



**MACDERMOL**  
BioSlim

A SAFE CELLULITE  
REMOVAL PROCEDURE



# WHAT IS CELLULITE ?

Cellulite is a lipodystrophy, i.e. a dystrophy of the subcutaneous fat tissue, and more specifically a superficial hyper lipodystrophy, i.e. an augmentation of the volume and/or the number of the adipocytes located in the superficial subcutaneous tissue.

The cellulite fat is distinguishable from the other hyper lipodystrophies by the fact that it is compacted by a pericellular fibrosis around adipocytes and associated to a phenomenon of water retention.

Visually, it is characterized by the formation of dimples on the skin, especially on the thighs, hips and buttocks.

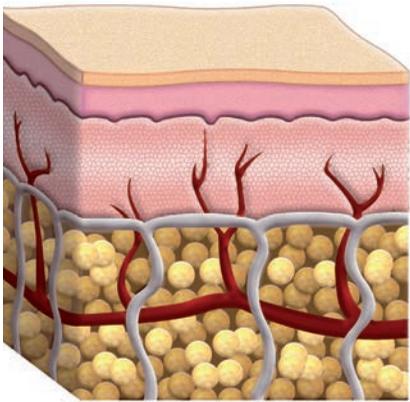


Figure 1: Cross section of skin without cellulite.

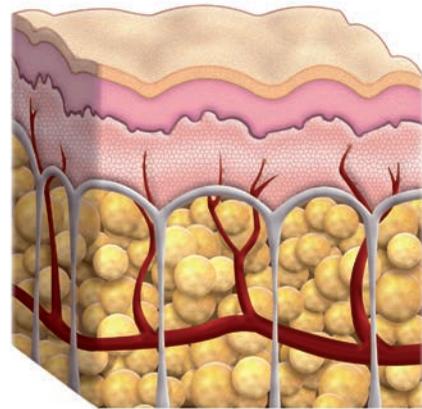


Figure 2: Cross section of skin with cellulite.

# WHY DO WE HAVE CELLULITE ?

There are three factors responsible for the creation of cellulite :

## ADIPOSE TISSUE AUGMENTATION

An imbalance between lipogenesis and lipolysis due to genetic, age-related decrease in hormones, lack of physical activity, over-nutrition (too much calories) or bad nutrition (too much high-glycemic index carbohydrates, saturated or trans fatty acids) leads to an augmentation of the number or size of the adipocytes.

## PERICELLULAR FIBROSIS

Due to hyperglycemia subsequent to carbohydrate ingestion, a glycation process will modify the collagen and will lead to a pericellular fibrosis

## WATER RETENTION

Because of bad venous return, lymphatic insufficiency or alteration of capillary permeability, water stands in the adipose tissue around adipocytes.

# WHAT IS MESOTHERAPY ?



Mesofilling is a new concept of injectable treatment between dermal filling and mesotherapy.

Mesotherapy, a safe, effective and established non-surgical medical technique developed by the French doctor Dr. Michel Pistor in the 1950's, involves local, multiple injections (intraepidermal, intradermal or subcutaneous) of micro-doses of active therapeutic substances. The advantage of this procedure is to deliver potent molecules directly on the area of tissue to be treated, providing superior effectiveness and safety compared to other routes of administration (epicutaneous, oral, intravenous etc.).

Mesofilling combined this technique with the injection of biomaterial. Basically, a mesofiller is a low concentrated dermal filler supplemented with active ingredients.

**MACDERMOL BIO SLIM** is a mesofiller indicated to improve the appearance of cellulite.

# HOW DOES IT WORKS ?

**MACDERMOL BIO SLIM** provides a specific proprietary complex of active ingredients which will act on the three causes of cellulite :

## ■ ON ADIPOSE TISSUE AUGMENTATION

High concentration of pharmaceutical-grade caffeine will stimulate lipolysis and inhibit lipogenesis.

## ■ ON PERICELLULAR FIBROSIS

Pyridoxamine, also known as Vitamin B6, will inhibit the glycation process.

## ■ ON WATER RETENTION

Rutin, a powerful bioflavonoid, will correct capillary fragility and venous insufficiency.

THE HYALURONIC ACID (HA) SOLUTION CONTAINED IN **MACDERMOL BIO SLIM** WILL HAVE THREE MAJOR EFFECTS :

**A biological effect** on the three causes of cellulite.

- On adipose tissue augmentation, HA will help the hydrolysis of adipocytes
- On pericellular fibrosis HA will restore collagen.
- On water retention, HA will absorb and facilitate the elimination of the water.

**A mechanical effect** on the dimpling appearance.

HA will provide a mechanical action in microfilling the depressions and will improve the aesthetic appearance of the cutaneous irregularities (dimples) due to cellulite.

**A pharmacokinetic effect** on the chronoavailability of the lipolytic substances.

An optimal delivery of the active molecules will be possible thanks to the HA.

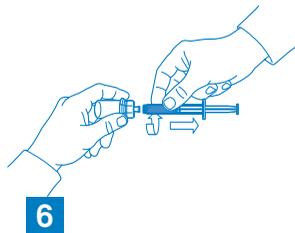
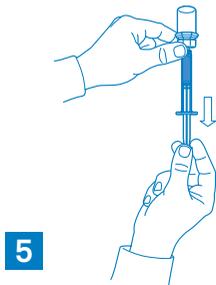
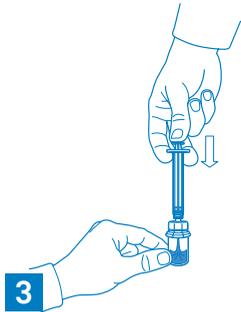
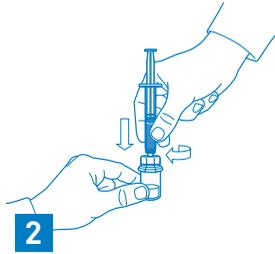
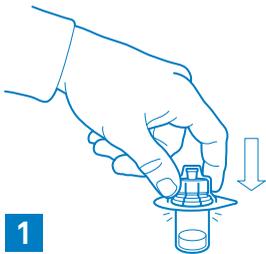
# EFFECTIVENESS



**TREATMENT  
SUCCESS<sup>1</sup>**

<sup>1</sup> 20 on 22 treated women with Nurnberger-Muller Scale III-IV upper thigh cellulite showed evidence of clinical improvement.

# MIXING PROCEDURE



## ■ PHASE 1

Remove the Flip-Off button from the vial and disinfect the rubber top of the vial with an alcohol pad. Remove the cover from the vial adapter package. Do not remove the vial adapter from the blister package. Use the blister pack to handle the adapter and seat it on the vial by pushing down until the spike penetrates the elastomeric stopper and the adapter snaps in place.

## ■ PHASE 2

Remove the blister package and attach the prefilled syringe to the adapter.

## ■ PHASE 3

Transfer the content of the syringe into the vial by slowly pushing the plunger all the way in.

## ■ PHASE 4

Gently swirl the vial to make sure the product is thoroughly mixed.

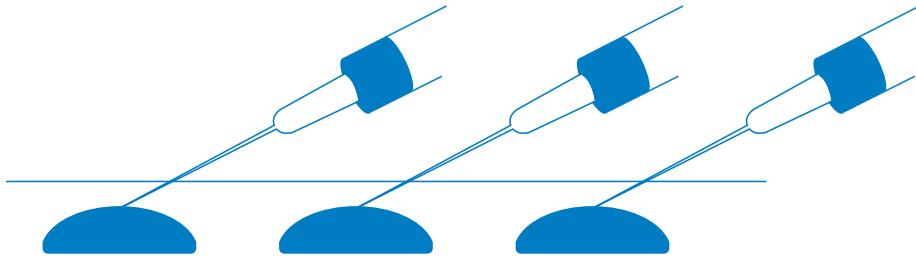
## ■ PHASE 5

Withdraw the mixed solution from the vial into the syringe.

## ■ PHASE 6

Remove the syringe from the adapter. The product is now ready for administration.

# INJECTION PROCEDURE



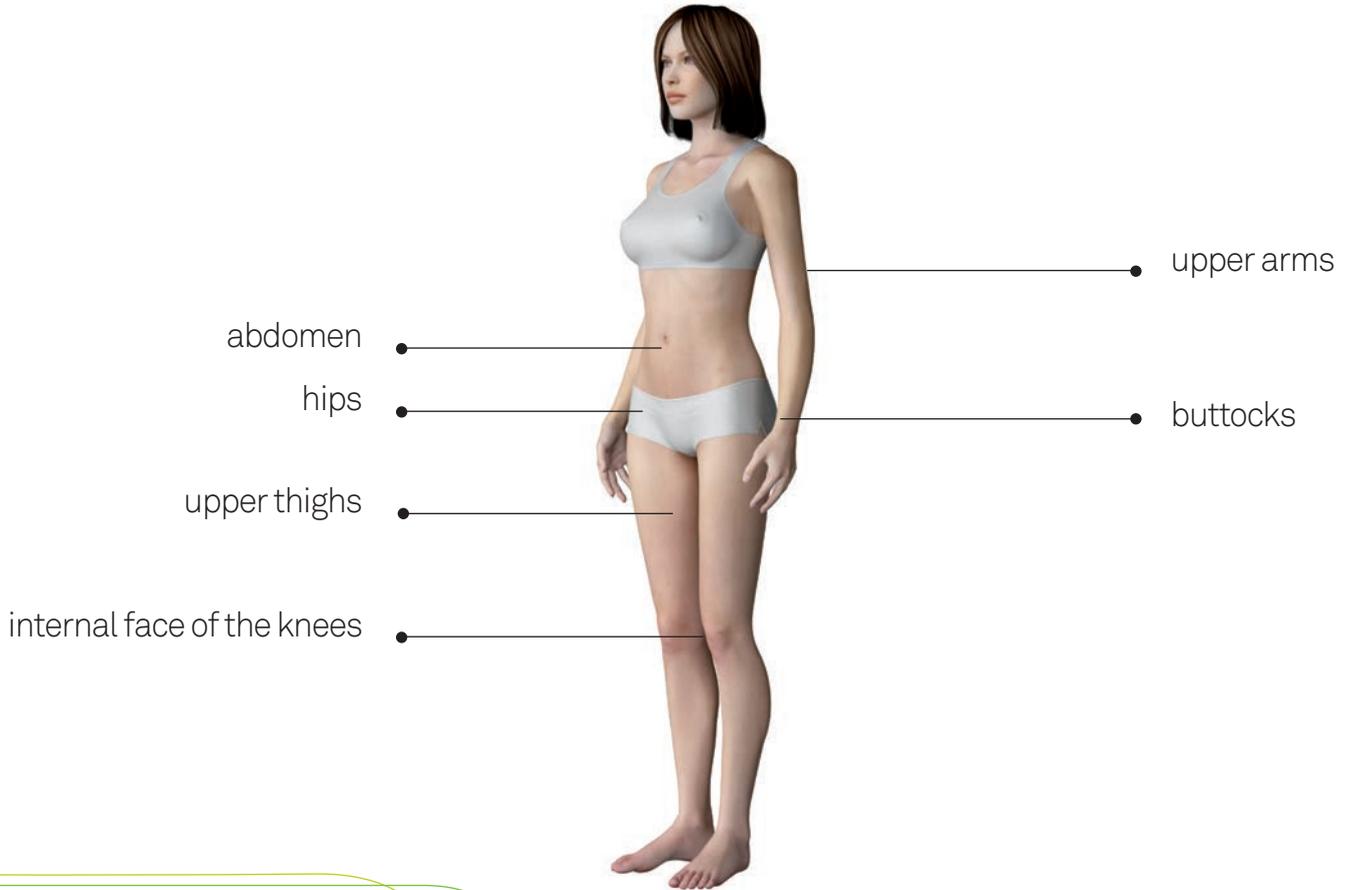
**MACDERMOL BIO SLIM** is injected by the multipuncture technique into the deep dermis or subcutaneous layer on the areas to be treated (upper thighs, hips, buttocks, abdomen, upper arms, internal face of the knees).

Injection of about 0,2 ml at 1 to 2 cm intervals. The total injection volume is dependent upon the area to be treated.

The injection of **MACDERMOL BIO SLIM** is reserved for medical practitioners trained in the Mesotherapy technique.

Other techniques exist. The choice is at the discretion of the physician.

# TREATMENT ZONES :



# TREATMENT REGIMEN

Envisage 3 to 4 initial sessions 2 to 3 weeks apart, 2 to 3 additional sessions a month apart, and then a maintenance session approximately every 3-4 months.

**3 TO 4  
SESSIONS**

2 TO 3 WEEKS APART

**2 TO 3  
SESSIONS**

A MONTH APART

**1  
SESSION**

APPROXIMATELY  
EVERY 3-4 MONTHS

**INITIAL SESSIONS**

**ADDITIONAL SESSIONS**

**MAINTENANCE**

Other treatment regimens exist. The choice is at the discretion of the physician.

**MACDERMOL BIO SLIM** can be integrated in a global cellulite reduction plan and be combined with lymphatic drainage, lasers, etc.

Appropriate nutrition and physical exercise will have a positive impact on the final result.

# TECHNICAL DATA

COMPOSITION	Water for injection, L-arginine, pyridoxine, caffeine, theophylline, rutin, hyaluronic acid, sodium chloride.
HA CONCENTRATION	12 mg/ml after mixing
INDICATION	Treatment of gynoid lipodystrophy (cellulite) or localized fat deposits
EFFECTS	Stimulates lipolysis and reduces the appearance of cellulite
RECOMMENDED ZONES	Upper thighs, hips, buttocks, abdomen, upper arms, internal face of the knees
ADMINISTRATION	Multi-injections into the dermis
HOW SUPPLIED	One syringe containing 1 ml of HA-based gel and one vial containing 1 ml of Bio Slim solution (a complex of active ingredients) to be mixed before use.
STERILIZATION	Autoclave + Microfiltration
STORAGE	Between +2°C and +25°C
SHELF LIFE	2 years



manufactured by:  
**NOVATEX BIOENGINEERING**  
An ORGEV company  
4, rue de l'Amiral Courbet  
75116 Paris  
France  
[www.novatex-bioeng.com](http://www.novatex-bioeng.com)