

The effect of two different types of HIV medicine on metabolism

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What is the background of this research?

There are different types of HIV medicines available. In recent years, so-called "integrase inhibitors" (often abbreviated to INSTI) have been used more and more.

Examples of INSTI are:

- Bictegravir (part of Biktarvy)
- Elvitegravir (part of Genvoya)
- Dolutegravir (also known as Tivicay; and part of Dovato)

As an alternative to INSTI, people with HIV sometimes use "non-nucleoside reverse transcriptase inhibitors" (often abbreviated to NNRTI).

Examples of NNRTI are:

- Nevirapine
- Doravirine (part of Delstrigo)
- Efavirenz (part of Atripla)
- Rilpivrine

We know from INSTI and NNRTI that they both suppress HIV well, but work in a slightly different way.

What did we want to investigate?

INSTI and NNRTI are both widely used as HIV medication. Therefore, we wanted to compare whether these medicines have an effect on the body's metabolism. The 'good lipids' and 'bad lipids' in the blood are part of your metabolism.

What did we do?

Two groups were distinguished in the 2000HIV study: one group consisted of people who use an INSTI, the other group used an NNRTI. A total of 500 metabolites and 141 different types of lipids present in the blood were compared. This is done with very advanced equipment at the molecular level.

What did we find?

We found differences between people taking INSTI and NNRTI, especially in molecules that belong to the category of "lipid or lipid-like molecules". We also found differences in molecules that contribute to the production of lipids in the blood. That is the reason we focused on 'good' and 'bad' lipids in the blood. We found that people who use an INSTI more often have lower amounts of 'bad lipids' and higher amounts of 'good lipids' compared to NNRTI users.

What does this mean for people living with HIV?

Every person with HIV is different so there is 'no solution fits all'. The choice for a certain medication depends on many factors, the effect on lipids being only one. Our findings are on their own no reason to change HIV medication.

Do you have any questions about the study?
Reach out to us via the contact form on our
website www.2000hiv.com