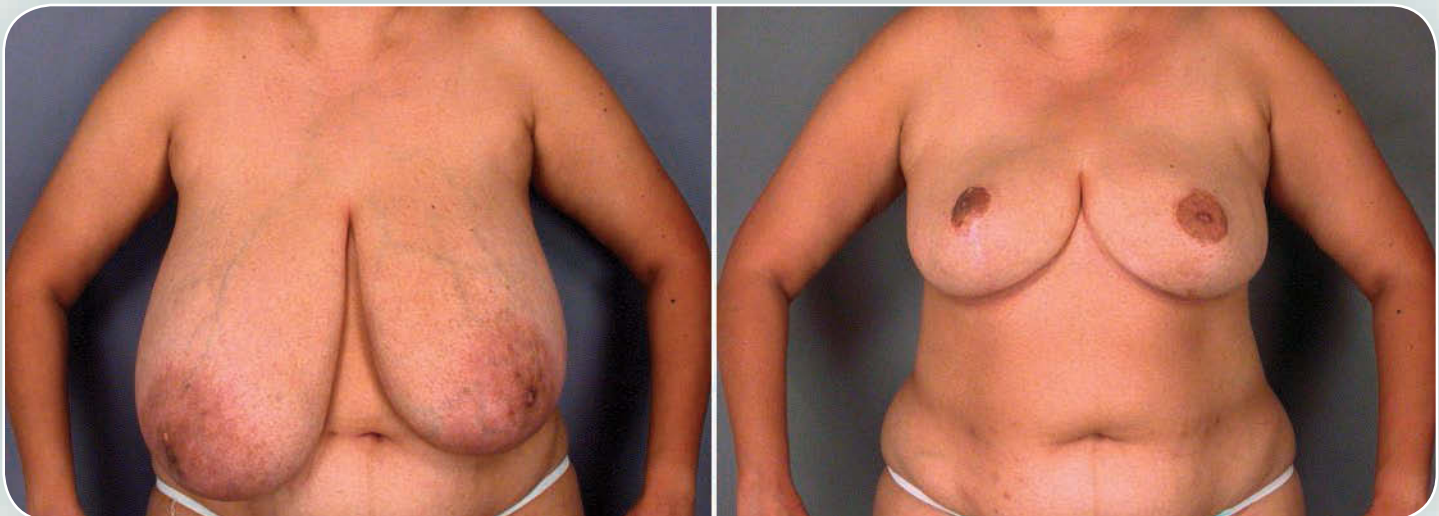


# 'Laser bra'

*Unique breast reduction technique employs CO<sub>2</sub> laser, excess skin as support*



All photos credit: David Stoker, M.D.

Patient shown (left) prior to undergoing "Laser Bra" breast reduction technique and after (right), during which 3,100 grams of tissue were removed from the right breast and 2,200 grams from the left.

Quick  
read

One surgical team has developed what they term the "Laser Bra," a CO<sub>2</sub> laser-assisted breast reduction technique, which they find to be a safe, effective and efficient alternative to traditional de-epithelialization.

Lisette Hilton

STAFF CORRESPONDENT

**MARINA DEL REY, CALIF.** Plastic surgeons report few and only minor complications, better results and less time in the surgical suite when they perform a version of laser-assisted breast reduction, called the "Laser Bra," versus standard methods of non-laser-assisted breast reduction surgery.

In a paper published in the *Aesthetic Surgery Journal* (July/August 2006), Marina Del Rey, California, plastic surgeon David Stoker, M.D., describes laser-assisted breast reduction as the use of a carbon dioxide (CO<sub>2</sub>) laser for pedicle de-epithelialization. He lists

benefits such as efficient and bloodless de-epithelialization, consistent preservation of the subdermal vascular plexus and a reliable and firm dermal leash that protects the pedicle and the nipple-areola blood supply.

**SKIN SUPPORT** "In laser-assisted breast reduction, or the Laser Bra technique, I use most of the excess skin to my advantage, rather than discarding it. I use a CO<sub>2</sub> laser to ablate the skin to the mid-dermal depth instead of scalpel de-epithelialization. And I use additional skin that would be discarded and is not a part of the pedicle to create an internal support structure for the breast and a youthful fullness of the upper medial breast. These results are difficult to achieve with traditional breast reduction techniques,"

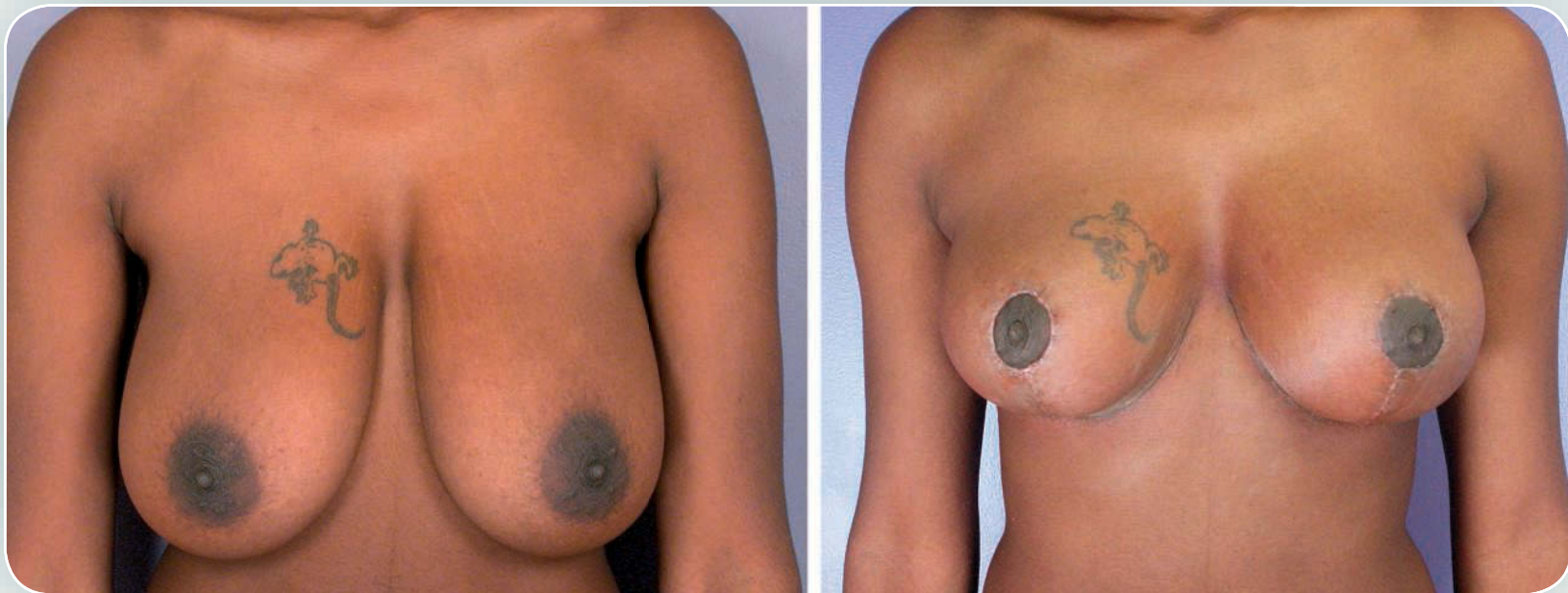


Dr. Stoker

Dr. Stoker tells *Cosmetic Surgery Times*.

The laser is responsible for an expeditious and blood-free de-epithelialization of a large surface area, which makes using large amounts of excess skin on the inner aspect of the breast more feasible than it would be without the laser, according to Dr. Stoker. Dr. Stoker, Clinical Assistant Professor of Surgery at the University of Southern California Keck School of Medicine, Los Angeles, is in practice with the 2006





This patient shown pre-op (left) and post-op (right) had 450 grams of tissue removed from each breast during her "Laser Bra" breast reduction procedure.

study's lead author, Grant Stevens, M.D. According to Dr. Stoker, Dr. Stevens coined the name "Laser Bra," and the partners host a fellowship dedicated to teaching the Laser Bra technique for breast reduction and breast lifting.



Dr. Heck

Robert Heck, M.D., a plastic surgeon practicing in Columbus, Ohio, completed the Stevens and Stoker Aesthetic Surgery Fellowship in 2001, and says that the purpose of the Laser Bra procedure is to create a longer lasting and more permanent lift of the breast when performing a reduction, augmentation mastopexy or a standard breast lift.

Dr. Heck, an author of the laser-assisted breast reduction study, says: "The Laser Bra procedure was created to provide a better shape to the lifted or reduced breast and to provide longer lasting support than the traditional breast lift. Using the patient's own de-epithelialized skin creates an internal support system."

Further, "This de-epithelialized skin is tacked to the patient's chest wall using permanent sutures and, then, the skin is draped over top providing two support systems to the breast instead of one. This technique is quick and safe," he says.

**OPTIMAL CANDIDATES** Patients who have large amounts of extra skin and severe ptosis are optimal candidates for laser-assisted breast reduction, according to Dr. Stoker. He adds that women who have enough volume to achieve the optimal breast shape but who do not want a breast implant are excellent candidates for this procedure.

"Patients who might normally benefit from a small implant can often get away with a Laser Bra procedure only and achieve a similar look without the implant. These borderline implant candidates are excellent patients for the laser-assisted breast surgery," Dr. Stoker notes.

Dr. Heck goes even further stating that he has yet to come across a breast lift or reduction patient who is not a candidate.

"If you are a candidate for a breast lift or breast reduction, then you are a candidate for the Laser Bra technique. This technique can also be used with an augmentation by placing implants sub-muscularly," Dr. Heck says.

**AVOIDING PITFALLS** Dr. Stoker emphasizes that surgeons must fully de-epithelialize the skin, so as not to leave any residual epidermis. He reports no complications from the laser-assisted aspect of the procedure in approximately 1,000 breasts on which he has used this technique.

"But for those who are new to laser-assisted breast surgery, extreme caution should be taken to avoid burns, damage to adjacent structures, as well as the creation of inclusion cysts and seromas. This includes, of course, taking all the standard laser precautions because the CO<sub>2</sub> laser is among the most powerful lasers that we use in cosmetic surgery," Dr. Stoker advises.

**THE SCIENCE** In their study, Dr. Stevens et al conducted a retrospective chart review of a series of 367 patients who had undergone inferior pedicle laser-assisted breast reduction. The plastic surgeons performed the procedure

using a CO<sub>2</sub> in continuous mode. They reported in 2006 that there were no major complications, but two patients with infections were hospitalized and administered IV antibiotics. Of the 47 minor complications reported, there were 36 incisional wound breakdowns, six infections, three hematomas, one seroma and one dog-ear revision. The authors concluded that these complication rates were consistent with those reported for non-laser-assisted procedures.

"These results, combined with the benefits and efficient operating time afforded by laser de-epithelialization, indicate that laser-assisted breast reduction surgery can provide an alternative to standard methods of de-epithelialization for those surgeons with access to a carbon dioxide laser," according to the authors.

The authors admitted that the cost of using the CO<sub>2</sub> is higher than employing a traditional scalpel, but many cosmetic surgeons already own CO<sub>2</sub> lasers and can use those.

In his practice, which is devoted to breast reduction, lifts and enhancement, Dr. Stoker states that the Laser Bra technique has been his preference for the last eight years.

"Unfortunately, I think there are a lot of people trying to perform their own version of the Laser Bra who have not been formally trained," Dr. Heck cautions. "In some cases this may be satisfactory, but many of these do not have the history of success as that of the Laser Bra technique." ◀

**REFERENCE**

Stevens WG, Cohen R, Schantz SA, et al. Laser-assisted breast reduction: A safe and effective alternative. A study of 367 patients. *Aesthet Surg J.* 2006;26:432-439.