MILESTONES IN THE ERA OF EFFECTIVE HIV TREATMENT

The first HIV med, Retrovir (zidovudine, or AZT), was approved in 1987. Over the next few years, additional antiretrovirals (ARVs) were introduced in the same drug class (nucleoside reverse transcriptase inhibitors, also known as NRTIs, or nukes). But using only one or two meds from the same drug class wasn't enough to fully suppress the virus, and the crisis period of the epidemic raged on. In December 1995, the first protease inhibitor (PI), Invirase (saquinavir), was approved, and a new era of combination therapy was set to begin. Here's a timeline of the highlights:

1996

The first viral load test is approved.

The first non-nucleoside reverse transcriptase inhibitor (NNRTI, or non-nuke), Viramune (nevirapine), is approved.

Norvir (ritonavir), a PI that would become a booster of other ARVs, is approved.

At the 11th International AIDS Conference in Vancouver, numerous studies demonstrate the efficacy of triple-combination antiretroviral (ARV) treatment, ushering in the era of what was then called highly active antiretroviral treatment, or HAART.

1997

The first combination ARV tablet, Combivir (zidovudine/lamivudine), is approved.

1998

AIDS-related deaths drop 47 percent in one year.

The U.S. Department of Health and Human Services issues the first federal HIV treatment guidelines, recommending treatment for those with fewer than 500 CD4s, in keeping with the "hit early, hit hard" philosophy of the time.

1999

2000

In an about-face, U.S. treatment guidelines switch to recommending starting ARVs when CD4s have dropped to 200 or below.

2001

Viread (tenofovir disoproxil fumarate, or TDF), which comes with bone and kidney toxicities, is approved and goes on to become the most widely prescribed ARV.

2002

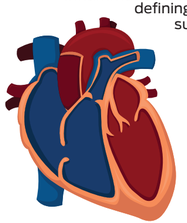
The Global Fund to Fight AIDS, Tuberculosis and Malaria in developing nations is launched.

President George W. Bush launches the U.S. President's Emergency Plan for AIDS Relief, or PEPFAR, pledging to spend $15 billion to combat the disease in poorer nations in five years.

2003

The first entry inhibitor, the injectable Fuzeon (enfuvirtide), is approved.

2004



2005

The first once-daily, single-tablet ARV regimen, Atripla (efavirenz/TDF/emtricitabine), is approved.

2006

The SMART trial is stopped early. The expansive global study investigated whether interrupting HIV treatment could reduce the risk of diseases thought to be the result of ARV toxicities. But those who interrupted treatment actually had worse health outcomes. The surprise findings spur research into the link between HIV, chronic inflammation and non-AIDS-defining conditions such as heart disease.

2007

The first integrase inhibitor, Isentress (raltegravir), is approved.

The first oral entry inhibitor, Selzentry (maraviroc), is approved.

2008

As HIV treatments improve, U.S. treatment guidelines up the CD4 threshold for starting ARVs to 350.

2009

2010

As San Francisco recommends HIV treatment regardless of CD4 count, U.S. guidelines advise starting ARVs when CD4s drop to 500, while the threshold set by the World Health Organization (WHO) is 350 CD4s.

The HPTN 052 study finds that starting ARVs reduces the risk of transmitting HIV through heterosexual sex by 96 percent, launching the treatment-as-prevention (TasP) era.

2011

The FDA approves Truvada (TDF/emtricitabine) for use as pre-exposure prophylaxis (PrEP).

2012

U.S. guidelines recommend treatment for all people living with HIV, regardless of their CD4 count.

2013

WHO recommends treatment once CD4s hit 500 or below.

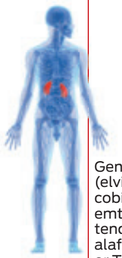
UNAIDS reports that global AIDS-related deaths have fallen 30 percent since peaking in 2005.

Interim results from the ongoing PARTNER study find that there have been no transmissions between partners in gay or straight mixed-HIV-status couples in which the HIV-positive partner has an undetectable viral load. Researchers estimate that the actual transmission risk may be close to zero, or in fact zero.

2014

2015

The placebo arm of the global START trial is terminated early when it becomes clear that there is a lower risk of various negative health outcomes associated with starting ARVs when CD4s are above 500 compared with waiting until they hit 350. In response, WHO supports treatment for all, regardless of CD4 count.



Genvoya (elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide, or TAF) is the first approved combination tablet to include an updated version of tenofovir that is safer for bones and kidneys.

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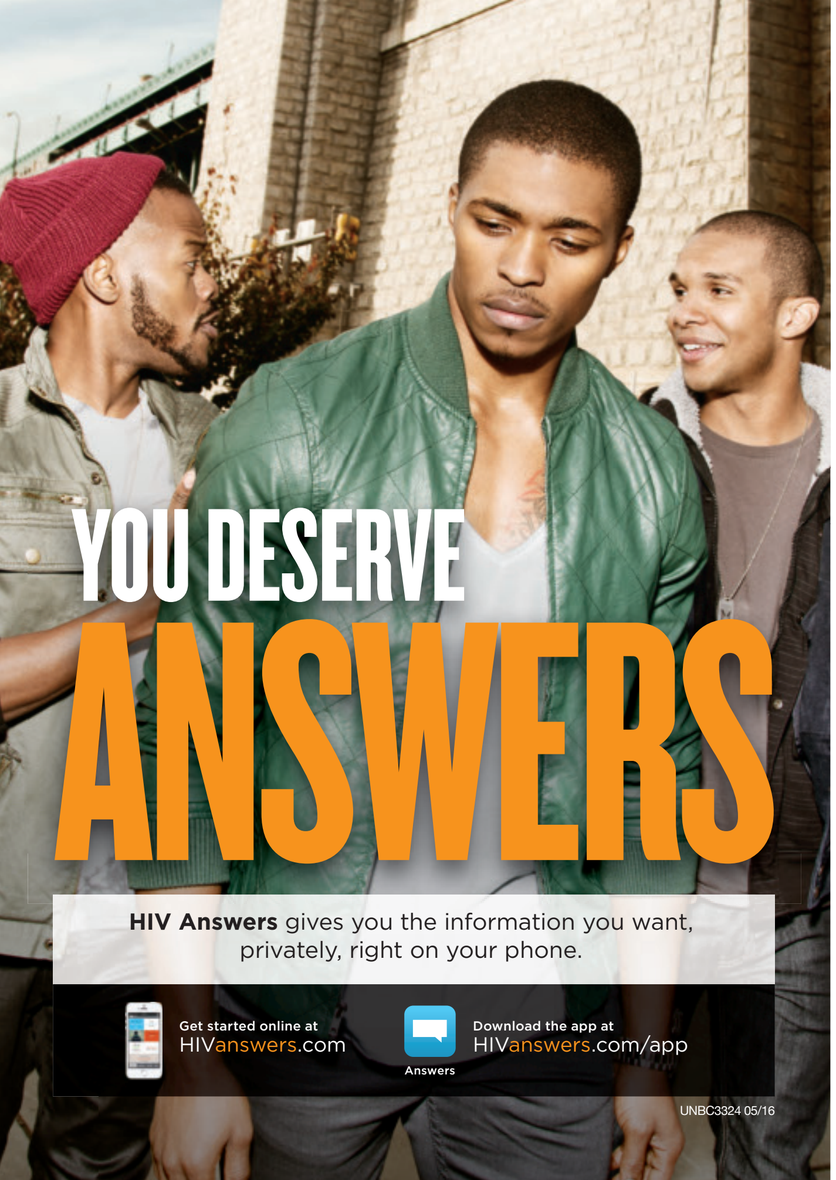


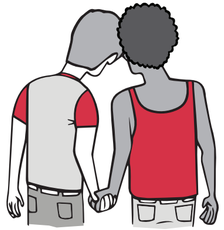
HOW DO WE HELP STOP HIV?

A. PREVENT IT.
B. TEST FOR IT.
C. TREAT IT.
D. ALL OF THE ABOVE.

Learn how it all works together at HelpStopTheVirus.com

STOP THE VIRUS.

TREATMENT LOWERS THE AMOUNT OF HIV IN YOUR BODY. AND HELPS LOWER THE CHANCE OF PASSING HIV ON.



There is no cure for HIV, but treatment can help protect your health and the people you care about. Talk to a healthcare provider and visit HelpStopTheVirus.com

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