

# PERSONAL BEST

HOW TO LOOK GOOD, FEEL GREAT, STAY FIT • EDITED BY DEBORAH FRANK

## THE STATE OF PLASTIC SURGERY 2012

Special  
Section

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It's gotten so ubiquitous and seemingly, well, transforming that plastic surgeons say patients literally rip out the celebrity pages from magazines, point to so-and-so's lips, chin, ears and/or cheekbones and, in *When Harry Met Sally* style, place their order for a makeover along the lines of "I'll have what she's having." But it's hardly that simple. Though the plastic surgery obsession has been tempered by the current economy, it's still about a \$10.7 billion-a-year industry. We aren't doctors, nor do we necessarily condone or encourage surgery, but we called on top-rated surgeons, as well as other experts in the field, for the following overview of The State of Plastic Surgery Now.



SMART ADVICE  
EIGHT STEPS TO CHOOSING DR. RIGHT

*It's an important decision. Get the facts straight.*

The relationship between plastic surgeon and patient is a kind of marriage, and the odyssey of identifying the right partner for your own particular needs is not unlike finding the right mate: It requires some due diligence. You'll probably start by asking friends, family—basically anyone you know who has had “good work” done—plus your already trusted team of medical professionals for recommendations.

If that's not enough, you may turn to one of the matchmakers in this realm: consultants who will open up their M.D. Rolodexes and walk you through the process. When hiring a consultant, confirm in writing that he or she does not accept referral fees or other compensation from the doctors recommended. Whichever way you go about your research, keep in mind these eight important tips.

**✓ KNOW THE LINGO.** Terms like “antiaging specialist” and “cosmetic surgeon” are unrecognized by the American Board of Medical Specialties but increasingly used by general surgeons, ear/nose/throat specialists and even dentists who want a share of the market. The ABMS acknowledges the American Board of Dermatology and the American Board of Plastic Surgery (which, in turn, certifies the American Society for Aesthetic Plastic Surgery). “Cosmetic surgeons’ was used to sound more

user-friendly,” says New York-based consultant Francesca Camp (917-685-8719). “But now any M.D. can take a weekend course and do procedures. My gynecologist is doing Botox!”

**✓ STEER CLEAR OF ADS.** “A lot of doctors are not that good but have powerful PR,” says Manhattan plastic and cosmetic surgery consultant Denise Thomas (denisethomas.com). “I’d never go to a doctor who advertises. Often the best are the quiet ones you may not hear about, like a great neighborhood restaurant.”

**✓ SEE MORE THAN ONE SURGEON.** “It’s not uncommon to see five qualified people and get five different opinions,” says consultant Wendy Lewis, who works with clients in Palm Beach, New York and London (knifecoach.com). “You can walk out with your head spinning. There’s never one option; there are even multiple alternatives for a bump on the nose.”

**✓ AVOID ONLINE FORUMS.** Those affidavits from satisfied patients aren’t always legitimate. “I’ve seen doctors sitting in their offices writing about themselves under various screen names,” says Thomas.

**✓ PREPARE FOR THE RECOVERY PERIOD.** “A big problem is doctors’

downplay of the downtime,” says Camp. “Sure, you can go back to work in a few days—if you work in a cubby where nobody will see you. Whatever the doctor tells you, double it.”

**✓ DO PHOTO RESEARCH.** “Most people judge a doctor’s skill with before and after photos,” says Lewis. “There are doctors who play fast and loose with Photoshop, but there’s still a lot you can tell by pictures. Does he overoperate or under-operate? Do the patients look better? If they all look like Joan Rivers, this isn’t the right guy. The hard part is finding photos that look like you.”

**✓ WATCH YOUR WEIGHT.** The truth is that some doctors don’t want to do facelifts on obese people. “It might be because they think the outcome won’t be great—there’s only so much skin that can be pulled back—and they don’t want to be associated with the result,” Thomas says. “Most importantly, they are concerned about the patient’s heart health.”

**✓ MAKE THE APPOINTMENT.** “There used to be more doctors who would tell patients to wait, to come back in five years,” says Lewis. “Now a lot of good doctors aren’t as busy and are happy to see you.”

ADVISORY BOARD

THE EXPERTS

Over the course of approximately six months, more than 30 plastic surgeons, dermatologists and other experts in aesthetic procedures were consulted for this special section. The following physicians, all certified by either the American Board of Plastic Surgery or the American Board of Dermatology, are considered among the best in their respective fields.

**ROBERT M. BERNSTEIN, M.D.**

Dermatologist and hair-transplant surgeon who pioneered the Follicular Unit Transplantation procedure; [bernsteinmedical.com](http://bernsteinmedical.com).

**JEFFREY S. DOVER, M.D.**

Founding editor of Journal Watch for Dermatology and laser-surgery dermatologist who has authored more than 350 scientific publications; [skincarephysicians.net](http://skincarephysicians.net).

**FELMONT F. EAVES III, M.D.**

Specialist in minimally invasive endoscopic plastic surgery and coauthor of the first textbook on the topic, and former president of the American Society of Aesthetic Plastic Surgeons (ASAPS); [charlotteplasticsurgery.com](http://charlotteplasticsurgery.com).

**GERVAISE GERSTNER, M.D.**

L’Oréal Paris consulting dermatologist and assistant clinical professor of dermatology at New York’s Mount Sinai School of Medicine; [gerstnermd.com](http://gerstnermd.com).

**JOE GRYSKIEWICZ, M.D.**

Coinventor of the Insoorb surgical stapler and expert in breast augmentation, rhinoplasty and body contouring, and chairman of the ASAPS Emerging Trend Task Force; [tcplasticsurgery.com](http://tcplasticsurgery.com).

**GERALD IMBER, M.D.**

Manhattan plastic surgeon, author of *The Youth Corridor* (William Morrow) and a pioneer of the limited-incision short-scar facelift; [drimber.com](http://drimber.com).

**HAROLD LANCER, M.D.**

Dermatologist and creator of the Lancer method and skincare line, a three-step beauty routine with minerals from the Dead Sea, and assistant clinical professor of dermatology at UCLA School of Medicine; [lancerdermatology.com](http://lancerdermatology.com).

**MICHAEL F. MCGUIRE, M.D.**

Past president of the American Society of Plastic Surgeons and a director of the American Board of Plastic Surgery; [michaelmcguiremd.com](http://michaelmcguiremd.com).

**J. PETER RUBIN, M.D.**

Chief of plastic surgery at the University of Pittsburgh and an innovator in post-weight loss body-contouring surgery; [mirm.pitt.edu](http://mirm.pitt.edu).

**AMY WECHSLER, M.D.**

Dermatologist and author of *The Mind-Beauty Connection* (Free Press), a nine-day regimen intended to reverse stress-induced aging; [dramywechsler.com](http://dramywechsler.com).

**ROBERT WEISS, M.D.**

Associate professor at Johns Hopkins University School of Medicine and past president of the American Society for Dermatologic Surgery; [mdslsv.com](http://mdslsv.com).

**FACT**

Sixty-seven percent of Americans said they would not be embarrassed if their friends or family knew they had plastic surgery.

**PHYSICAL CULTURE**

# Latest in Liposuction

*In the world of cosmetic medicine, the fight against fat rages on.*

**T**he first serious way to attack unwanted body fat was liposuction, using equipment originally designed for abortions. It wasn't long before lasers were added to disrupt the membranes of fat cells and help emulsify them. "Laser liposuction is another example of so much money invested in getting these machines out in the market that they often end up in the hands of untrained people," says Felmont Eaves, M.D., immediate past president of the American Society for Aesthetic Plastic Surgery. "We see patients who are burned, whose skin looks like cobblestones, who have scars within the fat. Most board-

certified plastic surgeons have abandoned the procedure."

And last July, a study done at the University of Colorado found that among women who had liposuction on their thighs or lower abdomen, the fat returned after a year, redistributed to the upper abdomen, shoulders or arms. Researchers explained that the body "defends" its fat, carefully controlling the number of cells.

## Injections

Mesotherapy (often called lipodissolve), a treatment that offered fat-melting injections composed of chemicals originally used to dissolve gallstones, proved unsuccessful for one important reason: Body fat exists in a mesh of fibers placed at irregular angles to each other, making it almost impossible for the chemicals to spread out evenly. "I saw lumpy, bumpy and irregular results," says Baltimore dermatologist Robert Weiss, M.D. "The procedure created a lot of inflammation, tenderness and pain. It would release fat into the bloodstream very quickly." The FDA has not approved any injection drugs to eliminate fat, and last April it sent warning letters to companies making misleading claims

*The fat returned after a year, redistributed to the upper abdomen, shoulders or arms.*

about the products used in lipodissolve, a procedure whose formula usually contains the drugs phosphatidylcholine and deoxycholate, and sometimes includes extra components like vitamins, minerals and herbal extracts. The adverse effects included permanent scarring, skin deformation and deep, painful knots under the skin in areas where lipodissolve was performed.

## Cool Sculpting

What the FDA has cleared are two new devices that fall under the heading of "cool sculpting." Fat is more cold-sensitive than other tissues, and the cold causes it to solidify without injuring the skin or underlying muscle. "It works the same way as soup that's refrigerated overnight, so you can trim the solid layer of fat," says Dr. Weiss.

With Zeltiq, a part of the body the government calls "individual flanks" (love handles) is pulled into the device and subjected to extreme cold for about an hour. Over a period of about two months, the frozen fat cells die and are slowly released into the bloodstream. Cool sculpting is not meant to address being overweight. "It's good for a Victoria's Secret model who just has a little saddlebag," says New York dermatologist Gervaise Gerstner, M.D.

The other new device, Zerona, is based on technology known as "cold laser," to produce small reductions in the waist, hips or thighs by causing fat cells to release their contents. Despite FDA clearance in 2010, there are detractors. "It's a primitive device, with low benefits," says Harold Lancer, M.D., an assistant clinical professor of dermatology at UCLA School of Medicine. "No reputable physician I know has it in their office."

## WARNING

The FDA has not yet approved UltraShape and LipoSonix, which claim to dissolve fat with technology based on ultrasound.



## CELLULITE: MYTH VS. REALITY

Stay away from anyone who claims to be able to get rid of cellulite. "It's a genetically programmed flaw of the collagen and elastin fibers that runs from the bottom layer of the skin through the fat all the way down to the lining of the muscle," says Dr. Lancer. "Cellulite is a cobweb of deranged, malfunctioning fibers." We know that salt retention and a high-carbohydrate or high-fat diet have something to do with making it worse in the genetically predisposed person, but is there a way to treat it? Absolutely not. All these supposed treatments work by temporarily swelling the skin, yet none are long-term. Throw yourself down the stairs: The swelling will be so immense that you won't notice the cellulite. And you must be meticulous about your diet. Eat one potato chip, and you're basically screwed."



CAN A  
DERMATOLOGIST  
DO MY JOB?

**GERALD IMBER, M.D.**  
PLASTIC SURGEON

**VIEW-POINT**

“Any licensed physician can call himself or herself a plastic surgeon or, for that matter, a neurosurgeon or a psychiatrist. That’s the law. It’s been left to hospitals to determine who is trained to do what. But cosmetic procedures usually don’t take place in the hospital, and there is often no oversight at all. Yes, there’s a healthy overlap between specialties. For example, dermatologists are fully qualified to inject fillers and Botox—it is not rocket science; they are also laser experts. There are, however, gray areas beyond these simple shared efforts, and that is where issues with outcomes and patient safety arise. Patient safety, as differentiated from the quality of the results, is generally lax when individuals perform procedures for which they are not adequately trained. The best is available—why would anyone settle for less?”

**OBSESSIONS**

**STOPPING THE ADDICTION**

*Perception plays a dangerous mind game.*

There is no Betty Ford Center for cosmetic surgery junkies, but perhaps there should be. Every year the red carpets for the Oscars, Emmys and Grammys reveal a fresh crop of celebrities who keep nipping and tucking until they’re virtually unrecognizable. And the obsession affects mere mortals too: According to the American Society of Plastic Surgeons, the number of cosmetic procedures has jumped 77 percent in the last decade. This ongoing cultural obsession with appearances and youth has spawned a growing number of plastic surgery addicts.

“Sometimes I feel like a mental-health professional,” says Robert Weiss, M.D., a dermatologist in Hunt Valley, Maryland. “People get fixated on things they see in a magnifying mirror that nobody else notices. I tell most patients, ‘Let’s do the absolute minimum.’ Then there are those who feel that getting work done is the only way to stop aging. You don’t want to

confuse maintenance with being age-obsessed. If you’re 55, you can’t possibly look like you’re 25—but you can keep people guessing.”

“It’s our job as physicians not to do a procedure just because someone wants it,” says New York-based Amy Wechsler, M.D., one of only two doctors in the country who are board-certified in both dermatology and psychiatry.

**“IF YOU’RE 55, YOU CAN’T POSSIBLY LOOK LIKE YOU’RE 25, BUT YOU CAN KEEP PEOPLE GUESSING.”**

“Managing patient expectations is very important. We don’t want people to think they’re going to have a Cinderella effect, that their entire look is going to change, that they’ll get the man or get the job. This is never the reality.” The motivation may be the same as in Hollywood. “Sometimes it’s ageism in the workplace,” says

Dr. Wechsler. “A patient will come in and say, ‘I didn’t really think I’d be doing this yet, but my company is hiring all these twentysomethings.’ Some people express concern that having cosmetic procedures could be a slippery slope, but I assure them I won’t let that happen. If the work is done well, the less you need.”

**TREND WATCH**

**WHAT ARE YOU DOING FOR LUNCH?**



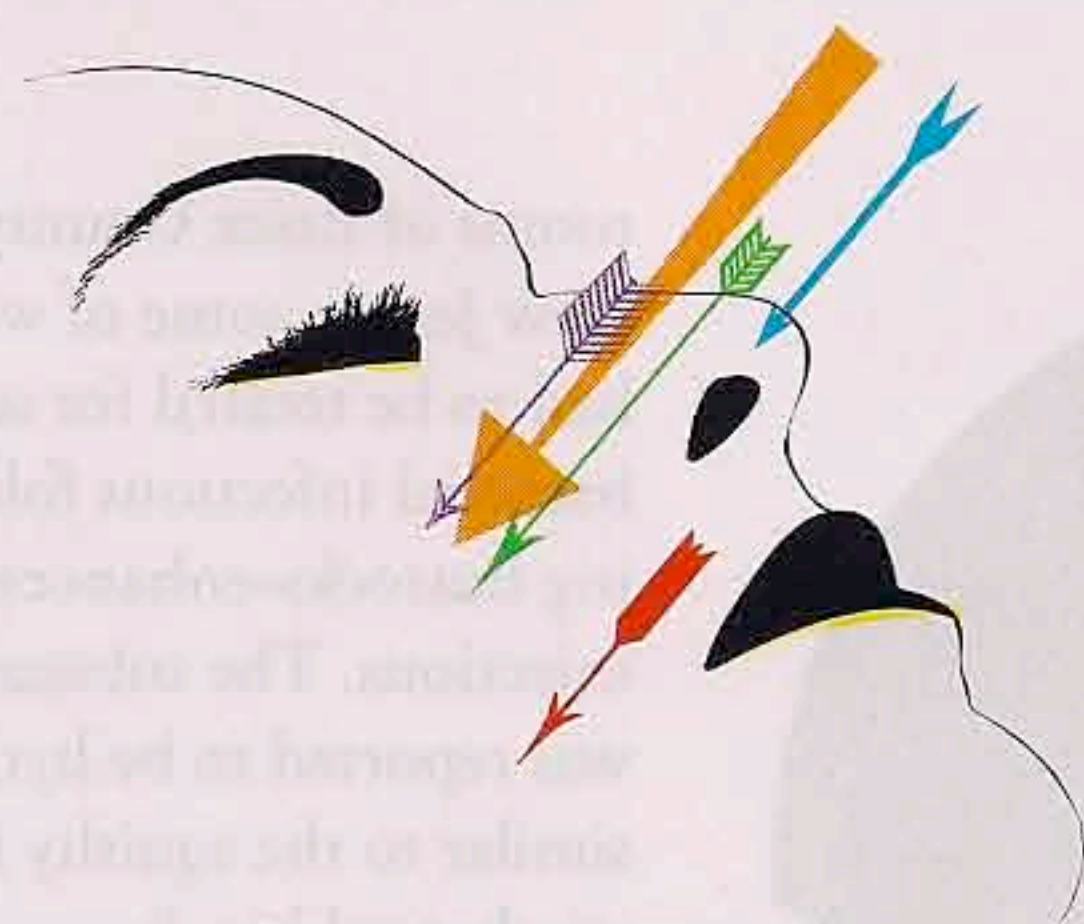
Going for a quick self-improvement session of Botox or a laser treatment, often referred to as the “lunchtime procedure,” can be tempting. “But beware,” says Felmont Eaves, M.D., a plastic surgeon in Charlotte, North Carolina.

“There’s so much greed without accountability from doctors who prey upon our desire for less scarring, less anesthesia, less downtime.”

New York plastic surgeon Gerald Imber, M.D. (see “Viewpoint”), pioneered the short-scar facelift, which

uses a small incision in the sideburns to lift the muscles under the skin. “The word ‘noninvasive’ gives patients a false sense of security,” he says. “Take Sculptra, touted as a non-invasive filler—people have reported uncontrollable

growth of collagen nodules.” Boston dermatologist Jeffrey Dover, M.D., agrees: “People get hurt by nondoctors in some states who are allowed to perform such procedures. This isn’t like a bad renovation; you can’t just call in a new carpenter.”



SERIOUS SKINCARE

# Laser Resurfacing IN OFFICE AND HOME

*New technologies claim to zap out everything from fine lines to brown spots quickly, but are they safer?*

Until recently, blasting the skin with a carbon dioxide laser was the ne plus ultra of complexion renewal, but it involved a serious trade-off. The CO2 laser produces a beam of infrared light, which is absorbed by water in the skin, and that beam does a lot of damage. "With CO2, you look like a burn victim for weeks afterward," says Gervaise Gerstner, M.D., a dermatologist in New York City and assistant clinical professor of dermatology at Mount Sinai School of Medicine.

The recent game-changer is the fractional laser (two predominant brand names are Fraxel and Affirm). Instead of that one beam, light is delivered in thousands of tiny columns, leaving the surrounding tissue intact and allowing for faster healing. "It makes micro-cuts in the skin and targets the body's own collagen to re-spackle," explains Dr. Gerstner. There are settings for two wavelengths: One can lift fine wrinkles, reduce pore size and lighten deep acne scars; the other can address sun damage, brown spots and the dark coloration

called the "mask of pregnancy." A physician can control the strength and power of the laser. "I usually start with what I call the 'Upper East Side setting,'" says Dr. Gerstner. "People will be pink for one or two days. Then, after they know how their skin heals, they might say, 'I don't have anything on my social schedule. Pummel me.'"

An article published in *Journal Watch Dermatology* warns that the neck and eyelids

are especially susceptible to scarring with the procedure. "Very rarely, a patient will develop temporary hyperpigmentation after a treatment if she or he is not vigilant about sun protection," says Dr. Gerstner.

Perhaps unsurprisingly, not everyone agrees. "There's no question that CO2 is still the gold standard," says Michael McGuire, M.D., a plastic surgeon in Santa Monica, California, and past president of

the American Society of Plastic Surgeons. "Even people who have spent their lives working outdoors can get dramatic improvement—skin tightening, removal of sun damage. But I wouldn't be doing CO2 if it weren't for an oxygen amino-acid spray, which means we don't have to use antibiotics, six weeks of preparation and that long healing process. Fraxel helps you heal faster, but you don't get the same results."

## TRIED & TESTED

**THE IDEA OF ANY LASER in untrained hands seems dangerous, so with the proliferation of at-home cosmetic gadgets, DEPARTURES decided to ask the staff nurses and aestheticians at the IMBER CLINIC ([drimber.com](http://drimber.com)) to test four of the most promising new devices available.**

**1. WRINKLEMD** employs anatomically shaped patches that fit around the eye area where smile and squint lines form. A mild electric pulse delivers hyaluronic acid into the skin. This is the same stuff in Juvéderm and Restylane. The idea is to reduce wrinkles without injections. **GOOD NEWS** It works. Eye wrinkles were definitely reduced for 24 hours. Great to prep for a big event.

**BAD NEWS** The electric pulses cause a pricking sensation, and the device is meant to be used for 40 minutes twice a week for the first two weeks (then once a week afterward), a commitment many will find too time-consuming. \$130; [universitymedical.com](http://universitymedical.com).

**2. LIGHTSTIM FOR WRINKLES** is a handheld LED device meant to stimulate collagen production and lessen wrinkles. It is applied for three minutes five times a week. **GOOD NEWS** Skin takes on a warm glow, which may be necessary for collagen production, and observers report inflammation reduced in areas with acne.

**BAD NEWS** It takes six to eight weeks to see results,

and treatments can go up to 30 minutes a day for large areas. Continued use is necessary. \$300; [lightstim.com](http://lightstim.com).

**3. TRIA HAIR REMOVAL LASER** works on the premise that the dark pigment in hair absorbs the beams of laser energy, converting them to heat and basically disabling the hair follicle to prevent it from growing new hair.

**GOOD NEWS** This user-friendly laser is an excellent, comfortable hair removal device.

**BAD NEWS** It's little. All laser hair removal requires at least five treatments over five months to attack the hairs in various stages of their growth cycles. With its tiny head, this de-

vice will be irritating to use on large, hairy areas. But for small areas on people with fair skin and dark hair, it is an inexpensive alternative to professional laser hair removal. \$395; [triabeauty.com](http://triabeauty.com).

**4. PALOVIA SKIN RE-NEWING LASER** is a junior version of professional fractional light devices. It is touted to reduce wrinkles around the eyes. **GOOD NEWS** It's well designed, comfortable to use and will help build collagen to fight and possibly even eliminate wrinkles.

**BAD NEWS** It requires a real commitment. Five minutes a day for at least 30 days to see results, even longer for a better outcome. \$500; [palovia.com](http://palovia.com).



**SAFETY  
ALERT**

## Risky Business

*While certain cosmetic procedures may sound cutting-edge, many are not yet approved to do what doctors claim. Here, three to avoid.*

Rumor has it that the face of one great French beauty is held up by a fine mesh of 22-karat-gold stitches. This technique, supposedly perfected in Paris, hasn't caught on, but consumers continuously search for the latest way to achieve youth and beauty—yet certain methods have proven to be unproven.

### Bringing Up the Rear

In March 2010 six women showed up in the emergency

rooms of Essex County, New Jersey, some of whom had to be treated for serious bacterial infections following buttocks-enhancement injections. The substance used was reported to be hydrogel, similar to the squishy blue patches sold in drugstores to protect blisters. According to the Physicians Coalition for Injectable Safety, the FDA has not given the green light for its use as a filler or an injectable for the buttocks.

“Hydrogel is really thick, so it’s great for creating a nice barrier, like a second skin,” says Robert Weiss, M.D., a Maryland-based dermatologist. “Sure, it has a lot of volume to it, but our buttocks have many big vessels, and it can travel back to the lungs. It’s more often used

in countries where there is less fear of lawsuits and organizations like the FDA.” Fat from your own body and gluteal implants are considered the only safe measures for augmenting this part of the anatomy.

### Getting Sedated

Breast augmentation, liposuction and even facelifts done under sedation rather than general anesthesia have been marketed as superior because the patient can “participate” by, for example, giving her opinion on the implant size or thigh shape. “It’s a gimmick being promoted to appeal to people who fear anesthesia,” says Michael McGuire, M.D., a director of the American Board of Plastic Surgery. “Standing

someone up who’s under a lot of sedation—to me it’s absurd, it’s malpractice. If you know what you’re doing, you can pinch and feel and tell what the results will be. And the level of anesthesia for these procedures is not what is needed for, say, a hip replacement. The patient is out of it for the duration but will wake up quickly.”

### Lifting Sagging Skin

To reduce the downtime and cost of a facelift, some people have turned to a procedure using barbed sutures that are

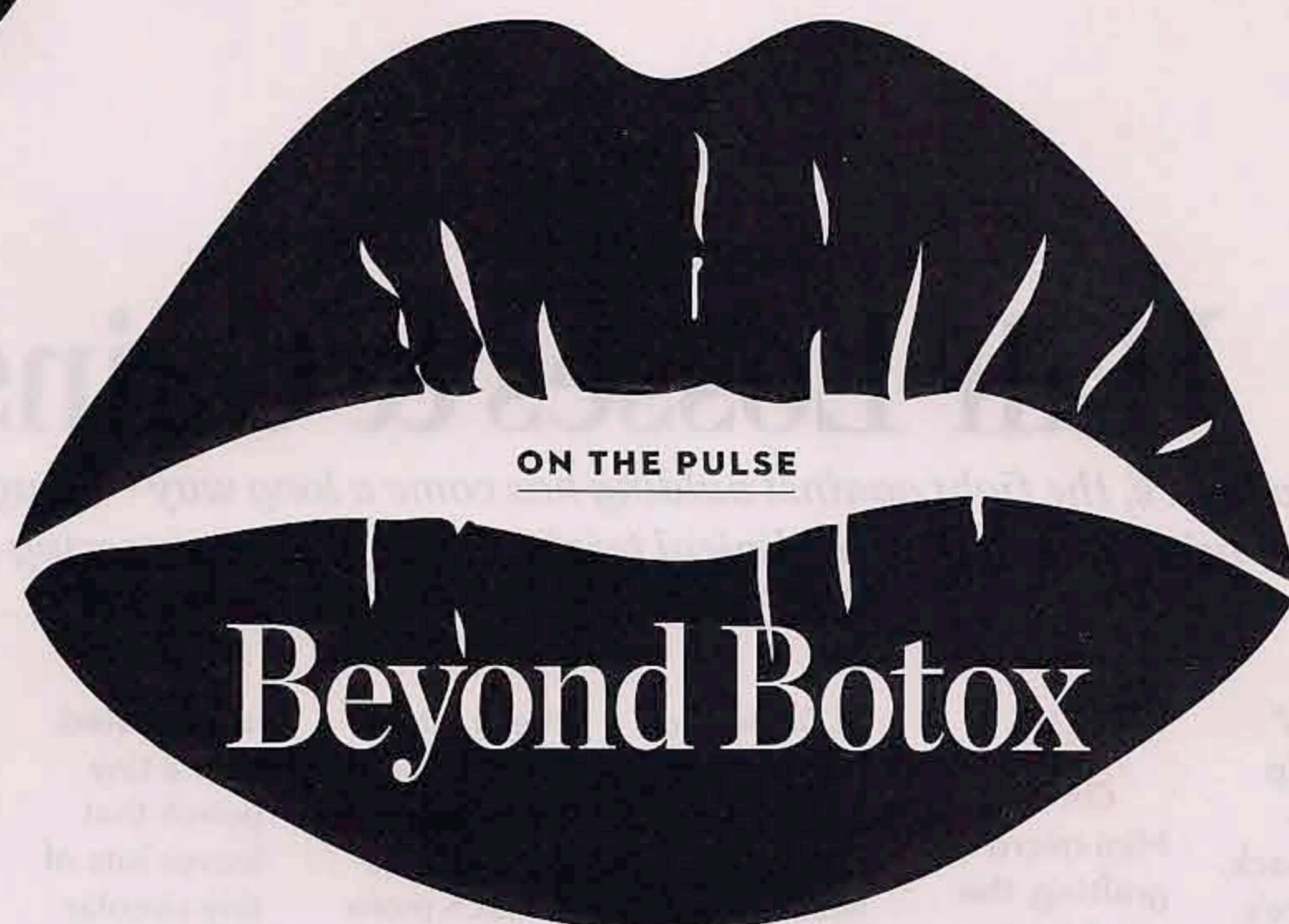
actually sewn under the facial tissues to grab and lift sagging skin. “Threadlifts appear to be DOA,” says North Carolina plastic surgeon Felmont Eaves, M.D. “The vast majority of surgeons who tried them have

abandoned them, believing they lacked predictability, and the results, if any, were very transient. Sometimes one could even see the threads tethering; they just didn’t hold the tissues long-term. Tissues grow and remodel, and the tension will not stay.” In a study published in 2009 in *Archives of Facial Plastic Surgery*, researchers found that the thread-lift provided only limited short-term improvement, which might be largely attributed to swelling and inflammation after the procedure. Its conclusion: “Given these findings, as well as the measurable risk of adverse events and patient discomfort, we cannot justify further use of this procedure for facial rejuvenation.” ■

**“THREAD-LIFTS APPEAR TO BE DOA. THE RESULTS, IF ANY, WERE TRANSIENT.”**

**FACT**

According to UCLA, the most accurate test of a person's real age is...saliva.



*It's become known as the go-to eraser of frown lines and furrows, yet Botox and other smoothers are still toxins. Fillers, which are basically hyaluronic acids, can do the same thing and, until recently, were considered temporary, with any undesirable outcome being dissolved and reabsorbed by the body in a few days or even within 24 hours. The game continues to change with new players on the roster, and the winner is yet to be determined.*

**SMOOTHERS****FILLERS****SETTING THE PACE**

The bacteria botulinum produces several toxins: One causes botulism in food, another makes up the active ingredient of **Botox** and another is the key to **Dysport**, a new Botox competitor believed to be easier to spread, giving a slightly more even look in the forehead and eye area, although the spreading can also cause droopy eyelids. (Alert: The makers of Botox and Dysport warn that botulinum toxin may affect areas of the body away from the injection site and cause symptoms of botulism, even weeks later.)

There are actually fewer fillers now than several years ago, partly because some have stood the test of time medically and some were introduced during the recession. Hyaluronic acid, a synthetic form of a natural substance found in connective tissues, is used in **Juvéderm**, **Perlane**, **Restylane** and the newer **Prevelle**. Most of these now contain lidocaine to mitigate the discomfort of injection.

**TAKING ON CHALLENGES**

**Xeomin** claims to be the untainted neurotoxin, "purified" of any proteins, so it may reduce the risk of developing antibodies—a major reason injections may have less of an effect or may not last as long. It was recently approved by the FDA, but only to be used for abnormal head position, neck pain and excessive blinking. Cosmetic use, while not illegal, would be considered off-label.

Fillers are now being used in what's sometimes called a **liquid facelift**, plumping the face without incisions. "It's almost painless, you get an immediate result and we see little or no bruising," says Boston dermatologist Jeffrey Dover, M.D. It may be non-cutting, but it's also temporary (lasting about a year in the cheeks, temple and jawline). After a small amount is injected during the first visit, the patient must return a few weeks later, then every four to six months for touch-ups.

**RACING TO THE FINISH**

A topical version of botulinum toxin, known in clinical trials as **RToo1**, is designed to reduce crow's-feet by relaxing the muscles around the eyes. The latest results confirm that the toxin's large molecules don't cross the skin barrier to be absorbed into the body. But that also may mean it's not useful where the skin is thicker, such as the forehead.

Until recently, all fillers were considered temporary, but more long-lasting results are now available. Semipermanent products include **Sculptra** (a synthetic similar to the material used in dissolvable sutures), **Artefill** (an acrylic that's used in making a shatterproof alternative to glass) and **Radiesse** (a calcium salt with a consistency similar to toothpaste). All are meant for heavier filling, like for "marionette lines" around the mouth.

According to the American Society for Aesthetic Plastic Surgery, the average cost for Botox and Dysport is \$400; for hyaluronic acid fillers like Juvéderm, Perlane and Restylane, \$560; for Sculptra, \$900; and for Radiesse, \$710.



# Hair Losses & Gains

*From plugs to lasers, the fight against balding has come a long way—though its future is still uncertain, with cloning in clinical trials and genetic engineering a dream.*

**1939**  
Japanese doctor Shoji Okuda is the first to publish the results of clinical hair-transplant experiments.

**1952**  
Dermatologist Norman Orentreich, M.D., uses four-millimeter punches to perform the first hair transplants, popularizing “hair plugs” to treat male-pattern baldness. Each plug of some 20 hairs is taken from a

“donor site” on the scalp (usually toward the back, where there’s adequate growth). They are bulky and, more often than not, the results look like a poorly hoed garden.

**1984**  
Mini-grafting—the use of grafts containing up to six hairs—is introduced.

**Late '80s**  
Mini-micro-grafting, the combination of mini-grafts and smaller micro-grafts containing one or two hairs, becomes popular as a more natural alternative.

**1995**  
New York dermatologist Robert M. Bernstein, M.D., and New Hair Institute founder William Rassman,

M.D., develop Follicular Unit Transplantation (FUT), which uses a special microscope to identify individual units of one to four hairs, plus nerves, blood vessels and a tiny muscle called the erector pilorum (the same muscle that makes a cat’s hairs stand on end). Transplanting

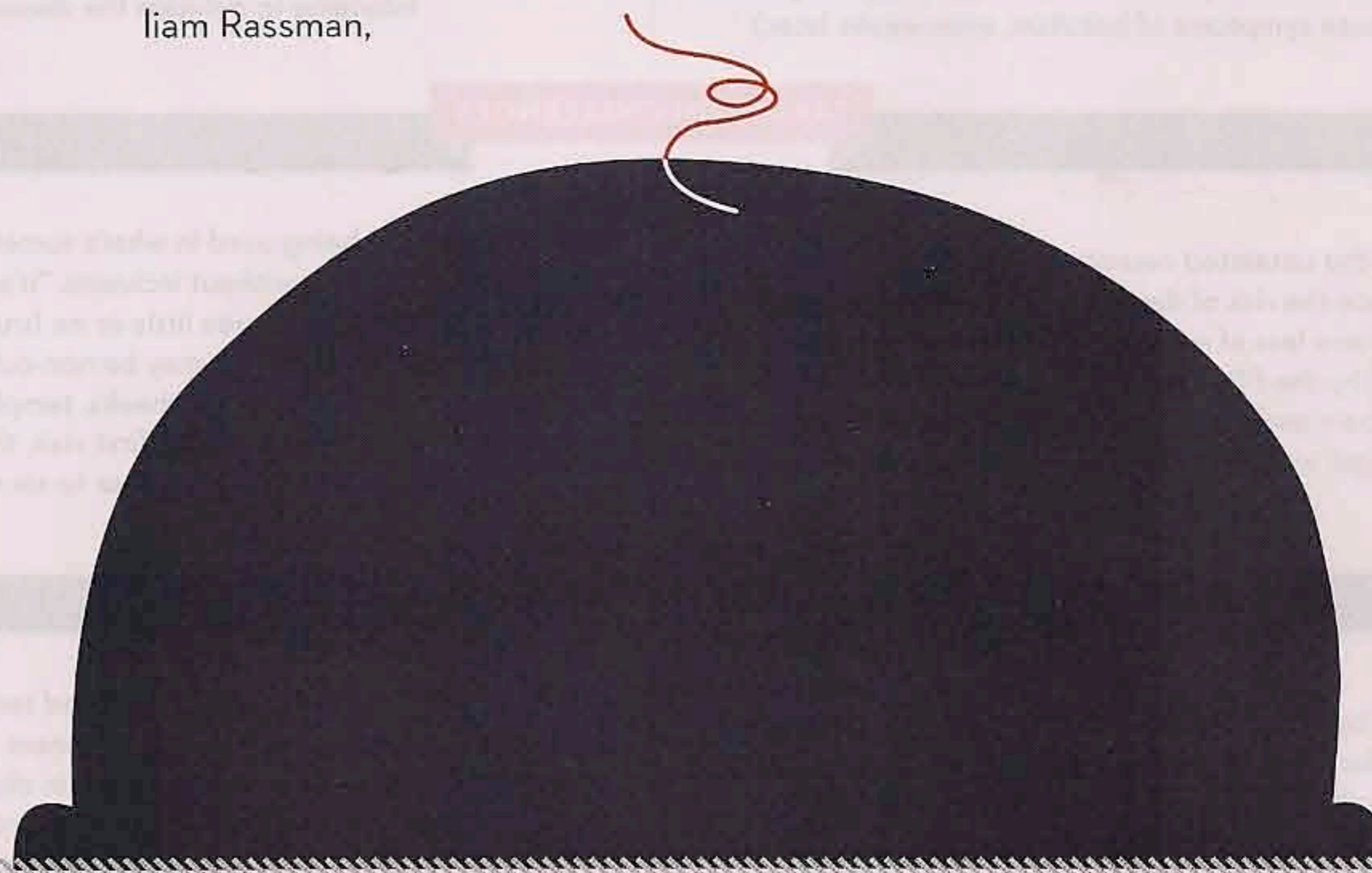
these intact units ensures their maximum survival and a much more natural look.

**2002**  
Dr. Bernstein and Dr. Rassman offer even more refinement with Follicular Unit Extraction (FUE). With FUT, the donor hair is harvested in a single strip, leaving a linear incision; with FUE, the hair

is harvested with a tiny punch that leaves lots of tiny circular incisions—a noticeable advantage for patients who want to wear their hair short. The disadvantage is that FUE requires a much larger donor site, and the results may not all be permanent.

**2007**  
The FDA clears low-level lasers, which promise that the absorbed light will stimulate cell metabolism and protein synthesis to regrow hair. “For women, we don’t have much else to offer, and the benefit is subtle at best,” says Dr. Bernstein.

**2008**  
Latisse, a prescription treatment to grow thicker and longer eyelashes, is cleared by the FDA. Now Allergan, the company behind Latisse, is doing a clinical study about a new formulation of bimatoprost (the active ingredient in Latisse) for male-pattern baldness and moderate female-pattern hair loss. The world waits with bated breath.



## THE EYES HAVE IT

Latisse, the wonder product that helps grow longer, thicker eyelashes, is sometimes prescribed off-label for over-plucked eyebrows. Though there has been a recent influx of over-the-counter brow products, they have not been approved by the FDA. In the future, says New York dermatologist Gervaise Gerstner, M.D., there will be skin patches, just like nicotine patches, for eyebrow and any other kind of hair growth, but these are five to seven years down the line. Until then, there is always the eyebrow pencil.



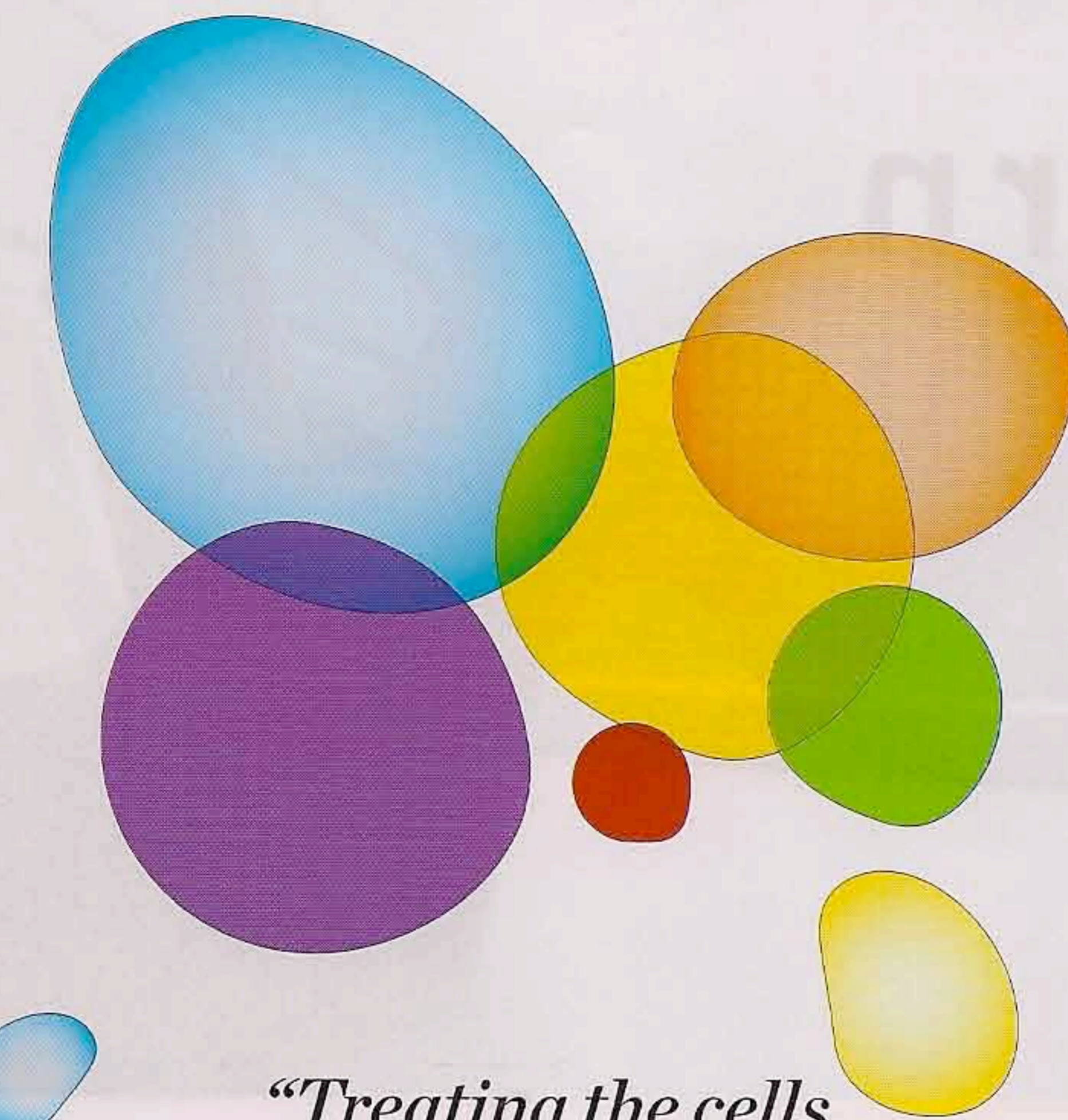
# The Great Stem Cell Debate

*They may not only have the power to cure diseases but also enhance your looks. Is now the time to try out the technology? Five doctors address the issue.*

While the controversy about embryonic stem cell research in curing diseases such as Parkinson's, Alzheimer's or diabetes continues, another debate is taking place, this one about the use of adult stem cells in cosmetic procedures—specifically, taking fat stem cells and using them to maintain and repair that tissue.

Harvesting unwanted fat from the waist, stomach, hips or thighs to add volume to the face is nothing new, but Beverly Hills dermatologist Nathan Newman, M.D., who calls himself the innovator of the stem-cell facelift, relies on a syringe instead of a scalpel. According to Dr. Newman, liposuction damages the stem cells, but his low-suction method preserves them. He then concentrates the stem cells before injecting the “enriched” fat to sculpt the face. “I try not to cut anymore,” he says. “I can restore a youthful look without doing that.”

Los Angeles-based plastic surgeon Richard Ellenbogen, M.D., performs the incision-based facelift but uses an LED light to activate the stem cells after separating them from the fat. The technique, he says, produces long-lasting results mainly for three reasons: He extracts the robust fat from the



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back of the waist, removes the tissue’s fatty acids and injects the fat into individual layers of the face. “The results are anecdotal,” Dr. Ellenbogen says, “and we need years and years of more research. But it’s like chicken soup: It won’t hurt, and it might help.”

Not so fast, counters Charlotte, North Carolina, plastic surgeon Felmont Eaves, M.D. “In the coming century, stem cells will have a huge impact on our ability to regenerate

tissue,” he says. “But treating the cells with growth factors and laser lights and saying this will rejuvenate you is based on theory. They can’t show a single human study. From my standpoint, it’s snake oil.” The jury’s still out for Minneapolis- and St. Paul-based plastic surgeon Joseph Gryskiewicz, M.D., who is also the chairman of the Emerging Trends Task Force at the American Society for Aesthetic Plastic

Surgery. “Manipulating fat to derive stem cells is like getting the cream at the top of the milk,” he says. “Is it okay? We don’t know.” Machines used to isolate fat stem cells, which spin the fat to separate the layers—most stem cells are located at the bottom—are not cleared by the FDA (neither Dr. Newman nor Dr. Ellenbogen uses these devices). “Do the machines do what they say they’re doing? You can’t tell,” says Dr. Gryskiewicz.

Although such procedures are, for the most part, unlikely to be harmful—except if used in the breasts, where they could potentially stimulate tumor growth—the bottom line is there isn’t enough evidence that any of this is effective, says J. Peter Rubin, M.D., chief of plastic surgery at the University of Pittsburgh, where he developed a research program in the biology of fat-derived stem cells, funded by the National Institutes of Health and the Department of Defense. “There is very little published human data to show that injecting stem cells under the skin makes any difference—that it makes your skin look better or improves the outcome of plastic surgery,” he says. “We have to separate the hype and marketing from the evidence we have to back it up.”

**FACT**  
One in four surgeons insures their hands.