all of which can become severe or life-threatening due to impaired immune defenses⁴⁶.

In addition to infections, HIV is associated with an increased risk of certain cancers and systemic complications. AIDS-defining malignancies such as Kaposi sarcoma, non-Hodgkin lymphoma, and cervical cancer occur more frequently due to immune dysregulation and reduced viral control, particularly for oncogenic viruses like HPV and HHV-8⁴⁷. Systemically, HIV can lead to conditions such as wasting syndrome, characterized by significant weight and muscle loss, as well as HIV-associated nephropathy, which can progress to kidney failure^{48,49}. Chronic inflammation and immune activation also increase the risk of cardiovascular disease, while peripheral neuropathy may develop due to nerve damage from the virus or its treatments^{50,51}. Together, these complications highlight the widespread impact of HIV across multiple organ systems, extending far beyond immune dysfunction alone.

THE TODAY NEWS

Rapidly growing HIV outbreak in Fiji

Fiji is currently experiencing one of the fastest-growing HIV epidemics globally, with cases tripling between 2023 and 2024 and over 1,200 diagnoses reported in early 2025. This surge has been strongly linked to unsafe injection drug use, including shared needles, as well as limited public awareness and persistent stigma surrounding HIV. A particularly concerning development is the rise in mother-to-child transmission, leading to infections and deaths among infants. This situation highlights how social and structural factors, such as poverty, stigma, and gaps in healthcare access, continue to play a critical role in driving HIV transmission in certain regions.

Source: The Guardian, 2026⁵²

Global funding crisis threatening progress

Despite scientific progress, HIV prevention and treatment efforts worldwide are being undermined by significant funding cuts. These reductions are leading to decreased access to essential services such as testing, treatment, and preventive measures like PrEP, as well as the closure of clinics in vulnerable regions. Health experts warn that without renewed financial investment, millions of people could lose access to care, potentially reversing decades of progress in reducing HIV infections and deaths. This demonstrates that financial and political commitment remains just as important as medical innovation in the fight against HIV.

Source: Reuters, 2025⁵⁴

New global HIV strategy aiming to end AIDS by 2030

UNAIDS has introduced its Global AIDS Strategy for 2026 to 2031, aiming to end AIDS as a public health threat by 2030. The strategy focuses on expanding treatment access to tens of millions of people, increasing prevention efforts, and addressing inequalities that drive HIV transmission. A strong emphasis is placed on community-led initiatives and reducing stigma and discrimination. While the goals are ambitious and reflect significant global commitment, their success will depend heavily on sustained funding and coordinated international action.

Source: UNAIDS, 2026⁵⁶

Concerns about global HIV leadership and coordination

There is growing concern among experts about potential changes to the global HIV response structure, particularly discussions surrounding the future role of UNAIDS. Some fear that reducing or restructuring this organization could weaken international coordination, disrupt data sharing, and limit access to treatment programs in vulnerable regions. Effective global leadership has been a key factor in progress against HIV, and uncertainty in this area could slow momentum at a critical time in the effort to end AIDS.

Source: The Guardian, 2025⁵⁸

Breakthrough: simpler HIV treatment (single-pill therapy)

A new single-pill HIV therapy combining bicitgravir and lenacapavir has shown highly promising results, with approximately 96 percent of patients maintaining viral suppression. This advancement represents a major step forward in HIV care, as simplified treatment regimens can significantly improve medication adherence, reduce side effects, and enhance long-term quality of life, particularly for aging populations living with HIV. Innovations like this are shifting HIV management toward more sustainable, patient-friendly approaches that support lifelong treatment.

Source: Financial Times, 2026⁵³

WHO updates global HIV treatment guidelines (2026)

The World Health Organization has released updated HIV treatment guidelines emphasizing the continued use of dolutegravir-based regimens as the preferred first-line therapy. The guidelines also encourage expanded use of long-acting injectable treatments, which can reduce the burden of daily medication, and strengthen strategies to prevent mother-to-child transmission. These updates reflect a broader global effort to make HIV treatment more effective, accessible, and adaptable to different patient needs, particularly in low-resource settings.

Source: WHO, 2026⁵⁵

Uneven global progress in HIV outcomes

Global progress in combating HIV remains uneven. Some regions, such as West and Central Africa, have seen significant declines in new infections and HIV-related deaths since 2010. However, HIV continues to spread in other areas, and mortality remains high in certain populations. This uneven progress highlights persistent disparities in healthcare access, prevention programs, and socioeconomic conditions. It reinforces the need for targeted interventions that address local challenges rather than relying on a one-size-fits-all global approach.

Source: UNAIDS, 2026⁵⁷

Promising progress toward an HIV vaccine (single-shot breakthrough)

Scientists have recently developed a groundbreaking HIV vaccine candidate that, for the first time, was able to trigger neutralizing antibodies after just a single injection in animal studies. This is a major advancement because HIV has historically been extremely difficult to vaccinate against due to its rapid mutation and immune evasion. The new approach uses a specially engineered viral protein to stimulate a broader and more effective immune response. If future human trials are successful, this could significantly simplify vaccination strategies and improve global accessibility, especially in low-resource settings where multi-dose regimens are harder to implement.

Source: Medical Press, 2026⁵⁹

THE PATHOLOGY PODCAST



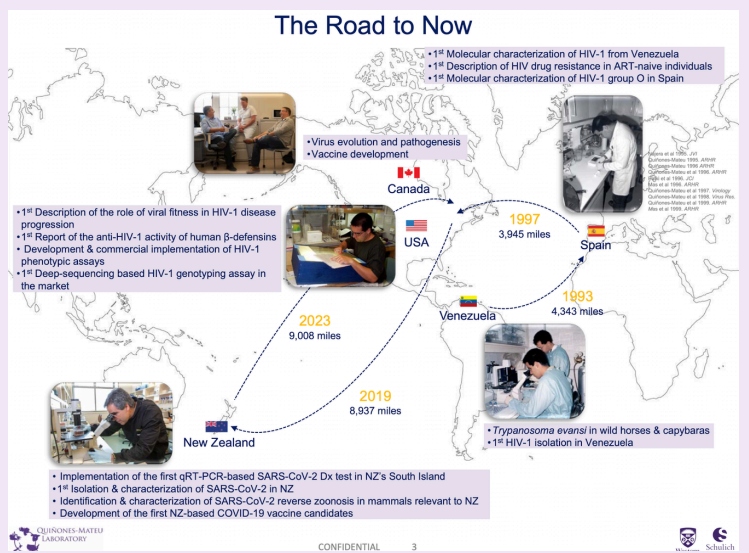
Dr. Miguel Quiñones-Mateu

Scan the QR code to access the full discussion.



You were involved in the first isolation of HIV in Venezuela. What key scientific, institutional, or societal factors made this possible, and how did it impact HIV research and patient care in the country?

During the height of the HIV pandemic, when mortality was high and treatment options were limited, there was strong scientific urgency to better understand Human immunodeficiency virus. He contributed to the first isolation of HIV in Venezuela, a significant milestone for the country's research capacity. He later brought viral samples to Spain to continue his research during his PhD training, further advancing scientific study of the virus.



What recent advances in HIV treatment/prevention is most promising?

The evolution of antiretroviral therapy (ART) has transformed the management of Human immunodeficiency virus over the past 30–40 years. Early treatments were highly toxic, comparable to chemotherapy, and often required patients to take 10–20 pills per day, with significant side effects. Single-drug therapy was ineffective and led to rapid drug resistance. The shift to combination therapy, using two to three drugs targeting different stages of the viral life cycle, dramatically improved outcomes. Today, many patients take a single daily polypill with minimal side effects, and long-acting injectable therapies can be administered every 2 months. Drug resistance is now much less common in countries like the United States and Canada, largely due to improved adherence and more potent agents such as integrase inhibitors, which significantly reduce viral fitness. However, resistance can still develop when medications are not taken consistently, especially with RNA viruses like HIV that mutate rapidly, and remains a challenge in resource-limited regions where access and adherence are inconsistent. While HIV is now a manageable chronic disease in many parts of the world, it continues to cause mortality in underserved settings.

Your virology research focuses on novel antiviral strategies alongside vaccine development. Can you give an overview about the potential mechanisms of novel strategies being explored?

The focus of current antiviral research is shifting toward the development of broad-spectrum strategies that can work against multiple viruses rather than targeting a single specific pathogen. One promising approach involves antiviral peptides (AVPs) that act extracellularly to inactivate viruses before they enter host cells. Unlike traditional antivirals, such as antiretroviral therapies used to treat HIV, which inhibit intracellular processes like reverse transcription or protease activity, these peptides directly neutralize viral particles. Many antiviral peptides disrupt viral envelopes, block attachment to host cell receptors, prevent membrane fusion, or destabilize the structural integrity of the virion. Because numerous viruses share common structural features, particularly lipid envelopes, this strategy holds potential for cross-family effectiveness. Early studies have demonstrated activity against viruses such as SARS-CoV-2, and ongoing research aims to expand this approach to additional enveloped viruses. The ultimate goal is to create adaptable, rapidly deployable antiviral platforms capable of responding efficiently to emerging viral threats and future pandemics.

What advice would you give students interested in infectious disease, public health, or health policy?

A successful career in infectious disease research and public health begins with staying intellectually engaged and globally aware. This means reading scientific papers regularly, keeping up to date with global health issues, and understanding how emerging infections affect different populations. Gaining hands-on experience through volunteering or clinical and laboratory work is equally important, as it provides practical insight beyond textbooks. Building professional networks and becoming part of a research or public health team can open opportunities for mentorship, collaboration, and growth. Above all, it is essential to find work you are genuinely passionate about. Loving what you do and waking up excited about your work fuels persistence, curiosity, and innovation—qualities that are crucial in fields like infectious disease research and global health.

We often live in “cocoons,” somewhat removed from the realities of the global burden of infectious diseases and the profound suffering they cause worldwide. Expanding our awareness, remaining engaged with global challenges, and contributing meaningfully, whether through research, policy development, education, or frontline public health efforts, can have a significant and lasting impact.

What policy changes would have the biggest impact on reducing HIV incidence or improving care access?

Prevention remains the most important strategy in addressing HIV. While modern therapies effectively control the virus, drugs used to treat Human immunodeficiency virus suppress viral replication but do not eliminate it from the body. Therefore, reducing new infections through public health campaigns, education, and comprehensive prevention programs is essential. Increased funding for prevention initiatives, improved access to medications, and stable global health support systems are critical to sustaining progress. When funding declines, particularly in developing regions, treatment interruptions can occur, leading to poorer outcomes and the emergence of drug resistance. Strengthening public health infrastructure and ensuring consistent, long-term access to care would have the greatest overall impact on controlling the epidemic.



THE PATHOLOGY PUZZLES

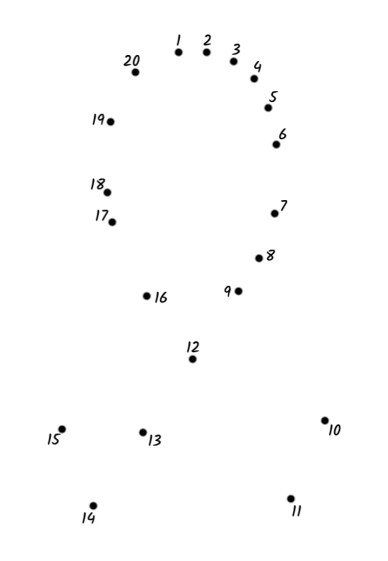
HIV WORD SEARCH

Words to look for:

AIDS
FEVER
SEMEN
CONDOM
BLOOD
FLU-LIKE SYMPTOMS
SORE THROAT
BREAST MILK
LIFELONG
MOSQUITOES

N E O T L S P C U K O E I N D
M E R G T S O E L N M O D N O
A W K R G N X S N M E O F E O
T L K I D O U A E D G M W M L
L T Q O L O N I Y R U K E S B
T S M G N U A H M B L F E S D
O R R H M E L G P I V O N T O
E F R E A C N F M S T O E D N
A R P L V O M T O I C Y I S U
D L E O L E S H U C A B G E L
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K I A R O O S D I A U E L Y N
L O B I M G R E U H S N P R U
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CONNECT THE DOTS



ANSWER: Red Ribbon

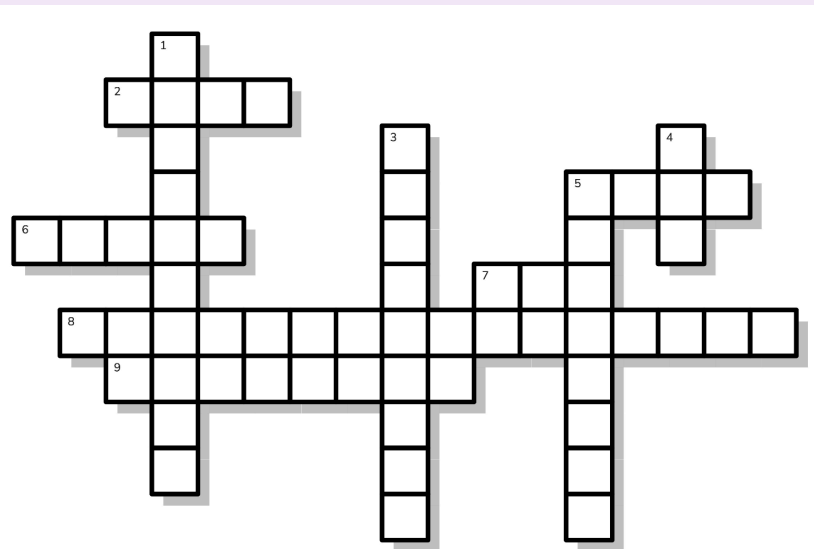
DOWN

1. Fluid involved in mother-to-child transmission
3. First step in HIV testing
4. Immune cell targeted by HIV
5. Immune protein detected in HIV tests

ACROSS

2. Medication that helps prevent HIV
5. Advanced stage of HIV infection
6. Common HIV antibody screening test
7. Treatment used to manage HIV
8. A weakened immune system
9. How long HIV remains in the body

HIV CROSSWORD



FACT OR MYTH FOR HIV TRANSMISSION⁶³.

1. Mosquitoes spread HIV.
2. Using exercise equipment at a gym.
3. Sharing eating utensils.
4. Kissing.

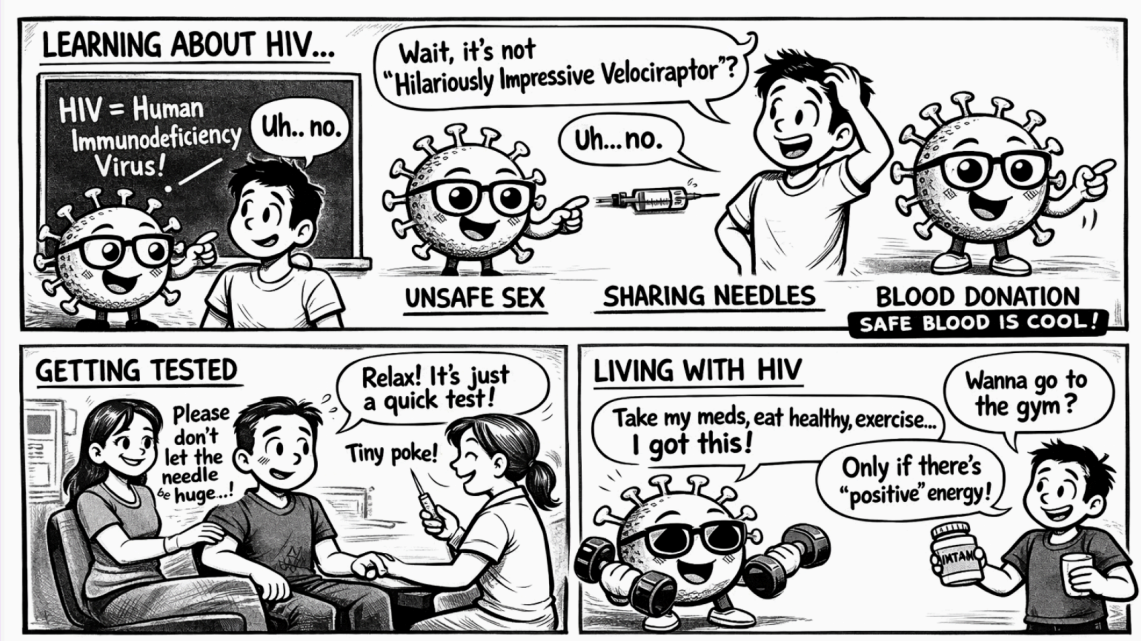
ANSWERS: 1 - F, 2 - F, 3 - F, 4 - F

ACROSS:
2. Prep
5. AIDS
6. Elisa
7. ART
8. Immunodeficiency
9. Lifelong

DOWN:
1. Breastmilk
3. Screening
4. CD4
5. Antibody

ANSWERS:

HIV COMIC



JOIN US

HIV Stigma Awareness Event

Learn how we can all support people living with HIV



2:00 - 4:00 PM
April 10, 2026
HSB 40

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