

Stem cells: Stalled promises

Recently I saw my first stem-cell therapy television commercial. A woman with chronic, undiagnosed lower back pain was 'cured' when a doctor at a local clinic injected adult stem cells into the tissue surrounding the source of her pain. The cells regenerated the damaged nerve and muscle tissue, the commercial claimed, with fine print scrolling along the bottom indicating the treatment hadn't been vetted by the FDA.

I suppose it's not that surprising that these experimental treatments have made it to basic cable, given that [the governor of my state, Rick Perry, had a similar treatment three years ago](#). Major sports figures like Yankees starting pitcher C.C. Sabathia and outfielder Carlos Beltran commonly head to other countries for similar treatments in their knees.

But the commercial did bring up memories of a time when stem cells were hailed as a near cure-all, sure to imminently deliver treatments for a wide range of neurological, auto-immune and trauma related conditions.

Although there are no approved treatments beyond bone marrow transplants, many patients continue to turn towards the initial hope stem cells inspired. [The New York Times tells the story of Edgar Irastorza who had a heart attack at 31:](#)

He survived the heart attack, but the scar tissue that resulted cut his heart's pumping ability by a third. He couldn't pick up his children. He couldn't dance. He fell asleep every night wondering if he would wake up in the morning. Desperation motivated Mr. Irastorza to volunteer for a highly unusual medical research trial: getting stem cells injected directly into his heart. "I just trusted my doctors and the science behind it, and said, 'This is my only chance,' " he said recently.

But while more patients are choosing these procedures, despite not knowing one way or another if the therapies are effective, various episodes have illustrated how tentative, dangerous and politicized the field is including a woman whose [ineffective treatment developed into a tumor](#) and a [Japanese research fraud that led to a respected scientist's suicide](#).

And there are continuing reports documenting how clinics promise results from stem cell treatments for procedures that have never been clinically proven effective. Often these procedures carry \$10,000 price tags or more. Some are even flat out scams, reports [the Australian Broadcasting Company](#). MS patient Annie Levrington went to Germany and paid \$15,000 for a transplant only to discover she'd not been given any stem cells at all when she returned and consulted with her primary physician.

Despite these set backs, research continues. There are some definite signs of promise of stem cell therapies becoming clinically significant. [The FDA approved the first treatment developed through the voter-backed California Stem Cell Initiative in August of this year](#). And a [Japanese woman received a retinal transplant of stem cells](#) made from her own adult skin cells earlier this year in an experimental

treatment for the degenerative eye disorder macular degeneration. Although it may feel like we are 15 years behind, it is perhaps a good lesson for the media and the public: Quality research doesn't happen overnight and we should be willing to wait for effective, safe therapies.

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Additional Resources:

- [Can regenerative therapy restore vision and the promise of stem cell technology?](#), Genetic Literacy Project
- [Patient with nasal tissue tumor illustrates unknowable side effects of stem cells](#), Genetic Literacy Project
- [Ten years in, first trial treatment from California's stem cell initiative approved](#), Genetic Literacy Project