

Mesotherapy: What Is It? Does It Work?

Science must begin with myths, and with the criticism of myths. —Karl Popper

Our patients appear to have an insatiable interest in cosmetic surgery, especially minimally invasive modalities with little to no down time, to enhance their appearance. Anything short of being on a diet, actually doing exercise, or making any commitment to lifestyle changes always has a mystical appeal. The current wave is mesotherapy, a European transplant. This so-called cure has swept America in the past several years, despite the lack of positive scientific data to prove its validity.

Basically, mesotherapy involves a series of injections that can contain a multiplicity of ingredients, from vasodilators to nonsteroidal anti-inflammatory agents, depending on the medications, enzymes, or hormones that are injected into the fat layer of the skin. It has been used to treat a variety of vascular and lymphatic disorders, as well as pain, alopecia, and psoriasis. It is being used more often now for body contouring and to treat cellulite to reduce body fat.¹ A common injectable is lecithin, which is phosphatidylcholine isoproterenol, a lipolytic agent that actually stimulates beta-adrenergic receptors. Lecithin is common in human bile and is needed for the digestion of dietary fat.¹

The true mechanism of mesotherapy remains unknown, even though it has been widely used in Europe for years to treat cellulite, amid unsubstantiated claims.¹ To my knowledge, no clinical scientific studies have been published in the literature to substantiate mesotherapy. It is conjectured that it starts to increase blood flow as well as lymphatic flow in the mesoderm. This causes shrinkage of fat cells, which dissolve themselves and are then excreted. The problem is the lack of randomized, double-blind studies through institutional review board–approved mechanisms to ensure patient safety. The U.S. Food and Drug Administration has not approved the subcutaneous use of the medications commonly used in mesotherapy. The available reports indicate that the medications may potentially cause immediate or delayed allergic

reactions, including urticaria pigmentosa problems at the injection sites.¹

It is inconceivable that plastic surgeons in the United States would embrace any treatment that has not had prior institutional review board approval where patient trials have been performed in approved clinical settings. Clinical trials must be performed in medical institutions to evaluate and validate that mesotherapy does or does not work.² Perhaps scientific evidence will bear out that the amount of cellulite and fat removal is valid, but these facts must be substantiated before we can use the medications or perform therapy based on the theory of mesotherapy injections. It is mind-boggling to think that a physician would inject patients—or that patients would allow physicians to inject them—with unknown, unproved substances based on hearsay and unsubstantiated clinical findings.

Our patients are always on the lookout for antiaging methods and for the fastest, simplest way to remain looking young, no matter what the consequences. As physicians, however, our duty is to provide our patients with safe, proven methods of medical care. Whether or not mesotherapy fits remains unclear.

Reality is the best possible cure for dreams. —Roger Starr

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