Body Shape Changes (Lipodystrophy)

WHAT IS LIPODYSTROPHY?

Lipodystrophy, or lipo for short, is a collection of body shape changes in people taking antiretroviral medications (ARVs). Lipo- refers to fat, and -dystrophy means bad growth. These changes include fat loss, fat deposits, and metabolic changes.

Fat loss occurs in the arms, legs, or face (sunken cheeks). This may be the most common feature of lipo.

Fat deposits can show up in the stomach, the back of the neck (buffalo hump), the chest (in all people), or other areas.

Metabolic changes can include increases in blood fats or lactic acid. Some people get insulin resistance.

- **Blood fats** include cholesterol and triglycerides.
- **Lactic acid** is produced when glucose (sugar) is used by the cells. Damage to the mitochondria or the liver can increase the amount of lactic acid. Too much lactic acid can cause health problems, including lactic acidosis.
- Normally, insulin moves sugar (glucose) into the cells to produce energy. With **insulin resistance**, less glucose gets into the cells and more stays in the blood.

Read more about lab tests for glucose, cholesterol, and triglycerides.

There is no clear definition of lipo. As a result, healthcare providers report that between 5-75% of people taking ARVs have some signs of lipo. However, lipo can develop in people taking many different types of antiretroviral therapy (ART).

IS LIPO DANGEROUS?

Although it is not life threatening, lipo is a serious problem.

- Body shape changes can be very upsetting. Some people even stop taking their medications.
- Fear of body shape changes keeps some people from starting ART.
- Insulin resistance can lead to diabetes and weight gain and can increase the risk of cardiovascular disease (CVD).
- High blood fats can increase the risk of CVD.
- Enlarged breasts can be painful.
- Lactic acidosis, although rare, can be fatal.
- Fat deposits behind the neck (buffalo humps) can get big enough to cause headaches and problems with breathing and sleeping.

No researcher has suggested that people with lipo should stop taking ART.

WHAT CAUSES LIPO?

We do not know what causes lipo. There are different causes for fat loss and fat gain.

Fat Loss:

- Protease inhibitors (PIs)

Fat Gain:

One theory is that PIs interfere with the body's processing of fat. However, some people who have never taken PIs have lipo. Another theory is that insulin resistance plays a role in lipo. People with insulin resistance tend to gain weight in the abdomen.

Lipo may also be similar to Syndrome X, which can occur in people who have recovered from serious illnesses like childhood leukemia or breast cancer. For people with HIV, this may be caused by the recovery of the immune system after effective ART.

A large study found that the following factors increase the risk of developing lipodystrophy:

- Age over 40 years
- Having HIV for over 3 years
- Lowest CD4 cell count less than 100 copies/mL
- White race

TREATMENT OF LIPO

Implants or injections are the only way to deal with sunken cheeks. These procedures have some risks and can be quite expensive.

Poly-L-lactic acid (Sculptra) is an FDA-approved medication used to treat lipodystrophy in people with HIV. It is injected into the areas where there is fat loss. Its effects take a while to be seen but can last for as long as 6 months.

Tesamoralin (Egrifta), made by Thera Technologies, is a growth hormone inducer that reduces visceral fat in people with lipodystrophy. It was approved by the FDA in 2010. The medication is a subcutaneous injection, given once daily.

Fat gain, in some cases, can be cut out surgically or removed by liposuction. Increased exercise and changes in diet can help. For example, more fiber in the diet may control insulin resistance and help decrease abdominal fat.

High cholesterol or glucose should be treated the same way as for people who do not have HIV. Some healthcare providers use medications to lower cholesterol and triglycerides or to improve insulin sensitivity. More attention is being paid to assessing and reducing the risk of CVD in people with HIV.

THE BOTTOM LINE

Lipodystrophy is a collection of changes in metabolism and body shape in people taking ARVs. The best thing to do to avoid developing lipodystrophy is to get tested, start ART before your CD4 count is low, and to avoid treatments that contain zidovudine (AZT) or stavudine (d4T). Without knowing what causes lipo, we don't yet know how to treat it.

Stopping ART to address lipo is generally not recommended.

MORE INFORMATION

nam aidsmap: Lipodystrophy

POZ: Changes to Your Face and Body (Lipodystrophy, Wasting, and Weight Gain)

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