DEFINITION, AIMS AND PRINCIPLES

As soon as the first liposuction techniques were invented Plastic Surgeons realised that the fat extracted could be re-injected elsewhere in the body, thus acting as a filler.

This technique, autologous fat injection, known as lipofilling, remained disappointing for many years: the re-injected fat tended to be reabsorbed to a great extent, leaving a result, which was neither predictable nor lasting.

Nevertheless Plastic Surgeons were not discouraged and tried to understand the reason for these unsatisfactory results. Little by little progress was made and it was from 1995 onward that the injection of autologous fat became a reliable technique. (S. COLEMAN).

Lipostructure can be used for many depressions (troughs) which can be natural or post-traumatic.

The aims and indications of this procedure can be summed up as follows:

1 - Aesthetic indications
• The filling and smoothing of certain wrinkles, especially of the face.
• Restoration of the ‘fullness’ of a gaunt face or one showing the first signs of aging.
• Restoration of volume and shape to the face: especially in the case of a face emaciated by aging.
• In complement to certain neck- and face-lifts to give a more balanced result.
• As an additional procedure after a previous face-lift, to improve the shape of the mid-section of the face without resorting to another face-lift.
• To correct corrugations in the appearance of the skin following lipo-aspiration.

Lipostructure: consists of removing excess fat from certain areas (outer thighs for example) and grafting the fat cells into areas where there is a lack of volume (for example the upper part of the buttocks).

These aesthetic procedures are not covered by medical insurance.

2 - Indications concerning restorative or reconstructive surgery:
• Filling of holes or hollowed out areas following injury.
• Correction of wasting after triple therapy for HIV + patients.
• To improve the aesthetic appearance of the breasts following reconstruction or mammary implants after mastectomy.
• Under certain circumstances these reconstructive procedures may be covered by medical insurance.

It is important to keep in mind that lipostructure is a truly surgical technique which must be carried out by a competent, qualified Plastic Surgeon, who is experienced in this technique and who operates in a surgical environment.

BEFORE THE OPERATION

Prior to the operation a thorough clinical and photographic examination will have been carried out in order to determine the corrections required.
Especially when lipostructure is being used to reduce age-related effects, photographs of the patient when young will have been studied in order to compare the differences between the younger face and the face at this time.

A preoperative check up will be carried out as prescribed.

A consultation with an anaesthesiologist will be arranged at the latest 48 hours before the operation. Smoking is not an absolute contraindication to this procedure, however it is preferable to stop smoking for a month before surgery as its negative effect on healing is well known.

No aspirin-based medication should be taken during the 10 days preceding the operation.

For certain types of anesthesia you may be required to fast (neither eat nor drink) for six hours before the operation.

**HOSPITAL STAY AND TYPE OF ANESTHESIA**

Type of anesthesia: Local anesthesia with sedation given by intravenous drip (‘twilight’ anesthesia) is the usual choice for lipostructure. One can also use local anesthesia alone, or general anesthesia.

The type of anesthesia will be chosen after discussion between yourself, the surgeon and the anesthesiologist

Hospital stay: The procedure is usually carried out on an outpatient basis, in an ambulatory facility, the patient arrives and leaves on the same day. The patient is discharged three to five hours after the procedure.

An overnight stay following surgery may be necessary.

**THE PROCEDURE**

Each surgeon has adopted his or her own specific technique which he or she adapts in order to obtain the best results in each case.

We can however give you some basic points.

We start by carefully defining the areas from which the fat will be harvested, and the re-injection sites.

The harvesting of fat is carried out atraumatically through a tiny incision hidden in the natural skin creases, using a small canula.

An area with reserves, or even an excess, of fat will be chosen for harvesting, at a site not normally visible. After harvesting, centrifugation will be carried out for a few minutes, in order to separate the intact fat cells, which will form the graft, from elements which cannot be used.

Re-injection is carried out through 1mm incisions using micro-canulas.

Tiny particles of fat are re-injected at different levels and in multiple divergent directions. This increases the surface area in contact with the implanted cells and receptor tissue and improves the survival of the grafted fat cells.

Since there is true grafting of living cells, when the technique is correct and the graft takes, these grafted cells will become a living part of the body. This means that lipostructure is a permanent technique since the grafted fat cells will live for as long as the surrounding tissues.

The length of the procedure varies according to the amount of fat to be re-injected and the number of treated sites. It can vary from 30 minutes to 2 hours for lipostructure alone.

**AFTER THE OPERATION**

After the operation pain is usually mild.

Swelling appears during the 48 hours following the procedure; this usually takes 5 to 15 days to disappear completely.

Bruising appears after a few hours on the injection sites: it disappears 10 to 20 days after the procedure.

Although recovery is in general rapid because of the nature of the procedure, you will have to take into account the swelling and bruising, and organize your family social and professional life in consequence.

Exposure to sunlight or UV rays must be avoided for the areas concerned for at least 4 weeks otherwise permanent pigmentation can occur.

Once the swelling and bruising have settled the final result will begin to be visible 2 to 3 weeks after the procedure.

**THE RESULT**

The final aspect will not be visible before 3 to 6 months.

This is usually satisfactory, whenever the indication and the technique have been correct: the depressions have been filled and volume restored.

Nevertheless the result will deteriorate little by little as these tissues age.

A difference of between 20 and 40% exists between the quantity of fat cells grafted and the quantity that will survive. The surgeon will allow for this in his initial evaluation of the amount to be injected.

Grafted fat is subject to the same variations in volume as normal body fat; therefore it will fluctuate with weight loss or gain.

The objective of this procedure is to provide improvement but not to attain perfection, when under taken with realistic expectations the results will be extremely satisfying.

**DISAPPOINTING RESULT**

We have seen already that lipostructure, when correctly indicated and carried out, can be beneficial to patients, giving a satisfactory result corresponding to what was expected.
Occasionally localized imperfections can be observed (without being true complications): hypo-correction of some areas, slight asymmetry, irregularities.

They can usually be corrected by ‘touch up’ lipostructure under local anaesthetic 6 months after the initial procedure; you will have been informed about this possibility.

**POSSIBLE COMPLICATIONS**

Lipostructure, although essentially an aesthetic procedure, is nevertheless an operation, and this implies that the risks inherent to any surgery apply here.

We must distinguish between risks related to the anaesthesia and those related to the surgery.

- For the anaesthesia, the anaesthesiologist will explain the risks during the preoperative consultation. You must be aware that anaesthesia can cause unpredictable reactions, which can be difficult to control: the presence of an experienced anaesthesiologist, in a surgical context, means that the risks are statistically practically negligible.

In fact techniques, products and monitoring methods have progressed considerably over the last twenty years, giving optimal safety, especially when the operation is not an emergency and the patient is in good general health.

- Risks of surgery:

  By choosing a competent, qualified Plastic Surgeon, used to performing this procedure, you limit the risks, without however eliminating them completely.

However, real complications are rare following lipostructure which has been carried out correctly. Following careful selection of the patient & expect technique, and by using rounded cannulas which do not damage skin, blood vessels or the nerves avoid as far as possible the risk of complications.

In fact practically all the operations go well and patients are completely satisfied with the result.

**Infection** is normally avoided by prescription of antibiotics before and after the procedure.

The most frequent complication of lipostructure is hyper-correction, this is caused by re-injection of an excessive quantity of fat giving an unsightly result.

This hypercorrection rapidly becomes permanent and difficult to treat, it cannot be treated by simple lipoaspiration: in general it can only be remedied by a true surgical operation to remove the excess fat.

All things considered, the risks must not be overestimated, but you must be conscious that an operation, even a minor one, always has some degree of unforeseeable unknown factors.

You can be assured that if you are operated on by a qualified Plastic Surgeon, he will have the experience and skill required to avoid these complications, or to treat them successfully if necessary.