

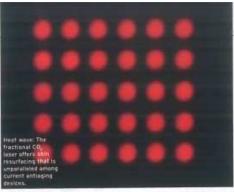
FRACTIONAL CO2 LASER

sk a group of dermatologists to name the best antiaging up-and-comers and the ensuing debate could get heated—unless they're discussing the fractional carbon dioxide laser. This newly launched device emits a tic-tac-toe grid of infrared light, creating millions of microscopic wounds that kick the skin into repair mode and jump-start col-

lagen production. Though it's being used by only a handful of physicians, fractional ${\rm CO}_2$ is already getting rave reviews for its ability to firm skin and reduce fine lines, wrinkles, and pigmentation.

While the fractional delivery system is novel, the carbon dioxide laser isn't exactly a new kid on the block. "The results of the traditional carbon dioxide laser were terrific, but it was plagued with a prolonged recovery time," says New York City dermatologist Dennis Gross, MD. Popular in the '90s, CO₂ lasers literally burned away the skin's surface to produce dramatic tightening and improved texture, with one major downfall: post-op house arrest (think open wounds) for three weeks, if not more. "It's like taking a blowtorch to the skin," says Kenneth Mark, MD, an assistant clinical professor of dermatology at NYU Langone Medical Center in NYC. But for those willing to put in the time, the benefits of the CO₂ laser outperformed everything else—easily taking 10 years off a patient's face.

Gross calls fractional CO₂ "the wave of the future" because it only hits up to 50 percent of the skin's surface with thermal blasts, cutting recovery time by 80 percent, but still produces most of the benefits of its predecessor. "Fractions of the epidermis remain intact, while heat spreads significantly deeper in the dermis than with the original CO₂," says Manhattan dermatologist Roy Geronemus, MD, who has treated more than a thousand patients with the recently FDA-cleared Fraxel Re:pair, one version of fractional CO₂. Afterward, treated areas are left with what one ELLE editor (who was zapped by Gross with the Mixto CO₂) called "a



bad sunburn" that lasts around three days before peeling (expect a week or so for full recovery; some may experience slight redness for up to a month). The price tag is hefty, averaging \$4,000 for a single session, and one to three may be necessary depending on the severity of pigmentation or wrinkles and the strength of the laser, which can be adjusted by the doctor. According to a study (which is currently awaiting publication) conducted by Geronemus, nine out of 10 patients who received fractional CO₂ on the face showed a 50 to an amazing 100 percent improvement in skin laxity and pigmentation within three months of treatment.

Like any resurfacing procedure, fractional CO₂ comes with minor risks: acne, cold sores, or hypopigmentation. "The laser breaks the epidermal barrier," Mark says. "This leads to a chance of infection." According to Mark, most of these hazards can be avoided with pretreatment care, including antibiotic and antiviral prescriptions. Macrene Alexiades-Armenakas, MD, PhD, an assistant clinical professor at Yale University School of Medicine, who is conducting a study on SmartXide DOT (a type of fractional CO₂ device), has treated one patient for small white patches that developed after another physician administered fractional CO₂, a side effect that she notes could possibly occur in all skin tones. Although she's seen moderate results from non-ablative (no-downtime) devices such as Titan, she still votes for fractional CO₃: "Tve been waiting for this breakthrough for over 15 years," Alexiades says.—Newell Citaness

