

Cosmetic treatment for lipodystrophy

A review of available options **by Dr. Yves Hébert**

Dr. Yves Hébert is a general practitioner who has worked in the field of aesthetic medicine for over 20 years. He provides a wide array of treatments at his Montreal-based clinic, and is an expert in the treatment of lipoatrophy. He is on the Board of the Canadian Association of Esthetic Medicine and, in July 2009, will become the president of the Association for a three-year mandate.

Lipodystrophy is among the complications people worry about most when they're treated for HIV, primarily because it can produce changes to the body that are visible to the outside world. While research continues on precisely how it's caused and how the benefits of antiretroviral

treatment can be delivered without risk of lipodystrophy, it may be reassuring to know that cosmetic options are available to reduce the changes in appearance.

Lipodystrophy affects a growing number of people on antiretroviral therapy. In 2008, it was estimated that, of the two million people infected with HIV in North America and Europe, some 285,000 suffered from lipodystrophy. That number is expected to climb to 380,000 by 2012!

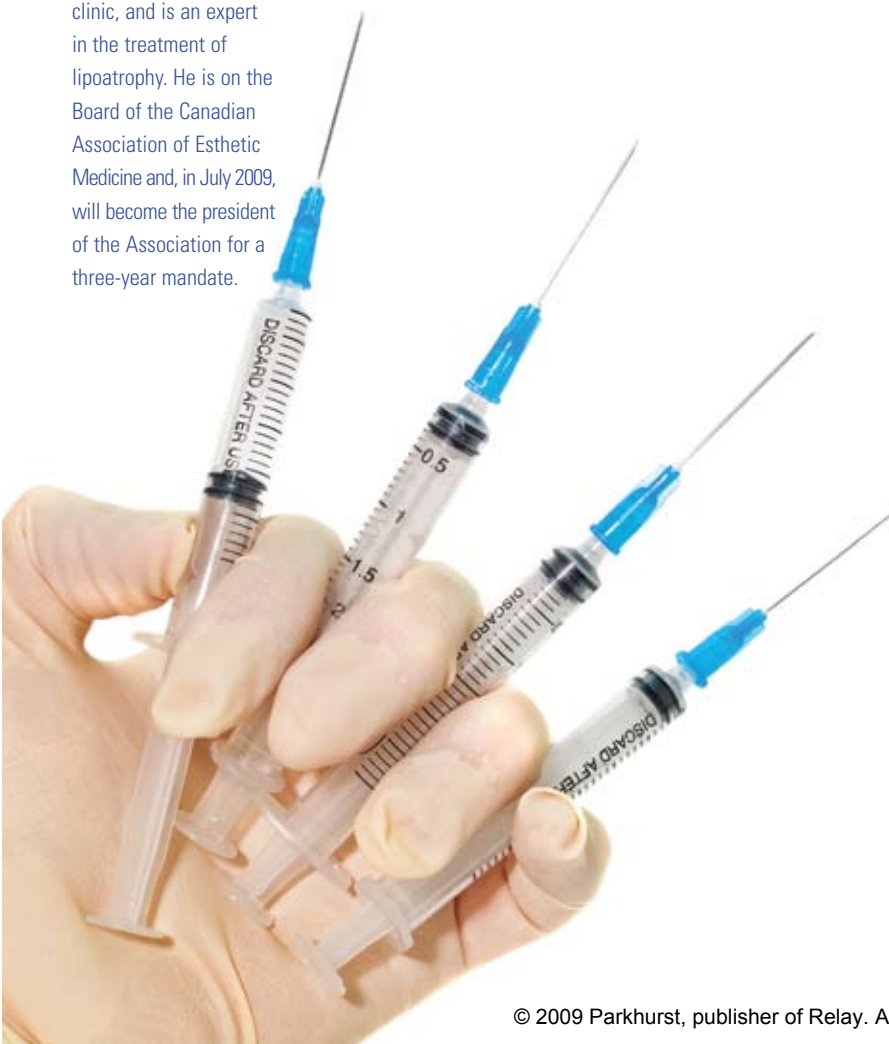
The word lipodystrophy literally means "fat (lipo) disorder (dystrophy)." It describes an abnormal change in the way the body metabolizes and distributes fat. Metabolism is how your body processes fats, sugars and some chemicals that are produced as it breaks down food. Distribution is where fat gets deposited under the skin around your body.

Changes in fat metabolism

Changes in metabolism can increase the levels of various types of fat (cholesterol and triglycerides) and sugar in your blood, and may lead to an increased risk of cardiovascular (heart) problems and a greater likelihood of diabetes. People living with HIV suffer heart attacks almost twice as often as people without HIV and have double the incidence of diabetes. (See "Heart disease and antiretroviral therapy" on page 7).

Changes in fat distribution

While metabolic abnormalities associated with lipodystrophy can compromise health, problems with fat distribution can have a negative impact on quality of life, as they lead to changes in appearance





that many find difficult to cope with. Some people notice lipoaccumulation, where fatty tissue accumulates abnormally in the abdomen, between the shoulder blades (where it can build up into what's commonly called a buffalo hump), in the breasts, or as lipomas (small fatty lumps under the skin). Others may see a loss of fatty tissue, or lipoatrophy, in the buttocks, arms, legs and face. It's possible to experience both lipoaccumulation and lipoatrophy at the same time.

It can be disturbing to watch your appearance start to change and to lose control over the shape of your body. The hallmark sunken cheeks or buffalo hump also increase fears of discrimination, as people feel that their HIV is suddenly visible. Social isolation is a real risk if you start avoiding contact with others. The appearance of lipodystrophy scares some people into stopping their antiretroviral (ARV) regimens without really thinking through the consequences of doing so. In such instances, psychological distress is then compounded by the risk of worsening HIV infection and the development of resistance.

Treating lipodystrophy

While there are currently no proven strategies for reversing the metabolic changes associated with lipodystrophy, cosmetic surgery is being used successfully to reverse changes in fat distribution. Unfortunately, the treatments and procedures described below are considered "cosmetic" and aren't covered under public or private insurance plans, making it difficult for many Canadians to afford treatment.

Getting rid of abnormal fat deposits

Liposuction or surgical removal can be used to remove fatty deposits, especially the hump between the shoulder blades. Liposuction is generally performed under local anaesthetic, involves little discomfort or risk, leaves only tiny scars and doesn't require a hospital stay. Surgical removal is done under general anaesthetic and requires a brief stay in hospital. It leaves a scar several centimetres long near the top of the back between the shoulder blades.

Both approaches are effective at eliminating the hump or other deposits, but there's a risk of them coming back after a few years, especially if the same antiretroviral regimen is maintained.

Fillers for lipoatrophy

Cosmetic surgery can also help correct the effects of lipoatrophy in the face and return fullness to hollow cheeks and temples by injecting different forms of implant or filler material under the skin.

In theory, all injectable fillers approved by Health Canada and marketed here can be used to treat lipoatrophy. Fillers are commonly used to reduce the appearance of wrinkles and scars. However, some fillers, such as hyaluronic acid-based products (Perlane™, Juvederm™, Teosyal™, etc) and porcine



collagen-based products (Evolve™) have short-lasting effects of between six months and one year, and are therefore not very cost-effective, despite being very safe to use. At best, they can help out with small superficial touch-ups.

Poly-lactic acid (Sculptra™)

This product, also known as NewFill™ in Europe, progressively fills in affected areas by stimulating collagen production and a gradual thickening of the skin. Depending on the severity of lipoatrophy, between three and six treatments, undertaken at intervals of four to eight weeks, may be required. Results last between two and three years and periodic maintenance treatments after that allow results to be maintained. The treatment is moderately painful and has a few side effects (swelling and bruising) that last only a short while. In rare cases, nodules can form under the skin, but these generally disappear with time. Its excellent safety profile makes Sculptra the treatment of choice for lipoatrophy.

Calcium hydroxylapatite (Radiesse™)

This product is made from microparticles of calcium that stimulate the formation of new collagen fibres, leading to a durable and natural filling. It lasts between one and a half and two years. Depending on the severity of lipoatrophy, the series of treatments can be performed at two- to three-month intervals, with occasional touch-ups after that to maintain volume. Treatment is moderately painful and may produce some short-lasting bruising and swelling. It's an attractive option for people with mild lipoatrophy.

Polyalkylimide (Bio-Alcamid™)

This is the only permanent filler currently available in Canada. It's a water-based gel that's injected deep under the skin until the desired volume is reached, usually in one or two treatment sessions. It behaves like a soft implant that fills the tissue by integrating with it completely. Treatment is done under local anaesthetic and involves more intense side effects than other treatments (swelling, bruising, sensitivity, hardening of the skin). These effects last several days and wear off gradually. For reasons we still don't understand, 2% to 3% of people can't tolerate this product and develop abscesses and inflammation. The only option should this happen is to gradually remove as much of the product as possible through small incisions in the skin.



Polymethyl methacrylate (PMMA) (Artecoll™, Artesense™)

With a life-span of five to 10 years, these are semi-permanent products composed of microscopic particles of PMMA (a plastic polymer) that stimulate collagen formation after they're injected. A series of treatments at three-month intervals is usually needed before the desired results are obtained. PMMA's prolonged durability means that touch-ups can be spaced several years apart. Treatment is only slightly painful and involves some temporary swelling and bruising. However, in some people, PMMA can, over the long term, produce nodules and inflammatory reactions that are difficult to treat.

Access and affordability

The products mentioned above can all be administered during an outpatient visit at a medical clinic, and (with the possible exception of Bio-Alcamid) shouldn't require you to take time off work. They're generally safe when administered by a competent doctor who has experience and training in the particularities of each product.

Injectable fillers are expensive and the total bill for a course of treatment can come to between a few hundred and a few thousand dollars. These costs aren't covered or reimbursed by the public provincial health systems or by private insurance plans. **R**