

Developing an improved liposuction technique that melts fat

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Although liposuction is one of the most common and well-established cosmetic surgery procedures in the U.S., it still has its drawbacks. But a new biomedical start-up says it may have found a novel way to improve the procedure using gold nanoparticles to literally melt fat, reports *Chemical & Engineering News (C&EN)*, the weekly news magazine of the American Chemical Society.

Lauren K. Wolf, an associate editor at C&EN, explains that during the most common type of liposuction procedure, a surgeon inserts a sharp-edged needle through an incision, moves it back and forth to break up fat cells and then vacuums them out. The problem is the procedure isn't selective, and sometimes [connective tissue](#) and nerves get removed along with the fat cells. Liposuction patients often suffer from bruising, long recovery times and lumpiness that has to be corrected with a second [procedure](#). To address the surgery's problems, a nanomedicine expert and her brother, who is a plastic and reconstructive surgeon, teamed up to try a different approach.

The duo, Adah and Khalid Almutairi, drew on some of the latest research looking into [gold nanoparticles](#)' ability to destroy cancer cells when exposed to infrared light. They wondered whether they could inject the same material into [liposuction](#) patients, light up selected areas with an infrared beam to melt the fat rather than mechanically breaking it up, and then suction out the cells. Fat melts at a low enough temperature that connective tissue and nerve cells could be spared damage, they say. A new firm, eLux Medical, has licensed the technique,

now called NanoLipo. Animal trials are currently underway, and human clinical studies could begin later this year, the company says.

More information: "Liposuction Goes Nano"

cen.acs.org/articles/92/i24/Liposuction-Goes-Nano.html

Provided by American Chemical Society

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