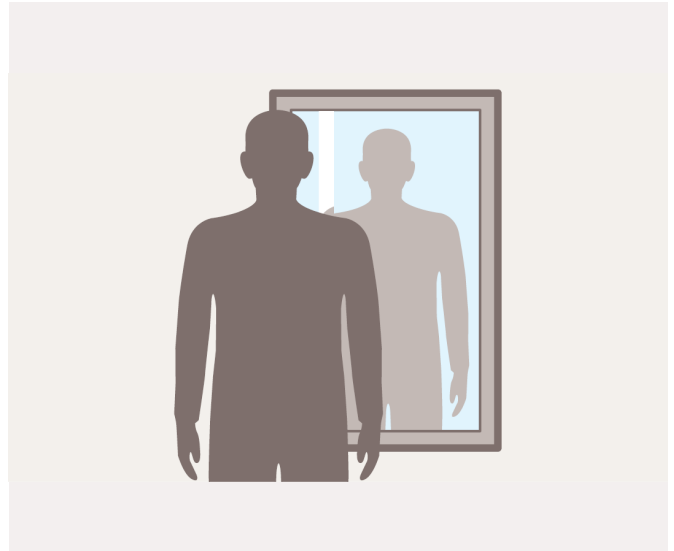


Factsheet Lipodystrophy

Key points

- Lipodystrophy is a side-effect of some older anti-HIV drugs which are now rarely used.
- Lipodystrophy includes both weight gain and weight loss.
- It is common for people who have lipodystrophy to have metabolic disorders such as high blood fats.



Lipodystrophy (lip-oh-diss-troh-fee) is the name for changes in body shape and metabolism first reported in 1997 among people taking HIV treatment.

It's not completely clear what causes lipodystrophy, but it seems to be associated with older antiretroviral drugs – particularly stavudine (d4T, *Zerit*) and zidovudine (AZT, *Retrovir*).

The drugs most widely used in HIV treatment today are not thought to cause lipodystrophy.

What does it look like?

Strictly speaking, lipodystrophy means the accumulation of fat.

However, body fat changes seen in people with HIV include both fat gain and fat loss. Fat loss is often referred to as lipoatrophy and fat gain is sometimes referred to as lipohypertrophy.

These changes may result in: increased waist size (without rolls of fat); increased breast size; fat gain around the back of the neck and upper back; fat gain around the neck and jaw; facial wasting, especially of the cheeks; wasting of the buttocks; prominent veins in the arms and legs (because of fat loss).

The abdominal fat gain in lipodystrophy is made up of visceral fat which accumulates around the internal organs, causing the belly to feel taut and pushed out. This is different to the squeezable fat gained if people put weight on through over-eating or

lack of exercise.

How common is lipodystrophy?

Doctors now have a good understanding of which anti-HIV drugs are most likely to cause lipodystrophy (stavudine and zidovudine). This means that their use can be avoided as much as possible.

The risk of developing lipodystrophy with the currently preferred drugs is very low.

But a lot of people developed lipodystrophy when taking older HIV drugs, both in the early years of HIV treatment in the UK and in other countries where older HIV drugs have continued to be used.

What causes lipodystrophy?

As already noted, the drugs stavudine and zidovudine have been associated with fat loss and their use is now avoided because of this.

A number of factors have been linked with body fat changes, including type and duration of HIV therapy, duration of HIV infection, extent of damage to the immune system when HIV therapy was commenced, gender, age, family history, diet, and body mass and fat prior to treatment. However, none of these have been proven to cause lipodystrophy.

Some experts believe that the range of body fat and metabolic changes seen represent several separate conditions, each with their own causes which may or may not be related.

Metabolic disorders

Metabolism refers to the range of processes which maintain the body, including the transformation of fat and sugar into energy.

People with lipodystrophy are commonly affected by metabolic disorders, such as raised levels of fats (or lipids) in their blood.

However, the link between body fat changes and these disorders is unclear. Some examples include: high levels of blood fats called triglycerides or cholesterol; high blood sugar; diabetes (an inability to use sugar); insulin resistance (an inability to respond to insulin, which is necessary for processing sugar); raised liver enzymes.

What are the implications?

Body fat changes alone do not seem to substantially contribute to poor health in the future.

Nevertheless, body fat changes may be **stigmatising**, and research has shown that they are a potential source of stress and worry amongst people taking HIV treatment.

High levels of fat in the blood are associated with heart disease, stroke and pancreatitis, causing concern that the metabolic disorders associated with combination therapy may lead to an increased risk of heart disease.

Any risk is likely to be highest in people with other risk factors such as high blood pressure, diabetes, obesity, smoking, or a family history of heart disease.

Don't forget – the risk of heart disease can be reduced with exercise, diet and by stopping smoking.

Monitoring changes

You'll have regular blood tests to monitor levels of fats and sugars in your blood once you start HIV treatment.

Remember though that the body fat changes associated with HIV drugs aren't like normal weight loss or weight gain, so don't assume that changes in your body shape are automatically caused by your treatment. It's a good idea to bring them to the attention of your doctor so you can discuss the possible causes.

Treatment options

Even when people have stopped taking the treatment associated with fat loss, the body fat can be slow to return, and may not come back at all. Fat loss from the face can be repaired in a number of ways. The most commonly used technique involves injections of a product called polylactic acid (*New Fill*) into the affected areas. This treatment is often available from HIV clinics so ask your doctor or another member of your healthcare team if this treatment is available to you.

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Surgery can be an option for removing fat accumulation around the neck.

Other possible treatments involve human growth hormone or anabolic steroids. Again, you can talk to your doctor about these.

High blood fats may be treated with drugs such as statins, and insulin resistance with

anti-diabetes drugs. Some statins can interact with some HIV drugs, so your doctor will choose your drugs with care and monitor you closely.

There are also things you can do yourself. As noted above, regular exercise, a good diet with lots of fresh fruit and vegetables, and stopping smoking can all help reduce your risk of heart disease.

Find out more

Side-effects Information booklet

Nutrition Information booklet

Facial wasting Simple factsheet