The following e-mail is typical of the trials and tribulations that doctors and staff encounter when attempting to add digital occlusal shots to their new patient exam protocols. "My staff and I are still having problems with getting decent occlusal pictures. We even bought the newer occlusal mirror with an attached handle and the lip lifter. We already had mirrors, both large and small, without handles. It seems to be a problem with getting a good clear picture back to the second molars, and of course, the lower is even harder than the upper. We blow air on the mirror to clear the fog. Perhaps the problem is that the patient is not reclined back in the chair enough, or is not opening wide enough. Should we be taking the picture from in front of the patient, or from behind? We take it from the front. Gagging is a problem all the time. I need some advice.

Occlusal images may indeed be tough to get. Assuming your camera is properly set up, the following tips might help regardless of whether you are using auto or manual focus to take your occlusal shots. (Note: manual focus might be more predictable with respect to magnification and illumination, but auto-focus will certainly speed up the process).

It's important to retract the cheeks when taking occlusal shots. Wire retractors may aid the cause as mirrors can slide through them rather than bump into them as they do with the solid plastic retractors.

It helps to pull the retractors up and out when shooting the maxilla and down and out when shooting the mandible. This 45 degree tug will expose the second molars.

The patient is usually reclined to about 30 degrees with the photographer shooting from the front of the patient. (If you are shooting with manual focus, use 1:5 magnification.)

We often ask the patient to move his or her tongue behind the mirror when taking the occlusal shots. This often helps to clear the field.

Air is essential to defog the mirror and a bit of indirect lighting from the overhead light will help the camera to lock in focus.

Sounds crazy, but the wide end of the occlusal mirror goes in first, not the small end. (You'd be surprised at what I see at my hands-on seminars.)

Attempt to get the image as close to a perpendicular to the occlusal plane as possible; the bigger the mouth, the easier it is.

If I can't get a good occlusal shot, I'll take quadrant shots to make up for this using a smaller mirror. Finally, realize that mirrored shots taken like this will need to be "mirror-flipped" vertically with image editing software to properly orient the arch prior to presentation.

I hope these tips are helpful. Practice makes perfect.

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**About the author**

Dr. Martin Goldstein, a member of the International Academy of Dento-Facial Esthetics, practices general dentistry in Wolcott, Conn. Noted as a Dentistry Today C.E. Leader for the last five years, he lectures and writes extensively concerning cosmetics and the integration of digital photography into the general practice. A regular contributing editor for Dentistry Today, he has also authored numerous articles for multiple dental periodicals both in the United States and abroad. He can be contacted at martyg924@cox.net. His current speaking schedule can be found at www.drgoldsteinspeaks.com.