

# Large-volume liposuction offers health benefits

*Women had continued weight loss after two years*

By Cheryl Guttman

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**Las Vegas** — Large-volume liposuction can be a valuable adjunct to a traditional diet-and exercise-based weight reduction program in medically overweight women, said Sharon Y. Giese, M.D., at the annual meeting of the American Society of Aesthetic and Plastic Surgeons.

Reporting two-year follow-up results from a series of 14 women, Dr. Giese said the group overall exhibited continued weight loss plus additional health benefits.



Dr. Giese

At a time period of two years, 10 (71 percent) women achieved weight maintenance, defined as having kept off at least 5 percent of their pre-operative weight, and Dr. Giese about half of the group lost more weight after liposuction, including three (21 percent) women who achieved their ideal body weight. In addition, fasting insulin levels were significantly reduced from baseline, and the data indicated a positive effect of the liposuction on blood-pressure control.

"Many weight-loss studies document the opportunity for short-term success, but a fewer number report that the subjects are able to maintain the weight loss they initially achieve. Our experience indicates that in carefully selected overweight persons, large-volume liposuction is not only an effective tool for helping those individuals to achieve long-term weight loss and concomitantly improve Comorbid cardiovascular risk factors associated with obesity," said Dr. Giese, a private practitioner in New York, and assistant professor of plastic surgery, SUNY Downstate, Brooklyn.

The 14 women enrolled in this study all had a baseline body mass index  $>27$  kg/m<sup>2</sup> (mean 28.8) and were ASA 1. The surgeries were performed at Georgetown University Medical Center under general anesthesia using a superwet, ultrasound-assisted technique. Fat was aspirated from multiple areas, including the back, flanks, thighs, abdomen, knees, and arms, with an average of 9.5 liters aspirate with an average of 6 liters fat aspirate which equals 13 pounds.

## Keeping the weight off

After two years, mean weight for the group was decreased from the baseline level of 181.4 pounds to 169.6 pounds, which represented an average weight loss of 11.8 pounds. Mean BMI for the group fell to 27.2 kg/m<sup>2</sup>.

Two-years postliposuction, 12 (85 percent) of the 14 women weighed less than they did before surgery, including the 12 women who met the criteria for weight maintenance plus two others who weighed less than they did preliposuction. Of the remaining two women, one had returned to her presurgical weight and the other weighed more than she did before liposuction.

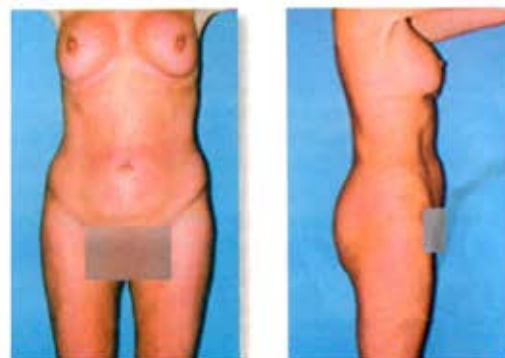
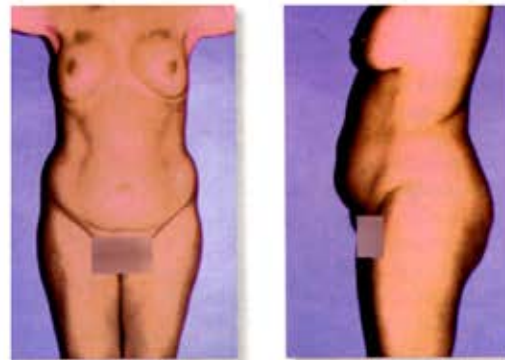
Mean fasting insulin level for the group was 15.3 mIU/mL at baseline and was significantly decreased at follow-up testing conducted after four months, one year and two years. In eight women who had hyperinsulinemia prior to surgery, fasting insulin fell from a baseline of 18.8 mIU/mL to within the normal range (12 mIU/mL or less).

"This reduction in fasting insulin was an important benefit of the liposuction. Eight of the 14 women were prediabetic at the time of surgery, and in this group of otherwise healthy overweight individuals, liposuction appears to have prevented the onset of diabetes," Dr. Giese said.

Systolic blood pressure was also followed over time with in-office measurements and was significantly reduced from baseline at four months and one year after liposuction. In statistical analysis, the results at two years were inconclusive, although Dr. Giese noted that ideally, the study design would have incorporated the ambulatory blood pressure recordings to investigate more accurately the longitudinal changes in blood pressure.

Dr. Giese indicated that she integrates liposuction into a three-phase weight loss program for overweight individuals, but that she does not offer it to persons who are medically obese. Patients begin by making modifications in their diet and exercise habits. Liposuction is performed approximately four to six weeks after those lifestyle changes are introduced. Patients then continue with their diet and exercise program, but subsequent to the physiologic and psychologic effects of liposuction, they may be more successful in achieving further weight loss through those efforts.

"A typical weight-loss program results in shrinking of fat cells and loss of lean muscle mass. As a result, metabolism goes down, weight loss may plateau, and patients may be disheartened about sticking with their program. A primary reason why liposuction is so effective in helping patients lose weight and maintain that loss is that it permanently decreases the number of fat cells without reducing lean muscle mass," Dr. Giese said.



Front and side preoperative view (top) of liposuction patient before treatment and two years postoperative.

(Photographs courtesy of Sharon Y. Giese, M.D.)

"We like to encourage patients to lose some weight first by changing their diet and becoming more active so that they establish realistic long-term lifestyle goals," she added. "However, by adding liposuction to that initial weight loss, we can take these overweight patients about half way to their goal, and that can be a great psychological motivator as well," Dr. Giese said.

Earlier follow-up of this cohort of 14 women showed most of the weight loss benefit of liposuction was realized at about six weeks after surgery. At that time, the women experienced an average two-size decrease in clothing size. The effect of the surgery for reducing fat versus lean body mass was established in the earlier analysis by assessing body composition with dual-energy X-ray absorptiometry. CST

## For more information

Giese SY, et al. *Plast Reconstr Surg* 2001;108:510-9

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