

## LIPOLYTIC DRUG USAGE, DOSAGE, PROS AND CONS

Removal of subcutaneous fat by injection lipolysis is a body-shaping procedure that targets localized areas of fat, which is not amenable to exercise and diet. <sup>(1)</sup>

The use of lipolytic drug to induce a nonsurgical fat reduction is a common method in cosmetic medicine, and has been used as surface application (creams, gels, and lotions) or through local injections. <sup>(2)</sup>

Recent approval of PHOSPHATIDYLCHOLINE (PC) and DEOXYCHOLATE (DC) for the purpose of injection lipolysis by the US Food and Drug Administration (USFDA) has made injection lipolysis as one of the mainstream nonsurgical techniques for body contouring. <sup>(3)</sup>

First reported use of this particular class of drugs was for the dissolution of atheromatous plaques in systemic arteries and was followed by further usage in the dissolution of pulmonary fat embolism. However, the dosage used in such applications was relatively much higher as compared to the ones we use in aesthetic procedures. <sup>(4)</sup>

Further studies on the subject started in Europe in 2001, and “Network Lipolysis” was founded in Germany in 2003 to extensively study the scientific basis of injection lipolysis. Since then, PC and DC have been used off-label across the world for injection lipolysis. <sup>(1)</sup>

Rotunda *et al.* postulated that the usage of PC solubilized in DC produced better results with lesser side effects. Biochemically sodium DC is a bile salt and PC is a glycerophospholipid. Biochemical nature of PC is that of a glycerophospholipid. Sodium DC is a commonly used detergent and is used to solubilize PC. The resultant cocktail has synergistic action and shows lipolytic action when injected into subcutaneous fat. <sup>(5)</sup>

### LIPOLYTIC DRUG DOSAGE:

#### USUAL ADULT DOSAGE FOR SUBMENTAL FAT REDUCTION:

Area-adjusted dose of 2 mg/cm<sup>2</sup> injected subcutaneously into fat tissue in the submental area.

- A single treatment consists of up to a maximum of 50 injections, 0.2 mL each (up to a total of 10 mL), spaced 1-cm apart at a depth of 5mm.
- Up to 6 single treatments may be administered at intervals no less than 1 month apart.
- The number of injections and the number of treatments should be tailored to the individual patient's submental fat distribution and treatment goals. <sup>(6)</sup>

#### USUAL ADULT DOSAGE FOR SUBCUTANEOUS FAT REDUCTION:

PHOSPHO DI CHOLINE (PPC) is commonly used to reduce subcutaneous fat from Belly, arms and thighs.

- DOSAGE: 2500mg/session
- INTERVALS: 4- 8 weeks
- DEPTH: 10 – 12 mm

Inject into the affected area, with the patient either seated or lying down. "Temporary swelling may occur within 48 hours after treatment. <sup>(7)</sup>

Safety and efficacy have not been established in patients younger than 18 years; this drug is not intended for use in children or adolescents. <sup>(6)</sup>

#### ADMINISTRATION ADVICE:

- Avoid injections near the marginal mandibular nerve area and into the platysma.
- The drug should not be injected into or in close proximity (1 to 1.5 cm) to salivary glands, lymph nodes, and muscles to avoid potential tissue damage.
- Changes in anatomy/landmarks or the presence of scar tissue may impact the ability to safely administer this drug and the ability to obtain the desired aesthetic result in patients with prior surgical or aesthetic treatment of the submental area.

- Use of ice/cold packs, topical and/or injectable local anesthesia (e.g., lidocaine) may enhance patient comfort.
- Injection of excessive doses/volumes may increase the risk of adverse reactions.
- Administration of this drug should be performed by a healthcare professional.
- Each vial is for single patient use and should not be diluted; unused portion should be discarded. <sup>(6)</sup>

## **PROS AND CONS OF LIPOLYTIC DRUGS:**

### **UPSET STOMACH AND URINARY PROBLEMS**

Lipotropic injections contain a variety of different vitamins and substances, including Vitamin B6, Vitamin B12, Choline, Chromium, L-Carnitine, and Picolinate. If you are not adequately hydrating, this fat-fighting cocktail can put a strain on the kidneys. This strain can lead to a stomach ache and possibly urinary problems. However, these side effects are temporary and will subside quickly.

### **EXHAUSTION FROM LIPOTROPIC INJECTIONS**

One of the ways that lipotropic injections help you lose weight and fat is by temporarily changing the function of the digestive system. By increasing your metabolism and digestive tract, your body is working at a higher level than usual. This increased workload can lead to extreme exhaustion in the period immediately following the injection.

### **PAIN OR TENDERNESS AT THE INJECTION SPOT**

Lipotropic injections are sent into the body through a needle, and following the injection, it is possible to experience some pain and tenderness at the point of injection. The pain tends to go away quite quickly, however, if you are experiencing swelling, pain, and redness at the injection spot after a few days, contact a medical professional immediately. This could mean that you have an infection.

## AN ALLERGIC REACTION TO A LIPOTROPIC INJECTION

Some individuals may experience an allergic reaction to a lipotropic injection shot. Signs of an allergic reaction can include itchiness, a rash, hives, chest tightness, shortness of breath and swelling of the throat, lips, mouth or tongue. If you feel that you are having an allergic reaction, get medical intervention as soon as possible.

## UNEXPLAINED PAIN IN RANDOM PARTS OF THE BODY

A final possible side effect is unexplained pain in various unrelated parts of the body following lipotropic injections. Some common areas that pain occurs is in the neck and parts of the hand. It is currently not clear why this random pain occurs, but it is only temporary and should go away quickly.

## LIPOTROPIC INJECTIONS ARE A SAFE WAY TO BURN FAT

While there are a few possible side effects of lipotropic injections, they are rare.  
(8)

## REFERENCES:

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