



# Prosthetic Contact Lens Fitting Made Easy as 1-2-3

Stephanie Ramdass, OD; Josh Lotoczky OD, FAAO

## Introduction

*Toxocara* infection can have many devastating effects on the eyes, including heterochromia and leukocoria (*Figures 1 and 2*). Patients who have ocular disfigurement often have decreased self-esteem due to the appearance of their eye(s). This is especially true with teenagers. Parents or teachers may describe them as having the following tendencies/characteristics: walking with their head down to avoid eye contact, not being particularly involved with organizations, worried people are always looking at them, and exhibiting socially quiet behavior. In such cases, contact lenses can greatly improve quality of life.



Figure 1



Figure 2

When evaluating prosthetic soft contact lenses, there are three main areas you want to assess:

- 1) Iris color matches the normal eye as close as possible
- 2) Pupil size matches the opposite eye in standard room illumination
- 3) Pupil is centered when the contact lens is on the eye

## Methods

An 18-year-old female presented as a referral for fitting of a lens that would mask the permanent anterior segment defects caused by toxocara disease diagnosed when she was 4-years-old. During initial examination using the Haag-Streit BQ 900 slit lamp biomicroscope, photographs were captured of the young patient's right diseased eye and left unaffected eye. Mild iris heterochromia was evident and a large advanced cataract whitened the pupil of the right eye. The patient was diagnostically fit into BioColors custom tinted contact lenses in her right eye only with the following parameters.

Diagnostic Lens Parameters		
BC	Power	Diameter
8.6	Plano	14.3

The lenses were applied in piggyback fashion in the following order:



Lens 1: Opaque Pupil

Lens 2: Chestnut Iris Tint

Lens 3: Limbal Ring

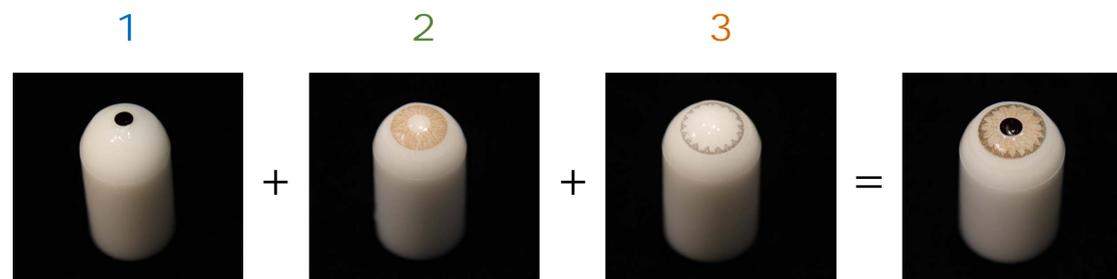


Figure 3

The final lens was ordered by dictating the exact order the diagnostic lenses were piggybacked to ensure trial lens is true to the in office views (*Figure 3*).

## Results

The first lens ordered (*Figure 4*) revealed adequate coverage in primary gaze, but decentered superior temporally upon blink. The limbal ring appeared too bold and the pupil did not match the size of her normal eye. The lens was reordered with 1.50D of prism ballast for lens centration, slightly reduced pupil size, and adjusted the depth of the limbal ring behind the iris print (*Figure 5*). This resulted in a more natural match to the patient's normal eye (*Figure 6*).

### Initial Lens Order



Figure 4

### Second Lens Order



Figure 5



Figure 6

## Discussion & Conclusion

Fitting prosthetic soft contact lenses on patients with ocular disfigurements requires the practitioner to manage patient emotions along with the condition that resulted in cosmetic changes. Utilizing this simple piggyback style of diagnostic fitting allows comparison of iris color, pupil size, and centration of the pupil all within the initial fitting visit. If needed adjustments can be made to achieve desirable results.

*We want to thank The Orion Vision Group and Alden Optical for providing lenses in this case report.*