

*Want an
hourglass figure?
Or maybe just a
thin shape that
emphasizes a flat
belly and slender
hips? Showcase
a sexy silhouette
this Summer with
the latest body
shaping solutions.*

body

contouring:

All the Ways to Sculpt

By Ivette Figueroa



Photo Credit: Tommy Chung

When most people think about body contouring, they think liposuction. In truth, that is not too far off the mark. Ask any cosmetic surgeon, and they will tell you that liposuction—removing fat using a suction device—is really meant more for shaping a body than for radically reducing weight.

As it turns out, there are lots of other procedures that fall under the umbrella of body contouring, including tucking that tummy, perking up your cleavage or getting a boost in the booty. And now, more than ever, body sculpting is embracing the concept of "non-invasive"—or at the very least of "minimally invasive"—as people opt to avoid the knife if at all possible. But are the latest high-tech gadgets effective? Here we explore the options so you can decide which technique or technology is right for you.


BODY BASICS

First, let's clarify what body contouring really means. The experts all have different opinions, but you can break it down to three main things: removing excess fat and skin; smoothing out skin imperfections; and adding volume to key areas to put the "curves" in "curvaceous."

"Body contouring ranges from addressing irregularities of excess fat to [reducing] cellulite to [tightening] excess skin, depending on what the person is concerned with and how severe it is," says New York plastic surgeon Elie Levine, MD. "Traditionally, people view body contouring as liposuction and tummy tucks, and while they are major aspects of body contouring, they're not the only aspects." According to Dr. Levine, body contouring includes addressing problems like stretch marks and can include a whole gamut of non-invasive treatments such as Zeltiq and Zerona for spot fat removal.

"A lot of people use the words body contouring or body shaping or lipo-contouring simultaneously. But realistically the words body contouring can mean a lot of things," says Angelo Cuzalina, MD, a Tulsa, Oklahoma cosmetic surgeon (and immediate past president of the American Academy of Cosmetic Surgery). "It means anything you are going to change on the body to make it look better below the neck." That being said, the number one body contouring procedure remains liposuction, topping the charts at 325,332 procedures last year, according to the American Society of Aesthetic Plastic Surgery.

"Full body contouring is assessing the patient for where and how much fat should be removed, following the natural curves of the body to enhance their look," says Michael Carter, MD, an Atlanta-based cosmetic surgeon. "Even for thinner patients that don't have much of a waist, as long as they have fat there, we can give them an hourglass figure where there wasn't one before."



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THE LIPO LOWDOWN

liposuction has come a long way over the last three decades, reclaiming its spot as the most popular cosmetic surgical procedure for the first time in three years.

When I first started liposuction in 1982, we didn't even have a name for it at the time. The cannulas [the tubes to suck the fat out] were as big as my index finger," says E. Ronald Finger, MD, a plastic surgeon in Savannah, GA. "The big advancement was the tumescent solution, which allows local anesthesia [to be injected] and liposuction of much larger areas. In the old days, 2,000 ml of fat removal was the max and much of it was blood. Now we remove 4,000 ml with virtually no blood loss." For those who aren't doctors, 1,000 ml is the same as a cup.

The tumescent solution limits blood and body-fluid loss, making liposuction safer, less painful and with a quicker recovery. The other advancement, says Dr. Finger, was in the size and design of the cannulas. "The first ones were 10mm thick [about a third of an inch] with a cutting edge, but the newest breed are less than 2mm and rely on the negative pressure of the suction machine to vacuum the fat," he says.

The main things, say doctors, is to not be fooled into thinking that liposuction is a weight loss procedure. "If a person comes in and they just have isolated fat with great skin tone, then they are one of the best candidates for liposuction or body contouring. They can have really dramatic results," says Dr. Cuzalina. "But it's important that the patient knows that liposuction is not a weight loss procedure, it's mainly a change in specific areas of size."

"Liposuction will not necessarily lose you pounds, it will lose you inches," says Brian Glatt, MD, a plastic surgeon in Morristown, NJ. "In liposuction, you can see 'slightening' in certain areas, a flattening or smoothing. It's a restoration of shape, not really about losing weight."

RISKS V. REWARDS

"With any type of body contouring you are going to have the usual risks of surgery, which are bleeding and bruising," says Dr. Cuzalina. "There is also a little higher risk for hematomas (a solid swelling of clotted blood within the tissues). The bigger the surgery you get and the longer the surgery takes, the more the patient is at risk for blood clots."

While blood clots are rare, bruising is common, and one reason why patient recovery time is important. "Liposuction is one of the most sore surgeries, even though the incisions aren't big—it's like a giant bruise," says Dr. Cuzalina. "So downtime really depends on how tough the person is."

The operating time itself for traditional liposuction is also very

time consuming. On average, doing one or two areas can take anywhere from one to four hours.

However, the payoff can really outweigh the negatives. "I know what results I can expect. I'm not guessing or hoping to see results," says Dr. Glatt. "The results themselves can be quite profound—it's not a minor improvement. With liposuction you can provide dramatic results."

WHEN YOU NEED A LITTLE MORE-OR LESS

If a significant amount of fat is removed and the condition of the skin is poor, liposuction may not be enough to achieve a smooth result. "The part that's a little bit out of your control is when the skin is not able to snap back on its own," says Dr. Cuzalina. "Liposuction relies on skin elasticity."

According to Rod Rohrich, MD, a plastic surgeon in Dallas, TX, deciding what method to use depends on the patient. "If they have extra skin, you can't do liposuction alone, if at all. You would also have to do excisional surgery like a tummy tuck," he says.

At the other end of the spectrum are women who need less fat removed, and who may be able to achieve the desired result with a non-invasive alternative. Companies like Cynosure, Invasix and Zeltiq are embracing newer methods that use lasers, ultrasound and even cryolipolysis (fat freezing). "There are lots of things that are non-invasive that are coming onto the horizon," says Dr. Rohrich. "Liposonix and Ultrashape, I think these show promise. I don't think they will replace liposuction, but they will be able to help shape smaller areas."

Most of the newer devices, in particular those using lasers and ultrasound, rely on energy to create heat, and in this way tighten the skin in a process similar to shrink wrapping. In terms

THE FAT CELL COUNT

The location and abundance of fat cells within the body is what determines a person's overall shape and appearance

"You are born with a certain number of fat cells that you have your entire life," says Dr. Steven Shapiro, a board-certified dermatologist in Palm Beach Gardens, FL. As weight is gained or lost, these cells expand or shrink. It's a myth that fat cells increase when a significant amount of weight is gained. "Liposuction physically removes those fat cells, versus most of the non-invasive alternatives, which puncture those fat cells to make them shrink," he says. While the advantage of liposuction means that the cells are permanently gone, fat cells in other areas can still expand.

of fat removal, both the heat energy and the cold-generating devices work by breaking down fat cells, which releases fat to be absorbed and then flushed away by your body.

"For the non-invasive technologies, the major pro is that there is no downtime and very little achiness," says Edward Zimmerman, MD, a cosmetic physician based in Las Vegas, who is board-certified in laser surgery. "However, they take multiple visits, so you have to wait longer for the results. And for most of the completely non-invasive technologies you have to wait for the fat to be taken away by the body's natural mechanisms."

Some surgeons are still skeptical of these new devices. Dr. Glatt believes that traditional lipo remains the most effective. "Liposuction itself is still one of the most powerful tools at our disposal for the improvement of body contouring," he says. "I'm not as enthralled with the newer technologies. Most of them haven't been proven adequately with scientific studies to show a significant enough benefit for me to recommend them to my patients."

In the end, patient expectation is the order of the day. **"I think that with all these technologies, patients should have two consultations: The first in which they are bombarded with all of their options and then, after they have time to sift through it, a second consultation," says Dr. Levine.**

Dr. Zimmerman agrees. "I think the care that needs to be taken is having realistic expectations. Choosing a method really depends on what the patient wants. If they have no ability to tolerate downtime, then the non-invasive methods are the treatments of choice."

LIPO TECHNIQUES

With so many options to choose from, picking your lipo method can be a heavy task (pun intended). Here are the different techniques available, as well as a breakdown of the most popular devices out there today.

Tumescent Liposuction: First developed by Dr. Jeffrey Klein, tumescent liposuction is performed under local anesthesia with sedation. The word tumescent is derived from Latin and means "firmly swollen." It includes a special saline solution that contains a small amount of pain killer as well as epinephrine (a natural hormone found within the body) that is pressed between the fat cells, causing blood vessels to constrict and reducing bleeding. The fluid "floats" the fat out of the body, limiting blood loss and bruising. This technique minimizes discomfort, reduces the possibility of complications and shortens recovery time.

Radiofrequency-Assisted Liposuction: Radiofrequency-assisted (RF) liposuction uses a thin hollow probe equipped with a radio wave transmitting electrode to send thermal energy into the fat and dermis tissue. The RF

OLD SCHOOL LIPO

The Syringe Technique, originally developed by Dr. Pierre Fournier 40 years ago, is still among the most effective liposuction methods.

The syringe technique is basically what it sounds like: Using a hand-held syringe-like device to suck out the fat, rather than an electric pump. "Using the syringe technique is totally different from using a machine," says Dr. Michael Carter, an Atlanta-based cosmetic surgeon. "It's manual, but I can achieve much better and safer results using it. Since it is not a heated device, there is no risk of burning or scarring. Plus, you can do patients who are heavier than the patients most machines are capable of," he says. In practiced hands, fat extracted with a gentle syringe technique is also more effective in preserving the integrity of fat cells for re-implantation.

energy melts the fat cells into an oily liquid that is sucked away simultaneously by the hollow probe. "This saves time and damage to the tissue," says Steven Davis, MD, a plastic surgeon in Cherry Hill, NJ, who uses the BodyTite radio-frequency device. "You get very even removal of fat, but also shrinking tissue and tightening skin [thanks to the heat]," he says. "Radiofrequency-assisted liposuction is the best one when you're talking about shrinking skin laxity."

Laser-Assisted Liposuction: In laser-assisted liposuction, such as SmartLipo, laser energy is used to liquify fat and facilitate its removal. Because certain wavelengths are absorbed more easily by fat, the laser can selectively target it. Those with loose or crepey-like skin, typically patients over the age of 45, can also benefit from the laser's tightening properties. "With SmartLipo, we get fabulous results that are off the charts," says Richard Goldfarb, MD, a cosmetic surgeon in Langhorne, PA. "I think the device is one of the safest modalities on the market... It also allows for neocollagenesis (production of new collagen) so you get the best combination of skin tightening and fat melting."

Ultrasound-Assisted Liposuction: Ultrasound-Assisted Liposuction (UAL) requires the use of tumescent fluid and uses a metal paddle applied to the skin to direct ultrasonic energy into subcutaneous fat. A good example is the Vaser system, which uses intermittent or continuous bursts of ultrasonic energy to break up fat cells that are then removed by suction. "Vaser has gotten more popular recently with Hi Def (used to define muscle lines)," says Dr. Cuzalina. "I do like that machine. It has more power and a larger head that can work on broader parts of the patient."

Water-Assisted Liposuction: Water-assisted liposuction uses a gentle stream of water to dislodge fat. Currently, the only system offering this technology is Body-Jet, which uses a special cannula that has openings on both the sides and the top. The opening at the top shoots out high-pressure water, which breaks down

BODY CONTOURING WITH LIPOSUCTION

When it comes to contouring the body, nothing works as effectively as liposuction. The various methods all require an incision, between one and four hours for treatment, and cost between \$2,000 and \$8,000, depending on technique, number of areas treated and amount of fat removed. Recovery time is typically two to three days -though you'll be sore for longer than that.

Tumescent Liposuction

This popular method uses a solution of painkiller and hormones flushed into the fat to numb the body, minimize blood loss and reduce bruising. It effectively 'floats' the fat so that it can easily be sucked out of the body.

Laser-Assisted Liposuction

Laser energy is used to liquify fat and facilitate its removal. Because certain wavelengths are absorbed more easily by fat, the laser can selectively target it. The heat from the laser also helps to grow collagen and tighten the skin.

Radiofrequency-Assisted Liposuction

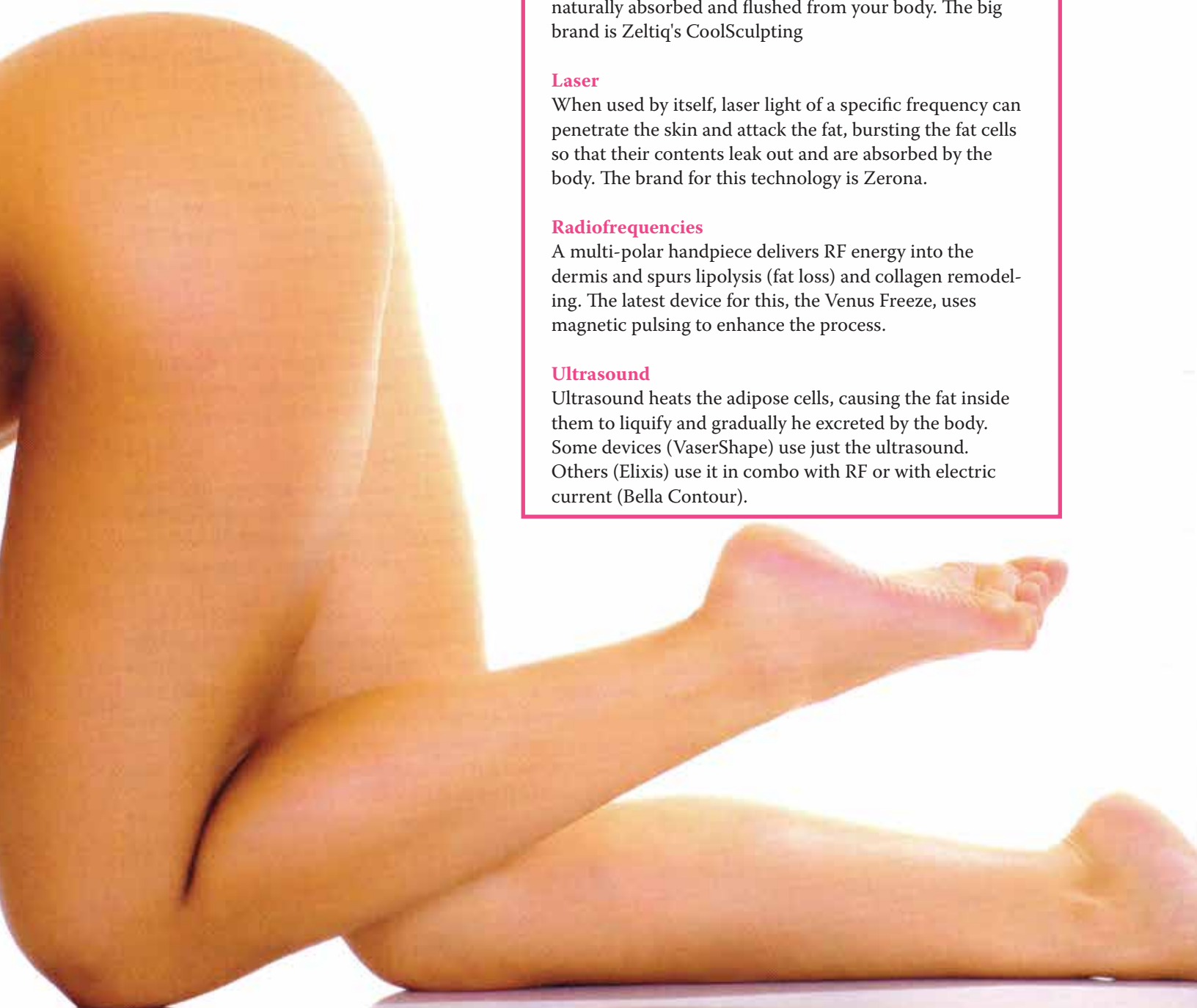
Radiofrequency-assisted (RF) liposuction uses a thin, hollow probe equipped with a radio wave transmitting electrode. The RF energy melts the fat cells into an oily liquid that is sucked away simultaneously by the hollow probe.

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Ultrasound-Assisted Liposuction (UAL) requires the use of tumescent fluid and uses a metal paddle applied to the skin to direct ultrasonic energy into subcutaneous fat. This breaks up fat cells that are then removed by suction.

Water-Assisted Liposuction

Water-assisted liposuction uses a stream of water to dislodge fat. The pressurized water breaks down the fat while leaving nerves and blood vessels intact. The mixture of fat and fluid that results is sucked away.



THE NON-INVASIVES

While usually requiring repeat treatments, the non-invasive body-sculpting techniques offer the advantages of lower cost (\$300 to \$750 a session) and quicker recovery. Here are the four basic technologies:

Cryolipolysis

It means freezing your fat cells until they die, followed by a period in which the dead cells and their fat content are naturally absorbed and flushed from your body. The big brand is Zeltiq's CoolSculpting

Laser

When used by itself, laser light of a specific frequency can penetrate the skin and attack the fat, bursting the fat cells so that their contents leak out and are absorbed by the body. The brand for this technology is Zerona.

Radiofrequencies

A multi-polar handpiece delivers RF energy into the dermis and spurs lipolysis (fat loss) and collagen remodeling. The latest device for this, the Venus Freeze, uses magnetic pulsing to enhance the process.

Ultrasound

Ultrasound heats the adipose cells, causing the fat inside them to liquify and gradually be excreted by the body. Some devices (VaserShape) use just the ultrasound. Others (Elixis) use it in combo with RF or with electric current (Bella Contour).

fat while leaving nerves and blood vessels intact. The side holes suction away the mixture of fat and fluid that results. "Body-Jet kind of power washes the cells and then collects them, so you are anesthetizing as you are collecting," says Dr. Zimmerman. "This is especially helpful if you want to re-inject them in other places later, as it keeps the cells viable."

COMBO CONTOUR

Ultimately, a combination of procedures may be your best bet for a shapely silhouette—including old-fashioned exercise. "The keyword right now is combination modality—we incorporate exercise and we have them come back for postoperative skin tightening procedures. The combination gives that extra added benefit that makes their results stand out" says Dr. Goldfarb.

"I usually combine non-invasive treatments with injections of Radiesse, Artefill and Sculptra, which are collagen activators," says Dr. Zimmerman. "They also go hand-in-hand with Ulthera, which tightens the skin with ultrasound. Throw in a little toxin and you're good."

Indeed, while liposuction remains the go-to procedure for bodysculpting, you can't overlook the importance of revolumizing. Body contouring isn't just about taking away what's there, but about enhancing certain key areas, too. And what better way to recycle unwanted fat than by inserting it in the places where you want it: the buttocks and breasts, or even the hips if that is where you want to go wide. "Sometimes you just need to remove fat en-mass and move it to other areas. You can take that donor fat, which is high in stem cells and growth factors, and put it into the chest, the face, or places where people have had trauma," says Dr. Zimmerman. "You can even bank the fat—we now have fat banks where you can store it for future use."

Best of all, since the fat comes from a patient's own body, there is no risk of an allergic reaction. The fat that was liposuctioned from a patient's trouble areas (abdomen, thighs, love handles, etc.) can be processed to enrich its concentration of stem cells and growth factors, and then re-injected. The results last for years, with an additional fringe benefit—your skin becomes smoother, tighter and firmer.

While there are different options for fat removal, for transfer the important thing is to ensure that the fat is not damaged. **"If I'm planning on doing liposuction and fat transfer, I will use traditional liposuction or aqua lipo [Body-Jet], which removes the fat in a less traumatic way,"** says Dr. Levine. **"You need to be delicate so as not to destroy the viability of the fat for re-injection."**

NEW SOLUTIONS

"There are a bunch of companies that offer cellulite treatments, but most offer modest improvement at best and the results are short-lived," says Dr. Levine. **"Until now, when someone came in**

for cellulite treatment I would do a combo of lipo, fat transfer and subcision (to break up the adhesions that were tethering the skin down). It was very labor intensive and improved patients, but not as much as I would like." Now Dr. Levine uses Cellulaze, a unique laser technology that allows him to do it all at the same time. "It melts fat for removal, releases the tethering points and generally tightens the skin," he says. "I would say the Cellulaze laser is an amazing technique for the vast majority of women. Even 30- and 40-year-olds that are in great shape can still benefit."

Another heavyweight contender on the horizon? iLipo. "What I like about iLipo is that it is a low-risk, high-benefit treatment with no consumables (disposable parts that add expense to the patient) and it targets the fat cells," says Steven Shapiro, MD, a board-certified dermatologist in Palm Beach Gardens, FL. "The way it does that is by attacking the mitochondria (the power source of the fat cells), which causes the walls of the cells to open and the fat to be released. It essentially turns a grape into a raisin—in other words, it shrinks the fat cells." Add the fact that it is non-invasive, with no downtime or reported side effects. "I think for the future, non-invasive devices with low-risk and high-benefit will become more and more desirable," says Dr. Shapiro. "iLipo is just the beginning."

Says Dr. Carter: "There will always be the next greatest device offered to physicians and patients. The important thing is that any



Michael Carter, MD, is an Atlanta-based board-certified physician. He is a member of the American Academy of Cosmetic Surgeons, the American Academy of Liposuction Surgeons and the American Society of Bariatric Physicians.



Angelo Cuzalina, MD, is the past president of the American Academy of Cosmetic Surgery and is board-certified by the American Board of Cosmetic Surgery and the Board of Oral & Maxillofacial Surgery.



Ronald E. Finger, MD, is a Savannah, GA.-based plastic surgeon and a member of the American Society of Plastic Surgeons, the American Society for Aesthetic Plastic Surgeons and the Georgia Society of Plastic Surgeons.



Edward M. Zimmerman, MD, is a Las Vegas-based cosmetic surgeon who is board-certified by the American Board of Laser Surgery and the American Board of Family Medicine.