HIV and Your Whole Health

Weight Gain and HIV

While wasting syndrome was a hallmark of AIDS in the early years of the epidemic, today undesired weight is a more common problem among HIV-positive people on antiretroviral treatment. Like the general population, many people with HIV have lifestyle risk factors, such as not eating a healthy diet or not getting enough exercise. But other factors related to HIV and its

treatment also contribute to weight gain and fat buildup.

Who is at risk for weight gain?

Experts estimate that as many as 70% of Americans are considered overweight, and this is also common among people living with HIV. One study found that more than half of HIV-positive people struggle with overweight or obesity.

Women with HIV tend to put on more pounds than men, as do Black people compared with white people—meaning Black women are particularly prone to weight gain. The fact that white men have been overrepresented in clinical trials of new HIV drugs may help explain why there was a delay in recognizing treatment-associated weight gain as a concern.

Some studies suggest older people with HIV are more likely to experience weight gain, but even adolescents starting antiretrovirals can gain more weight than expected. People who start treatment with a low CD4 T-cell count or a high viral load may also be more likely to gain weight.

What types of weight gain do people with HIV experience?

People with HIV can experience different kinds of weight gain and fat buildup. Visceral fat accumulates deep within the belly surrounding the internal organs. The buildup of internal fat pushes up against the abdominal wall, resulting in a hard belly. Subcutaneous fat—which is soft and pinchable—accumulates beneath the skin, often around the belly, hips and thighs.

Some people with HIV experience generalized weight gain that involves both visceral and subcutaneous fat and possibly increased lean muscle mass as well (especially in people recovering from wasting).

But HIV-positive people on antiretroviral treatment seem more likely to gain a disproportionate amount of visceral fat. The buildup of visceral fat is sometimes called lipohypertrophy. Lipodystrophy syndrome can be characterized by an increase in internal abdominal fat along with a loss of subcutaneous fat in the face and limbs (lipoatrophy). Today, lipatrophy is most often seen among long-term HIV survivors who have used older antiretrovirals.

What causes weight gain?
In general, weight gain and fat accumulation occurs when people consume more calories than they burn. Foods high in fat and sugar contribute to excess weight more than vegetables, whole grains and lean protein. A sedentary lifestyle with little physical activity can also lead to weight gain.

People with HIV may gain weight as they return to health after starting treatment. HIV infection increases metabolic demands, and stopping viral replication reduces energy expenditure, leading to weight gain if food intake stays the same. Plus, people who feel better tend to eat more.

But that’s not the whole explanation. Weight gain can occur even among people who start antiretroviral treatment early and those who switch to newer meds with a fully suppressed viral

load and a normal CD4 count. Chronic HIV infection—even if the virus is well controlled with treatment—can trigger persistent immune activation and inflammation that throws off metabolism and leads to fat buildup.

In recent years, there's been a growing recognition that some people gain weight—sometimes several pounds—and put on excess fat after they start antiretroviral treatment or switch their meds.

What HIV medications are linked to weight gain?

People taking any antiretroviral regimen may experience weight gain, but it is more commonly associated with certain drugs. Several studies show that people taking potent integrase inhibitors, such as dolutegravir, are more likely to gain weight. The newer form of tenofovir (tenofovir alafenamide, or TAF) is also frequently associated with weight gain. In part, this is because the older form, tenofovir disoproxil fumarate (TDF), is linked to lower blood fat levels and weight loss, so people who switch from TDF to TAF lose this protective effect. Research suggests that people taking both dolutegravir and TAF are most prone to weight gain.

What are the health risks of weight gain?

Excess body weight, and especially the buildup of visceral fat, is linked to a host of health problems.

Fat, or adipose tissue, is metabolically active and produces hormones and cytokines that can trigger inflammation. Weight gain often goes hand in hand with metabolic abnormalities. Metabolic syndrome is a cluster of conditions including excess abdominal fat, high blood sugar, abnormal levels of cholesterol and triglycerides (dyslipidemia) and high blood pressure (hypertension). People with persistent inflammation and metabolic abnormalities are at greater risk for diabetes, cardiovascular disease, heart attacks and strokes.

Visceral fat can accumulate around the heart and inside the liver and other organs. Over time, fat buildup in the liver—non-alcoholic fatty liver disease (NAFLD) or its more severe form, non-alcoholic steatohepatitis (NASH)—can lead to cirrhosis, liver cancer and the need for a liver transplant. Excess weight contributes to other types of cancer as well, including breast, colon, kidney and pancreatic cancer.

Overweight and obesity can contribute to cognitive decline and are implicated in pregnancy complications. What's more, unwanted weight can have a negative effect on self-esteem, worsen depression and leave people less willing to start or stay on antiretroviral treatment.

How do I manage weight gain?

Let's start with what not to do: delay or stop HIV treatment. Modern antiretrovirals are highly effective and generally well tolerated, and keeping the virus under control is the most important thing you can do for your overall health. Weight gain should be balanced against the many benefits of HIV treatment, including a healthy immune system, longer survival and reduced sexual

transmission of the virus.

Lifestyle modification can often help control weight gain in HIV-positive and HIV-negative people alike. Experts recommend eating a balanced diet rich in plant-based foods and low in unhealthy fats, sugars and processed foods. A Mediterranean diet is a good option. Consider consulting a registered dietitian to develop a personalized eating strategy to combat weight gain.

Exercise is also key. Aim to move more and sit less throughout the day. Federal guidelines recommend at least 150 minutes of moderate-intensity aerobic activity or 75 minutes of vigorous activity per week as well as muscle-strengthening activities. But any amount of physical activity is better than none!

Unfortunately, it can be difficult to lose weight—and especially to reduce visceral fat buildup—with changes in diet and physical activity alone. In some cases, medications may help.

Tesamorelin (Egrifta), a growth hormone–releasing factor analogue that mimics a natural hormone produced in the brain, is the only drug approved to reduce excess visceral abdominal fat in HIV-positive people with lipodystrophy.

Somatropin (Serostim), an engineered form of growth hormone, is approved to treat HIV-related wasting, but some studies suggest it may also help reduce visceral fat. Metformin, a drug used to control blood sugar in people with diabetes, reduces appetite and can lead to weight loss. Additional medications may be used to manage metabolic abnormalities that often accompany weight—for example, statins to lower cholesterol.

Talk to your health care provider if you are gaining more weight than you want, and don’t stop HIV meds on your own. Preventing weight gain is easier than losing weight afterward. People starting or switching antiretrovirals should have their body weight and fat distribution measured at the outset and monitored regularly to catch unusual weight gain as soon as possible. Ask your doctor for recommendations about how to keep your weight under control.

The module was created by d’Vinci Interactive and POZ.

Last Reviewed: June 1, 2021