

THE STEM CELL FACELIFT

The New Face of Youth

Of all the new procedures made possible by the stem cell revolution, nothing has proven more dramatic than the restoration of a youthful face with your own stem cell-enriched fat.



By J.P. Faber

Kerr started to model even before she was 18, but that was her age when she got her first big break, winning the Wilhelmina agency's Mid America Modeling Competition. With that she headed for New York City from her hometown of Columbus, Ohio.

"They were trying to find the next new face," she says. "I won the overall competition and ended up in New York. I met Cheryl Tiegs, Christie Brinkley and all the top models."

But the big city was too much for the small town girl ("they called Columbus 'cow town' back then," she says), so Debra returned home where she modeled for 10 years before surrendering the limelight in favor of running cosmetic spas.

Flash forward four decades. The once top model found herself a grandmother and unhappy with what the years had done to her glamorous looks. "My 30 years in the skin care business made me a local celebrity, writing a column and talking on TV about what was the latest in the spa industry and the cosmetic business," she says. "So I wanted to look as young as possible, and I did everything to keep my skin soft and firm. But we all know what gravity does..."

Debra watched as friends and clients went under the knife, but she says that wasn't for her. "Even though I held the hand of many of my clients as they got their facelifts and brow lifts, I knew I could never go through surgery... I didn't want the scars, I didn't want the downtime, I didn't want the pain, or for something to go wrong... So I waited for the technology to get better, for something non-invasive."

That technology turned out to be a facelift using her own fat, augmented by stem cells derived from that same fat.

In what amounts to nothing less than a revolution on facial rejuvenation, a growing number of cosmetic surgeons and dermatologists nationwide are now using a patient's own fat to restore facial volume. Unlike synthetic fillers, however, stem cell-enriched fat is not only natural—it is safe, permanent and, most incredible of all, uses the healing power of your stem cells and their associated proteins to actually improve the texture and tone of the skin.

THE STEM CELL FACELIFT

WHAT IT IS: The transfer of fat from one part of your body (someplace where you don't want it, like your love handles) to your face, for the purpose of volume replacement.

ADVANTAGES: In addition to providing volume, stem cell-augmented fat continues to improve skin quality over time, reducing wrinkles and enhancing skin tone.

DISADVANTAGES: Requires liposuction; costs more than standard fillers (\$5,000 to \$10,000, vs. \$2,000 to \$3,000) and requires some downtime because of bruising.

These are not the controversial embryonic stem cells that can turn into any cell in your body, the ones that caused such a religious furor that former president George Bush banned U.S. research into their use. These are stem cells that can be released and activated from your own fat. For that reason they are called adult stem cells, or adipose (fat) stem cells, and for several years have shown astounding results when it came to healing and improving the quality of skin where they were injected.

In Debra's case, the results were so remarkable that she ended up doing a segment on stem cell facelifts for Good Morning America, which featured her and her cosmetic surgeon, [Dr. Sharon McQuillan](#).

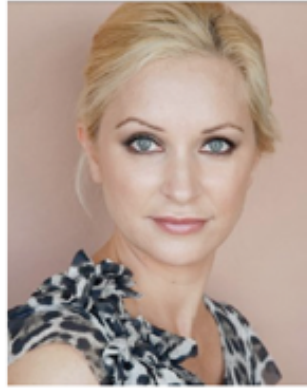
The Fat Revival

[Dr. McQuillan](#), who practices in Aventura, Fla., was among the vanguard of cosmetic physicians who embraced the use of a patient's stem cells to augment fat for a facelift. That upgrade, she says, was a critical shift in the use of fat transfers for aesthetic procedures.

*(Top) Debra Kerr, and
(Bottom) Natasha Gonell, before
and after stem cell facial fat grafts.*

OLD YOU

NEW YOU



“Fat transfer has been around for a long time, but it did not work well before the use of stem cell augmentation,” she says. While all fat contains some stem cells, “there weren’t enough stem cells to insure the viability of the fat ... to maintain the volume correction.” By filtering extra stem cells from one batch of fat, then adding them to another that the physician uses to inject, the fat ‘holds’ and becomes permanent.

“In those past procedures, the fat would disappear,” says [Dr. McQuillan](#). “You want to see a really upset female? Give them a youthful look that then disappears.”

Just how the addition of extra stem cells ensures that fat survives is a matter of debate. Some doctors feel that it helps the fat to ‘vascularize’, or form a network of tiny capillaries that feed and sustain it. Others believe that the new stem cells turn into fat cells, replacing those that inevitably die in the transfer. Still other physicians believe it is not the stem cells themselves that do the work, but a soup of associated molecules call the SVF, or stromal vascular fraction, that includes the stem cells. Regardless, doctors who employ the procedure all agree that it works.

“We don’t know which [parts of the SVF] are doing it,” says [Nathan Newman, MD](#), a cosmetic surgeon based in Beverly Hills, Calif., who uses concentrated stem cells and SVF for fat transfer. “When you just use the [stem cells] alone, you don’t get the same results... and if the basic science world wants to research why that is for the next 30 years, fine. In the meantime, it’s pretty amazing what the results are. When you see the

changes we are seeing from the use of these little cells, you realize their power.”

Like other doctors who augment fat with additional stem cells, [Dr. Newman](#) says that the skin condition of his patients continues to improve long after the procedure. “It’s amazing to watch the patient’s skin tone improving over time. We used to see some that with fat, but with stem cells you can see the skin glowing.”

The Power to Fill and Repair

THE VOLUME OF YOUTH

“Youth as interpreted by visual observers is perceived as volume,” says [Dr. Sharon McQuillan](#). “That doesn’t mean that blepharoplasties [eye lifts] or [traditional] facelifts don’t have their place. But for the woman who has lost volume or whose face is gaunt, you want to return volume. Otherwise you are stretching skin over bone. You may have an improved appearance, but it’s not perceived as more youthful. It’s volume that conveys youth.”

For Denver-based cosmetic surgeon [Peter Schmid, MD](#), the transfer of stem cell-enriched fat to give a patient a facelift is just the latest tool in the world of cosmetic facelifts, though it can be used by itself.

“I use a lot of stem cells in fat grafting for facial procedures, and I place [the augmented fat] in areas of facial atrophy,” says [Dr. Schmid](#). “But not all aging is volume loss.”

In some cases, what is called for is skin tightening or skin lifting, in addition to adding volume. This is especially true for older patients, says [Dr. Schmid](#). “Sometimes a younger patient only needs

volume, especially those in their 40s or early 50s,” he says. “For patients in their later 50s, 60s and older, you need a lifting technique.” The problem with the classic facelift, he notes, is that it typically does not

add any volume. “If you are not working with a sense of 3D, you have a tendency to pull too much”—resulting in the unnatural, stretched look of a bad facelift.

“Patients want to look fresher and more balanced. They all want to achieve that ‘triangle’ of beauty,” says [Dr. Schmidt](#), referring to the high, full cheeks that are lost as the face sags. “As we age, there is a precipitous change in the peri-orbital area (under the eyes) that is kind of a hollow look. They need to replace this if they want to look refreshed.”

OLD YOU

NEW YOU



[Dr. Schmidt](#), like many other cosmetic surgeons, uses a ‘mechanical’ method to produce stem cell-enriched fat—something which has come to be



Female patient before and after a cell-assisted fat transfer to the face.

OLD YOU

NEW YOU



addition to restoring volume.

known as the Coleman technique, named after **Sydney Coleman**, the New York-based physician who first observed the power of transferred fat to heal and improve the quality of skin where it was injected. **Dr. Coleman** simply took the fat and spun it in a centrifuge, which produced various layers, including a rich, white band that was later revealed to be rich in stem cells.

Dr. Coleman now advocates the use of your own fat, augmented by stem cells, instead of synthetic facial fillers, largely because of the power that the stem cells have to improve skin condition in

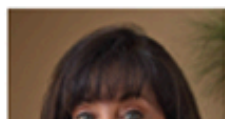
“First of all, it’s treating yourself with yourself, so you are actually using your own body to repair or improve facial proportions,” says **Dr. Coleman**. “This not only produces results at the moment [you inject], but continues to improve and repair your skin for your lifetime. Whereas if you put a filler in, we’re not sure of what is going to happen in your lifetime. No one has shown what these things are going to do with multiple injections.”

Making the Right Choice

Before you run out to your local doctor and ask for a stem cell facelift, however, **Dr. Coleman** also warns patients to avoid the hype.

“There is such a rash of doctors in the U.S. making all sorts of claims that consumers don’t know what to believe,” he says. “Stem cells are the big thing now, and now that it’s in fat, it’s become the buzz word. Now every MD with an Internet site is sort of slipping that in, in a way that is very deceptive.” The problem is that since all fat contains stem cells, “doctors who have been grafting fat can say they are doing stem cell-assisted facelifts,” when that is not the case. Only when the fat has been enriched with stem cells and SVF can that claim be made.

DOCTORS WHO PRACTICE CELL-ASSISTED FACE FAT TRANSFERS



Sharon McQuillan, MD, is a board-certified physician who specializes in both Aesthetic and Anti-Aging Medicine. A graduate with honors from the Ohio



State University College of Medicine, she is the director of the Ageless Institute in South Florida. Dr. McQuillan is also a leading international researcher in the development of scientific protocols for stem cell therapies.



Nathan Newman, MD, is a board-certified dermatologist and cosmetic surgeon in Beverly Hills, Calif. Dr. Newman is the pioneer of the Stem Cell Lift, an innovative technique that utilizes the natural regenerative abilities of stem cell-rich fat to safely and naturally volumize, lift and contour the face and body.*



Sydney Coleman, MD, is a board-certified New York-based surgeon and current member of the American Society of Plastic and Reconstructive Surgery and the American Society for Aesthetic Plastic Surgery. Dr. Coleman is one of the early pioneers of fat transfer, and one of the first physicians to recognize the improvement of skin quality after fat grafts in the 1980s.



Peter Schmid, MD, is a cosmetic surgeon who practices in Longmont, Colorado (north of Denver). As an accomplished sculptor, Dr. Schmid focuses on the aesthetic harmony in a patient's appearance. Dr. Schmid is a member of the board of the American Academy of Cosmetic Surgery and a board-certified facial plastic surgeon.

Not all doctors are properly trained in the technique, either. Injecting too much fat at once, rather than in tiny droplets, can lead to a big loss in volume later, since the lumped fat will die before it can be reached by a network of new capillaries. On the other hand, injecting too much fat overall can give the patient a puffy 'chipmunk' look. The other downsides are that you have to undergo liposuction to get the fat, which helps make the overall cost significantly higher than using a simple filler—\$5,000 to \$10,000, vs. \$2,000 to \$3,000.

Patients who want to find a doctor who practices true stem cell-assisted cosmetic procedures are advised to do their homework well, or to use a reference site such as www.stemcellMDregistry.com or www.findastemcelldoc.net.

As for Debra, her procedure produced a little bit of bruising, which is normal, followed by several weeks of slight swelling. Now, she says, she could not be happier.

“Even though I knew it would look better, it turned out much better than I expected,” she says. “Every day my stem cell facelift looks better. Every day I look in the mirror, and instead of the gravity look, instead of the sagging, I see the contours of my face, especially above the cheekbones. And it keeps improving. It’s the regeneration from the stem cells.”

The emotional result, she says, is even better. “I was a confident woman to begin with, but now I have a different walk and a different smile. It kind of surprised me—I know every own woman would feel better, but it’s really been a nice lift for me.” Pun intended.