A close-up photograph of a dental model or cast of upper teeth. The teeth are white and appear to be made of a translucent material. The gingival tissue is represented by a vibrant pink and red mesh-like structure. The background is a solid dark grey.

The Modern Dentist's Guide to Clinical Dental **PHOTOGRAPHY**

by Dr. Jason Olitsky

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Why Dentists Need Photography

If you've downloaded this eBook there's a good chance you already know why you need photography in your practice, so I'll keep this short. Dentists need great photography to communicate their work to those around them. This includes patients, potential patients, dental laboratories, accrediting agencies and more.

"When people hear information, they're likely to remember only 10% of that information three days later. However, if a relevant image is paired with that same information, people retained 65% of the information three days later."

This statistic is true for any subject, and dentistry is complex. The average person sitting in your dental chair won't be able to fully comprehend a treatment plan without some sort of visual aid. Going further, dental photography builds trust, creates transparency and allows you to connect with your patients. If they can see your work through photographs, it gets them that much closer to understanding the value of what you provide. ***Don't tell people your plans, show them your results.***

Dental photography also allows you to effectively communicate with potential patients in your marketing, giving people a window in to see the results you are able to achieve. Great photography is often the difference between someone picking up the phone or not.

At the end of the day, exceptional dental photography allows you to do more of what you love, which is helping people through dentistry.



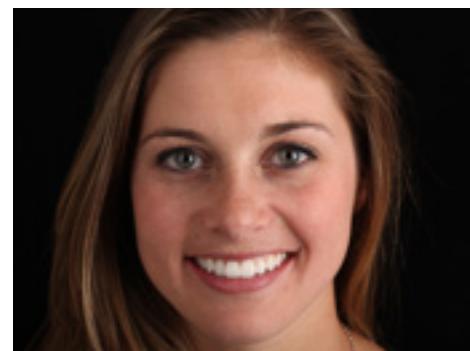
Dental Photography Views

There are 24 views required by the American Academy of Cosmetic Dentistry for clinical case examination. 12 of these views are to be taken before and 12 after treatment. These views are required for AACD documentation, but are also a great guideline for any dentist practicing dental photography regardless of affiliations and credentials. You can read about the views in detail in the AACD Guide.

Below you'll see visual examples of each view. The numbers next to the title refer to the magnification ratio the images should be.

FULL FACE

(1:10)



Dental Photography Views

FULL SMILE



RETRACTED

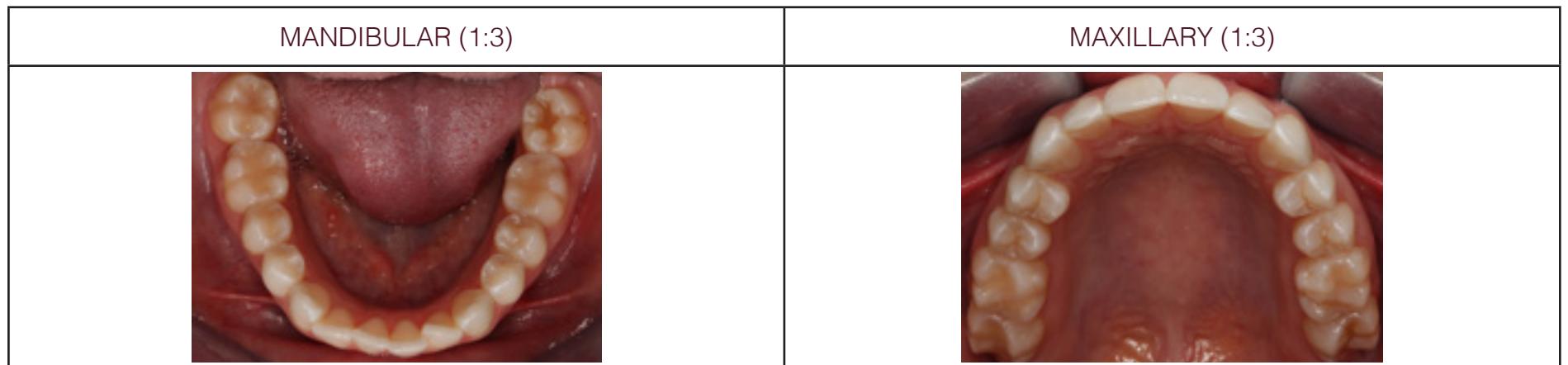


Dental Photography Views

RETRACTED CLOSE-UP



OCCLUSAL VIEW



Clinical Dental Photography Tips

After taking dental photographs for a number of years, I can tell you that the tips I give to other dentists come straight from experience. I've learned from my own mistakes, and also spoken with dozens if not hundreds of other dentists about their own dental photography struggles.

Face Composition

In a full face shot, your orientation should always be horizontal. Make sure the patient's nose is in the center of the image, with the chin near the lower border and the top of the head near the top border. Their head should be in full view, but it should not be so far away that you can see their shoulders.

COMMON ERRORS



PROPER FACE COMPOSITION



IMPROPER FACE COMPOSITION



Clinical Dental Photography Tips

Background

Make sure you have a uniform background that is not distracting. It's a good idea to use a backdrop for full face shots to avoid this problem every time.

Angle

The camera should always be 90° horizontally and vertically to the subject. Always be sure to take the shot straight on and avoid having a canted image.

COMMON ERRORS



DISTRACTING BACKGROUND

IMPROPER ANGLE



Clinical Dental Photography Tips

COMMON ERRORS



CANTED IMAGE



IMPROPER F-STOP



INCORRECT EXPOSURE



CANNOT SEE CONTRALATERAL



Clinical Dental Photography Tips

Eliminate Distractions

It's important to have no distractions within your shot. The only teeth that should be visible are the ones you are shooting, and those teeth should be cleared from debris. Proper lip retraction is another important step to eliminating distractions.

Lip Retraction

In many cases it feels like we are overwhelming our patients with retractors and mirrors. The best thing you can do is practice capturing this shot quickly by utilizing your team members. With another set of hands, you can perfect this set up and create massive confidence in your dental photography. This can be done with one person, however initially having a helper chair side can assist in repositioning patient, mirrors and retractors.

Coat the patient's lips in vaseline and get the retractors wet so they are easy to manipulate. Start the retractors on the bottom lip and rotate up. Position your retractors and have the patient hold in position.



Clinical Dental Photography Tips

Mirror Placement

One of the most difficult shots to get in the intra-oral series is the retracted occlusal shots using mirrors. These images are critical in restorative treatment planning, evaluating arch form, and seeing the occlusal surfaces of teeth. The key to this shot is having the right tools. The best retracted dental photography is achieved with either a Chromium or Titanium Occlusal Mirror – Ideal size is 2 7/8" x 5 1/2" which captures most full arches. (Can be purchased at Photomed.) The most common error in occlusal photography is using a mirror that cannot capture all the way back to the distal of the second molars or non reflected teeth are in the frame of the image.

The second most common error is fogging. You can eliminate or reduce fogging by heating the mirrors in a warmer or running under hot water just prior to insertion. Customizing your retractors will also assist in manipulating the patient's lips so that you can create a wide enough frame to insert the mirror.



NON REFLECTED TEETH IN SHOT



FOGGY MIRROR



Clinical Dental Photography Tips

Magnification Ratios

A magnification ratio is the relationship between the size of the photograph and the subject. A 1:2 ratio means that the photo is half as large as the subject. In dental clinical photography, the closest shots are 1:1 ratio, which are the close up retracted views. The views that are taken from the furthest away are 1:10, which is the full smile view. On a DSLR camera lens, you are able to set your magnification ratio and then move the camera in or out until your subject is in focus.



How a DSLR Camera Works

Nowadays, point and shoot cameras come with a lot more features than they have in the past. Even the camera on your phone takes a better quality image than most cameras did years ago. But there are features on a DSLR camera that you simply can not get in a small point and shoot. They have a bigger sensor than a point and shoot, making the image quality a lot better overall. They have better sensitivity to light and much faster shutter and focus speeds. But the key difference is control. A DSLR is flexible, and once you learn to use all the settings, you can get shots you simply can't replicate with a simpler point and shoot.

Here are some of the key features of a DSLR Camera.



How a DSLR Camera Works

- Autofocus- Camera finds focus point
 - Manual Focus- Photographer finds focus point
- Maintains magnification ratios*



We go over all these settings in detail in the Dental Photography workshop offered by Clinical Mastery Series, which I highly recommend. The key to becoming a great dental photographer is hands-on experience, and this half day workshop gives you plenty of it. The following section just touches upon the skills we go over in the course.



Basic Photography Skills

Exposure (ambient light)

Your image exposure is the lightness and darkness of the image. There are three elements in digital photography that come into play when achieving the right exposure. Those elements are ISO, aperture, and shutter. ISO is the measure of the camera sensor's sensitivity to light. Aperture is the size of the opening in the lens when a picture is taken. And shutter speed is the amount of time that the shutter is open.

If you imagine that your camera is like a window with shutters that open and close, the aperture is the size of the window. If the window is larger, more light comes in. The shutter speed is the amount of time you have the shutters open. The longer they are open, the more light comes in. The ISO is your eyes sensitivity to light. If you put on sunglasses (like a low ISO), your eyes (or your lens) aren't as sensitive to the light.

Flash Exposure

When shooting with a flash, the three elements change slightly. Instead of your shutter speed affecting your exposure, it is your flash output that determines the amount of light you let in. The same balancing act applies when you are using flash, just with slightly different settings.

Mastering this triangle of elements takes a lot of practice, and you can only practice by shooting. With the age of digital photography upon us, you can able to take lots of photos without worrying about wasting film. So do it whenever you have the chance.



Products I recommend

- Canon 5D Mark II, the camera Dr. Olitsky uses
- Canon 70D, the camera Dr. Olitsky recommends for dental photography
- Nikon D7100
- Digital Smile Design



What's in my studio?

- 2 Einstein E640 \$499.95 each
- 2 32" x 40" foldable large soft-boxes \$129.95 each
- 2 Alien Bees B400 flash units \$224.95 each
- 4 light stands
- 1 background support stand kit for up to 10' paper backdrop
- 1 650 watt Arri light plus tungsten fresnel \$444.60



About the Author

Dr. Jason Olitsky

Dr. Jason Olitsky DMD AAACD is past president of the Florida Academy of Cosmetic Dentistry and an accredited member of the American Academy of Cosmetic Dentistry. He is the Program Director at Clinical Mastery Series where he teaches portrait and clinical photography. Dr. Olitsky is CoAuthor of "The Naked Tooth: What Cosmetic Dentists don't want you to know." He publishes on various topics of cosmetic dentistry, has appeared in numerous national beauty and health magazines and serves as product consultant for dental product companies. Dr. Olitsky is the founder of the Smile Stylist franchise, and he maintains a private practice in Ponte Vedra Beach, Florida.

