

Cryolipolysis can do the opposite of what's promised

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Credit: Valeria Boltneva from Pexels

At the height of her fame in the 1990s, supermodel Linda Evangelista was often quoted as saying she wouldn't get out of bed for [less than \\$10,000 a day](#). Now she's [revealed](#) a popular cosmetic procedure has

sent her to the "lowest depths of self-loathing," destroyed her livelihood and made her a recluse because of the changes to her body. She is suing for US\$50 million.

The process, called cryolipolysis (or fat freezing) shrinks fat over a few months, after an initial period of redness where the treatment has been applied.

When Evangelista underwent cryolipolysis, she reportedly experienced a side-effect where the fat increases over the months following treatment instead of decreasing. This is called paradoxical adipose hyperplasia. This complication occurs more often in men and more often when older versions of the machine used in the treatment are employed.

Manufacturers quote an [incidence of 1 in 4,000 cycles](#), but the real incidence may be more frequent because patients might not report the complication due to lack of awareness.

Cryolipolysis—often referred to by the commercial name [CoolSculpting](#)—has gained popularity in recent years. But those considering it should be aware of the potential for rare complications.

Less invasive than liposuction

Before cryolipolysis, liposuction was the only effective therapeutic option for the removal of excess fat tissue. Because liposuction is an invasive procedure and carries the inherent risks associated with surgery, cryolipolysis was developed in 2007 to address body contouring as a less-invasive procedure.

The procedure was conceived after the observation of reduced fat in a child's cheek after sucking on an ice block. Normally the fat cell numbers are reduced after freezing.

Unfortunately, the cause of the opposite effect reportedly experienced by Evangelista is not fully understood. [Theories vary](#) from some patients' fat cells being prone to acting in the opposite way than predicted, to unintended activation of stem cells due to nerve or blood supply issues.

Growing in popularity

Body contouring, or body sculpting, procedures are the fastest growing procedures in cosmetic medicine. Some areas of fat on the body are almost impossible to shrink with diet and weight loss. People with diabetes may also seek treatment for areas that are injected with insulin and can [accumulate fat under the skin](#).

Nonsurgical fat reduction methods include cryolipolysis (often marketed as CoolSculpting), ultrasound (Vaser Shape and Liposonix), and radiofrequency (Vanquish).

The number of body sculpting treatment sessions has risen 68% since 2015. Within body sculpting procedures, cryolipolysis [accounted](#) for 45.7% of all body contouring treatments.

Similar undesirable effects—paradoxical adipose hyperplasia—have [been reported](#) for non-invasive radiofrequency treatment.

Ultrasound fat reduction has not yet been reported to cause the same adverse effects. However, fat cells can recover after this treatment, making it a temporary reduction in those cases.

Many patients may not be aware they have experienced paradoxical adipose hyperplasia because it comes on slowly and may be hidden by general weight gain. They might also just assume the treatment did not work.

In more noticeable cases, the area drawn into the freezing device will, after the redness settles, slowly enlarge and protrude more than it did before the start of treatment. The growth is not steady and within a few months it reaches a maximum size that depends on the patient's body fat content.

What is safe for people who want to change their shape?

The definitive treatment for unwanted body fat that can't be improved with exercise is liposuction in a skilled operators' hands.

Liposuction is an [invasive procedure](#) with increased risks including irregularity in the skin's surface and contour.

Ultrasound therapy may be the safest option to adjust body shape as a primary treatment. It may also be considered for cases of paradoxical adipose hyperplasia although it may only be a temporary solution. Testing the treatment in a small area is advisable first.

Any time you change the [body's](#) balance, you risk creating new problems. Particularly when dealing with fat. When patients put weight on after fat removal procedures, the fat will distend in other areas significantly more than the treated areas and this gives an unusual appearance.

When proceeding with any cosmetic procedure it pays to be well informed and prepared for unwanted outcomes, even if they are rare. Yes, the journey will be much longer when complications occur. The trick is not to go for a quick fix or let negative feelings about appearance override caution and have a competent clinician advising you.

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