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Fat Grafting

Nip, Tuck 'n' Talk: One-on-One Chats with Plastic Surgery Notables

Trend: Fat Grafting for Breast Enhancement

Increasing the size of breasts with a patient's own fat is a quickly rising topic on the radar screens of plastic surgeons and patients worldwide.



"I believe that structural fat grafting is going to revolutionize breast surgery and completely change the way plastic surgeons deal with the female breast." -- Sydney Coleman, M.D.

But one thing is very clear -- you're going to be hearing a lot more about the procedure which is also known as structural fat grafting, Lipotransfer, microlipoinjection and autologous <u>fat grafting</u>.

New York City's <u>Sydney Coleman, M.D.</u>, a board certified plastic surgeon and clinical associate professor, is widely regarded as the world's leading proponent, researcher and provider of breast enlargement via fat transfer. While his own version of fat grafting is trademarked as LipoStructure, virtually all surgeons worldwide who successfully employ fat grafting use his technique or a variant of it.

To shed some light on a seemingly confusing topic, CosmeticSurgery.com sat down with Dr. Coleman for an interview about the current state of fat grafting for breast enlargement.

QUESTION: When did the controversy about fat transfer to the breast start?

ANSWER: Some plastic surgeons have been transplanting fat to the breast for a century, although it was not widely performed. In the 1980s, after liposuction gave surgeons a convenient source for fat, more started offering it but the results were not always the same. In 1995, I started grafting fat to the breast.

Q: Is that why so many surgeons say fat grafting is just injecting dead fat cells?

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A: Human fat is incredibly delicate -- at least, outside the human body. Unless donor fat is prepared with the greatest care in a very particular manner, it will not survive. And it must be placed back in the patient in a certain manner and also with great care or it will not find a blood supply and live.

Q: What does fat grafting involve?

A: Donor fat has to be removed with much more care than in an ordinary liposuction. The surgeon can't use high-powered suction equipment or a sharp-edged <u>cannula</u>, the wand inserted into the pockets of fat. Nor can the cannula be too wide. Once the aspirate --that is, the combined fluids taken from the body during fat removal -- is collected, fat cells must be separated from the other fluids like oil, blood, saline and medicines used in the procedure. Fat cells are usually filtered and separated with a centrifuge but, again, the centrifuge can't whirl too fast or be too big least it kill the cells.

In fact, to facilitate the entire process, I invented some kinder, more benign surgical tools appropriate to gentle fat collection and deposit. For instance, I use a blunt instrument to insert fat cells to avoid injury to nerves and blood vessels.

The fat must be placed in dozens of layers throughout the breast in very tiny drops. And that takes a lot of time and tremendous attention to detail.

Q: Why the tiny drops? That must be excruciatingly painstaking.

A: It is, but there is no way around it. If the drops of fat cells are placed near muscle and fat tissue in many different layers of the breast, most of the cells will develop a blood supply, thrive and become a part of the breast. Painstaking? Consider this: it takes 25 passes to deposit a teaspoon of purified fat cells. To put in a cup of fat cells requires 1250 passes. My fastest breast augmentation using this method has been four hours while the longest has taken six or seven hours. A surgeon just can't squirt a huge amount of fat cells into a breast and expect it to survive

Q: How many of the fat cells DO survive?

A: The survival of fat cells depends on the technique used, the surgeon's experience, the areas grafted and the individual patient's response. Some surgeons using my techniques report about 80 percent survival rate.

Q: Why is fat transfer a better way to enlarge breasts instead of using silicone or

saline implants?

A: Many reasons. Fat is your own natural tissue and can't be rejected. Implants can leak, show and protrude through the skin, cause scarring and even cause the breast to droop. If you have a breast implant, you will at some point in your life have at least one more operation to replace or remove them. However, in fat grafting, minimal incisions are used. The surgeon can sculpt and shape the breasts for a completely natural look and feel. For instance, with fat grafting, I can create tear-drop shaped breasts with nipples that do not point down. Or, I can create a natural looking cleavage or make the breasts flow smoothly and naturally into the armpits. You don't see that with saline or silicone implants.



A 28-year-old-patient with <u>tubular breast deformity</u>, left, received fat grafting to the breast on two occasions. The right picture shows how she looked four years and 11 months after the second fat grafting. She had a total of 720 cc's (a little over three measuring cups) of fat transferred into the right breast and 670 cc's (about 2.8 cups) into the left.

Q: What are the downsides? What do you disclose to your patients about fat grafting to the breast?

A: Besides the normal risks of any surgery like possible infection, I tell patients the procedure takes longer; it takes several months before the final results can be seen; the maximum increase in one session is one cup size; that some fat may be absorbed by the body and that very thin patients may not have enough donor fat to spare.

Q: Then why are the largest professional plastic surgery societies -- the ASPS and ASAPS -- cautioning consumers against having the procedure?

A: It stems from a 1987 ASPS position paper that predicted fat grafting would conceal breast cancer detection and should therefore be prohibited. After 1987, nobody in the United States or the world spoke of fat grating to the breast until 2005. There is a huge prejudice against fat grafting in general among the plastic surgeons who have tried it --

using their own particular method -- and failed. These surgeons judge fat grafting by the failures, choosing to ignore or even ridicule others' successes. It is extremely easy to kill fat and they have succeeded admirably in their efforts.

Q: How could fat grafting conceal breast cancers?

A: If transplanted fat dies, it leaves some scarring and calcification. Mind you, there have been no studies on enlarged breasts via fat transfer to prove it, but the opinion of one ASPS committee at the time was that calcification could confuse <u>breast cancer tests</u> and delay or prevent treatment. That has pretty much discouraged other practitioners and research for the last 20 years. Oddly enough, research done that same year -- 1987 -- shows that, within two years of breast reduction surgery, 50 percent of the patients' mammograms showed calcifications. But nobody suggested doing away with the breast reduction.

Q: Have things changed since '87?

A: Mammogram screens and X-rays are now much more sensitive. Radiologists are usually confident about being able to distinguish the calcifications caused by dead fat from calcifications indicating breast cancer. If they have any doubt, radiologists also have tools like ultrasound and MRI's to further aid them.

Q: What should be done next?

A: We should encourage standardized procedures for fat grafting to the breast. Currently, virtually every surgeon doing the procedure separates the fat cells from the aspirate differently. And our very first concern, even before creating beautiful, larger breasts, is patient safety. Moreover, we should ensure those patients undergo regular mammography and do breast self-exams. And, we also want to prevent unnecessary biopsies. My biggest concern is technique -- my greatest fear is that some practitioners will still squirt large amounts of fat cells into breasts. Such a glob of transplanted fat will never find a blood supply and survive. The problem is not that the glob will die, but that it will live unevenly and may create irregularities and lumps.

Q: Where else is breast enlargement with the patient's own fat being done?

A: I started discussing fat grafting to the breast in France and Italy about ten years ago so they have been using the technique to enlarge breasts much longer than in the United States. Last year, the French Society of Plastic Surgery at their annual meeting presented ten medical articles on fat grafting to the breast. In most of the world, especially, France and Korea, if a surgeon is grafting fat successfully any place in the body, he or she is using the "Coleman technique." But U.S. surgeons seemed to have dropped my name, even though they use my technique.

Q: Can fat grafting be applied to other sections of the body?

A: Absolutely. In fact, I started this work twenty years ago, doing <u>buttocks augmentation</u> and filling in the little divots in the body caused during some liposuction procedures. The same technique of taking and preparing donor fat and adding it drop by tiny drops in buttocks is now being done by perhaps a dozen U.S. <u>surgeons who create rounder</u>, <u>shapelier derrières</u> for patients. <u>Fat transfer to the hand</u> and <u>face</u> is a widely accepted procedure; fat grafting is additionally used to smooth out the rough edges of breast

implants that show through the skin and to create cleavages. Structural fat grafting can also be used to correct many craniofacial and maxilla facial deformities such as lip deformities after cleft lip repairs.

Q: Why are you regarded as the leader in the field?

A: Most physicians showing long term fat transfer survival rates are using my technique; I have given many three-day courses with video or live demonstrations and short instruction courses several times a year all over the world. I've published about 25 scientific articles on fat grafting to the breast and allow other surgeons to come in and observe my techniques.

Q: What is the bottom line, doctor? Where is all this headed?

A: I believe that structural fat grafting is going to revolutionize breast surgery and completely change the way plastic surgeons deal with the female breast.

Q: Thank you, Dr. Coleman. A: You're very welcome.

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