

# What is Interstitial Laser Lipolysis.

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## ABSTRACT

*Interstitial laser-lipolysis* is an advanced technique proposed for the removal of excess fatty tissue in those areas that are usually resistant to diet and physical exercise. The technique is called laser-lipolysis as it allows the surgeon to sculpt the body specifically targeting the adipocytes (fatty tissue cells), which contain the fatty matter. This technique involves less risk and less blood-loss compared to traditional methods, also reducing the recovery times which are safer and more comfortable.

## HISTORY OF THE TRADITIONAL TECHNIQUES

Before the 70's fatty tissue was extracted in lumps by means of large cutaneous incisions that produced extensive scarring. During the 70's Italian and French surgeons experimented independently on a new method for removing excess fat. Today this technique is known as liposuction, lipoaspiration or liposculpture. The greatest innovation consisted of the use of cannulas for removing large quantities of fat through reduced incisions and as a result, reduced scarring. The cannula, which was combined with a high vacuum pump, was capable of removing the fat cell by operating underneath the skin. In this way large areas can be treated with only a few small scars.

With liposuction considerable modifications are obtained in the body contours. Initially the cannulas had a large diameter which caused significant blood loss in surgery under general anaesthetic and difficult, slow and painful recovery times. An upgrading of the liposuction technique was introduced by an American surgeon in 1987. This new technique is known as Tumescence Liposuction surgery. Large quantities (several litres) of an

adrenalin and anaesthetic solution are infiltrated into the areas of fat to be aspirated. This solution procures the local anaesthetic necessary during the procedure allowing carrying out the treatment with resorting to a general anaesthetic.

During the 90's an ultrasonic vibrating cannula technique was introduced that allowed for increasing the volume of removable fat via the insertion of the cannula. All these techniques have one big disadvantage: the limited possibility of modelling the areas treated. The passage of the cannulas creates subcutaneous hollows that are difficult to fill. Another big disadvantage is the rupturing of the veins found in the fatty tissue with considerable blood loss and subsequent haematomas requiring long-term bandaging. All these are significant disadvantages in view of the fact that lipoaspiration requires a general anaesthetic, allows for removing a litre of fat per session and in some cases calls for a blood transfusion with slow recovery times accompanied by widespread haematomas.

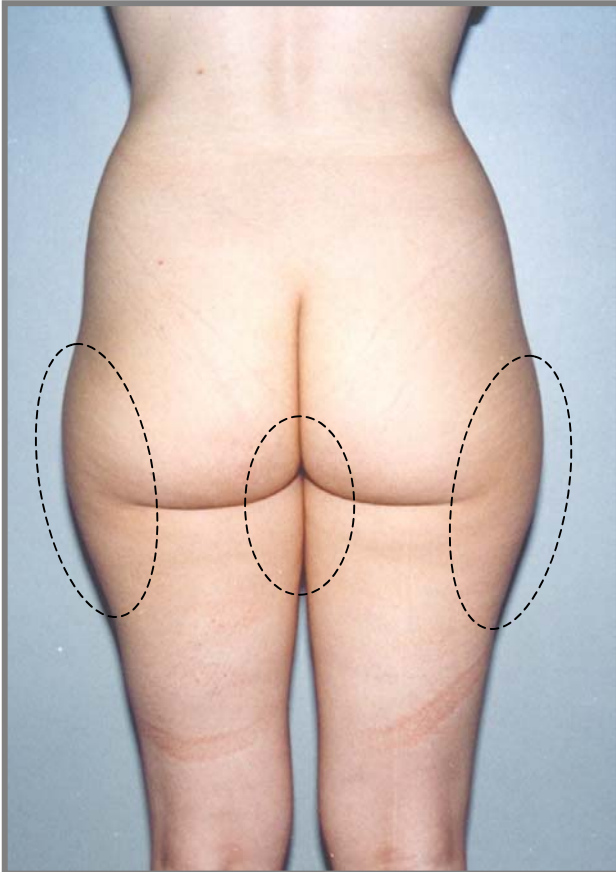
## INTERSTITIAL LASER-LIPOLYSIS

*Interstitial laser-lipolysis* was introduced in 1999 as an additional improvement to the liposculpture technique. It allows for reducing the localised adiposity without resorting to liposuction thanks to the destruction of the fatty tissue as a result of the laser action. In fact, the Nd:YAG laser system has a specific wavelength that provokes the rupturing of the adipose cell membranes transforming them into an oily substance that is immediately absorbed and eliminated in a natural manner (the correct term laser-adipocytolysis, is more difficult to pronounce). At the end of the treatment the fatty tissues are more compact, with greater suppleness and less surface unevenness. Normally the body profile

improves day after day and the results stabilise within 20-30 days. Moreover the recovery time and the side effects (like bruises, oedemas and bleeding) can be estimated to be reduced at least 50%.

With *Interstitial Laserlipolysis* it is possible to treat all forms of adiposity located in any part of the body whatsoever, with the restoring of surfaces that are uneven or affected by cellulite. The treatment minimises

post-operative side effects like haematomas and inflammation, and reduces the containment times which only require elastic bandages. The method therefore allows the patient to rapidly resume a normal social life. The results are permanent, giving rise to a harmonious silhouette in no time at all, ensuring the patient's satisfaction and avoiding the excessive traumatising of more aggressive techniques.



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