

By TARA PARKER-POPE

New Study Investigates Benefit of Liposuction In Fighting Diabetes

LIPOSUCTION CAN MAKE you look better, but can it make you healthier, too? That's the question being investigated in new research partially funded by the National Institutes of Health, which is studying whether the controversial procedure offers patients a therapeutic benefit. Early research shows liposuction may lower blood pressure and reduce insulin resistance, meaning it could benefit patients in the earliest stages of diabetes and possibly prevent full diabetes from developing. Initial research by a New York physician so far follows only 14 patients for one year. The results also haven't yet been duplicated—something the NIH study hopes to accomplish. Yet the idea that liposuction could improve both a patient's appearance and health is a tantalizing prospect to plastic surgeons who are battling negative perceptions about what has generally been considered a relatively high risk, "vanity" procedure.

"These are very proactive results," says Gerald H. Pitman, one of the pioneers of liposuction in the U.S. and author of the "Liposuction & Aesthetic Surgery" textbook. "The industry has hoped for it, but no one has ever proven it."

Last year, New York plastic surgeon Sharon Y. Giese, who has a background in biochemistry, studied 14 women at Georgetown University with a body mass index of 27 or higher. The women underwent large-volume liposuction, in which an average of 12 pounds of fat was removed by suctioning from about five different parts of the body.

THE RESULTS PRESENTED in May to the American Society of Aesthetic Plastic Surgery in Orlando, Fla., showed that four months after the procedure, the women's body mass index had dropped from an average of 29.1 to 26.8. But the most exciting results involved measurements of fasting insulin levels, which are used to gauge whether a patient is at risk for diabetes. Before the study, eight of the women were in a prediabetic state known as insulin resistance. After the procedure, all 14 of the women showed drops in their fasting insulin levels and the eight women who appeared headed for adult-onset diabetes posted normal insulin levels. Systolic blood pressure measurements (the first number in a blood pressure reading) fell an average of 9% following the procedure.

The complete one-year results of the study won't be released until an October meeting of the American Society of Plastic Surgery, but Dr. Giese said all of the patients have continued to maintain the health benefits one year after surgery.

As a result of the research, Dr. Giese obtained funding from the NIH, among other sources, for a more detailed study, looking at the effects of large-volume liposuction on 10 overweight women in a diabetic or prediabetic state before the surgery.

It's unclear how liposuction alters a patient's insulin resistance. One theory is that because fat cells carry insulin receptors, removing large amounts of fat affects the body's regulation of insulin. Obesity is a significant factor in adult-onset diabetes. But diabetes is not the only risk that patients with insulin resistance face.

Patients in this prediabetic state also are believed to be at higher risk for cancer, stroke, poor blood flow, blood clots and cardiovascular disease.

Proving that liposuction can affect insulin resistance may one day prompt insurance companies to cover the procedure. The study participants will pay about \$7,000 for the treatment, but large-volume liposuction typically costs about \$14,000.

The research comes at a time when liposuction is under increasing scrutiny by the medical community. Liposuction is the most popular cosmetic surgery, jumping 347 last year as doctors performed, more than 230,000 procedures (nearly 30,000 were on men), according to the American Society of Plastic Surgeons. However, a January 2000 survey of doctors published in *Plastic and Reconstructive Surgery* found that the procedure has an unusually high death rate, causing a fatality in about one in every 5,000 patients.

THE MOST COMMON cause of death was a blood clot traveling to the lung—a potential complication of any surgery. The study is widely viewed as flawed because some of the deaths were likely counted more than once. Nonetheless, plastic surgeons said the results should send a wake-up call to both patients and doctors.

One of the lead authors of the study, retired California plastic surgeon Frederick M. Grazer, has long believed that liposuction could alter the insulin needs of diabetic patients, publishing the assertion in a 1992 textbook he wrote.

Any medical doctor can legally perform liposuction, but patients should consider a plastic surgeon certified by the American Society of Plastic Surgeons. If the procedure is performed in an office, ask whether their physician has privileges to perform liposuction in a hospital in the event complications arise.

Dr. Giese says liposuction will never be the first line of defense for overweight individuals with insulin resistance. But her research suggests it may become a tool to help manage some of the most serious risks associated with being overweight. "Doing liposuction alone isn't wise," says Dr. Giese. "It should be part of a lifetime weight management process."

Patients interested in taking part in the NIH study can get more information at www.clinicaltrials.gov, keyword "liposuction."

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