HIV Treatment

HIV Treatment Interruption

There is no cure for HIV, so antiretroviral treatment is a lifelong commitment. Starting treatment promptly and maintaining an undetectable viral load is key to halting disease progression and maintaining good health.

Modern antiretroviral medications can keep HIV suppressed indefinitely, but the virus usually resumes its replication soon after treatment is stopped. This replicating virus infects and kills CD4 T-cells, leading to immune suppression. Uncontrolled HIV can contribute to a wide range of health problems. In addition, a person with a detectable viral load can transmit HIV during sex or from mother to child during pregnancy.

Earlier in the epidemic, HIV medications were difficult to take, sometimes requiring multiple pills three times a day. What's more, some of them caused short-term side effects and long-term complications, including metabolic problems, which in some cases could be severe.

In an effort to balance the benefits and harms of the medications, some experts thought that periodic treatment interruptions might offer a welcome break from daily pill-taking and relief from side effects. But today, we know that this is a risky strategy.

Definitive evidence came from the SMART trial, in which people were randomly assigned either to stay on continuous antiretroviral therapy or to delay treatment or take breaks when their CD4 count was above 350, resuming when it fell below 250. Researchers thought this approach might reduce side effects while keeping the CD4 count high enough to avoid opportunistic illnesses.

The study was halted ahead of schedule in 2006 after interim results showed that people in the treatment interruption group had double the risk of progression to AIDS or death. In addition, people in this group also had more serious non-AIDS events, including heart, liver and kidney problems. The results suggest that some of the health problems that had been blamed on the drugs were actually attributable to persistent inflammation, which could be minimized if people stay on treatment and keep their viral load suppressed.

Reasons for Treatment Interruption

Today's antiretroviral regimens are easier to take, better tolerated, have fewer interactions with other drugs and are more effective, so treatment interruptions are generally not recommended.

If a person experiences mild to moderate side effects after starting treatment or switching to a

new regimen, it may be worth waiting them out, as symptoms often diminish over time. In case of more severe adverse reactions, it's usually possible to find other drugs that work well and are better tolerated. Long-acting injectable antiretrovirals might be an option for people who want a break from daily pills or have trouble taking daily medications consistently.

In some cases, a brief interruption might be necessary—for example, if a person is undergoing surgery or needs treatment for another illness. However, it is usually possible to maintain antiretroviral therapy. Injectable antiretrovirals or other administration methods could be used if a person can't swallow pills.

In other cases, a person might lose access to treatment—for instance, due to loss of health insurance. Health care providers, social workers or AIDS service organizations may be able to provide medications on a short-term emergency basis and help reestablish insurance coverage or other payment assistance.

Women who become pregnant or are trying to get pregnant should stay on antiretroviral treatment for the sake of both their own health and to prevent transmission of HIV to the baby. In some cases, it may be advisable to substitute different antiretrovirals, but treatment should not be discontinued altogether.

Treatment interruption should not be done without the guidance of a knowledgeable health care provider. In general, experts advise stopping all medications in such situations, so the virus doesn't develop resistance to the remaining drugs. However, some antiretrovirals have a longer half-life—meaning they last longer in the body—so proper timing is important to avoid resistance.

People who also have hepatitis B virus (HBV) have an additional consideration. Some antiretrovirals are active against both HIV and HBV, and stopping them abruptly can lead to a flare-up of liver inflammation. Liver enzyme levels should be monitored when people with HIV and HBV coinfection adjust their medications.

One notable exception to the continuous treatment rule is HIV cure research. Antiretroviral treatment keeps the virus under control, so the only way to see whether a potential therapy leads to a functional cure or long-term remission is to stop antiretrovirals. These so-called analytic treatment interruptions should only be undertaken with careful monitoring as part of a clinical trial.

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