

EXTREME MEASURES

How far will you go for COMPLEXION PERFECTION?

Bird droppings, sperm, mercury, even placenta—there isn't much women have not tried to slather on, ingest, or inject in their battle against aging. But what if the fountain of youth lies in your own fat and blood? That's just what some doctors and scientists are starting to say. We think the technology looks extremely promising—specifically with stem cells—but patience, ladies, you may want to hold off on any treatments for now. “While the future is definitely there, so far the evidence is anecdotal,” says Z. Paul Lorenc, a respected New York plastic surgeon.

Here are two high-tech procedures that may revolutionize the war on wrinkles.

Stem-Cell Rejuvenation

You've undoubtedly heard about the controversy surrounding stem cells. First things first: “For cosmetic usage, we are working with adult stem cells, not embryonic stem cells,” says Renato Calabria, a plastic surgeon in Beverly Hills and Milan who has used the new stem-cell technology to enhance his face-lift procedures. How does it work? A doctor removes adipose tissue—fat—from your body under local anesthesia, then processes the fat to isolate the stem cells (and other regenerative cells). The concentrated cells are then mixed back with some of the fat and injected into the face. “We are seeing amazing improvements in skin texture

because there is greater regeneration of skin and tissue,” Calabria notes. And although fat injections are nothing new—and adipose has always contained stem cells—it's the extraction of stem cells from fat and “turbocharging” them that's creating buzz. “Results are much better because the concentration of stem cells is much higher versus plain fat,” explains Calabria. Marc Hedrick, a plastic surgeon and president of Cytori Therapeutics, which makes the Celution automated stem-cell extracting machine, says, “We've been working for 10 years on developing ways to use regenerative cells from fat tissue to treat primarily heart disease and in breast reconstruction following lumpectomy.”

He explains that many doctors taking part in this research also have cosmetic patients and realized that if stem-cell rejuvenation worked in areas with radiation damage or scarring, it should perform in less demanding situations like filling out the face. And while the Celution has yet to receive FDA clearance, the company is currently working on it. So in other words, be cautious of doctors promoting stem cells because they may be doing typical fat injections. According to Calabria, the problem with standard fat grafting is that it has an unpredictable survival rate and the fat can be reabsorbed by the body. But when fat fillers are infused with stem cells, they are thought to have greater longevity and predictability (allowing you to use less fat than traditional injections so you look less

puffy), increase blood supply, and help jump-start the regenerative process.

And what are the chances of the stem cells unintentionally morphing into another body part, like bone? “Adult stem cells can release growth factors to help heal tissues but need strong chemical signals to make them transform into another tissue type,” says J. Peter Rubin, a plastic surgeon and an associate professor of plastic surgery at the University of Pittsburgh, who has been studying adipose stem cells for eight years. “If you are placing them in undamaged muscle or fat tissue, they should become well incorporated in that tissue.” As for side effects? “We don't know if it can have any adverse long-term effects, as we are in the early stages of research, but regenerative medicine is one of the most exciting new areas of development,” explains Manhattan dermatologist Neil Sadick. Adds Jon Turk, a plastic surgeon in New York, “It's the wave of the future. I wouldn't get it now, but I'd keep my eye on the clinicals.”

Blood Injections

“Vampire fillers,” so called not because they're part of the *Twilight* craze but because they literally involve vials of blood, are another hot topic. How do they work? The doctor starts by taking your blood and spinning it in a centrifuge machine to extract the platelet-rich plasma, thought to be high in growth factors. “By injecting PRP below the skin like we do with dermal fillers, the theory is that the growth factors in the plasma will stimulate collagen,” says Turk. And a face with boosted collagen is a face with fewer wrinkles. “Conceptually, it's moving in the right direction,” notes Lorenc, “but there isn't enough follow-up. I'd love to have a double-blind controlled study comparing PRP with Restylane so we can see if it's as good as or lasts longer than the gold standard.” And while Turk believes this procedure carries no danger, there is a chance it may have no effect at all. Sadick adds, “Until evidence-based studies come out, we won't know the optimal treatment program.” ■

