

MEDICAL BREAKTHROUGHS

RESEARCH SUMMARY

TOPIC: **INSTANT HIV TEST**

REPORT: **MB #4708**

BACKGROUND: Acquired Immunodeficiency Syndrome, also known as AIDS, can be caused by HIV Type 1 and HIV Type 2. HIV is transmitted mainly by sexual contact, exposure to blood or blood affected products or from an infected mother to her fetus. Antibodies specific for HIV envelope proteins are prevalent in blood or blood products from people at high risk of contracting AIDS as well as people with AIDS. When HIV leaves a host cell, it takes part of that cell's plasma membrane and becomes an HIV envelope. The HIV envelope isn't only made up of components from the host. It is also made up of HIV envelope proteins. HIV envelope proteins include gp41, gp120, and gp160. GP stands for "glycoprotein". Glycoproteins have carbohydrate, or sugar, components as well as a protein backbone. The number after the gp refers to the proteins' length. HIV interferes with the body's ability to fight infection and disease by damaging the immune system. The U.S. Centers for Disease Control and Prevention estimates that up to 25% of people living with HIV in the United States are unaware of their infection and thus don't benefit from antiretroviral therapy.

(Source: <https://www.fda.gov/media/79719/download> and <https://www.verywellhealth.com/what-are-hiv-envelope-proteins-3132617>)

SYMPTOMS AND DIAGNOSING: According to Shirlene Manuel, MD, Metro Inclusive Health in Tampa, FL, back in 1988, it could take anywhere from two to six weeks to get results back. More recently, HIV testing would take at least 20 minutes before results were given. This has caused many individuals to avoid getting tested due to the fear of their results. There are four stages to the progression from HIV to AIDS. The first is Acute HIV, this then becomes Chronic HIV, then Symptomatic HIV Infection and finally the progression to AIDS. Due to the introduction of antiviral treatments, most people with HIV in the U.S. don't develop AIDS. Although leaving it untreated, HIV can turn into AIDS in about 8 to 10 years. There are a few treatment options to prevent the spread of HIV. If an individual believes they have been exposed to HIV through sex, needles or in the workplace, they should contact a doctor as soon as possible. Patients can also take post-exposure prophylaxis (PEP) as soon as possible. If taken in the first 72 hours, it can greatly reduce the risk of becoming infected with HIV. Other prevention tactics include: wearing a new condom every time you have sex, using a clean needle, tell your partners if you're HIV positive and if pregnant a patient should seek medical care right away. There is no cure for HIV/AIDS as of now, but medications can dramatically slow the progression of the disease.

(Source: <https://www.mayoclinic.org/diseases-conditions/hiv-aids/symptoms-causes/syc-20373524>)

INSTI TESTING: A new test is being introduced as a quicker solution to getting results on HIV testing. The INSTI test is where physicians take a drop of blood, put it in a solution and in a minute, results are presented. It is a rapid in vitro qualitative test for the detection of antibodies. It also detects HIV Type 1 and HIV Type 2 in blood, fingerstick blood, serum or plasma. Over 15 million tests have already been performed.

(Source: <https://insti.com>)

FOR MORE INFORMATION ON THIS REPORT, PLEASE CONTACT:

info@metrotampabay.org

www.ivanhoe.com