



## *Lipo-dissolve*

- Non-invasive
- Reduces localized fat
- Safe
- Natural solutions
- Alternative to liposuction
- Cost effective

## ABOUT LIPO-DISSOLVE

### What is Lipo-dissolve?

Lipo-dissolve is an injection method used to dissolve the superficial (sub-dermal) layer of localized unwanted fat. It is not a treatment for obesity, or weight loss – only for body sculpting. It does not remove pounds, only inches. It is recommended for patients with a Body Mass Index (BMI) of < 27%. The effects of Lipo-dissolve treatments will last from 1-2 years commonly, but as we get older, our tissues will lose elasticity and generally fat cells will increase their mass. The number of treatments averages from 1-4, but some patients will treat up to 6 times for their desired results.

### What is the procedure?

The procedure is non-invasive in that the area to be treated is decided upon by the patient and physician, marked with a pen, cleansed with alcohol or iodine and then a very small needle (the size of a hair) is used to inject the surface layer of fat with a mixture of Phosphatidylcholine (50mg/ml) and Deoxycholic Acid (42 mg/ml), referred to as PPC/DC.

### What is PPC?

Phosphatidylcholine (PPC) is a standardized and highly purified soybean lecithin extract, which has been used worldwide topically, orally, and intravenously since 1968. Lecithin, an over the counter food supplement, is a naturally occurring mixture of stearic, palmitic and oleic acid diglycerides linked to the choline ester of phosphoric acid. Its use as an inject-able is not FDA approved unless prescribed for the patient by a physician, and must be compounded by an accredited pharmacy.

PPC is formed from Lecithin which may be compounded from soy or egg yolk. Phosphatide found in all living organisms, and in humans comprises 40-50% of the cell membrane. It provides the main structural support for the membrane. It is a natural emulsifier, with both lipophilic and hydrophilic properties. It is a significant constituent of nerve and brain tissue; a major functional component of natural surfactants within the lungs and gastrointestinal tract, and in the hospital setting it is used as an inhalant for premature infants to treat Respiratory Distress Syndrome, (RSD).



To date there have been no reported cases of toxic, mutagenic, or teratogenic side effects. In 1997 the FDA reported PPC was used safely when topically applied in 679 cosmetic formulations for the purpose of skin conditioning and as surfactant. When taken as an oral supplement it makes cholesterol more soluble, limits its ability to induce atherosclerosis and is used to treat liver diseases from hepatitis, cirrhoses, fatty liver, and drug induced liver damage. PPC has been used successfully as an intravenous atherosclerotic plaque reduction technique since 1996, for cardiac ischemic patients.

Sodium deoxycholate (DC) is a bile salt and is used for phospholipids solubilization in water; and pure PC is insoluble in aqueous solutions unless it is combined with a substances like bile salts that can solubilize it.

### **How does it work?**

There are several theories on the mechanism of action. It is thought that since PPC transports fat into the cells, it probably would transport it out of the cells as well. The lipophilic or fat attracting tail of the molecule could play a role in attracting and absorbing fat. PPC stimulates lipase release, which is an enzyme which breaks down fat, resulting in the breakdown of triglycerides into fatty acids. The common side effect of itching and redness indicate histamine release, which is often associated with lipase activity. Deoxycholic Acid (DC) attaches to the fat cell membrane, which causes the cell membrane to lose its integrity and the cell dies.

### **What areas can be treated?**

Most commonly treated areas are the eyelid fat pads, nasolabial folds, chin, jowls, back of arms, under bra line, "saddlebags, love handles, spare tires", buttocks, abdomen, inner and outer thighs and superficial lipomas (fatty tumors). Essentially any area of the body that has accumulated unwanted fat can be treated.

### **What should I expect?**

This treatment results in improvement, not total correction of the localized fat. Unrealistic expectations are a contraindication to treatment, and these should be discussed thoroughly with the physician. Although skin retraction is desired, and commonly experienced, it cannot be promised. The primary indication for the use of injection lipolysis is the reduction in size of small localized fat pads. If the patient does not follow-up for additional treatments, expecting one treatment to correct an area which realistically will need several, they will not be satisfied with the outcome. Also, those patients who will not adhere to a diet and exercise plan, and who see the injections as a "quick fix" will also be unsatisfied with results. Discuss these critical points with the physician and you will get great results!

## **Cellulite**

Cellulite occurs when subcutaneous fat cells expand and become entrapped by fibrous bands. Swollen fat cells impinge upon the connective tissues and cause weakening of the tiny blood and lymphatic vessels that maintain a fresh supply of nutrients in the tissues as well as remove fluid, fat and toxins. More fibrous bands, equates to greater the fibrous contractions, and the tissue presents as "cottage cheese".

There are different theories for the cause of cellulite, a few include, damaged circulation (varicose or spider veins), free radical damage, excess synthetic estrogens or deficient androgens, lack of exercise, smoking, poor lymphatic circulation, over-exertion and toxin build-up from nutrient poor diets.



## Stages of cellulite

- Stage 1: Skin is cool to the touch and presence of spider veins
- Stage 2: Dimpling of the skin present when pinched
- Stage 3: Cellulite is visible when standing, but disappears when the patient lays down
- Stage 4: Cellulite is visible when standing and does not disappear when laying down

Treatments for cellulite vary from 1-4 with a maximum of 5, depending on the area being treated, and the stage. Time between treatments is not less than 28 days. Both the “peaks” and the “valleys” are treated. Peaks are treated with PPC and the valleys are treated with Collagenase. Collagenase is an enzyme that digests the fibrous band that causes the dimpling associated with Cellulite.

## After Treatment Recommendations

Burning, stinging, itching, swelling and redness are all common side effects you will experience within 15-30 minutes post-injection. After your treatment we request you wait in the waiting area for 15 minutes before leaving so we may watch for any unusual side effects. Swelling occurs rapidly and tends to peak at 1-3 days. Patients state they sense the fat turning into a water-like sensation or a “gelatinous” feeling. This sensation will last commonly for 3-5 days.

Inflammation is desired and we recommend only using Tylenol® for any discomfort, as the inflammation helps to retract the skin. **Please do not apply ice to the area, or use anti-histamines.** A small amount of bruising is common and tends to resolve in most cases, by 7-10 days post-injection.

By the end of the first week, small subcutaneous nodules may appear; these indicate ongoing fat cell death or necrosis. These resolve commonly in 2-3 months, but can take up to 6 months in some patients. This is a process which aids in the retraction of the skin and is not to cause concern but is desirable. Make sure when you ride in the car, not to allow the seatbelt to rub on the treated area, or to wear compressive clothing, as it can create a wound and potential infection.

Discoloration of the skin in the area treated (increase of skin color) is rare (0.0021%, but can occur. This is produced from the iron which is stored in the cells, and it can discolor the skin if it is trapped in the superficial layer of the skin. Usually it resolves in 3 months.

Maintenance of a good diet and exercise program are always recommended, and remember injection lipolysis is not a substitute for a healthy lifestyle.

**For Eye Pad Injections:** Sunglasses will help with the post treatment care, as the sun will increase blood flow to the eyes. Also it is recommended to not drive or read for the first 24-48 hours.



## Preview for Lipo-dissolve

*Please read carefully prior to signing consent form, so all your expectations and reactions will be well educated.*

### Contraindications

Allergy to Soy or Eggs (Lecithin most commonly compounded from Soy) or an allergy to benzyl alcohol a common preservative

Hyper pigmentation can occur more commonly in Asian, Light African-American or Persian descent. Rare occurrence, but know that it is possible.

### What to expect

- 1) Within minutes, redness, swelling, and burning, and a sense of fullness.
- 2) Short term (hours/days) swelling, and tenderness, bruising, and can feel nausea, or upset stomach.
- 3) Weeks later, tenderness with palpation, numbness, dark skinned individuals may notice hyperpigmentation, and nodules or area of increased density.
- 4) Long term there is no adverse events reported.

### Exclusion criteria

Obesity  
Pregnancy  
Lactation  
Skin laxity, infection, eczema, or psoriasis  
Unrealistic expectations  
Bleeding dyscrasias  
Blood thinner medications  
Prednisone or other steroid regimen  
Insulin dependent diabetics  
Severe Cardiovascular disease, hypertension  
HIV (although some respond to the "buffalo hump")  
Severe renal or liver disease  
Any debilitating condition  
Any allergies to products  
Must be 18 years of age  
Breast reduction (male or female)  
Autoimmune diseases, except Hashimoto's Thyroiditis and rheumatoid arthritis

### Predictable reactions

*Results based on survey of 17,376, from 75 physicians in 17 countries*

# center for vital health

Mary Harrow DO, President



20% of patients will experience pain during the injection process. 30 minutes after injection, is the peak of uncomfortable sensations of burning, stinging, (90.6%) as well as some swelling (88%). At one hour most felt the pain had become a "background" sensation, with little soreness or swelling, and were able to tolerate the pain without any medications. The following day many patients experienced a "gelatinous" feeling in the treated area. Swelling peaked between the first and third post-injection day, and many reported a decrease in discomfort with some type of mild compressive garment. Less than 5% of patients report pain, but swelling and soreness is profound at this point. At one week, the swelling and bruising (84%) will begin to recede. At the 2 week to 3 month time period, less than .5% of the 17,376 patients noted pain, swelling, or other uncomfortable sensations.

Nausea was noticed in <10% usually peaking in 24 hours post-injection. None reported nausea lasting more than 48 hours. Nausea appears to be dose related, thus the more areas treated, or larger surface area, increases the reaction. Diarrhea was recorded in <2% which resolved within 24 hours, again, dose related. Small hematomas (superficial blood clots) at the injection site were noted at one hour post injection in <25%, and all resolved by one week.

Dizziness and lightheadedness may be experienced for 2 reasons. Some patients are "needle-phobic" and get anxious which creates less blood to the brain. The second is the fluid which results in swelling will cause some relative dehydration.

Redness, itching, burning, bruising, skin necrosis (if pressure is applied to skin after treatment) and Granulomas or nodules under the skin, are common reactions.

While skin retraction is commonly seen, especially with superficial injections, this can not be promised. The indication for Lipo-dissolve is to reduce the size of small localized fat pads. Remember large areas of fat or Lipodystrophy are best treated with liposuction if diet/exercise/sauna treatments have not been successful.