

MEDICAL BREAKTHROUGHS **RESEARCH SUMMARY**

TOPIC: HIV & TEENS: PREVENTION, DIAGNOSIS AND CURE
REPORT: MB #4754

BACKGROUND: HIV or human immunodeficiency virus is a virus that attacks cells that are meant to help the body fight infections. This makes patients more vulnerable to other infections and diseases. It is spread by contact with certain bodily fluids, most commonly through unprotected sex or shared drug injection equipment, from an HIV patient. When left untreated, HIV can turn into acquired immunodeficiency syndrome or AIDS. HIV is a life-long disease, meaning the body cannot get rid of it naturally, and currently, no medical cure exists. AIDS is a late stage of the HIV infection and occurs when the body's immune system is badly damaged because of the effects of the virus.

(Source: <https://www.hiv.gov/hiv-basics/overview/about-hiv-and-aids/what-are-hiv-and-aids>)

DIAGNOSING: The only way to confirm or find out that you have HIV is to get tested. The test involves pricking the finger for a blood sample. The Center for Disease Control and Prevention recommends everyone ages 13 – 64 get tested at some point in their life and yearly if you are of greater risk. Greater risks include, having vaginal or anal sex with someone who is HIV positive or whose HIV status you don't know; having sex with many partners; and injecting drugs and sharing needles, syringes, or other drug equipment with others. The also CDC recommends that all pregnant women get tested for HIV so that they can begin taking HIV medicines if they are HIV positive to prevent mother-to-child transmission of the virus. Commonly, there are three types of tests used. The most rapid of these tests is the antibody test that screens for HIV antibodies in the blood or oral fluid. There is also an antigen/antibody test, that screens for both HIV antibodies and antigens, a part of the virus, in the blood. And finally, NATs or nucleic acid tests look for HIV in the blood.

(Source: <https://aidsinfo.nih.gov/understanding-hiv-aids/fact-sheets/19/47/hiv-testing>)

NEW TECHNOLOGY: Pre-Exposure Prophylaxis or PrEP is a drug for people who are HIV negative but are at a very high risk of contracting HIV. PrEP is an oral pill taken daily and contains two medicines that are used in tandem with other medications to treat HIV. When someone is exposed to the HIV virus, these medicines can work to keep the virus from establishing a permanent infection. When taken as directed, PrEP is highly effective at preventing HIV infection and can reduce transmission via sex by about 99 percent. And among transmissions via drug use, the risk goes down by at least 74 percent. PrEP's efficacy varies if not taken consistently. Also, PrEP is only effective against HIV, condoms are still an important safety tool to prevent other STIs from spreading as well as additional HIV prevention for if PrEP is not taken consistently. Professor Patrick Sullivan from Emory University also says in regard to treatment for HIV positive patients, "Antiretroviral medications are used by those who have HIV and suppress the replication of the virus; when the virus is completely suppressed people living with HIV cannot transmit the virus to others."

(Source: Patrick S. Sullivan, PhD, Emory University,
<https://www.cdc.gov/hiv/risk/prep/index.html>)

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com