

An Introduction to Dental Photography

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After many years of sharing information with my colleagues I have noticed that the majority of dentists take very few photographs, and do not take time to document their work, even the interesting cases with photographic records. In today's economic and business environment, it has become a necessity to adequately promote your business, and I consider photography a very important part of that. With this article, I would like to introduce a simple but effective way of documenting your cases with dental photography that will help you in many ways with your practice.

Dental photography has two parts. Intraoral and extraoral photography, and you need some basic tools as follows:

- 1- A camera that allows you to take both full face or profile pictures and also intraoral close-up shots.
- 2- Two sets of intraoral photographic mirrors and two sets of retractors. There should be one occlusal mirror and one lateral mirror in each set.

I have adopted a simple standard set of dental photographs in my office to document my cases. I take one set of preoperative pictures, and I take another set to document the final results postoperatively. If I think that I might make a presentation, I will also take additional photos of the procedural steps. The required views for clinical case submission to the American Academy of Cosmetic Dentistry (AACD) are twelve preoperative views and twelve postoperative views.

My standard set of photographs consists of the following:

1. Extraoral photos (3): Two frontal views of the face, one in repose and one smiling. And one profile shot.
2. Intraoral photos (5): Five Retracted views, an anterior view, a right view and a left view. Two mirror occlusal shots, one of the mandible and one of the maxilla.
3. For cosmetic cases, an anterior retracted view with the teeth apart is very helpful and that makes for six intraoral photos instead of five.

Let's talk about the camera. Undoubtedly, the best camera system is an SLR digital camera like a Cannon T3i or a Nikon D90, using a dedicated 100 mm macro lens and a ring flash.

In this basic tutorial, however, we will be using a point and shoot camera which is simpler to use since there are no settings to change and focusing is automatic. This simple system was chosen due to the different levels of expertise exhibited by the dentists attending our courses, and the need for a camera that could take the use and abuse. We chose the Pentax Optio W90 for its simple to use instructions as well as for its shockproof and waterproof characteristics. This 12 megapixel camera allows you to take great looking face shots and intraoral views without changing settings in the camera.

Patient positioning: Basically you can take the necessary pictures with the chair in two positions: Completely horizontal, and at 45 degrees from horizontal.

With the chair at an inclination of about 45 degrees we can take the anterior, right and left retracted views, as well as the three head shots. For nicer looking pictures, you can take the three headshots with the patient standing in front of a contrasting background.



With the chair completely horizontal, you can take the maxillary and mandibular occlusal mirror views.

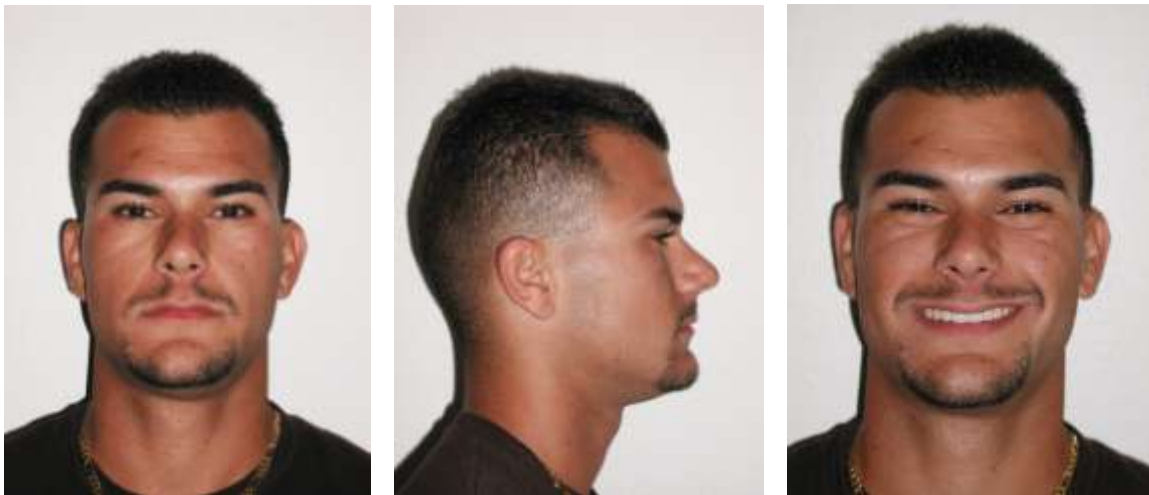


Tips for taking proper photographs:

- Standardize the photographs by taking them at the same distance from the subject every time, that way they will be easier to compare before and after shots.
- Do not change the “P” or program mode in the Pentax Optio W-90. This will standardize your exposure settings, since the camera will adjust the focus and the exposure for you automatically, and the lighting should not change in the operatory.
- Proper position of the camera avoids the errors associated with canting and taking the shots at angles that are “too high” or “too low” from the front.
- Reposition the head of the patient slightly instead of leaning over him or her.
- Use a background for head shots for a better looking picture. Do not place the patient too close to the background as this may create shadows.
- Try to take the occlusal views looking down the incisal edges of the anteriors.
- Use the interpupillary line and the vertical midline to orient the camera.
- Finally, try to remove anything that would make the picture look bad, such as excess saliva, blood, food, etc... Plaque and calculus are ok in the preoperative pictures, but should not be there in the final ones; lipstick on teeth, excess cement, tongue covering the teeth, shadows. Fogged mirror, etc...

For those that have Decals on their lenses, the full face shots should be at about a 1:10 magnification, all the other frontal, lateral and occlusal retracted views should be at a 1:2 magnification. For the Optio W90 camera, when you are taking head shots you place the camera about 5 feet from the face and zoom in or out to frame the head on the screen. For the intraoral shots, the retracted frontal and lateral views are taken about one foot away from the face at maximum optical zoom, and about two feet away for the occlusals.

Here are sample pictures of the series of photographs just described:



These are the three head shots: Full face resting, profile and full face smiling .



These are the two occlusal shots of the maxilla and the mandible



These are the right and left lateral retracted views



And the anterior view

The 1:1 views are reserved for case documentation, when you want to show one to three teeth in the picture, as in a step by step documentation of a case.



A very useful tool when working with digital pictures is a photo editing program. There are a lot of good ones in the market, from free applications such as Gimp, Picasa, Photoscape, etc.. to those geared towards the professional such as Adobe Photoshop. Others, to name a few are Adobe Lightroom, Adobe Elements, Corel Paintshop Pro, Arcsoft Photo Studio, etc... These programs will let you tweak your photos by doing things like cropping, rotating, adjusting exposure, etc..., so that they look great even if you are not the greatest photographer.

This brief tutorial was written with the hope that it may encourage more of us to document cases with photography. Documenting your work with before and after pictures will increase your cosmetic or implant case acceptance, and will have patients ask you about doing their dental work. It will benefit our marketing efforts, but it will also make us humble and better dentists in the process.

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