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SHOULD YOU INJECT STEM CELLS?

Controversial new rejuvenation treatments use umbilical cord cells. Emily Listfield investigates.

RESEARCHERS HAVE FOUND what they hope is the next big breakthrough in the ongoing search for younger-looking skin—stem cells from the umbilical cords of newborn babies. While dermatologists have been using cells from patients' own blood for their purported rejuvenating powers for years (see Vampire Facials), they have high hopes for umbilical-cord stem cells because they're, well, younger. "Umbilical stem cells are brand-new, and they are multipotent, meaning they can take on the characteristics of tissue they come into contact with," says Mark B. Taylor, M.D., a Salt Lake City dermatologist and cosmetic laser surgeon who is currently leading pilot studies that use umbilical-cord stem cells for skin rejuvenation, vaginal rejuvenation, and hair regrowth. "They're like a new car—they drive better." That such a range of uses is possible is a testament to the power of multipotent cells. When they are placed in the skin after a collagen-stimulating treatment (i.e., laser or micro-needling), they become ambitious little copycats and begin producing collagen too, or so the theory goes. When the stem cells are injected into the scalp, their natural growth factors can stimulate hair regrowth, and, used in conjunction with facial fillers, they appear to work synergistically to regenerate healthier skin, build collagen, and regulate melanin. Multipotency also explains why they can't suddenly make up their nascent minds to grow an ear in the middle of your cheek.

The cells are extracted from the Wharton's jelly tissue layer of the umbilical cord, which has a high concentration of multipotent cells, explains Tim Lacy, president of Predictive Biotech. The Salt Lake City-based company supplies cells for more than 250 academic research centers, health systems, and clinics, including thousands of doctors. Lacy's team is working with dozens of hospitals in the U.S. to recruit pregnant women. Donors have blood tests and are screened for communicable diseases as well as risky behavior.

Using umbilical stem cells for cosmetic purposes is still so new that no double-blind, placebo-controlled clinical studies

have been conducted. "We need to do real science and make sure we understand long-term risk and benefits," Taylor acknowledges. "The question of whether they can grow into cancer has been on the table for many years. What happens if the cells go berserk? It hasn't happened yet, but it's possible." Clearly, he isn't overwhelmingly concerned. "I've had some 14 million umbilical stem cells combined with Sculptra in my face and neck for the past eight months," says Taylor. "I'm still seeing gradual improvement in volume, texture, and appearance."

Many doctors are taking more of a wait-and-see approach. Robert Anolik, M.D., a New York dermatologist, believes that umbilical-cord stem-cell usage will be shown to be safe, at

least in terms of malignancy, and potentially beneficial. "I can't prove that, though, without better study. I'm open to it but will only take steps forward once I have more confidence in their efficacy." Nevertheless, others, including New York dermatologist Gary Goldenberg, M.D., have been incorporating umbilical-cord stem cells into micro-needling, laser, filler, and hair regeneration procedures. "Filler usually lasts eight months, but if we add stem cells it lasts two years and delivers a more natural result."

(Stem cells add up to \$3,000 to the cost of fillers.)

For hair regeneration, Goldenberg injects umbilical stem cells alone or with PRP (platelet-rich plasma), which is already in wide use as a treatment to prompt new growth. "Stem cells provide growth factors to hair follicles and improve their health. They may also potentially become new hair follicles." Three to six treatments are needed to see results. (Cost: \$3,000–\$6,000 per treatment.)

New Yorker Amanda Forsyth, 50, had no qualms when Goldenberg suggested she try the new treatment, along with a micro-needling session. "It smoothed out a lot of the small wrinkles around my mouth and eyes," Forsyth says. "My skin feels like it has more elasticity. After a month my nasolabial folds are practically gone. But," she admits, "when I tell my friends, they get crazed looks on their faces." ■

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with facial fillers, the cells
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Photograph by Kenneth Willardt

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