

## How I Do It

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As pervasive as the promotion and marketing of most every plastic and cosmetic procedure there is, most claims and results are supported by the ever present “before” and “after” photos, which are shown in ubiquity in publications, textbooks, and, most saliently, on the internet. I am sure that most of us appreciate that even subtle variations in lighting, technique, and angulation can produce misleading outcome results—both intentional and unintentional. When we, as a Society, strive to provide transparent and honest demonstration of the outcomes of our clinical work, it reflects on our mutual commitment to ethical and consistent patient care standards. Below, Dr. Steve Gabel shows us his personal choice of technique for standardizing his approach to photo-documentation of patient progress in the setting of Hair Transplant Surgery.

## Techniques for Consistent Before and After Photographs

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Proper photo documentation for the hair restoration physician is crucial for several reasons including the ability to objectively monitor and assess a patient’s results with medical and/or surgical treatment modalities, education, marketing, and medico-legal documentation. Modern digital cameras have the capability to produce outstanding photographs for amateur and professional photographers alike. Equally important is the setting and manner in which the photographs are taken in. This article presents the method that I use to take consistent, high-quality photographs of my patients.

Standardizing the photographs in hair restoration allows for specific comparisons to be made. To accomplish this, the patient’s head position and angles must be the same each time the patient is photographed. If the before and after photographs are not taken at the same angles and head position, it is very difficult to accurately measure the treatment outcome, and the photographs may not give a truthful representation of the results. Therefore, it is essential to photograph each patient in a similar manner in terms of camera and lens settings, lighting, background color, head position, and head tilt angle.

In my clinic, I have a dedicated photography room. The setup consists of a Nikon D300 digital SLR camera on a tripod with a wired remote shutter release to minimize camera shake, two fluorescent Bowens Tri-Lite lamps with light diffuser for constant lighting without flash, and a background wall painted in a medium shade of blue. I use different camera lenses for either portrait or close-up photographs. The fluorescent lamps are placed at 45° angles from the patient to minimize any shadows against the background (Figure 1). I do not use the overhead lights. The ISO, aperture, and shutter speed have all been manually set up based on the distance I have the patient sit from the camera, light intensity, the temperature of the fluorescent lights, which is programmed into the camera, and the overall look I am trying to achieve with the photographs.

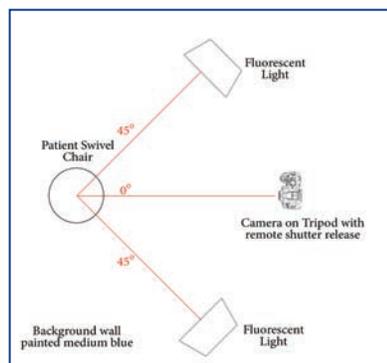


Figure 1. This diagram demonstrates the position/angles of the camera and fluorescent lights in relation to the patient.

To achieve consistency of the photographs in relation to patient positioning and head tilt angles, I have the patient look at specific, round, object markers that I have attached to the camera tripod and stand-up fluorescent lights (Figure 2). The markers are easily seen and they give the patient an object to focus on to duplicate the same head position for each shot. When taking photographs, I instruct the patient to look directly at the markers with their eyes in a neutral, primary gaze position. Once steady, I am then able to easily make small adjustments to their head position and angle, if needed. The most common error I have seen is that patients will look at the markers with either a superior or inferior gaze of their eyes, which requires an adjustment in their head tilt angle so they are looking straight at the marker. Additionally, having the patient sit on a chair that swivels 360° helps facilitate the positions for all the required shots.



Figure 2. These photographs show the actual set up of the photography room with a blue background painted on the wall. There are round, gold object markers on the tripod and fluorescent light stands for the patient to look at in primary gaze that establish the correct head tilt and direction.

The standard views that I photograph for each patient (both portrait and macro close-up shots) are the following:

1. Directly facing the camera (Figure 3, photos 1-4)
  - straight/level with close-up
  - 30° head tilt down
  - 70° head tilt down
2. Facing 45° angle (left and right profiles) from the camera toward the stand-up lights (Figure 3, photos 5-12)
  - straight/level with close-up
  - 70° head tilt down with close-up
3. Facing 90° angle (left and right profiles) from the camera toward the room side walls (Figure 3, photos 13-16)
  - straight/level with close-up

4. Facing 180° angle from the camera toward the back, blue wall (Figure 3, photos 17-20)
  - donor area
  - donor area scar close-up if had previous surgery
  - crown
  - patient looking directly up to ceiling for top view

If indicated, I will also take photographs of the patients parting their hair either vertically or horizontally depending upon the unique characteristics of the patient. This is especially useful in women where vertical parts are made centrally and laterally in the frontal and mid-scalp areas. After the photographs are taken, I review the images for quality, and retake any that are not optimal.

Achieving photographic consistency requires a dedicated space where all the elements of the shoot are constant. Object markers placed at specific locations give the patient an exact point to focus on, which helps to standardize head positions, producing consistent images each time photographs are taken. This technique allows for an accurate representation and measurement of the patient's photographic progress and results. ♦



Figure 4. Photos 1-20 show the standard views taken for each patient.



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