

Editorial: Current Advancements in Dentistry

Although human mouth benefits from remarkable mechanical properties, it is very susceptible to traumatic damages, exposure to microbial attacks, and congenital maladies. Since the human dentition plays a crucial role in mastication, phonation and esthetics, finding promising and more efficient strategies to reestablish its functionality in the event of disruption has been important. Dating back to antiquity, conventional dentistry has been offering evacuation, restoration, and replacement of the diseased dental tissue. However, due to the limited ability and short lifespan of traditional restorative solutions, scientists have taken advantage of current advancements in medicine to create better solutions for the oral health field and have coined it "regenerative dentistry." This new field takes advantage of the recent innovations in stem cell research, cellular and molecular biology, tissue engineering, and materials science etc. In this review, the recently known resources and approaches used for regeneration of dental and oral tissues were evaluated using the databases of Scopus and Web of Science. Scientists have used a wide range of biomaterials and scaffolds (artificial and natural), genes (with viral and non-viral vectors), stem cells (isolated from deciduous teeth, dental pulp, periodontal ligament, adipose tissue, salivary glands, and dental follicle) and growth factors (used for stimulating cell differentiation) in order to apply tissue engineering approaches to dentistry. Although they have been successful in preclinical and clinical partial regeneration of dental tissues, whole-tooth engineering still seems to be far-fetched, unless certain shortcomings are addressed. The field of dentistry is constantly evolving and changing to best suit patient needs. 123Dentist is always on the lookout for new and emerging technology to make our patients' experience as comfortable as possible. Here is just a few of the different technologies that 123Dentist practices use to ensure we provide world-class service to all our patients:

New Technologies in Dentistry

1. VELscope—VELscope is a special type of light that a dentist will shine in a patient's mouth to detect any abnormalities. This new form of technology is effectively used to detect early forms of cancer or disease during an oral cancer screening.
2. Digital X-Rays—Digital X-rays are faster and contain less radiation than traditional X-rays. When a patient has a digital X-ray done, the image appears on the computer in a matter of seconds. Your dentist can then zoom into the image to better assess and educate the patient regarding their oral health. Digital X-rays are also less harmful for patients as they contain up to 90% less radiation compared to traditional X-rays.
3. Invisalign—Invisalign are clear, practically invisible braces that can gently straighten your teeth. They provide an effective and comfortable way to straighten your smile without the inconvenience of wearing heavy, metal braces. Invisalign braces are easy to take out for cleaning and don't require a restriction on what type of foods to eat. They get the job done in less time with less hassle.
4. Laser Dentistry—Lasers are used to improve efficiency and eliminate discomfort in a number dental procedures, including filling cavities, reducing tooth sensitivity, getting rid of tumors, and whitening. Laser dentistry is fast, painless, and can effectively eliminate any form of bacteria during the procedure to avoid any further complications or problems.
5. Dental Implants—Dental implants are screw-replacements for the root portion of missing teeth. Implants are used to restore healthy smiles when patients have missing teeth. Implants are effective because they can replace missing teeth, while still giving the patient the feel and look of a natural tooth.
6. HealOzone—HealOzone is a fast, easy and painless way to eliminate tooth decay. HealOzone is effective because it contains ozone (O₃), which is a common, natural gas that effectively kills bacteria and fungus. HealOzone is a great tool to detect and get rid of any early signs of tooth decay before it progresses to a more advanced stage.
7. DIAGNOdent—DIAGNOdent is a new, state of the art device that dentists use to detect cavities that are hiding in places regular x-rays can't find. It ensures that your mouth has been thoroughly checked for early signs of cavities to avoid you having to spend more in the future if the cavities progress and expand.
8. Intraoral Camera—The intraoral camera is a tool that dentists use to gain precise and well-defined pictures of hard to see places within a patient's mouth. The camera also allows dentist to show these images to patients while assessing and educating the patient's needs. This new form of technology allows dentist to conduct a thorough checkup of your mouth and better assess their patient's oral care needs.
9. Zoom! Whitening—Zoom! Whitening is a new, state of the art whitening treatment that gives our patients fast and easy results. In just one appointment, Zoom! Whitening can make a significant change in a person's smile and can make their teeth up to eight shades whiter.
10. Nitrous Oxide and (Intravenous) IV Sedation—Nitrous oxide, also known as laughing gas, can calm a patient down to a point that they are relaxed but can still interact with their dentist. On the other hand, IV sedation puts a patient to sleep completely so that they are unaware of what happened during their dental session. This is usually recommended for patients who are fearful of going to the dentist or for procedures that are painful such as wisdom teeth extraction.