PRIMEVIEW

HIV AND ART-RELATED FAT ALTERATIONS

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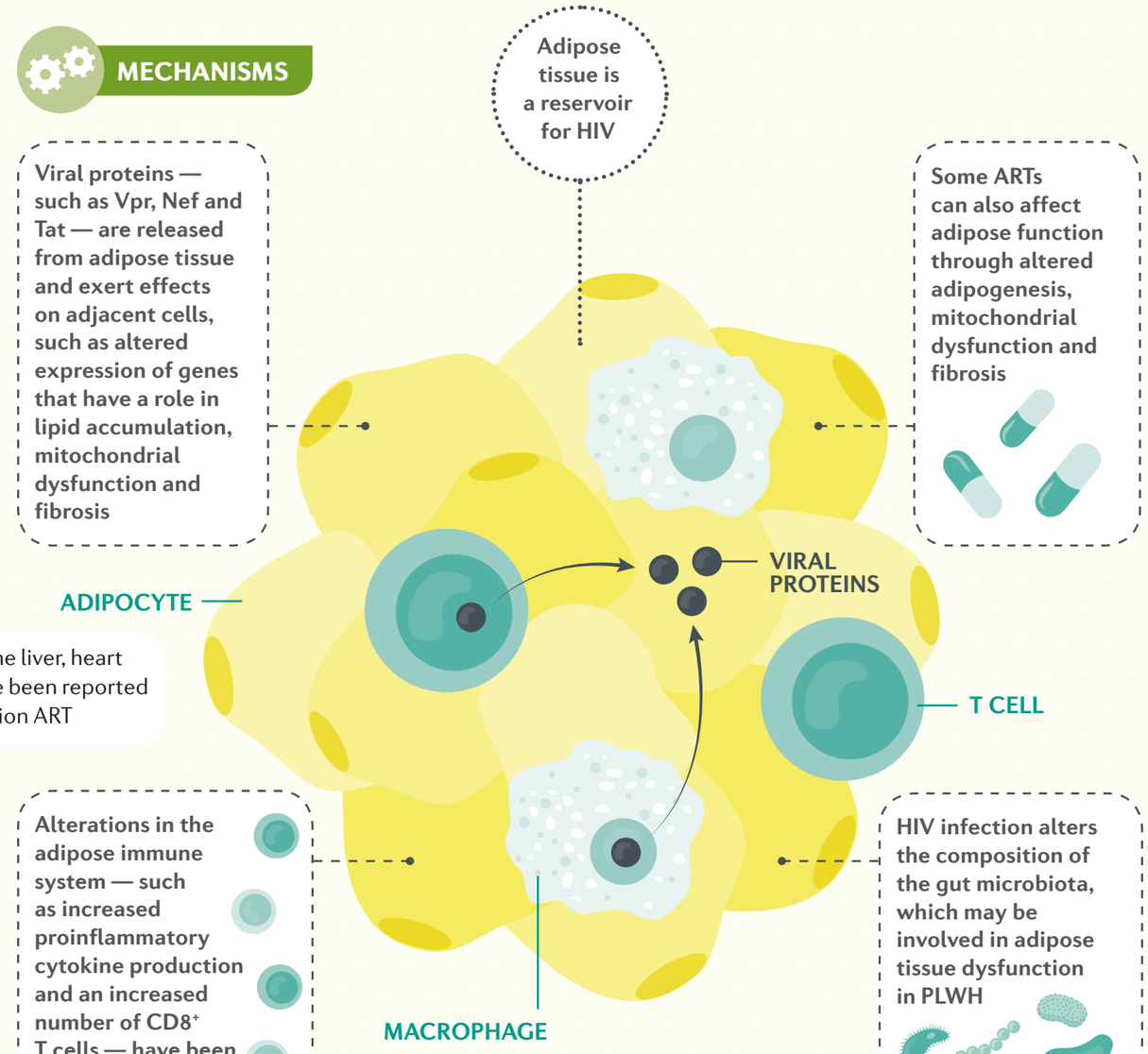
In some patients, HIV infection and antiretroviral therapy (ART) are associated with alterations in fat, including subcutaneous fat loss (lipoatrophy) and/or abdominal fat gain (lipohypertrophy) or generalized fat gain.

EPIDEMIOLOGY

Lipoatrophy was first identified in people living with HIV (PLWH) who received first-generation thymidine analogue nucleoside reverse transcriptase inhibitors (NRTIs). Up to 70% of PLWH who receive ART have abdominal or visceral fat gain. Weight gain and generalized fat gain occur in almost all PLWH following initiation of ART, although some integrase strand transfer inhibitors are associated with a higher fat gain than other classes of ART; this is also the case for tenofovir alafenamide.

! Ectopic fat deposits in the liver, heart and skeletal muscle have been reported in PLWH who receive combination ART

MECHANISMS



MANAGEMENT

Facial lipoatrophy can be partially reversed by switching medication. However, plastic surgery (commonly the injection of poly-L-lactic acid into the cheek) can be used in those with permanent lipoatrophy. Medication switching is generally not effective to reduce abdominal obesity; patients should adopt a reduced-calorie diet and a regular exercise programme. Pharmacological therapy using tesamorelin is approved for the treatment of abdominal obesity in PLWH in the US and Canada, among other countries.

DIAGNOSIS

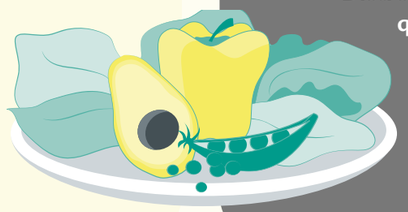
Clinical assessment, medical history taking and patient self-report are used to diagnose HIV and ART-related fat alterations. In general, loss of fat of the face and limbs that is apparent on visual inspection is sufficient for diagnosis of lipoatrophy. By contrast, diagnosis of lipohypertrophy is more complicated and can be difficult to identify in those with pre-existing obesity and overweight. In general, regional visceral fat accumulation supports the diagnosis of lipohypertrophy.

! Body weight and body mass index should be evaluated at least once per year in PLWH, to screen for fat alterations

PREVENTION

Lipoatrophy can be prevented by avoiding first-generation ARTs that carry a high risk of this condition, such as zidovudine and stavudine.

Close monitoring of weight gain, together with lifestyle interventions such as healthy diet and regular exercise, can help to prevent HIV and ART-associated lipohypertrophy and generalized fat gain.



QUALITY OF LIFE

Research assessing the effect of fat alterations on health-related quality of life in PLWH is scarce. Some quality of life instruments include questions specifically about fat alterations, such as the Assessment of Body Change and Distress and the HIV/AIDS-targeted quality of life tool. Importantly, the use of facial plastic surgery to treat facial lipoatrophy has been associated with improved quality of life scores in PLWH.

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