



Specialty Medicine Compounding Pharmacy

116 N Lafayette, Suite B  
South Lyon, MI 48178

# Competent Compounding

Phone: (248) 446-2643  
Toll Free: (886) 446-2643  
Fax: (248) 486-1906  
www.specialty-medicine.com  
Hours: Mon-Fri 10am-6pm

September 2006 Christopher Chung, PharmD (candidate)

## Mesotherapy: Non-invasive Alternative for Body Contouring and Other Conditions

Mesotherapy has been in Europe and South America for several years and has increasing interest in the United States as an alternative therapy for many conditions. Mesotherapy was discovered in France in 1952 to treat vascular and lymphatic disorders and in 1987, mesotherapy was recognized by the French Academy of Medicine as a medical specialty. Public interest in the United States is growing due to increased media reports regarding mesotherapy. Most publicized mesotherapy treatment has been body contouring, which has been discussed mostly as either "Thin-Jection" or "Lipo-Dissolve" in the media.

Mesotherapy is a non-invasive therapy in which medications or other substances are injected into the mesoderm, a layer of fat and connective tissue under the skin. Different substances, such as vasodilators, nonsteroidal anti-inflammatory medications (NSAIDs), enzymes, nutrients, antibiotics, hormones, calcitonin, and phosphatidylcholine are used to treat different conditions such as chronic pain, psoriasis, cellulite, weight loss, and spot weight loss. Body contouring and weight loss has been possible with the use of phosphatidylcholine (lecithin),

which is a naturally occurring phospholipid, and isoproterenol. It is important to note that mesotherapy is not just used as a treatment for spot weight loss. Mesotherapy can be used to treat lipomas, bulging of the lower eyelid due to fat pads, xanthelasma, and drug induced "buffalo humps".

The possible mechanism of action for body contouring and spot weight loss is that the injections increase the blood and lymphatic flow through the mesoderm. This causes the adipose tissue and cellulite to be drawn out of the mesoderm. Lecithin is used because it penetrates the adipocyte to emulsify stored fat to make the fat more water soluble. The fat is then degraded by lipases and transported out of the mesoderm.  $\beta$ -adrenergic stimulation and  $\alpha_2$ -adrenergic inhibition increases lipolysis. Isoproterenol is used because it stimulates  $\beta$ -adrenergic receptors and induces lipolysis.

Mesotherapy is performed on areas which patients have the most trouble with their figure. These areas include thighs, hips, abdomen, flanks, neck, and lower third of the face. Mesotherapy can be performed at the doctor's office since there is no need for general or local anesthetics due to the mini-

mal pain involved with the procedure. However, in some instances, small amounts of anesthetics are added to the injections or topical anesthetics are used prior to the procedure. Patients should be advised that mesotherapy is not a treatment option for obesity and is used mainly for body contouring and spot weight loss.

There are more clinics in the United States that perform mesotherapy as an off-label use than ever before. Mesotherapy in the United States is a viable alternative option due to decreased severity of the risks involved compared to plastic surgery. Physicians using phosphatidylcholine recommend three to six treatments that are separated by 2 weeks per treatment to allow swelling to subside after the injections. Adverse events occur in both plastic surgery and mesotherapy but there has not been any reports of deaths involved with mesotherapy. Also, patients who are not candidates for plastic surgery may be treated with meso-

therapy as an alternative if other options are not optimal. Patients who decide to proceed with mesotherapy should use dietary modification, hormone replacement, exercise, and nutritional supplementation in conjunction to maintain efficacy. Although there are not many clinical trials to support efficacy and safety of mesotherapy, there are many satisfied patients who have undergone mesotherapy treatments with great results and minimal side effects. Many trained professionals in the United States and other countries have perfected the technique of mesotherapy, which have been very safe and effective.

At Specialty Medicine Compounding Pharmacy, we will be pleased to discuss the possible uses of mesotherapy with you. Working with physicians to provide individualized care for patients is our priority. If you have questions about mesotherapy or other questions regarding compounding pharmacy, feel free to contact us.

## Specialty Medicine Compounding Pharmacy