

# Benefits Spotlight

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## The Latest in Tooth Technology

New technology is always emerging – and it's no different in the dental world. These developments demonstrate ways technology is being used to help your mouth stay healthier longer.

### Tooth Regeneration Gel

Dentists in the U.S fill millions of cavities every year, but with new regeneration gel they might be able to hang up the drill and heal some cavities simply and painlessly. The gel or thin film contains a hormone that encourages bone regeneration. While the gel does not prevent cavities, it can heal them in about a month. The days of drilling aren't over just yet – numerous clinical trials will have to be completed before regeneration gels are proven to work to treat cavities in humans.

### Various Digital Applications

Digital dentistry is still a bit on the pricy side, so not all dental offices currently offer these services. As with most technology, however, prices will likely come down – after all, the first microwave cost \$2,000! Here are a few ways dentists can use digital application to improve your smile:

- Digital X-rays produce clearer images in a shorter time and have been shown to result in significantly less radiation exposure than traditional X-rays.
- Cone-beam computed tomography (CBCT) imaging is the dental equivalent of a medical CT scan. An X-ray machine rotates around the patient's head and captures a 3-D view of the teeth, jaw, gum and nerves. A CBCT scan can recognize tumors and diseases that don't appear on traditional X-rays.
- Digital dentures are made using computer design and digital manufacturing. They provide the advantage of having a permanent digital record that can be easily duplicated if the original dentures are lost or damaged.

### Oral Sensors

Wearable technology has been rising in popularity, and thanks to scientists in Taiwan, it may even be in our mouths! A newly developed sensor system can track what your mouth is doing 94 percent of the time. This can aid the user in monitoring munching while dieting, and can also help determine a diagnosis during sickness by monitoring the frequency and severity of coughs. The device is still in the early stages of development – it's currently challenging to wear, as there is a thin wire that connects the sensor to the outside world.

### CAD/CAM-Generated Crowns

If you crack or break a tooth, your dentist will likely recommend a crown – a custom-fitted cap that covers the tooth and helps restore its shape, strength and appearance. This procedure often takes multiple visits to complete, but with computer-aided design (CAD) and computer-aided manufacturing (CAM), dentists can now create crowns in less than an hour. A tiny camera is used to create a 3-D image of the drilled tooth. Then a computer program constructs an image of what the tooth will look like with the crown in place. Once the image is approved, a machine makes a custom ceramic crown that can be cemented into place.

Though these trends might not be available in the near future, up-and-coming oral technologies are something to keep an eye on.

### **Readers Ask, We Answer**

**Jill asks:** “Do you have any tips for preventing bad breath? Even though I’m pretty on top of my oral health – I brush twice a day and floss regularly – I also drink a lot of coffee, and I’ve never met a dish with garlic I didn’t like.”

**We answer:** Hi, Jill. Certain foods top the list when it comes to causing bad breath, which is also known as halitosis. Coffee and garlic are among the worst offenders, along with onions and spicy foods. It sounds like you stay on top of the problem by brushing and flossing as recommended. If possible, brush right after you eat the stinky foods. You can also drink more water and chew sugar-free gum to stimulate saliva flow.

Also, alcohol, smoking, stress and certain medications are major culprits of bad breath because they can cause dry mouth. Saliva helps rinse away food particles and bacteria, so if your mouth is too dry, food debris can stick around and cause stinky breath.

Using mouthwash or sugar-free gum and mints might mask the odor, but it doesn’t treat bad breath. However, a chronic case of halitosis may be a sign of more serious health issues, such as sinusitis, diabetes and liver or kidney problems, so be sure to discuss concerns with your dentist. He or she can offer personalized recommendations to keep your mouth healthy and smelling fresh.