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Alternative energy

Research, results and opinions on new laser lipo technology with noninvasive, nonsurgical potential

Quick read

One surgeon-investigator shares his results with a novel laser device. Although this technology may hold the potential to provide a noninvasive, nonsurgical alternative to liposuction, some experts question its sustained efficacy.

Michelle Stephenson

STAFF CORRESPONDENT

NATIONAL REPORT With the high patient demand for liposuction comes an equally high interest in developing new, more effective, and less invasive methods for achieving the same — or better — results. While Gregory Roche, M.D., in private practice in Bloomfield Hills, Mich., touts the new Zerona laser (Erchonia Medical) as such an alternative, other cosmetic surgeon experts await additional data. “The laser works by dragging the fatty

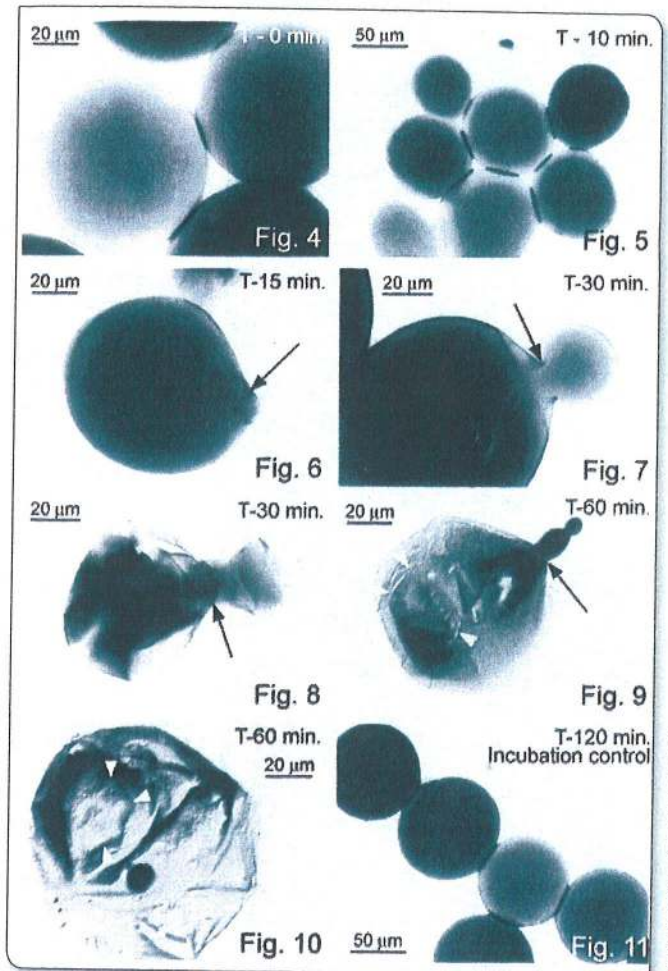


Dr. Roche

content of the cells out of the cells through the cell membrane into the extracellular space, resulting in deflation of the adipose cells,” Dr. Roche, who recently studied the effects

of the Zerona laser, tells *Cosmetic Surgery Times*. “This has been proven by histology and scanning microscopy,” he adds.

Dr. Roche’s study, which has been submitted to a peer-reviewed aesthetic journal and is currently in the review process, included 67 patients. Thirty-five were randomized to the active treatment group, and 32 were randomized to the placebo group. Patients in the treatment group were



This histological series depicts the Zerona laser’s purported effect; the thinning of the cell wall (Fig. 6) allowing lipid passage into the extracellular space and the cell’s subsequent collapse.

All photos credit: Gregory Roche, M.D.

“The laser works by dragging the fatty content of the cells out of the cells through the cell membrane into the extracellular space, resulting in deflation of the adipose cells.”

—Gregory Roche, M.D.
Bloomfield Hills, Mich.

treated with a five-diode laser scanner device, emitting 635 nm red laser light, with each diode generating 17 mW output. Patients in the placebo group were treated with a five-light emitting diode scanner device, emitting 635 nm red light, with each diode generating 2.5 mW power. Each patient received six total treatments with the laser scanner (three procedures per week). Each session was at least two — but no more than three — days apart.

A total of 62.86 percent of patients in the treatment group and 6.25 percent of patients in the placebo group achieved a total decrease of three inches or more in combined circumference measurements from pre-procedure to study endpoint. Additionally, patients in the treatment group lost an average of 2.837 inches more than patients in the placebo group. Compared with baseline, total circumference measurements were statistically lower at week 1, week 2, and 2 weeks post-procedure. Patients in the treatment group achieved an overall decrease of 3.22 inches in total circumference measurements between baseline and two weeks after the procedure, which was statistically significant. Patients in the placebo group achieved an overall decrease of 0.62 inches in total circumference measurements during the same time period.

Patients in the test group achieved a decrease in waist circumference of 1.08 inches between baseline and two weeks post-procedure, while patients in the placebo group achieved a decrease in waist circumference of 0.32 inches during the same time period. Additionally, patients in the test group achieved a decrease in hip circumference of 0.7 inches during this time period, while patients in the placebo group achieved a decrease in hip circumference of 0.22 inches. In treatment of the thigh area, patients in

the test group achieved a decrease in right thigh circumference of 0.78 inches and a decrease in left thigh circumference of 0.67 inches. In contrast, patients in the placebo group achieved an increase in right thigh circumference of 0.04 inches and a decrease in left thigh circumference of 0.12 inches.

LIPO PLUS According to Dr. Roche, the laser costs approximately \$120,000, and his office charges \$2,500 for six treatments. Any area of the body can be treated with the laser. “You do all areas pretty much at the same time because [the laser] has five heads on it, so you can be done in 20 minutes,” Dr. Roche relates. “It takes 40 minutes if you want to do front and back, which most people do. We’ve been using it a lot on people who are post-liposuction and didn’t get the exact result that they wanted. You can add on to the effects from standard liposuction.”

According to Dr. Roche, this technology offers the benefit of being nonsurgical. And, to date, there have been no complications. “I’m not going to say there are no side effects, but at this point, there don’t appear to be any. If you do the laser one time, the cell contents seem to re-absorb into the cell. But because you do it three times, and then three times more, it keeps it driven out of the cell long enough that it doesn’t impinge back into the cell. The effect there is that the cell dies,” he explains. Dr. Roche notes that studies are currently underway to determine whether the procedure results in increased cholesterol or increased triglycerides in the blood.

The laser has also been approved for use in the rehabilitation of injuries and soft tissue swelling. “It has a remarkable ability to create decreased pain by stimulating your normal endorphins. We use it on a lot of professional hockey and basketball players in the area.

They say it’s like someone injected xylocaine or anesthetic into the area,” he adds.