

# Lipodystrophy Treatments Part II: Treatments for Fat Loss <sup>[1]</sup>

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## Table of Contents

- [Fat in the Body](#)
- [Switching HIV Drugs](#)
- [Serostim](#)
- [Fat Loss in the Face](#)
- [Temporary Facial Fillers](#)
- [Permanent Facial Fillers](#)
- [Taking Care of Yourself](#)

## 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 (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.

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](#) [2] and [Lipodystrophy Treatments Part III: Treatments for Metabolic Changes](#) [3].

## Switching HIV Drugs

Some HIV drugs in the [non-nucleoside reverse transcriptase \(NRTI\)](#) [4] class have been linked to subcutaneous fat loss, including 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 show 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 for 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 man-made or synthetic version of human growth hormone. Approved by the US Food and Drug Administration (FDA) in 1996 for treatment of wasting, Serostim is taken by injecting it under the skin every day or every-other-day. It helps adults grow muscle. The main [side effects](#) [5] are joint or muscle aches, swelling in the hands and feet due to excess water held in the body, and increased blood sugar levels, including [diabetes](#) [6].

Since Serostim is not approved for HIV-related fat gain, it is not currently covered by insurance for this purpose. It can be expensive, costing over \$12,000 a month. Serostim requires prior medical authorization in the US, but Medicaid, Medicare, and most insurance companies now cover it. There is a patient support program for Serostim [here](#) [7].

## 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](#) [8] 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 usually 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 by the FDA 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 can 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, and especially if you plan to go outside of the US to get it, check with the product's manufacturer to make sure your provider has been properly trained to perform the procedure.

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, below) for people living with HIV on Medicare who experience symptoms of depression <sup>[9]</sup> 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:** 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](#) <sup>[10]</sup> for more information).
- **Radiesse:** 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 (small containers) of Radiesse you need; Radiesse costs about \$600 to \$800 per vial in the US. This cost does not include fees for anesthesia or the surgical facility. The manufacturer has a patient assistance program (click [here](#) <sup>[11]</sup> for more information).
- **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) and 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 lasts for 3-6 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 for Precise or Metacrill.

- **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, Mexico, and the UK, 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. In the UK, it costs £200-£300 per vial at private clinics.
- **Silicone Oil (Silikon 1000, VitreSil 1000):** Silicone oil is not approved for lipoatrophy, but is commonly used for this purpose. Its safety and effectiveness are still being investigated for facial filling. The oil is injected in very small quantities which require anywhere from three to six sessions. Once injected, it cannot be removed. Silicone has been known to trigger inflammatory reactions in some recipients. Also, it sometimes forms nodules and leads to disfigurement over time.

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 [9], no researcher has suggested that people with lipodystrophy should stop taking their HIV drugs. If you are concerned about your appearance, talk to your health care provider about treatment options. There are many things that you can do to stay healthy and feel good about your body.

## Tags:

- [lipodistrophy](#) [12]
- [body changes](#) [13]
- [fat gain](#) [14]
- [fat loss](#) [15]
- [body shape changes](#) [16]
- [body shape](#) [17]
- [metabolic problems](#) [18]
- [increased glucose levels](#) [19]
- [hyperlipidemia](#) [20]
- [lipo](#) [21]
- [lipodystrophy](#) [22]
- [lipoatrophy](#) [23]
- [lipo HIV](#) [24]
- [lipodystrophy HIV](#) [25]
- [fat loss HIV](#) [26]
- [fat gain HIV](#) [27]
- [wasting HIV](#) [28]
- [buffalo hump](#) [29]
- [facial wasting](#) [30]

## Additional Resources

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

[HIV/AIDS & Lipodystrophy & Other Metabolic Complications \(The Body\)](#) [31]

[Changes to Your Face and Body \(Lipodystrophy & Wasting\) \(POZ\)](#) [32]

[Facial Wasting \(AIDSmap\)](#) [33]

[The Mirror Has Two Faces \(Positively Aware\)](#) [34]

[Facial Wasting/Lipoatrophy & HIV/AIDS \(The Body\)](#) [35]

[US Treatment Guidelines, Table 12h: Antiretroviral Therapy ? Lipodystrophy,](#)

[Lipohypertrophy, Lipoatrophy \(NIH\)](#) [36]

[Facing Facts: Dealing with Lipodystrophy \(POZ\)](#) [37]

[Body Weight and Body Shape Changes \(CATIE\)](#) [38]

[Soft Tissue Fillers Approved by the Centers for Devices and Radiological Health \(FDA\)](#) [39]

[Complications Reported in Some Recipients of Bio Alcamid \(CATIE\)](#) [40]

- [Sign Up / Login](#)
- [My Account](#)
- [HIV Information](#)
- [A Girl Like Me](#)
- [Partners](#)
- [Who We Are](#)
- [Terms](#)
- [Privacy](#)
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**Links:**

- [1] <http://www.thewellproject.org/hiv-information/lipodystrophy-treatments-part-ii-treatments-fat-loss>
- [2] <http://www.thewellproject.org/hiv-information/lipodystrophy-treatments-part-i-treatments-fat-gain>
- [3] <http://www.thewellproject.org/hiv-information/lipodystrophy-treatments-part-iii-treatments-metabolic-changes>
- [4] <http://www.thewellproject.org/hiv-information/hiv-drug-chart-overview#NRTIs>
- [5] <http://www.thewellproject.org/hiv-information/side-effects>
- [6] <http://www.thewellproject.org/hiv-information/diabetes>
- [7] <https://serostim.com/patient-support-services/>
- [8] <http://www.thewellproject.org/hiv-information/stigma-and-discrimination-against-women-living-hiv>
- [9] <http://www.thewellproject.org/hiv-information/depression-women-and-hiv>
- [10] <http://www.rxresource.org/prescription-assistance/galderma-patient-assistance-program.html>
- [11] [http://www.needymeds.org/program\\_list.taf?\\_function=name&program\\_id=76cf99d3614e23eabab16fb27e944b](http://www.needymeds.org/program_list.taf?_function=name&program_id=76cf99d3614e23eabab16fb27e944b)
- [12] <http://www.thewellproject.org/tags/lipodistrophy>
- [13] <http://www.thewellproject.org/tags/body-changes>
- [14] <http://www.thewellproject.org/tags/fat-gain>
- [15] <http://www.thewellproject.org/tags/fat-loss>
- [16] <http://www.thewellproject.org/tags/body-shape-changes>
- [17] <http://www.thewellproject.org/tags/body-shape>
- [18] <http://www.thewellproject.org/tags/metabolic-problems>
- [19] <http://www.thewellproject.org/tags/increased-glucose-levels>
- [20] <http://www.thewellproject.org/tags/hyperlipidemia>
- [21] <http://www.thewellproject.org/tags/lipo>
- [22] <http://www.thewellproject.org/tags/lipodystrophy>
- [23] <http://www.thewellproject.org/tags/lipoatrophy>
- [24] <http://www.thewellproject.org/tags/lipo-hiv>
- [25] <http://www.thewellproject.org/tags/lipodystrophy-hiv>
- [26] <http://www.thewellproject.org/tags/fat-loss-hiv>
- [27] <http://www.thewellproject.org/tags/fat-gain-hiv>
- [28] <http://www.thewellproject.org/tags/wasting-hiv>
- [29] <http://www.thewellproject.org/tags/buffalo-hump>
- [30] <http://www.thewellproject.org/tags/facial-wasting>
- [31] <http://www.thebody.com/index/treat/lipodystrophy.html>
- [32] <https://www.poz.com/basics/hiv-basics/changes-face-body-lipodystrophy-wasting>
- [33] <http://www.aidsmap.com/page/1045041/>
- [34] [http://www.positivelyaware.com/archives/2012/12\\_06/mirror-has-two-faces.shtml](http://www.positivelyaware.com/archives/2012/12_06/mirror-has-two-faces.shtml)
- [35] <http://www.thebody.com/content/art47294.html>
- [36] <http://www.aidsinfo.nih.gov/guidelines/html/2/pediatric-arv-guidelines/97>
- [37] <https://www.poz.com/article/lipodystrophy-treatment-24184-8626>
- [38] <http://www.catie.ca/en/practical-guides/hiv-drug-side-effects/3-body-changes>
- [39] <http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/CosmeticDevices/WrinkleFillers/ucm227749.htm>
- [40] <http://www.catie.ca/en/cativenews/2010-11-05/complications-reported-some-recipients-bio-alcamid>