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fat chances

Will body perfection one day be possible? From skin-tightening lasers to fat-dissolving ultrasound, Catherine Piercy discovers a new world way beyond lipo. Photographed by Steven Klein.

When I arrive at Nancy Trent's airy SoHo loft one morning at 9:00, she is fresh from an hour-long Core Fusion class at the neighborhood's Exhale spa. Dressed in a flattering black swimsuit, a magazine tucked under one arm, she is about to embark on phase two of her weekly body-refinement regimen: climbing into the infrared sauna in the middle of her living room.

"Did you work out this morning?" she chirps brightly, ushering me toward the petite alpine hotbox where she dutifully spends half an hour three times a week. I pause to consider whether the flights of stairs leading to her apartment count before cheerfully replying in the affirmative. And then I change into my suit.

In her early 50s, Trent, a former health writer and current health nut, is more fit than most 25-year-olds I know. Her decision to install Health Mate's mini sauna—with its neat wooden planks and soothing cedar aroma—came five years ago, when she hit a diet-and-fitness wall trying to take off "the last few pounds." Penetrating directly beneath the skin with its far-reaching rays (rather than simply heating the air around it), infrared units like Trent's claim to burn hundreds of calories in a single 30-minute session. With wellness practitioners crediting them with everything from increasing circulation to reducing stress, they are now part of the post-workout protocol at gyms like Station Studios in Manhattan and spas like Houston's Sanctuary Spa d'santé. "I think of it as full-body antiaging," says Trent, stepping inside.

I understand Trent's steely determination to retain her girl-ish figure by any means necessary. Since crossing the 30-year threshold last year, I've been battling increasingly hard-to-budge puffy areas myself—my formerly flat abdomen, the once-sleek curve of my lower back, and the final frontier: my hips—despite a weekly routine of dance classes, kickboxing, and Pilates.

"It's the ultimate injustice," says Cheryl Karcher, M.D., a dermatologist in New York. "As we age, we lose fat in the face and we put it on at the waist, the hips, the thighs. Our metabolism slows; our hormones shift and redirect the

ISPY

The latest body-sculpting machinery promises to tighten and tweak from head to toe. Maison Martin Margiela shoes. Hair, Thom Priano for Garren New York Salon; makeup, Kabuki for Dior Beauty at Kabuki Magic. Produced on location by Viewfinders. Details, see In This Issue.

Sittings Editor: Phyllis Posnick.

weight.” But it’s not just extra inches that are the issue in the quest for body perfection. As Manhattan plastic surgeon Haideh Hirmand, M.D., explains, “Ten years ago, the women who came to see me just wanted to look thinner, whether that meant sucking out the fat or cutting away the extra skin on the belly. Now they want their body to look *younger*, too. That means thinner but also tighter, firmer, smoother.”

The medical world is responding, taking on those small-but-stubborn areas that no amount of squatting, Spinning, or dieting can reach. The body-contouring market is shaping up to be an approximately \$8.1 billion industry by 2011, and what was once the sole domain of liposuction—which itself seemed too good to be true when it debuted in the late seventies—is expanding to include a futuristic arsenal of devices that promise to trim inches and firm lax skin. Some of them may sound like science fiction—skin-tightening injections, fat-melting lasers, silhouette-slimming ultrasound waves—and many are undergoing FDA trials; still, others have already arrived at dermatology and plastic-surgery offices across the country. “We’ve become pretty adept at dealing with the [aging] face,” says Hirmand. “The body is the next frontier in beauty.”

THE FAT BLASTERS: LIPO PLUS

Liposuction has long been the gold standard of surgical fat removal, delivering sleeker contours—with one unavoidable catch: “After the age of 35, the skin begins to slow its production of collagen and elastin. It loses its snap,” says plastic surgeon Barry DiBernardo, M.D., a past president of the New Jersey Society of Plastic Surgeons. “Traditional liposuction might remove the fat, but now you’ve got loose skin hanging on the abdomen, the arms, the neck. Without more surgery, like a tummy tuck, you might end up looking worse than you did before.” In an attempt to take on unwanted bulk and skin laxity in a single shot, a crop of new devices is using novel fat-destroying heat and energy sources in conjunction with high-powered suction to remove fat from the body.

Arriving from Brazil (where, it seems, winning the genetic lottery simply isn’t enough), laser-assisted lipolysis has been generating buzz and sparking fierce debate among plastic surgeons since the FDA approved it in 2006. By delivering fat-absorbing laser light through a tiny microfiber inserted beneath the skin, heat-generating devices with names like SmartLipo, SlimLipo, CoolLipo, Lipotherme, and AccuShape literally melt the fat cells. Before suctioning them from the body through a small cannula, the doctor turns his or her attention—and the laser’s heat—to the most superficial layers of the skin, raising its temperature in an effort to contract lax overlying tissue like shrink wrap on areas like the neck, underarms, abdomen, and thighs. Detractors, like Beverly Hills plastic surgeon Steve Teitelbaum, M.D., claim “the hype behind these devices is way ahead of the science” and take issue with the lack of published data (on the skin-tightening claims in particular). They also share stories of heat-related scarring, an

alarming potential side effect that the top manufacturers are addressing by installing thermometers in their laser heads.

If it gains FDA approval later this year, Invasix’s BodyTite will become the first liposuction device to use radiofrequency—a medium formerly reserved for noninvasive skin tightening—to liquefy fat cells with what its proponents claim is greater speed and efficacy than its laser counterparts. Using an internal probe to generate a high-frequency electrical current, it ruptures the cells, siphoning them off through a cannula, while simultaneously generating that all-important collagen-boosting heat at the skin’s surface, says Hirmand, an investigator in Invasix’s clinical trials. In an attempt to avoid burns and scarring, skin temperature is monitored by a secondary external probe that, much like a home air-conditioning unit, simply switches off when it fluctuates above or below the optimal skin-tightening temperature.

For women like me, who shy away from sharp-tipped objects and shiver at the word *microincision*, focused ultrasound, a noninvasive fat therapy seeking FDA approval later this year, can’t get here a minute too soon. Using a concave hand piece to concentrate multiple sound waves onto a single point beneath the skin—much the way a magnifying glass can focus the sun’s rays on, say, a single blade of grass—UltraShape and its competitive counterpart, LipoSonix, induce high-frequency pressure changes in fat cells, bursting them without a single incision in the skin’s surface. The liquefied fat is subsequently whisked away by the body’s own waste-removal mechanisms (rather than physically removed with a cannula). Eugene, Oregon, plastic surgeon, Mark Jewell, M.D., a lead researcher for Medicis’ LipoSonix, says the devices—most effective on women within ten to fifteen pounds of their ideal weight—can zap one to three inches of fat from the abdomen and lower waist over several sessions. Teitelbaum, who has worked extensively with UltraShape, calls it “among the most exciting new technologies out there. It’s the most you can get without surgery, and the data are in. We know that this works.”

FAT-DISSOLVING INJECTIONS

Even the proverbial double chin—that saboteur of otherwise flattering photographs—is getting its due, thanks to an injection from the Calabasas, California, company Kythera. The as-yet-unnamed cocktail ATX-101 contains a purified, bovine-derived bile salt that breaks down dietary fat during digestion in cows and works similarly when injected into fat in humans: destroying the targeted fat cells, which are then naturally eliminated from the body.

Unlike lipodissolve (the group of generic fat-lysing injectables that is not FDA-approved and has been widely panned by doctors for potentially dangerous side effects), Kythera’s formula aims to be the first “safe, standardized, purified, and FDA-approved drug of its kind,” says Patricia Walker, M.D., Ph.D., a chief medical officer for the company. The formula,

which is currently being tested for use under the chin by experts like dermatologist David Goldberg, M.D., in New York and Teitelbaum in Los Angeles, may be available by 2010.

THE TIGHTENERS

“What can I do about this?” begs my very fit friend Agatha one night at dinner, waving her finger at a fleshy patch along the underside of her arm (otherwise known as the “bat wing”).

Her predicament, explains Beverly Hills plastic surgeon Norman Leaf, M.D., likely has nothing to do with fat. “I have patients who are in great shape,” he says, “but no matter how much muscle tone they achieve, there’s this loose, stretched skin that drives them crazy, whether it’s a result of aging, pregnancy, sun damage, whatever.”

To firm up exercise-resistant slack spots and age-related wrinkling on the belly, thighs, and even neck, a new group of body-tightening devices, which stimulate collagen production by “bulk-heating” the surface of the skin, has arrived.

Penetrating several millimeters beneath the dermis, infrared lasers like Sciton’s SkinTyte and Cutera’s Titan have effectively treated the floppy “rooster wattles” along the neck, and, more recently, the butt and thighs. Cutera now offers an XL head to access wider expanses of skin on the abdomen (though, n.b., there isn’t a woman alive who wants to hear the term *XL* associated with her midsection).

Thermage—the original device designed to tighten the uppermost layers of the skin via external radiofrequency—has undergone a makeover since it debuted with much fanfare and uneven results in 2002. Manhattan plastic surgeon Lisa Zdinak, M.D., uses the new, “much improved” machine—now equipped with a deep-penetrating, body-specific tip—with great success on flab-prone areas like the backs of the arms, abdomen, and inner thighs on patients who fly in from as far as Moscow for the \$5,000 single-treatment procedure.

Alma’s Accent Your Body, favored by New York dermatologist Macrene Alexiades, M.D., combines two different radio-frequency modalities to cover more territory in the skin (yet requires four to six treatments). The Miratone, a buzzworthy, minimally invasive device developed by Pleasanton, California’s, Primaeva corporation, delivers radio-frequency energy directly into the dermis via five micro needle pairs. The results on the face and neck “surpass any other device I’ve seen in terms of tightening for a single treatment. And there’s no reason it couldn’t potentially be used elsewhere on the body, like the jowls or the abdomen,” says Alexiades, who presented the findings of the clinical trials at the American Academy of Dermatology annual meeting this past February.

The treatment that really gets my attention, though, is VelaShape, one of the first energy-based devices to be approved by the FDA for “circumferential reduction” (of the thighs). Combining two established fat-penetrating modalities—radio frequency and infrared light—with a suction-like stimulating massage head, it claims to actually *shrink* one’s love handles. With zero downtime and little to risk, other than eternal flabbiness, I decide this is the one I must try, and zip over to Anne Chapas, M.D.’s, midtown Manhattan office to begin a series of weekly treatments. After addressing the areas I’d like to treat (“everything” is apparently the wrong answer), we settle on my thighs, lower abdomen, and the area on my waist that’s waging a losing battle with my favorite pair of jeans.

In a mortifying initiation ritual that leaves me wishing I’d chosen smarter underwear for the occasion, a nurse marks my pasty white flesh with even pastier white chalk and records my girth for future comparison. Both the heat and suction are far more intense than the “warm massage” promised in the press release. I leave Chapas’s office with faint purple bruises along my back (very Gwyneth Paltrow circa the cupping years) that fade within a few days. One month later, the results, which should last up to twelve months with a reasonable diet and exercise, are admittedly subtle, but real: I feel tighter if not thinner, and those painstakingly precise measurements show a 2.5 cm reduction of my waist, thighs and lower back. Just enough to have me feeling newly taut in my jeans.

CELLULITE: THE ETERNAL SCOURGE

In the land of body polishing, cellulite remains the final frontier.

“The worst cases I see are often on the thinnest women,” says Zdinak. “It’s the marathon runners, the Olympic athletes.” That’s because cellulite, most likely an estrogen-induced phenomenon, resides in the superficial layers of the skin, where it’s most visible.

“As women, we have brittle, vertical strands of collagen in our connective tissue,” says Karcher. (Men, wouldn’t you know it, have a tightly meshed crosshatched pattern.) At some point during adolescence, the theory goes, estrogen gets switched on, and the fat cells below begin to fill up “and poke their way through [the overlying connective tissue] so that you can see them,” Karcher adds. Once they arrive, they tend to stay put.

While old techniques continue to perform new tricks—Thermage has a new cellulite-specific tip meant to lock heat into collagen fibers—others are aiming to reinvent the wheel.

Among the most popular is the FDA-approved SmoothShapes. While a lipid-seeking laser beam heats fat cells beneath the skin (causing their inner contents to liquefy like a stick of butter in a warm pan), a wavelength of light increases the permeability of their outer walls. The fat that leaks out, so to speak, is whisked toward the lymphatic system with a large mechanical roller that—taking its cue from Endermologie—glides across the skin. Requiring two treatments a week for four weeks (up to \$300 each), the procedure requires a substantial time commitment. While dermatologists like Patricia Wexler, M.D., are fans, “it’s important to remember that the results are temporary,” says Chapas. “When the fat cells fill back up, they may become visible from the surface again.”

Boasting minimal downtime and collagen-boosting secondary effects, doctors are exploring carboxy therapy as a treatment for cellulite and stretch marks. Injecting pure medical-grade CO₂ gas—which has been used for years in hospitals to inflate the abdomen before laparoscopic surgery—under the skin with a small needle “causes the fat cells to pop like a balloon,” says Zdinak, who offers the injections at her practice. Once released, “the lipids enter the bloodstream, where they are expelled naturally.” The downside? “There’s bruising,” Zdinak says of the procedure, which requires six to twelve sessions (\$200 each) to produce results. And while the use of CO₂ to treat cellulite has been popular for years in Brazil, where it originated as a treatment for fatty deposits in the knee, employing it “for cosmetic purposes is currently an off-label use in this country,” says Zdinak. In the meantime, I suggest turning down the lights and backing out of the bedroom slowly. □