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## **Lipodystrophy Treatments Part II: Treatments for Fat Loss**

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Image



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## Fat in the Body

Fat is needed for the body to function. It plays an important role in keeping the skin and hair healthy, protecting body organs, and maintaining body temperature. Fat is also stored energy.

There are different types of fat found in the body. Visceral fat is located deep in the belly under the muscle. Subcutaneous fat is the layer of fat just under the skin. Lipids are fats or fat-like substances in the blood, such as cholesterol and triglycerides.

Lipodystrophy means abnormal fat changes. It is used to describe a number of potentially unhealthy changes including:

- **Body shape changes**
  - Lipohypertrophy: Fat gain in the breasts or back of the neck (buffalo hump); visceral fat gain in the belly; round lumps that appear under the skin (lipomas)
  - Lipoatrophy: Loss of subcutaneous fat in the arms, legs, butt, or face (sunken cheeks)
- **Blood fat and sugar changes (metabolic problems)**
  - Increased fats (lipids) in the blood
  - Increased sugar (glucose) in the blood

People living with HIV who have lipodystrophy can have both body shape changes and metabolic problems. Some treatments can help with certain lipodystrophy changes, but no existing treatment gets rid of all of them. If left untreated, lipodystrophy can lead to a number of other conditions, including [heart disease](#), low self-esteem, and limits to the way the body functions and moves. Lipodystrophy or fear of developing lipodystrophy may keep some people living with HIV from taking their HIV drugs regularly ([adherence](#)).

This fact sheet looks at treatments for fat loss or lipoatrophy. For treatments for fat gain or metabolic changes, see our fact sheets on [Lipodystrophy Treatments Part I: Treatments for Fat Gain](#) and [Lipodystrophy Treatments Part III: Treatments for Metabolic Changes](#).

## Switching HIV Drugs

Some HIV drugs in the [nucleoside reverse transcriptase \(NRTI\)](#) class have been linked to subcutaneous fat loss. These include Zerit (stavudine, d4T) and Retrovir (zidovudine, AZT). Zerit is an older HIV drug that is rarely used today.

- For people who have developed lipoatrophy, switching from Zerit or Retrovir to newer NRTIs may keep fat loss from getting worse. Some studies have shown that people may even get back some fat under the skin after switching. However, this process may take a long time, or it may be hard to see in those who have more severe cases of lipoatrophy.
- People who have not developed lipoatrophy should avoid taking Zerit or Retrovir, if possible, to reduce the risk of developing the condition.

## Serostim

Serostim (somatropin) is a manufactured, or synthetic, version of human growth hormone. Approved by the US Food and Drug Administration (FDA) in 1996 for treatment of wasting, Serostim is injected under the skin every day or every other day. It helps adults grow muscle and may reduce belly fat. The main [side effects](#) are joint or muscle aches, swelling in the hands and feet due to excess water held in the body, and increased blood sugar levels that can lead to [diabetes](#).

It can be expensive and requires prior medical authorization in the US. Medicaid, Medicare, and most insurance companies now cover it for some purposes, but not to treat HIV-related fat loss. There is a patient support program for Serostim [here](#).

## Fat Loss in the Face

While lipoatrophy can occur in the arms, legs, and butt, fat loss in the face can be the most difficult for people living with HIV. This can make someone look older and sicker than they are, and cause embarrassment and low self-esteem. Many people living with HIV also believe that facial fat loss marks them as living with HIV and increases the [stigma](#) they face.

There are a number of treatments available. They all involve having products injected or surgically implanted to fill out hollows in the face. This can restore facial fullness. Temporary and permanent fillers are available. Temporary fillers usually last from three to 12 months and normally require touch-ups. Permanent fillers provide long-lasting results, but generally cannot be removed if the outcome is not good.

Many of these fillers have not been approved by the FDA for HIV-related lipodystrophy. Some of them have been approved for other conditions or purposes. If you are considering a treatment, get as much information as you can about the choices available to you. The long-term effects are unknown, and results may be different from person to person.

It is important to consult with a plastic surgeon or dermatologist experienced in treating HIV-related lipodystrophy. If you are planning on using a treatment, make sure that your provider has been properly trained and certified to perform the procedure before acquiring the treatment products – especially if it is coming from outside the US.

The treatments are expensive, and many insurance companies will not provide coverage. However, some people living with HIV have been able to convince their insurance companies or health services to cover the treatment. If you try to get your insurance company or health service to pay for these treatments, it is important to stress to them that fillers are required to restore facial features lost to HIV drug treatment, not simply for cosmetic purposes.

On a positive note, in the US, Medicare pays for facial fillers (Sculptra and Radiesse, see below) for people living with HIV who experience symptoms of [depression](#) due to HIV-related facial lipoatrophy. This decision was made, in part, because studies showed that the fillers can improve self-image, ease symptoms of depression, and help people stick more closely to their HIV drug treatment schedules.

## Temporary Facial Fillers

- **Sculptra (injectable poly-L-lactic acid, New-Fill):** This is the first facial filler approved in the US for HIV-related lipoatrophy. It contains poly-L-lactic acid, a synthetic (made in a laboratory) product that has a long history of use in reconstructive surgery. Sculptra stimulates the body's production of collagen, which gives the face a fuller look. The treatment requires three to six sessions and a touch-up every year. Sculptra is injected directly into the skin and your provider

will likely use some topical anesthetic (numbing agent) to decrease discomfort at the point of injection. The total cost depends on how many vials (small containers) of Sculptra you need and how many sessions it takes. It costs approximately \$500 to \$1000 per vial in the US. This cost does not include fees for anesthesia or the surgical facility. The manufacturer (Galderma in the US and Canada; formerly Valeant) has a patient assistance program (click [here](#) for more information).

- **Radiesse (calcium hydroxylapatite):** This product is also FDA approved for facial lipoatrophy in people living with HIV. Radiesse contains synthetic calcium hydroxylapatite, a substance found in bones and teeth that stimulates the body's production of collagen. It is used for reconstructive surgery and dentistry, and has a good safety record. The total cost depends on how many vials of Radiesse you need; it costs about \$600 to \$800 per vial in the US. This cost does not include fees for anesthesia or the surgical facility.
- **Autologous fat transplant:** This procedure, also called 'fat-grafting' or fat transfer, involves taking fat from one part of your body and injecting it into another part. Fat transplants are considered to be natural looking; however, fat can be difficult to find in people living with HIV with lipoatrophy. In addition, injected fat can sometimes become too large. Autologous fat transplants do not require FDA approval, but should be performed by a plastic surgeon with experience using this approach. These fat transplants cost several thousand dollars.
- **Collagen (CosmoDerm, CosmoPlast):** Collagen has been used for more than 25 years for cosmetic purposes, usually as a filler for facial wrinkles. Injected collagen is made from calf skins (bovine collagen) or grown in test tubes using human tissues (human collagen). While not specifically approved for HIV-associated lipoatrophy, collagen is widely available, and many plastic surgeons know how to use it. The cost per treatment in the US ranges from \$300-\$900, and treatments last for three to six months.

## Permanent Facial Fillers

- **PMMA (Artefill, Precise, Metacrill):** PMMA stands for polymethyl-methacrylate. PMMA filler is an injectable substance that contains PMMA microspheres in collagen gel. The body absorbs the collagen over time, and the PMMA microspheres stimulate the body to produce its own collagen.

The FDA approved Artefill (also known as Bellafill) for the treatment of facial wrinkles, lines, and furrows, but not for HIV-related facial lipoatrophy. Precise and Metacrill have not been evaluated by the FDA. Most people living with HIV treated with either Precise or Metacrill go to Mexico or Brazil to receive treatment. The cost varies, depending on the brand, the amount of filler needed, and travel expenses.

- **ePTFE Implants (Gore-Tex, Gore S.A.M., SoftForm):** ePTFE stands for expanded polytetrafluoroethylene, which is a mesh-like substance that does not degrade once implanted in the body. These solid implants require minor surgery to insert. Gore-Tex and SoftForm are FDA approved for filling out the face (although not for HIV-related facial lipoatrophy). There is a risk of infection and scarring.
- **Bio-Alcamid:** This product is not approved in the US. It is available in Europe and Mexico, where it is used for cosmetic and reconstructive purposes. It is an injectable gel, around which the body then forms collagen. Bio-Alcamid usually requires one or two sessions. There have been reports of infections and of the Bio-Alcamid moving downward in the face.
- **Silicone Oil (Silikon 1000, VitreSil 1000):** Silicone oil is not approved for lipoatrophy but is commonly used for this purpose. Its safety and effectiveness for facial filling are still being investigated. The oil is injected in very small quantities, which requires anywhere from three to six sessions. Once injected, it cannot be removed except through surgery, which can leave a scar. Silicone has been known to trigger inflammatory reactions in some recipients. Also, it sometimes forms nodules (small swellings) and leads to disfigurement over time, and can migrate to other parts of the body.

When considering permanent facial fillers, it is important to remember that our faces age – what looks good now may not be what helps us look good two, five, or ten years from now.

## Taking Care of Yourself

Even though the physical changes of lipodystrophy can cause [emotional distress](#), no researcher has suggested that people with lipodystrophy should stop taking their HIV medications. If you are concerned about your appearance, talk to your healthcare provider about treatment options. There are many things that you can do to stay healthy and feel good about your body.

## Additional Resources

Select the links below for additional material related to lipodystrophy treatment.

- [Body Fat, Lipodystrophy and HIV \(TheBody\)](#)
- [Changes to Your Face and Body \(Lipodystrophy, Wasting and Weight Gain\) \(POZ\)](#)
- [Facing Facts: Dealing with Lipodystrophy \(POZ\)](#)
- [Body Weight and Body Shape Changes \(CATIE\)](#)
- [FDA-Approved Dermal Fillers \(US Food and Drug Administration\)](#)
- [HIV and Lipodystrophy \(HIVinfo\)](#)
- [Lipodystrophy and HIV Treatment \(aidsmap\)](#)
- [Everything You Need to Know About HIV-Related Lipodystrophy \(TheBody\)](#)
- [Body Shape Changes \(Lipodystrophy\) \(International Association of Providers of A...](#)



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