



How to Master Digital Dental Photography

By Warren Rosenberg, eHow Contributing Writer



Digital photography in dentistry

Digital photography has many applications in dentistry and is becoming more frequently used in many [denta](#) practices. According to Dr. Gordon Christensen, DDS, PhD, a dental educator and lecturer, these uses include documenting treatment for legal defense, supporting patient education and clinical research. Obtaining adequate results from digital dental photography requires the proper technique, camera, lens and lighting equipment.

Instructions

Difficulty: Moderately Challenging

1.



Digital Camera [Body \(#\)](#) and Lens

(<http://i.ehow.com/images/a06/f0/sh/master-digital-dental-photography-1.1-800X800.jpg>)

Shoot with the proper equipment. Digital cameras range in price and sophistication from cheap, disposable cameras with sensors capturing less than one mega pixel (mp) of data to large-format professional cameras costing thousands of dollars and offering sensors capturing over 100 mp of data. Camera formats include pocket-sized, fixed lens cameras to mid-sized single lens reflex (SLR) cameras based on 35 mm film formats and using interchangeable lenses, to the large format cameras used in professional studio photography. The 35mm-format digital SLR camera combines convenience, flexibility, and modest cost. Many good camera [bodies \(#\)](#) with either APS-C, APS-H or full-frame digital sensors are appropriate for use in the dental office. Choose a camera offering at least 10 megapixels.

2.



Digital SLR Camera Lens

(<http://i.ehow.com/images/a06/f0/sh/master-digital-dental-photography-1.2-800X800.jpg>)

Capture fine detail at close working distances with the right lens. Digital SLR cameras use a variety of lenses, rated by their focal length, as measured in millimeters. For dental photography, the best lens is a medium focal length (50-100 mm) lens that can focus on objects at a close distance. Some lenses in this category are classified as "macro" lenses because they can reproduce images at their full size. Dr. Martin Goldstein, writing in "Dentistry Today," recommends the 100mm macro lens.

3. Illuminate your subject with an appropriate lighting source. Photographing in the tight confines of the oral cavity requires a special type of flash which surrounds the end of lens, encircling it with the light source. This type of light source is known as a "ring flash." All camera manufacturers produce ring flash units that work with their cameras and lenses.
4. Minimize blurring with a fast shutter speed. It will be difficult for your patient to hold her head still while you are photographing her oral cavity, so it is important to use as fast a shutter speed as possible. Avoid shutter speeds of less than 1/125 second. Use of a ring flash will allow you to avoid slow shutter speeds.

Things You'll Need:

- Digital SLR camera body
- Macro SLR lens
- Ring light
- Personal computer
- Photo editing software

5. Set your lens' aperture to a value that will maximize depth of field in your photograph. To capture all of the intra-oral structures in clear focus, use a small, or stopped down, aperture. Aperture size is rated as an inverse number; therefore, a small aperture will have a larger number. Good results can be obtained with an aperture setting of between f/5.6 and f/8.
6. Capture and record your photographs using your camera's "RAW" or native format rather than in the "jpeg" format. "RAW" images contain much more data and detail than "jpeg" images.
7. Use your camera's LCD viewing screen to be sure that you've captured a photograph of your desired subject. If not, re-shoot the image.
8. Download your images to a computer using the software and cable that come with all camera systems and use post-processing software to make fine adjustments on exposure and cropping. Images are best saved for long-term storage as "tiff" format rather than "jpeg" format files. The "tiff" format preserves more detail. Save multiple copies using more than one medium, such as a hard disk copy and a DVD or CD copy.

Tips & Warnings

- A macro lens requires a fairly close working distance, so make sure you warn the patient. If you will use images that show the patient's face, obtain permission first. Your attorney or local dental society can provide you with specific advice.

References

- "Important Clinical Uses for Digital Photography"; Gordon J. Christensen, D.D.S., M.S.D., Ph.D.; Journal of the American Dental Association; January 2005
- "Dental Digital Photography: Assorted Pearls"; Martin B. Goldstein, DMD ; Dentistry Today, May 2008

Resources

- "How is Lighting Used in Macro Photography"

Who Can Help

Sponsorec

- How to Lose 30+lbs Guaranteed. Try it Free.

Photo Credit

dentist 07 image by Dragan Bombek from Fotolia.com

digital camera age image by Steve Brase from Fotolia.com

camera lens image by dinostock from Fotolia.com