10 high-tech ways to get the look you want.

by Michele Bender

New Year, New Smile

FOR DECADES, it seemed that only the rich and famous spent time and money on megawatt grins. And while their teeth didn't always look real, they certainly were big and sparkling. Then came the '90s, when even people who typically avoided their six-month checkups started hopping into the dentist's chair, and not just for a good cleaning. "New technology, as well as a booming economy, made cosmetic dentistry more popular than ever," says Jonathan Levine, D.M.D., professor of aesthetic dentistry at New York University College of Dentistry and creator of the GoSmile line of whitening products. "It became a decade of dental excess, where dentists wanted to transform smiles using the latest treatments even when more-conservative routes could have been taken." Adds Lana Rozenberg, D.D.S., a cosmetic dentist in New York City, "You saw the same uniformly sized, Chiclet-like teeth on everyone—it looked unnatural. Today, you want someone to say, 'You have a beautiful smile,' not 'Where did you have your teeth done?'" And that's exactly the reaction you'll get with the latest advances in dental technology. Each of these 10 techniques will help you take your look to the next level—with less time, less hassle, and more confidence that, in the end, you'll still look like you.

PHOTOGRAPH BY STEVEN LIPPMAN

1 Superfast Bleaching That Lasts

Dual whitening is the latest way to bring your teeth back to the color nature intended, erasing stains caused by cigarettes, beverages like coffee and tea, and less-than-diligent maintenance. A recent study published in *The Journal of the American Dental Association* found that teeth became eight shades brighter after a one-hour high-intensity light treatment known as power bleaching. The light activates a peroxide solution that is applied to teeth, causing it to release oxygen molecules that break down stains. But cosmetic dentists report that following this state-of-the-art in-office procedure, whitening can regress by up to 50 percent in a month. To extend its effects, dentists now combine power bleaching with the use of an at-home whitener for one to two weeks. "Dual whitening gives you the two things you need for quick and long-lasting results: a high concentration of hydrogen peroxide in the office and high-contact time at home," Levine says. Gels and custom trays for home use are effective, but they'll run you $200 to $500 (on top of the $500 fee for your in-office treatment). For a cheaper alternative, ask your dentist to recommend a reliable over-the-counter product that will work just as well; most cost about $25 for a four-week supply.

In spite of its great results, dual whitening will not change the color of crowns, caps, fillings, and veneers. Gray stains or white calcifications may not respond well, either, because they are usually part of the tooth's structure.

2 Cover Up Flaws Discreetly

New restoration materials have made it possible to create ultrathin veneers that mask chips, worn teeth, and spaces. Older caps were bulky and opaque—an obvious sign that your smile had been overhauled by your dentist. But these custom-made porcelain coverings are only as thick as a fingernail. Despite their slender profile, these modern veneers have stamina. The porcelain and ceramics they're made of can withstand more force and pressure than materials of old, and the new adhesives used to attach them have better staying power. "These cements work way into the tooth to attach both mechanically and chemically for stronger bonding," Levine notes. Plus, today's veneers come in colors that can be layered and mixed to closely mimic your natural tooth shade. And because they're translucent, they absorb light just like real teeth, making that flat, chalklike appearance a thing of the past.

Getting your veneers, which average about $1,000 apiece, takes at least two to three appointments. The area is numbed, about half a millimeter of enamel is removed from the front of the tooth with a high-speed drill, and an impression is made and sent to the lab. At this point, you'll get temporaries that look and function just like regular teeth. "Wearing them is like a dress rehearsal," Levine says. "You get to live in them for a week or two and see what you like and don't like." Then your dentist can make the appropriate changes. About two weeks later, your new veneers are ready, keeping your smile looking lovely for eight to 15 years.

3 A Natural Look for Fillings

A mouthful of metal that sparkles when you laugh is as far as you can get from an au naturel grin. (It can also give away your age, since silver amalgam isn't used much anymore.) The tooth-colored porcelain and composite-resin materials currently used for fillings and crowns are stronger and more wear-resistant than ever. "Many of our breakthroughs in restoration materials use technology from the NASA space program," explains Ken Fieldston, D.D.S., a dentist in Cresskill, New Jersey.

Teeth filled with these new materials don't just look better, they *are* better. "After years of wear, old silver fillings can cause teeth to fracture and break," says Michael Malone, D.D.S., president of the American Academy of Cosmetic Dentistry. "Today's porcelain and resin restorations have physical qualities that are very similar to enamel, so they strengthen the teeth instead of fracturing them." More good news: Less of your original tooth is removed when the fillings are put in, and liners placed beneath them prevent decay by releasing fluoride. Here's how it works: Your dentist numbs the area, removes the old filling, cleans out any decay, and then lines the inside of the tooth with a resin or cement filler. The dentist then takes an impression of the area and sends it to a laboratory, where a restoration is made. You get a temporary filling until the permanent one is glued into place in about a week or two. In some cases, the entire procedure can be done in the dentist's office, with no waiting.

Today's techniques capture every detail to give you a smile that's new—but still you.

PHOTOGRAPH BY KATE POWERS

4 Fast Fixes in a Single Visit

Now you can have your fillings replaced and be fitted for crowns or veneers in a single visit, thanks to new equipment that makes lab services obsolete. One such example, the CEREC 3, is a combination camera, computer, and milling machine. ("CEREC" stands for "Chairside Economical Restoration of Esthetic Ceramics.") The dentist uses an infrared scan to take a digital photo of the inside of your tooth. A 3-D color image immediately pops onto the computer screen so the dentist can design your crown, filling, or veneer. Then the computer directs the milling machine to carve the restoration, which is in your dentist's hand 10 minutes later. No impression of the tooth is needed, no second shot of Novocain is required, and you've just saved that week or two of waiting for the lab to do its work.

CEREC 3 is a step up from machines of previous generations because of its more accurate calculations and 3-D technology. "With the older CEREC machines, the main benefit was creating a restoration in one visit, but the aesthetics and accuracy weren't that good," says Daniel Deutsch, D.D.S., director of the Washington (D.C.) Center for Dentistry. "The newest machine rivals the quality and fit of what you can do in a lab."

5 Braces That Secretly Straighten

Less than five years ago, if you wanted to align crooked teeth or close unwanted spaces, your only choice was old-fashioned braces with metal brackets and wire. Though some clear-plastic brackets were available, tooth-straightening devices were still far from subtle. Industrial science has transformed all that with Invisalign, a removable appliance made from transparent plastic (similar to a retainer) that fixes your smile while keeping your vanity and natural tooth structure intact. "And because you take it out to brush your teeth and eat, food and plaque won't get trapped like they can with nonremovable braces," Deutsch explains.

A computer makes three-dimensional images from impressions of your teeth to map out the incremental movements necessary to straighten your smile. (Patients love seeing this "movie" of their teeth falling into place.) Once your doctor gives the Invisalign manufacturer the OK, a series of aligners is generated. During an office visit every six weeks, your dentist checks your progress and then gives you three new sets of aligners. You wear each set for two weeks until the six weeks is up, and the process starts again.

Invisalign can take as long to work as traditional braces—anywhere from several months to several years—and can cost just as much, too, from $3,000 to $8,000 depending on how many aligners you need. Some dentists let the devices do double duty as teeth-whitening trays by giving their patients bleaching gel to wear for an hour each day for up to two weeks, saving them the $200 to $500 they'd pay for custom trays. A potential added benefit: weight control. Taking the aligner out to eat makes you aware of what and how often you're nibbling. **[continued on page 188]**

coming to a dentist near you

New tools allow your dentist to see more of your mouth than ever before, catching potential problems before you can say "ouch."

Digital X-rays. Digital machines emit 70 percent less radiation than traditional ones, allowing a dentist to take multiple pictures of an area to yield a more accurate diagnosis. The images are instantly projected onto a screen (no more waiting five to 10 minutes for them to develop), and they can be enlarged to any size. Plus, with none of the lead waste and toxic solutions of conventional X-rays, this new digital technology is environmentally friendly.

Diagnodent laser. Tech-savvy dentists may use this device to easily spot a tooth defect before it can be seen with the naked eye or even on a standard or digital X-ray. The dentist shines the laser onto an area where the suspected cavity is located (decay reflects light differently than healthy enamel does), and the laser beeps if it detects a problem.

Intraoral camera. This tiny handheld camera goes into your mouth, projecting images of your teeth—magnified 20 times their normal size—onto a TV monitor. The dentist can see minuscule cracks and fractures better than she can with her eyes, so she can spot problems before repairs become costly.

Periodontal screening software. Periodontists use this computer program to check for gum disease. The specialist wears a headset with an attached microphone while measuring the depth of each tooth's pocket. A voice-activated computer uses these measurements to create a color image, displaying healthy gums in one hue and not-so-healthy areas in another.

Resources: *For more information on many of these procedures, contact the American Academy of Cosmetic Dentistry (800-543-9220 or www.aacd.com/consumers), the Academy of General Dentistry (877-292-9327 or www.agd.org), or the American Dental Association (312-440-2500 or www.ada.org).*

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