

Problem Solvers 40- Lights, Camera, Action!

Synonyms: Intra-Oral Cameras, Single lens reflex cameras, dental microscopes.

NEW AND EXCITING DENTAL TECHNOLOGIES:

The intra-oral camera and digital photographs can help with diagnosis and treatment of dental disease at its earliest presentation. These technologies help dentists perform better dentistry but more importantly they educate the patient so the disease process can be understood and treatment accepted without question or delay. The earlier treatment is accepted, the more minimal the dentistry can be! This revolutionary technology can allow dentists to perform minimally invasive dentistry and help keep the cost of dentistry more affordable!

There are many new and exciting pieces of technology that can improve the quality of dentistry today. New research and materials have exploded over the last 10 years and these technologies have changed the way dentistry is practiced. Dentists use these technologies for seeing better, bonding better, producing better crowns and bridges and this article will provide an insight into some of the most exciting developments in modern dentistry. This article will explore the use of cameras in dentistry.

One of the best technologies that is available today is the intra-oral camera. These wand like cameras can be used to blow up a tooth on a television or computer monitor as much as 25-50 times its actual size or larger! This can help show patients and insurance companies what fractures, decay, poor crown margins or gum disease looks like under magnification. The intra-oral camera is simply the best educational tool available in dentistry today. In my practice we not only use the intra-oral camera but also then can go back with a regular camera and get even better images that can be printed, sent to a patient or insurance company, to help educate about the problems at hand and discuss the possible solutions.

Intra-oral cameras are good for showing fractures, uneven gums or tooth height problems on front teeth and can identify areas that are in need of attention before they cause pain. If there are areas where there is swelling, growths, discolored or ulcerated lesions and oral cancer is suspected, the dentist can take photos of the problem and e-mail them to the surgeon for a quick consultation and to document what it looked like so any changes can be easily recognized. Recognizing and treating oral cancer can save lives.

An intra-oral camera can easily help a patient be a partner in co-diagnosis of their problems. Decay is easily recognized by a layperson, as are fillings that are old,

leaking or have fractures. When patients can see their gum tissues are bluish in color compared to other areas where they are bright pink they can understand the disease process better! So understanding your problems through direct visualization can help patients accept the dentistry they need through better education.

What does it mean when your gums are blue versus pink in an oral camera exam?

The lack of proper oxygen to the tissues can make them look puffy and bluish in color. It is one our clues to the presence of gum disease. The term for bluish gums is "cyanosis" and represents areas of poor health. These are areas that will bleed readily upon probing and are in need of deeper cleanings and perhaps other periodontal treatments.

What is the difference between using an intra-oral camera and a regular camera?

The intra-oral camera can be a very quick screening tool. The traditional larger single lens reflex camera can give a much higher quality image that can be e-mailed to insurance companies and it can be manipulated to show different areas of a specific tooth better than the regular intra-oral camera image.

My dentist does not have an intraoral camera but I have heard about them. What are they used for?

An intra-oral camera is an educational tool for a patient, but it allows the dentist to magnify all areas of the mouth 50X larger so better diagnoses can be made. It lets the patient visually see inside of their own mouth to see exactly what problems their dentist is talking about. It can often be a big motivational tool to get their mouths fixed because they can see first hand the extent of the problems. Without visual evidence and education, a patient may not think the problem is as important as it truly is. When patients see larger chunks of tartar and calculus covering their teeth, they are truly incredulous, as they never realized they had this problem until they saw it on a television screen or monitor.

Will my insurance pay for an intra-oral camera tour or photographs inside my mouth?

Normally, insurance companies will not pay for them but if they are submitted with a claim, they may be more likely to give approval for a given service. For example, a large fracture under an old silver filling may not look like much on an x-ray but this tooth will still require a crown to prevent the fracture from propagating.

Photographic evidence of this fracture may allow the patient to have this crown

approved and if it were submitted without a photo it would have been denied.

One extension of a dental camera is the dental microscope. It allows dentists to magnify an image from 10.5-12 times magnification or larger to improve visualization in dentistry. The ability to use microscopes in dentistry requires a learning curve so they are not used frequently at this point in dentistry. There are many endodontists that are utilizing a surgical microscope to perform surgery at the end of the roots of teeth or to find canals that may be difficult to find with ordinary magnification glasses.

These dental microscopes have attachments for video cameras and single lens reflex cameras so that the magnified images or surgical procedures can be recorded. The ability for a dentist to perform procedures in the mouth while looking at a screen is approaching. It is already a feature of dentists' training to work indirectly on a tooth by looking at a the backwards reflection of a tooth while looking in a mirror, but with microscopes and monitors there is another skill set to be learned.

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