

BEYOND GLASSES: THE LATEST LASER EYE SURGERY

# NEW YORK

## PILLOW FIGHT


Ian Schrager is taking his velvet-rope hotels to L.A. and beyond, and trading his partner for a younger, prettier face. But will he ever find another Steve Rubell?  
By Eric Konigsberg



\$2.95 (Canada \$3.95)



10 >



I CAN

# SEE CLEARLY NOW

LASER EYE SURGERY IS A MEDICAL SENSATION. BUT CAN WE TRUST THE SUBWAY ADS? A "FLAP AND ZAP" SURVIVOR EXPLAINS WHY SEEING IS BELIEVING. BY MELINDA BLAU

**O**N SEPTEMBER 20, 1996, THE PHRASE *MIRACLE OF MODERN SCIENCE* TOOK ON NEW MEANING for me. I am in a stark, dimly lit room, wearing a shower cap and my street clothes, reclining on a surgical BarcaLounger, fully awake and alert. My right eye, numbed by anesthetic drops and held open by a speculum, peeks out from the opaque white plastic drape that covers my other eye and the rest of my face. Next to me is a huge, sleek hybrid machine—part laser, part microscope, part computer—that casts a red dot surrounded by a halo of tiny white lights onto my eyeball. Dr. Mark Speaker, a celebrated New York eye surgeon, is about to sculpt my right eye—and, in doing so, change my life. ■ The procedure, officially termed laser-assisted in-situ keratomileusis (LASIK)—better known as “flap and zap”—takes minutes. It is considered dangerously experimental by some, the wave of the future by others. “Vision correction by laser surgery will become as common a rite of passage among middle-class consumers as braces.”



predicts Dr. Marguerite McDonald, a former New York ophthalmologist now practicing in Louisiana.

Analysts call this surgery the "most widely marketed medical procedure in history"—it's hard to miss the subway ads and infomercials—but New Yorkers, conservative, skeptical, and demanding by nature, are not impressed by the hard sell. So although the practice has taken off in other parts of the U.S. and in Canada, it's just catching on in New York. Doctors in California do four operations for every one performed here.

Dr. Speaker, who calls the technology "the most exciting I've worked with," has done this procedure around 400 times to date—ten to fifteen a week, probably more than any other practitioner in the tri-state region. Director of corneal and refractive surgery at the New York Eye and Ear Infirmary, Speaker also teaches other doctors how to do it. Fewer than 10 percent of the area's approximately 1,200 ophthalmologists currently perform refractive laser surgery, and of those, a handful of talented doctors stand out—Marc Odrich and Steve Trokel at Columbia Presbyterian Medical Center East; Ken Moadel and Sandra Belmont at Manhattan Eye and Ear; Peter Hersh in Teaneck, New Jersey; Eric Donnenfeld in Nassau County. Speaker himself is listed in both *America's Best Doctors* and *New York's 1996 "Best Doctors in New York"* survey.

I try to keep this in mind when he picks up his first instrument—a device resembling a tiny apple slicer that puts ink marks on my cornea. As he places a suction ring over the marks, Dr. Speaker warns that the world will go black. It does. Then, using a microkeratome—a miniature carpenter's plane—he carefully slices a pancake sliver of my cornea, leaving a piece intact: the "flap." Those ten seconds feel like forever.

He peels back the flap and dries the underlying tissue with foam swabs. Guided by a computerized contour map of my eye, he vaporizes the too-high elevations of my cornea with a cool ultraviolet beam of light. The rat-a-tat of the machine—the "zap"—is accompanied by a faint smell of burning flesh.

It's over in minutes. The only pain is the sting of adhesive tape as Dr. Speaker lifts the drape, which seems to have been Superglued to the skin around my eye. This time, at least, I am prepared. At once a veteran and a pioneer, I had my left eye done the day before.

I sit up slowly; Dr. Speaker holds my arm as I slide onto my feet and walk twenty steps into an examination room. Before my surgery, I couldn't see the big *E* on the eye chart. Now I can read the next-to-last line. The staff gives me a pack of eye drops I'm to use for the next week, and five minutes later, walking down Second Avenue, I am almost giddy. Through a clear plastic shield on the newly zapped eye and a pair of giant nonprescription sunglasses, I can read street signs and see the faces of passersby—without contact lenses or Coke-bottle glasses. I am no longer legally blind.

## "THE PHILOSOPHY IN THE NORTHEAST IS DIFFERENT," SAYS DR. JEFFREY COOPER. "THIS IS NOT A GROUP THAT RUNS OUT AND SAYS, 'CUT ME UP AND MAKE ME BEAUTIFUL.'"

IF I HAD BEEN BORN A SLAVE DURING THE ROMAN EMPIRE, I WOULD have been considered defective and sold at a discount. I was 5 when our kindly family optometrist diagnosed "progressive myopia"—galloping nearsightedness. Twelve years later, he wrote on my college medical form "fingers at ten feet" to describe my off-the-chart vision. In 20/20 terms—"20/20" being average—my eyesight was worse than 20/1,200. What most people see at 1,200 feet—four football fields—I couldn't see clearly at 20.

About 100 million Americans are nearsighted, although only 10 percent of those are as visually impaired as I was. In a nor-

mal eye, which works like a camera, the light streams through the clear cornea and lens (the focusing elements of the eye) and travels to the retina (the film), which processes the image and sends it to the brain. But with myopia, the eyeball itself is elongated and/or the cornea is too steep or shaped like a football instead of a basketball (which causes astigmatism as well as myopia). The light does not enter the eye correctly, so the image falls short of the retina and the brain perceives distant objects as blurry. In hyperopia—farsightedness—the eyeball is too short, the image overshoots the retina, and anything close is unclear.

Such refractive errors are expressed in diopters—which measure how much the light must be bent in order for images to land directly on the retina. When an optometrist (O.D.) or ophthalmologist (M.D.) writes a lens prescription, a "minus" number indicates nearsightedness, a "plus" farsightedness. (Second and third numbers, if any, denote the degree and direction of an astigmatism.) The bigger these numbers, the worse your uncorrected vision. For example, I was a minus eleven. Glasses and contacts corrected my vision, in effect, by altering the way light entered my eyes. Laser surgery did the same thing by changing the shape of my corneas.

**D**O I SEE PERFECTLY NOW? NO, BUT I'M LIKE SOMEONE who's been in a wheelchair her whole life and now walks with a slight limp. I'm still one diopter nearsighted, but I don't need reading glasses (no mean feat at 53!) and, except for night driving, I function without any vision correction. All the same, refractive laser surgery is hardly as simple and risk-free as the ads and infomercials would have us believe. But if you're nearsighted, have tried contacts, and don't like glasses, it's certainly worth investigating.

The technology that made my surgery possible—the excimer laser—was invented by military physicists in the late seventies and refined in the early eighties at IBM to etch computer chips. So exact was its cool ultraviolet beam, the excimer also could "etch" a human hair, 50 microns thick, a fifth of a micron at a time. Dr. Trokel of Columbia, who visited the IBM labs in 1983—reportedly toting a bucket of cow eyes—was the first to write a paper suggesting the excimer's potential as a tool for sculpting corneal tissue without scarring or damaging the surrounding area.

Partly because the technology itself was so stunning and partly because the nation's 16,000 ophthalmologists were feeling the squeeze of managed care, a natural marriage transpired between eye surgeons and industry. Radial keratotomy (RK), in which a surgeon flattens the cornea by cutting spokelike slits with a scalpel, had already demonstrated that some types of nearsightedness could be corrected surgically. But photorefractive keratectomy (PRK), the procedure Trokel suggested, prom-

ised far greater accuracy. Like RK, PRK flattens the optical zone but does it with the precise ultraviolet pulses of the excimer. In 1987, after experimenting on animals and blind eyes, Dr. McDonald did the first PRK on a healthy but nearsighted human eye. The rest, as they say, is history.

BY THE EARLY NINETIES, EXCIMER-DRIVEN SURGERY WAS BEING hawked aggressively throughout the world, touted as the greatest innovation in eye-care history. In late 1995, buoyed by early clinical trials—with 95 percent of PRK patients achieving 20/40



READY, AIM, FIRE: Dr. Mark Speaker, one of the top eye surgeons in New York and a true believer in laser technology, prepares to zap the eye of author Melinda Blau—and free her from Coke-bottle glasses forever.

vision or better—the FDA gave the green light to two companies, Summit and Visx, to market their excimers. Doctors were allowed to perform PRK on patients with mild to moderate nearsightedness (up to minus seven diopters) and with no more than minus 1.5 astigmatism.

By then, a smattering of surgeons, eager to treat higher myopes, had begun experimenting with LASIK, which combined PRK (the "zap") with microkeratome surgery (the "flap"), a technique ophthalmic surgeons had been using since the sixties. Instead of ablating the surface, or epithelium, of the cornea, LASIK reshapes only the tissue underneath the flap. Officially, LASIK is done under "practice of medicine" rules, which permit doctors to use FDA-approved technology in new ways, as long as it is in an individual patient's best interests.

According to industry watcher Irving Arons, managing director of Spectrum Consulting, approximately 100,000 refractive laser surgeries (including both PRK and LASIK) have been performed since FDA approval—far short of early projections, which estimated between 300,000 to 500,000 a year by now. "It's taking longer because of the FDA restrictions, the need for training doctors, and the cost," Arons explains. Each machine costs half a million dollars to buy, and about \$60,000 a year to maintain. With such high overhead—and the controversial \$250 "royalty fee" paid to Summit and Visx, which jointly profit every time a doctor zaps an eye—doctors need between 550

and 600 eyes a year just to break even, and 760 to 800 to realize a profit, according to Dr. Kenneth P. Taylor, director of the medical-and-ophthalmic consulting unit at Arthur D. Little, Inc.

PRK retails for between \$1,350 and \$2,500 per eye, LASIK slightly more, and most insurance companies won't reimburse, deeming this "cosmetic" surgery—a point someone in my shoes would be quick to argue. In any case, for high myopes like me, cost is not a factor. Considering the cost of a couple of pairs of expensive glasses and contacts and all the paraphernalia needed to maintain them, the investment is made back in no time.

Still, there are naysayers. "I just can't recommend this procedure to my patients," insists ophthalmologist Cynthia MacKay, associate clinical professor at the Columbia University College of Physicians and Surgeons. She puts the "need" for such surgery right up there with that for liposuction and is appalled by the risks. "Have you read the consent form?" she challenges before I can blurt out that I'd already had LASIK. To be sure, the ten-page document, listing every possible side effect from minor vision problems to blindness, is a bit daunting.

The medical culture of New York, in any case, has been resistant to refractive surgery. Neither patients nor practitioners embraced RK, and we've been only slightly more receptive to PRK and LASIK. Around 3,000 to 4,000 PRKs and 1,200 LASIKs have been done here to date—a scant 5 percent of the national total. "The philosophy in the Northeast is different from anywhere else



in the U.S.," says Dr. Jeffrey Cooper, my Manhattan optometrist for the past twenty years, who recommended LASIK but never RK. "Unlike consumers in the Sun Belt, this is not a group that runs out and says, 'Cut me up and make me beautiful.'"

Of the 400 excimer lasers in operation in the U.S., New York has only fourteen machines so far, New Jersey four, and Connecticut two. Some are owned by hospitals, some by private practitioners, and some by corporate entities—wannabe Wal-Marts of the new technology. But most local lasers are "underutilized," says Dr. Speaker. Indeed, only 10 percent of those who come to seminars at Crystal Vision actually have the surgery, says a disappointed Dr. Steve Joffe, an Ohio ophthalmologist and president of LCA Vision, which owns one laser center in Manhattan, one in Westchester, and seventeen others nationwide.

"It's growing slowly," Dr. Speaker acknowledges, "but it's beginning to reach critical mass." The busiest machines, not surprisingly, are those used by the best surgeons. For example, the machine Dr. Speaker uses at the New York Eye and Ear Infirmary—owned by 20-20 Laser, a network of O.D.'s and M.D.'s sharing operating costs and profits—is responsible for a third to half of all LASIKs done locally.

Certainly, with 50 percent of the population in glasses or contacts, vision correction is big business. Some 24 million Americans wear contacts—another 10 million have tried and failed, or worn them and abandoned them. This is especially common among boomers, once heavy consumers of contacts. And although glasses are by far the safest alternative, a recent survey by LensCrafters indicates that a third of the patrons they surveyed strongly agree with the statement "I hate wearing glasses."

**W**HETHER LASER VISION CORRECTION WILL SOMEDAY BECOME a "rite of passage" is open to debate. But it's already clear that these new procedures are reasonable options for at least some people. The question is, how do you know if you're one of them?

The first step is to educate yourself: Read about the procedure—at the library, online—and talk to patients. Many doctors offer demo videos. Mark Speaker goes so far as to invite prospective clients into the operating room, which can have a calming effect—or not. I stood by in utter awe as the woman on the table, having her second eye done, cracked jokes and traded stories with him.

"People have to go into this with their eyes open," says Franette Armstrong—no pun intended. A writer excited about her own PRK, Armstrong compiled the incredibly informative and comprehensive *Beyond Glasses! The Consumer's Guide to Laser Vision Correction*. "It can wreak havoc in your life if you don't do the research, go to the right place, get the right support," she says.

Ask yourself—as I did a hundred times—why am I doing

## WHEN I CALLED ONE PARK AVENUE OPHTHALMOLOGIST AND INQUIRED ABOUT "LASER SURGERY," THE RECEPTIONIST ASKED, "FOR VISION CORRECTION OR WRINKLE REMOVAL?"

this? I had worn lenses for 39 years, but my eyes were getting drier with age. The possibility of having to wear glasses all the time pushed me over the edge—a function of both vanity and vision. I simply didn't see as well with glasses, and I felt extremely vulnerable whenever I wore them.

Some patients, like Clare Ferraro, 47, publisher of Ballantine Books, chose surgery because they ran out of options. A minus eight who had worn hard contact lenses for almost 30 years, she developed dry eyes and, after trying twenty different types of soft lenses, took the plunge. (Her post-surgical enthusiasm led



her to publish a primer on the subject, *The Eye Laser Miracle*, by California ophthalmologist Andrew Caster.)

Others elected to have the surgery out of concern about eye infections and other long-term implications of wearing contacts—or they simply no longer wanted the hassle. *Sports Illustrated* editor Paul Fichtenbaum, 36, a self-confessed "baby" when it comes to surgery, had been wearing lenses for fifteen years to correct his minus-four vision. "It's the little things that other people take for granted—like when I take a shower and put my 14-month-old son in the playpen, not being able to see him across the room," he told me days before his surgery.

The worse your vision, the greater your motivation. But if you're only slightly nearsighted and don't mind glasses or contacts, risk may outweigh gain. One of the few disgruntled PRK patients I talked with was only a minus three before surgery. She experienced severe discomfort for two weeks after the operation and was so disappointed with the results, she not only refused to have the second eye done but was considering suing the sur-

geon. Still, when I told her how nearsighted I was, she said, "Oh, your case is different. I'd have the surgery if I were you."

It's important to remember that many of the vocal supporters of the excimer laser are often the same surgeons who did clinical trials for the manufacturers; many M.D.'s and O.D.'s are heavily invested in equipment. It's not a bad idea to ask a practitioner about his or her personal stake in the technology. Get a second opinion—from someone up-to-date on all types of vision correction. I went to Barry Farkas, a Manhattan contact-lens specialist, who agreed I'd be a good candidate for LASIK.



**DON'T EVEN THINK ABOUT BLINKING:** Metal forceps hold open Blau's eye so the laser can work its magic. At left, a human hair etched by the excimer laser.

Beware of slick advertising or places where surgery is the only "product" sold. "It felt like a meat market," recalls Debra Ervolino, 32—a minus six in one eye, minus seven in the other—who works in sales on Seventh Avenue. She had been following PRK since she read about its being done in Russia and Germany. When the FDA finally approved the procedure here, she went to Crystal Vision's free seminar: "It was rush, rush, rush—*We can do it for you right now*. I had questions, and they just weren't very sympathetic." The supermarket approach is not uncommon. When I called one Park Avenue ophthalmologist and inquired about "laser surgery," the receptionist asked, "For vision correction or wrinkle removal?"

Based on your prescription and your goals, the surgeon will propose either PRK (just the zap) or LASIK (the flap and zap). According to Dr. Robert Maloney of UCLA, one of the principal investigators in an ongoing national study, the two procedures have comparable results—although the vision of LASIK patients improves more quickly, and they have less or no post-op pain. LASIK, however, requires a higher degree of surgical skill. In unsure hands, or with a poorly functioning microkeratome, the flap can be sliced off or get caught in the machine and end up wrinkled; it can be relaid off-center; particles can get caught underneath. With PRK, which is technically less demanding but far from foolproof, the epithelial layer is zapped directly. It can result in corneal haze, scarring, a halo effect at night, or a central island (a bump on the cornea).

If you're extremely nearsighted, you may not have a choice. Given the currently approved excimers, LASIK is the only procedure done on patients whose vision is worse than minus seven. If you have a greater-than-minus-1.5 astigmatism, you'll have to wait for the Visx "Star" laser, already approved for nearsightedness, soon to be approved for astigmatism up to minus four

diopeters. And if you're farsighted, hyperopic excimers and the even newer holmium lasers are a few years away from approval.

No surgeon can, or should, guarantee 20/20 vision. In fact, one of the risks of both surgeries is under- or overcorrection. The more correction one needs, the harder it is to hit the target. Five to 10 percent of undercorrected PRK patients go back for an "enhancement," as do 10 to 25 percent of LASIK patients—admittedly, higher myopes who have more to correct. Overcorrection, which makes you farsighted, is more difficult to remedy. At worst, either surgery could cause "irregular astigmatism"—a wrinkled cornea—which only rigid contact lenses can correct.

The most honest surgeons admit that it's impossible to predict the idiosyncrasies of healing. After my first operation, I could see across the room. The bad news was that I couldn't read anything—a problem Paul Fichtenbaum also experienced. Although Speaker and Cooper assured that "the reading vision takes longer to come in," I, who make a living with words, was not convinced. By the next morning, though, I glanced at my sister's copy of the *New York Times* and, like an ex-

cited first-grader, exclaimed, "I can read!"

I had virtually no discomfort with the left (first) eye. But the morning after the second operation, I woke up in pain. My right eye was tearing profusely, as if something was in it. At Dr. Speaker's office, his associate confirmed that my cornea had been slightly abraded by the suction ring. Within three hours—and after several doses of anti-inflammatory drops—the pain was a distant memory.

Still, no one warned me about the dryness. There I was, in the lens wearer's version of *No Exit*—feeling as if I had left my contacts in too long and was unable to take them out! The discomfort was instantly relieved by wetting drops, but for the first week to ten days, I had to hose down my eyes every fifteen minutes.

There was some psychological adjustment as well: I became totally obsessed with my new eyesight, its nuances, its deficiencies at night, my lack of depth perception. I tired easily and wasn't "back at my desk in a day or two," as some claimed they were. But gradually, my vision improved, and I got used to it. Today, I don't have a moment's regret.

Most trailblazers in the brave new world of laser refractive surgery are equally delighted with the results. But the first tier of customers have been mostly the rare Mister Magoo types, like me, for whom the surgery was hardly cosmetic. The question is, will the average Jane or Joe buy into this technology, take the risk of having an operation, and shell out five grand in the bargain—just for the privilege of not wearing glasses? Laser-stock speculators predict a future of storefront clinics where one can simply drop in for a quick vision fix. The technology itself, already earning high marks for safety, is bound to get even better and doctors more proficient. And as more and more people cast aside those Matsuda frames and queue up for the Zap, thick, cumbersome glasses may become a twentieth-century relic.