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## An instructional video of RGP fitting modalities

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## An instructional video of RGP fitting modalities

### Abstract

The ultimate goal in fitting rigid gas permeable contacts is to maintain a healthy corneal-lens relationship while satisfying the patient. The fitter may choose between an interpalpebral lens, an under the lid lens, and an upper lid attachment lens modality. The interpalpebral modality is fit at least 0.50D steeper than the flattest keratometer reading and has a diameter between 7.8 and 8.3mm. The base curve chosen for an under the lid fit depends on the size of lens used. Large or small lenses can be fit with this modality depending on the palpebral fissure width. In contrast the upper lid attachment fit uses a diameter larger than 8.8mm and rests under the upper lid. The fitter must understand the relationships between lens diameter, base curves, lens edge and center thickness, and peripheral curves when designing the rigid gas permeable (RGP) lens. The use of fluorescein is an invaluable tool in assessing the fit of a RGP lens and the patient's corneal health. This paper /video will discuss and illustrate these various effects.

### Degree Type

Thesis

### Degree Name

Master of Science in Vision Science

### Committee Chair

James E. Peterson

### Keywords

base curves, fluorescein patterns, interpalpebral fitting modality, lens diameter, peripheral curves, under the lid modality

### Subject Categories

Optometry

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**An Instructional Video  
of  
RGP Fitting Modalities**

**By  
Lois M. Meacham  
and  
Diana L Whitlock**

**A Thesis submitted to the faculty of the  
College of Optometry  
Pacific University  
Forest Grove, Oregon  
for the degree of  
Doctor of Optometry  
May 1994**

**Advisor:**

**James E Peterson, O.D., F.A.A.O.**

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## Biographies

LOIS M. MEACHAM received her B.A. in Biology from Gustavus Adolphus College, St. Peter, MN in May of 1984. She is a candidate for an O.D. degree at Pacific University College of Optometry in May of 1994. Her future plans include optometric practice in Oregon.

DIANA L. WHITLOCK received her B.S. in Chemistry from University of Washington, Seattle, WA in August of 1990. She is a candidate for an O.D. degree at Pacific University College of Optometry in May of 1994. Her future plans includes marriage to Lyle McFarland in July of 1994 and private practice in the Seattle area.

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*James E. Peterson*

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James E. Peterson, O.D., F.A.A.O.

**Abstract:**

The ultimate goal in fitting rigid gas permeable contacts is to maintain a healthy corneal-lens relationship while satisfying the patient. The fitter may choose between an interpalpebral lens, an under the lid lens, and an upper lid attachment lens modality. The interpalpebral modality is fit at least 0.50D steeper than the flattest keratometer reading and has a diameter between 7.8 and 8.3mm. The base curve chosen for an under the lid fit depends on the size of lens used. Large or small lenses can be fit with this modality depending on the palpebral fissure width. In contrast the upper lid attachment fit uses a diameter larger than 8.8mm and rests under the upper lid. The fitter must understand the relationships between lens diameter, base curves, lens edge and center thickness, and peripheral curves when designing the rigid gas permeable (RGP) lens. The use of fluorescein is an invaluable tool in assessing the fit of a RGP lens and the patient's corneal health. This paper/video will discuss and illustrate these various effects.

**Key Words:**

Base curves, fluorescein patterns , interpalpebral fitting modality, lens diameter, peripheral curves, under the lid modality, and upper lid attachment modality

**Foreword:**

Pacific University presents an instructional video for beginning and intermediate fitters. This video will illustrate the upper lid attached, the interpalpebral, and under the lid fitting modalities. These modalities will show options in designing a custom fit for the patient.



1. Pacific University presents
2. A comparison of RGP fitting modalities: the interpalpebral fit, the under the lid fit, and the upper lid attached fit
3. A good interpalpebral fit  
42.87/43.12@90 B.C. 7.65mm Diameter 8.2mm
4. A steep interpalpebral fit  
42.87/43.12@90 B.C. 7.38mm Diameter 8.5 mm
5. An under the lid fit  
42.87/43.12@90 B.C. 7.76 mm Diameter 8.2 mm
6. The "dumb-bell" shape or the "double d" fluorescein pattern  
42.00/43.50@90 B.C. 7.71mm Diameter 9.2mm
7. A flat under the lid fit  
44.25/43.50@70 B.C. 7.68mm Diameter 8.5mm
8. A good under the lid fit  
42.00/43.50@90 B.C. 7.80mm Diameter 9.6mm
9. A steep under the lid fit  
44.00/44.62@90 B.C. 7.65mm Diameter 9.0mm
10. A flat under the lid fit  
42.00/43.50@ 90 B.C. 8.04mm Diameter 9.6mm
11. An upper lid attachment fit on ATR patient  
43.25/42.75@90 B.C. 7.95mm Diameter 9.5mm
12. Our appreciation goes to  
Dr. James Peterson for technical advising  
Dr. Christina Schnider for assistance with the equipment  
Collin Stapp for audio/visual support  
Arlynn Roper for narrating
13. Presentors:  
Lois Meacham  
Diana Whitlock  
Advisor:  
Dr. James Peterson

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