

Web Exclusive
Mesotherapy An overview of the treatments and controversies



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Mesotherapy – An overview of the treatments and controversies

by Ada Polla Tray

Much ink has been spilled over the topic of mesotherapy in the last few months, in both the trade and the consumer press. Points of view diverge, controversies abound, and clients are increasingly asking for information on this novel Therapeutic modality. This article attempts to provide unbiased information on both sides of the argument, in order to best prepare aestheticians and other beauty professionals to answer client questions accurately.

Mesotherapy: what is it?

The word mesotherapy comes from mesoderm or middle layer of the skin. More specifically, mesotherapy is a non-surgical, relatively painless technique of injecting various compounds into the mesoderm by using a manual technique or an injection gun. Mesotherapy has a broad range of applications and is believed to promote the body's circulatory, lymphatic, and immune systems to create a biological response and reverse abnormal physiologies. To date, no standardized "cocktail of ingredients" (what is injected) or protocols (how the ingredients are injected, and with what frequency) have been developed.

Mesotherapy: from France to the U.S.

The Frenchman Michel Pistor, MD, is credited with "inventing" mesotherapy in France in 1945, when he started injecting various drugs into the mesoderm to treat deafness. Obtaining good therapeutic results, he expanded his experimentation to include the treatment of pain, arthritis, inflammations, and tendonitis. He published his first paper on the subject in 1952.

Among Pistor's students are Jacques Le Coz, MD, who continued to develop and teach the technique in France, and Patricia Rittes, MD, who introduced the technique in Brazil in 1986. From the 1950s on, mesotherapy continued to evolve and grow in popularity primarily in Europe and South America,

until the technique reached the United States in the late 1990s.

Lionel Bissoon, MD, is credited as having pioneered the use of mesotherapy to the U.S. in 1999, when he started performing the technique at the Bissoon Institute for Mesotherapy in Palm Beach, Fla. Bissoon received his Doctorate of Osteopathy from Des Moines University and then completed his residency in Physical Medicine and Rehabilitation at Mt. Sinai in New York, NY, with an emphasis on sports medicine. He studied mesotherapy in Paris with Le Coz and other renowned mesotherapy practitioners (including Christian Chams, Albert Benouish, Maurice Drae, and Elizabeth Dancey). Bissoon is the founder of The American Board of Mesotherapy and currently heads offices and physician training programs in New York, Palm Beach, and Beverly Hills.

Mesotherapy – for which indication?

Mesotherapy has been used to treat both medical and cosmetic concerns:

Mesotherapy for Cosmetic Indications: Mesotherapy for Medical Indications:

- * Cellulite
- * Wrinkles and aging skin
- * Stretch marks
- * Hair loss
- * Acne
- * Scars
- * Arthritis pain
- * Tendonitis
- * Chronic infections
- * Shin splints
- * Carpal tunnel syndrome
- * Frozen shoulder
- * Plantar facitis
- * Migraine headaches
- * Bone spurs

Today's debate centers primarily on the cosmetic uses of mesotherapy, and more specifically on the following three conditions:

- * Cellulite
- * Skin aging
- * Hair loss

1. Mesotherapy for melting fat and reducing cellulite
Rittes is credited with having the idea of injecting phosphatidylcholine (PPC) in the mesoderm to reduce fat deposits. Conventional wisdom has it that PPC breaks up fat cells, releasing them into the bloodstream where they are somehow metabolized. Other compounds injected to reduce fat deposits and cellulite include, among others, tefamine and carnitine (the latter is often found in weight-loss oral supplements).

Rittes published research on what she calls "lipo-dissolve technique" in a 2001 issue of Dermatologic Surgery (Dermatol Surg 2001; 27(4):391-392) and more recently in a summer 2003 issue of Aesthetic Plastic Surgery (Aesthetic Plast Surg 2003 Jul-Aug;27(4):315-8).

Typically, protocols for mesotherapy for cellulite reduction involve the following parameters:

- * Injection point by point, 2 cm apart from each other on the affected areas
- * Injections are deep (18 mm of depth)
- * Use of 5 cc for the stomach area, 10 cc for hips and thighs
- * One treatment per week for the first four weeks, then bi-weekly maintenance treatments for the next two months

2. Mesotherapy for skin aging

The idea behind using mesotherapy to treat skin aging is to increase the availability of nutritional elements required for the optimal functioning and renewal of fibroblasts. Indeed, permanent bio-availability of amino acids such as glycine, proline, valine, and hydroxyproline are necessary for Collagen synthesis. As such, practitioners inject various compounds in the face to prevent skin aging by stimulating natural collagen and elastin production through an activation of the fibroblasts. One of the popular compounds used for this indication is dimethylaminoethanol (DMAE), which is a synthetic analog for choline, a precursor of acetylcholine.

Typically, protocols for mesotherapy for facial rejuvenation involve the following parameters:

- * Injection point by point, 1 cm apart from each other
- * Injections are superficial
- * Use of 2 to 4 cc of the compounds for the entire face
- * 10 consecutive treatment sessions at 7-day intervals

3. Mesotherapy for hair loss

Some physicians have been using mesotherapy to treat certain types of hair loss (Alopecia), in men as well as women. The compounds injected to stimulate hair follicles include a combination of antioxidants, vitamins, hyaluronic acid, and vasodilators.

Typically, protocols for mesotherapy for hair loss involve the following parameters:

- * Injection point by point, 1 cm apart from each other on the entire scalp
- * Injections are superficial
- * Use of 5 cc of the compounds for the entire scalp
- * 1 treatment per week during the first four weeks followed by monthly maintenance treatments

The pros and cons

From the perspective of the patient, the pros and cons can be summarized as follows:

Pros Cons:

- * There are few side effects, the most common are bruising and minor itching.
- * The procedure is non-invasive: no cutting, no post-operative wounds, no downtime.
- * No general anesthesia is required; the patient can request a local.
- * Mesotherapy is multi-functional. The safety and efficacy of the treatment modality are still being investigated.
- * There is a lack of published scientific data on the technique.
- * There is a lack of published studies detailing the long-term side effects, if any, of this treatment modality.
- * Reports of bacterial infections resulting from mesotherapy have been published.

The cost of mesotherapy

Typically, consultations for mesotherapy cost approximately \$500. Depending on the area, the treatment itself can vary from \$300 to \$800 per session.

The debaters – and the FDA

The debate surrounding mesotherapy centers on the lack of double-blind, peer-reviewed scientific studies published in medical journals. Indeed, a quick search on Pub Med (www.pubmed.com) yields 18 results for the past 10 years, most of which (according to the titles) focus on various side effects associated with this therapeutic approach.

The professional associations disagree with each other. Whereas the American Academy of Dermatology (AAD) has no official position on the subject, the American Society for Aesthetic Plastic Surgery (ASAPS) recognizes the lack of scientific studies to back up claims that mesotherapy improves the appearance of cellulite, and thus does not endorse the treatment. The ASAPS website states that:

"As the leading educational and research organization in cosmetic plastic surgery, ASAPS encourages open-mindedness in regard to new treatment

modalities, but also urges caution. 'Patients who choose to undergo mesotherapy must first understand that they are assuming the unknown consequences and long-term effects of an unproven treatment that lacks adequate validation of safety and clinical effectiveness,' says Peter Fodor, MD, immediate past president of the Aesthetic Society. 'Today, the only proven method for eliminating unwanted fat cells is lipoplasty, a procedure that has a long and successful track record for both safety and effectiveness,' states Fodor."

To further confuse the debate, physicians, whether dermatologists, plastic surgeons, or other specialists, have opinions that range across the board, from believing mesotherapy to be a "bogus treatment" to encouraging specialists to further experiment with the technique.

Most importantly perhaps, the FDA has not taken a position on the subject. The technique itself does not fall under the organization's purview. As to the injected compounds, no single drug has been approved for use in mesotherapy, so the technique is considered an off-label use of various compounds. The good news is that no FDA warning letters have been issued to doctors about mesotherapy.

According to Bissoon, because many of the pharmaceutical patents used in mesotherapy have expired, there is little incentive for the drug companies to undergo time-consuming and expensive studies for a new FDA indication of mesotherapy.

In terms of who can practice mesotherapy (although as an off-label use of drugs), the same rules apply as to who can perform injections, and thus vary from state to state (ranging from MD only to nurse under the supervision of an MD).

Ada Polla manages the development and distribution of the Alchimie Forever line. Expanding the family business beyond Switzerland, she created her own company, Alchimie Forever LLC, in 2003 for the sale and distribution of the Alchimie Forever products in the United States. She recently graduated in the top 5 percent of her MBA class at Georgetown University, and received her Magna cum Laude BA at Harvard University in art history. She has professional experience in consulting and product management of medical devices. Polla is also a speaker at Georgetown University and on the editorial board of PCI Magazine.