

LIPODYSTROPHY

SEPARATING FAT FROM FICTION

What is “lipodystrophy”?

“Lipodystrophy” is a general term for describing what are likely several kinds of body changes caused by HIV, anti-HIV drugs, and perhaps other factors like a person’s age or genetic traits. Much about lipodystrophy is still not understood. Lipodystrophy usually shows up as changes in body shape (morphologic changes) that sometimes are accompanied by changes in blood fat and sugar levels (metabolic changes).

What kinds of body shape changes happen in lipodystrophy?

People with lipodystrophy may experience an accumulation of fat in certain areas of their bodies, a loss of fat in certain areas, or a combination of these effects. The accumulation of fat is called “lipohypertrophy.” The areas affected are usually the gut (abdomen), the neck, and the breasts (especially in females).

- The fat accumulation in the abdomen tends to be underneath the abdominal muscles so the fat feels firmer to the touch than typical subcutaneous fat (which is immediately under the skin). The result often resembles a “pot belly.” In addition to the increased abdominal size, a person may have greater difficulty breathing or may feel full quickly while eating.
- The fat accumulation on the neck usually happens at the back and the base of the neck. This can range from a mild fat pad to a much larger “buffalo hump.”
- Enlarged breasts have been seen in both men and women, but the symptoms are usually more severe in women.

The loss of fat is called “lipoatrophy.” The areas affected include the arms, legs, face, and buttocks. Fat is lost from subcutaneous regions (immediately under the skin). The results are usually thinner arms and legs (especially with veins showing from under the skin), hollow areas in the face (cheeks and sides of the face), and a smaller or less-full butt.

What kinds of metabolic changes happen?

The most common metabolic changes are those involving lipids (fats). Increases in blood levels of triglycerides, cholesterol, and low-density lipoprotein (LDL) cholesterol are typically seen. Also seen are changes in glucose (sugar) metabolism, especially elevated levels of blood glucose and insulin (a hormone that helps maintain blood sugar levels). It is still unclear what role, if any, these metabolic changes have in the lipodystrophy syndrome.

Why is there so much concern about lipodystrophy?

Body shape changes can cause a great deal of personal distress. Such changes can affect self-image and lead to feelings of depression and stigmatization (being singled out by certain characteristics or flaws). Of equal importance is the risk of developing cardiovascular disease (including a heart attack or stroke) because of factors like abdominal obesity and elevated blood fat levels. Altered glucose metabolism can lead to insulin resistance or even diabetes. These added threats to the physical and mental health of people with HIV/AIDS are of major concern.

What causes lipodystrophy?

It is important to remember that the accumulation and loss of fat are not *necessarily* related—the fat that is lost may not be “redistributed” to where fat accumulates. In fact, different processes may be happening. There are many theories, but no firm answers yet. Since lipodystrophy was first noticed after protease inhibitors came into widespread use, much of the blame has been placed on anti-HIV

drugs. This is true not only for protease inhibitors, but also some nucleoside analogs—especially d4T (Zerit). Certainly, HIV drugs (particularly protease inhibitors) have been shown to raise blood levels of cholesterol and triglycerides. The US Food and Drug Administration now requires that anti-HIV drugs have a statement in their information packets that “fat redistribution” has been seen in patients taking anti-HIV therapy, but that the cause is unknown. Anti-HIV drugs are considered a risk factor for, not a cause of, developing lipodystrophy.

A possible cause could be the virus itself. The damage caused by HIV may interfere with the body’s normal processing of sugars and fats. Changes in blood fat levels and fat wasting have been seen in HIV-infected people not taking anti-HIV therapy. Other risk factors for lipodystrophy include duration and severity of HIV infection, length of time on suppressive anti-HIV therapy, female gender, age over 40, increased body mass index (fat to muscle ratio), and genetic traits. Also, body shape changes appear to happen more frequently in Caucasians.

Are there any ways to prevent lipodystrophy?

There is no known way to prevent lipodystrophy. Switching or avoiding certain anti-HIV drugs has shown some success with metabolic changes, but less so with body shape changes. Anti-HIV therapy should not be avoided if it is medically necessary to treat the HIV. A diet that is low in cholesterol and fats and limited in sugars (sweet foods, soft drinks, juices, etc.) may help control blood fat and sugar levels. Aerobic exercise 3 or more times a week for 20 to 30 minutes may also help control blood fat and sugar levels. Exercise and moderate weight lifting can increase lean body mass (muscle) and improve body shape.

Are there any treatments for lipodystrophy?

There are ways to control the metabolic changes that may accompany the body shape changes. The use of drugs that lower cholesterol (“statins”) and drugs that lower triglycerides (“fibrates”) has helped greatly. However, several statins interact with anti-HIV drugs so physicians must prescribe them with care. These drugs may help lower risk of cardiovascular disease, but will not likely help with body shape changes. Some research is being done to see if anabolic steroids (like testosterone) or human growth hormone (HGH) can help with body shape changes. Even studies that report success with HGH have shown a return of symptoms once the treatment is stopped.

Surgery (like liposuction) is not an option for abdominal fat accumulation, since this fat is located under muscle tissue and around delicate internal organs. Diet and exercise have helped some people lose some of their abdominal fat. Surgery may be an option for fat accumulation in the breasts or at the back of the neck, although in some people more than one treatment may be needed if the fat returns. Some people have had facial implants or injections of poly lactic acid to help with facial wasting. Fat loss in the arms and legs may be irreversible.

Where can I call for more information, or for a referral to a physician who specializes in HIV?

You can call The Center for AIDS at 713.527.8219 or toll free at 888.341.1788.

**P.O. BOX 66306
HOUSTON, TEXAS 77266-6306**
**1407 HAWTHORNE STREET
HOUSTON, TEXAS 77006**
E-mail: rita@centerforaids.org
Website: www.centerforaids.org

