Who Gains Weight After Switching to Integrase Inhibitors?

Researchers at George Washington University take a look.

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People with HIV experience a greater percentage increase in body weight after switching antiretrovirals (ARVs) to an integrase inhibitor–based regimen if they begin with a normal weight and if they are younger, the National AIDS Treatment Advocacy Project reports.

Previous studies have found that people gain weight after switching to an integrase inhibitor, in particular if they switch from a non-nucleoside reverse transcriptase inhibitor (NNRTI), switch to dolutegravir or if they are female, Black and at least 60 years old.

Dolutegravir is sold under the brand name Tivicay as an invdividual tablet is included in the combination tablets Triumeq (dolutegravir/abacavir/lamivudine), Juluca (dolutegravir/rilpivirine) and Dovato (dolutegravir/lamivudine).

Presenting their findings at the IDWeek meeting in Washington, DC, researchers at George Washington University conducted a retrospective analysis on 260 people living with HIV in Washington, DC, who switched from an NNRTI regimen (107 people) or a protease inhibitor regimen (97 people) to an integrase inhibitor regimen. They compared weight changes in this group with changes in 56 people who remained on their existing NNRTI regimen.

Baseline characteristics of the groups that switched and did not switch were similar, including median age (50.1 years old versus 48.7 years old), sex (75% versus 82% were men), race (61.3% were white versus 69.6% were Black), median CD4 count (653 versus 711) and median body mass index, or BMI (27.2 versus 28.8). (A BMI of 25 to 29.9 is in the overweight range; a BMI above 30.0 is considered obese.) However, those who switched initially weighed less, at a median 180.5 pounds, compared with those who did not switch, who had a median weight of 194.5 pounds.

After 18 months, those who switched regimens, compared with those who did not, gained more weight (6.0 pounds versus 1.0 pound) and gained a greater percentage of their body weight (3.6% versus 0.7%). Additionally, when comparing weight gain during the 18 months prior to the medication switch versus the following 18 months, those who changed regimens gained more weight during the latter period.

Factors associated with gaining weight following a switch to an integrase inhibitor included initially weighing less than 150 pounds. Such individuals gained 6.6% of their body weight, compared with a 3.0% gain in those weighing 150 to 200 pounds and a 2.3% gain among those weighing more than 200 pounds.

Those with a BMI below 25, indicating a normal body weight, gained 4.9% of their body weight, while those with a BMI of 25 to 29.9 gained 2.8% of their body weight and those with a BMI of 30 or higher gained 2.4% of their body weight.

Lastly, older individuals gained less weight after switching medications compared with younger people.

Factors unassociated with a post-switch weight gain included sex, race, CD4 count or previous ARV regimen.

There were differences in the percentage increase in body weight based on the specific integrase inhibitor regimen, although these differences were not statistically significant, meaning they may have been driven by chance. The percentage increase was 5.3% among those who switched to Biktarvy (bictegravir/tenofovir alafenamide/emtricitabine), 4.2% among those who switched to Genvoya (elvitegravir/cobicistat/tenofovir alafenamide/emtricitabine), 3.3% among those who switched to Stribild (elvitegravir/cobicistat/tenofovir disoproxil fumarate/emtricitabine), 3.2% among those who switched to Isentress (raltegravir) plus Truvada (tenofovir disoproxil fumarate/emtricitabine) and 1.3% among those who switched to Tivicay plus Truvada.

The investigators called for research that assesses changes in metabolic factors among those switching to integrase inhbitors in hopes of identifying the mechanism by which the drug class promotes weight gain.

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