



METROPOLITAN DENVER
DENTAL SOCIETY

YOUR COMMUNITY PARTNERS IN ORAL HEALTH

Metropolitan Denver Dental Society

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Dental Technology

Technology in the Dental Office

Dentistry has come a long way in making patient check-ups more comfortable. With today's technology, dentists are better equipped to detect and treat decay and perform other procedures with maximum comfort. Below is a brief list of some of the tools available. Some of the technologies listed below have additional limitations as they are newer and need some additional studies.

Lasers

As scientific studies are confirmed, lasers may be a good alternative to the traditional drill as anesthetic is not needed as often. The procedure is more precise and can reduce symptoms and healing times associated with traditional therapies. Currently, your dentist may use lasers for tooth whitening, removal of ulcers, periodontal (gum) therapy, cavity preparation and removal of the decay. In the future, laser technology may be used to prevent decay by increasing the strength of the tooth. Laser therapy cannot be used as an alternative for every procedure.

Air abrasion

Air abrasion is a conservative procedure used to remove small areas of decay or to prepare a tooth for the placement of restorations or sealants. This procedure works with an air compression device that delivers, under pressure, tiny particles of aluminum oxide to the surface of a tooth structure to blast away decay. This is similar to sandblasting a building in order to clean it. Air abrasion is good with early decay and helps to preserve tooth structure. Discomfort is minimized and many patients do not need any anesthesia. Children and adults who are fearful of needles, noise or the vibration of a regular dental handpiece may prefer this option if it is available. Air abrasion cannot be used as an alternative for every procedure.

Intraoral cameras

First developed in 1987, the intraoral camera is a wand-like device with a tiny magnifying lens that projects a picture from a patient's mouth onto a screen. The image, which is magnified up to 40 times its original size, allows the dentist to see fractured enamel, gum recession, fracture lines in teeth, and breakdowns of restorations, and then also allows the patient to see the images. After these pictures are taken, dentists are better able to diagnose and recommend treatment plans for their patients. The pictures also can provide documentation for insurance companies.

Digital radiography

Similar to traditional x-ray systems, digital radiography allows dentists to detect decay, bone loss, and help with root canals. To take an x-ray, dentists will place a sensor on the tooth that looks like a piece of film. The process is a little faster than a traditional x-ray system, so patients' exposure to radiation is decreased. Once the picture is taken, dentists can adjust the contrast and brightness to optimize diagnosis and find even the smallest decay. Another benefit of digital radiography is the reduction of chemicals to process the film. The time to develop photos is reduced and can eliminate treatment disruptions.

Q&A

Can lasers be used to remove cavities?

The Food and Drug Administration has granted Premier Laser Systems, Inc. the first-ever clearance to market a laser system for caries removal, cavity preparation and related applications. Previously, the FDA had granted marketing clearance to lasers for use in soft tissue surgery, composite resin curing and bleaching procedures. The American Dental Association Council on Scientific Affairs has reviewed the data submitted by Premier Laser Systems, Inc.

Is laser whitening safe?

Lasers, like other light sources, can be used to enhance the effectiveness of in-office peroxide bleaching agents. This technique may be safe, but the ADA has not seen published data on the safety and effectiveness of laser whitening.

What if my dentist does not have this equipment?

Dentists keep their eye on new technologies as they are introduced to ensure that they are safe and beneficial for patient use. As members of the American Dental Association and the Metro Denver Dental Society, member dentists read clinical studies to determine the efficacy of a product prior to purchasing new equipment.