

# Hidden facial cheek fat compartments are key to youthful appearance

June 24 2008

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Rejuvenating newly identified fat compartments in the facial cheeks can help reduce the hollowed look of the face as it ages, according to new research by plastic surgeons at UT Southwestern Medical Center.

Researchers used special dyes to identify and map four cheek-fat compartments hidden deep beneath the skin. When these compartments are restored using fat, tissue fillers or artificial implants, the result is a more youthful and less hollow look to the overall face, according to Dr. Joel Pessa, assistant professor of plastic surgery.

Restoring these compartments also improves volume loss under the eyes, helps eliminate lines around the nose and mouth and gives more curve to the upper lip, all of which restore a more youthful appearance to the face, Dr. Pessa said.

"This research breaks new ground by identifying the boundaries of specific fat compartments that are key to facial rejuvenation involving the cheeks, and as a consequence, the overall look of the face," said Dr. Pessa, a co-author of the study, which appears in the June issue of *Plastic and Reconstructive Surgery*. "Cheeks are vital to what we consider beautiful – from chubby-cheeked infants to Hollywood stars like Angelina Jolie."

Plastic surgeons performed nearly 8,000 cheek implants in 2007, according to the American Society of Plastic Surgeons. In addition, nearly 47,000 fat injections and 1.1 million injections with hyaluronic

acid fillers were performed last year.

Researchers injected 14 cadavers with dye and latex to identify the boundaries of the deep medial fat compartments and their relationship with adjacent muscles. Volume loss in the compartments resulted in the hollow look associated with aging, the study noted, but is restored immediately by properly filling the compartment. In addition, when the compartments are filled properly, less fat or filler is needed.

"This anatomic fat cheek compartment completely changes how we look at facial aging," said Dr. Rod Rohrich, chairman of plastic surgery at UT Southwestern and lead author of the study. "The process to correct facial aging is now dramatically changed as well. No longer do we remove fat without pre-op analysis or merely lift the cheek; we must now lift and fill the face to restore a natural youthful, unoperated appearance."

The research is part of an ongoing project among UT Southwestern plastic surgeons to better map fat compartments in the face and body.

"Research to identify specific fat compartments for surgeons to target helps provide more predictable results in the ongoing fight against facial aging," Dr. Pessa said.

Source: UT Southwestern Medical Center

Citation: Hidden facial cheek fat compartments are key to youthful appearance (2008, June 24) retrieved 9 April 2024 from

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