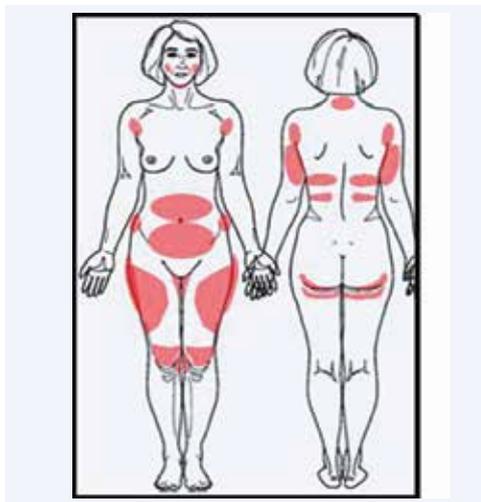




## Indications of injection lipolysis:

1. Non - surgical lipolysis of small, well-localized deposit of subcutaneous fat where a volume of 100 to 500 ml is considered ideal, especially, if the fat is soft and spongy:
  - Fat deposits on shoulders, arms, knees and thighs.
  - Fat on abdomen, back and “bra-rolls”
  - “Double chin”: but not sagging skin.
2. Cellulite.
3. Body – contour correction.



### Advantages:

- The procedure is a simple and effective method, which helps to remove local fat deposits, which cannot be eliminated with the help of diets and fitness.
- The introduction of lipolytics does not take more than 20-30 minutes.
- There is no scarring of the skin.
- The fat can be removed at the any part of the body and face.
- The effectiveness of the procedures increases, when it is combined with the diet, proper nutrition & exercising.
- The technique is well combined with other procedures and methods for losing weight.
- Manipulation does not require anesthesia and is well tolerated by patients.

### Contra-indications:

- Pregnancy;
- Breast feeding;
- Menstrual period
- Kidney or liver failure;
- Current serious illness or active infection;
- Known allergy to soy products or any ingredients of the injection compound, for breast reduction;

- Insulin-dependent diabetics with unstable diabetic control or impaired circulation;
- Severe generalized obesity.

### Preinjection Documentation

There was strong agreement among all physicians with respect to the importance of preinjection documentation. Because alterations in body contour resulting from injection lipolysis are very gradual, it was noted that many patients perceived little to no change in a treated region upon completion of the injections.

Pretreatment photographs were considered essential for confirming the contour changes. It was recommended that all pretreatment and post-treatment photos should be taken with the patient wearing the same clothing and with the same camera and lighting techniques. Other measurements that reinforced the treatment value included measuring skinfold thickness in the same area before and after treatment, as well as measuring a circumference in applicable areas. Unfortunately, these measurements are difficult to standardize.

Respondents indicated that body mass index (BMI), patient height, and weight should be measured by the physician, not simply reported by the patient. This helped to prevent patients from either claiming that any success was due to weight loss when there was none, or that lack of improvement was treatment-related when noncompliance and weight gain were the reasons.

The practitioners should avoid the treatment of patients with a BMI of 30 or higher, as the diffuse and large amount of subcutaneous fat in these patients does not respond well to phosphatidylcholine – based injections. It stands to reason that soft fat dissolves more easily than deposits containing a lot of connective tissue.

### Localized side effects

Subcutaneous injection of phosphatidylcholine formulations are associated with localized burning sensation, erythema & oedema, transient ecchymoses & hematomas (bruising) infectious granulomatous reaction, that spontaneously resolve within one month, skin ulceration that could be either due to injections placed too superficially or to compression of blood vessels in the area by severe oedema. Nodules in subcutaneous area. Also, inadvertent injection into muscles causes immediate pain. Angiogenesis which can improve the appearance of aged and lax skin but in relatively ischemic areas, this reaction can be observed as persistent telangiectasias or prominent veins. Also, skin irregularities due to skip area could occur, but no persistent unwanted clinical side effects

### Systemic side effects

Rare to occur and include: nausea, diarrhea, abdominal pain, menstrual irregularities and syncope and are associated with high doses.

### Educating of the patient

It is suggested that told in detail for the patient what to expect during and after the injection process. Most will experience minimal discomfort during the injection process, if the injector is skilled. They will also note some redness, burning and itching sensations within 15 minutes to 2 hours post injection. Swelling occurs rapidly, and tends to peak at 1 to 3 days post injection. A small to moderate amount of bruising is common and tends to resolve, in most cases, by about 7 to 10 days post injection. By the end of the first week, small subcutaneous nodules may appear; these indicate ongoing fat necrosis. Evidence of mild skin retraction may begin to appear at 10 to 14 days post injection. By the 4th to 6th post injection week, most patients will be able to see an improvement in the volume of the localized fat deposit. This improvement may be more evident in a photograph than in the patient's own estimation. Frequently, the patient perceives little to no change, when in fact, a noticeable change is apparent in serial photographs. Measurement of circumference, skinfold thickness changes, and final photographs are usually performed about 6 to 8 weeks following the final injection session, because the inflammatory process is not complete at that time.

### Lipolysis procedure

1. Find out the allergic history and possible contraindications. The indications, benefits and possible complications should be explained.
2. An informed consent for the procedure of mesotherapy is signed by the patient once after the medical consultation.
3. Preparation of the products and disposable materials.

### Materials required for the lipolysis session:

- Disposable syringes (5 ml) according to product amount used.
- Disposable mesotherapy needles (30G) – 13mm length.
- Chlorhexidine water solution
- Normal saline
- Other sterile materials: cotton pads, gloves, sterile trays, linen savers.

**Vascular phase** - effect on peripheral circulation and microcirculation:

An important and first step of lipolysis is a vascular stage (especially widely used in the treatment of obesity, because it improves venous outflow and lymphatic drainage of the tissues). Proper vascular phase improves the microcirculation of the whole body and as well accelerates the excretion of metabolic products.

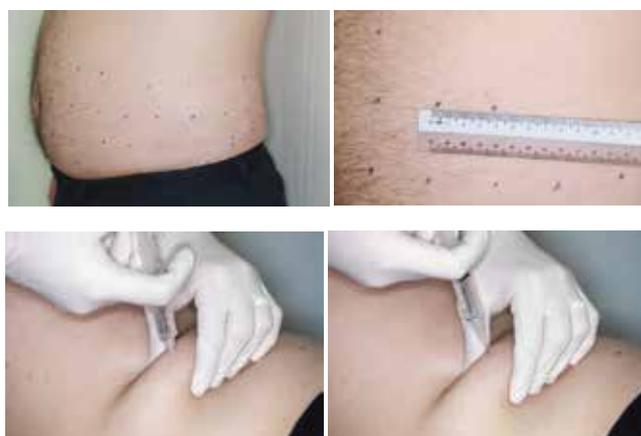
The procedure is performed, when the patient is laying down. Vascular phase should be started after disinfecting of the skin with an antiseptic solution (Chlorhexidine) twice.

During this stage doctor carries out injections of the vascular drugs (which contains plant extracts such as Ginkgo biloba, Arnica montana, Artichoke, Centella asiatica, green tea) at the projection of the spinal column

and large blood vessels of hands and legs. After finishing of this stage, need to stop the blood with a help of dry cotton pad, then disinfect injected areas.

### Lipolysis

1. Cleanse the skin from any creams or make – up (if the procedure is performed on the face or neck areas).
2. Re-clean the skin of the treated areas with Chlorhexidine two times.
3. 1ml of VP TSRRP Aesthetic Lipolysis solution should be diluted with 4ml of normal saline. For sensitive patients 1ml of normal saline may be exchanged to 1ml of Xylocaine 2%.
4. Multiple injections will be made to cover the treatment area.



### For the body

An injection is done manually at a depth of 13 mm). Injection spacing is 3-4 cm. The amount injected at each prick is 0.4 cc.

### For the face

The depth of injections on the face and neck is about 6-8 mm. Injection spacing is about 1 cm. The amount injected at each prick is 0,1-0,2 cc.

### Technique of the injection

An injection have to be done perpendicular to skin with the bevel of the needle directed upwards at regular intervals. The technique is correct without the infiltration along the injection tract. The solution SHOULD BE INJECTED to the subcutaneous layer of the skin!!! The wrong (superficial or intramuscular) technique may leads to necrosis of the tissues!

### The course

The whole course is customized for each individual, which may take from 6 to 12 sessions. An interval between treatments is around 10-14 days. After 4 – 6 months the patient should repeat the course of the treatment.

*To avoid hematomas/bleeding:*

- Do not perform mesotherapy during a patient's menstrual period.

- Do not let the patient take aspirin or a non steroidal anti-inflammatory drug (NSAID) for a few days before and a few days after the procedure.
- Inject the product slowly, to avoid the high pressure breaking vessel walls.

*To avoid pain and oedema in sensitive patients:*

- Pinch the skin during the injections.
- Perform the injections precisely, without infiltration along the injection tract.
- Change the needle several times during each treatment.
- Add to the formula 1 ml of Xylocaine 2% for the sensitive patients.
- Talk with the patient a lot during the session!

#### Post treatment:

- The first 2 hours post treatment, the patient feels a slight sensation of itching and burning. Cold compresses may be used immediately after treatment to reduce swelling.
- If the pain after injections is uncomfortable, use acetaminophen following the directions on the bottle or in tablet form. DO NOT USE ASA (Aspirin) as it may increase bruising at the site of injection.
- Avoid touching the treated area for (6) hours following the treatment. After that you can wash the area gently.
- The amount of movement in the area injected should be immobilized as much as possible for the next 48 – 72 hours.
- Visiting saunas and swimming pool, sunbathing and cold outdoor activities should be avoided until the redness and/or swelling go down (usually it takes from 1 to 3 days). After that time period, sports activity or exercising is acceptable.
- After Lipolysis treatment, it is important to keep hydrated by drinking plenty of fluids, at least 2 litres of water per day. The area must be massaged every evening for a period of 2 weeks.



A 29 years female patient, the measurement of the circumference of abdomen “before” the course of lipolysis – 90 cm.

The measurement of the circumference of abdomen “after” the course of lipolysis (7 sessions) – 79 cm.



#### RESULTS & COMPARISON

A 33 years male patient, the measurement of the circumference of abdomen “before” the course of lipolysis – 117 cm.

The measurement of the circumference of abdomen “after” the course of lipolysis (8 sessions) – 104 cm.

