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CURRENT
CHALLENGES IN
*Cataract
& Refractive*
SURGERY

23-25
JANUARY
2019

Hilton
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Pediatric Refractive Surgeries Vision savers or Awful Crimes?

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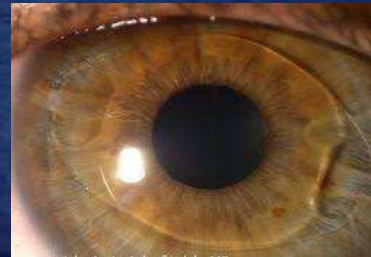
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Benefits of refractive Surgeries

- A high success rate.
- Very little pain involved with the procedure.
- Vision is corrected almost immediately or by the day after.
- Almost minimal or no need for eyeglasses.



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- Glasses
- Contact lenses
- LASIK, PRK
- Phakic IOLs
- Clear lens extraction



- Glasses
- Glasses
- Glasses
- Glasses
- CLs, LASIK, phakic IOLs, CLE



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1-Anisometropia



	Sphere(SPH)	Cylinder(CYL)	Axis	Addition(near) ADD
Right Eye (OD)	-1.00	-----	-----	
Left Eye (OS)	-9.00	-----	-----	



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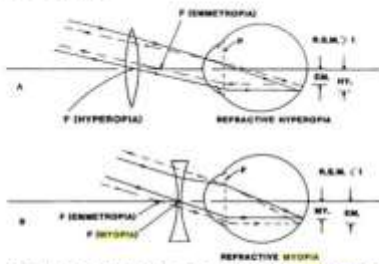


FIG. 5-23. For an eye having purely refractive anisopia, the retinal image for a corrected myopic eye will be smaller than that for an emmetropic eye, while the retinal image for a corrected hyperopic eye will be larger than for an emmetropic eye.

than the retinal image size being basically similar for **anisopia**, emmetropia, and hyperopia. Figure 5-25A shows that the retinal image for the corrected refractively hyperopic eye will be larger than that for the emmetropic eye, while Figure 5-25B shows that the retinal image for the corrected refractively myopic eye will be smaller than that for the emmetropic eye. However, a comparison of Figures 5-25 and 5-26 shows that for the eye in question the correcting lens enlarges the size of the retinal image for a refractively hyperopic eye, and reduces the size of the retinal image for a refractively myopic eye—exactly the same situation occurring with an axial myopia or hyperopic eye.

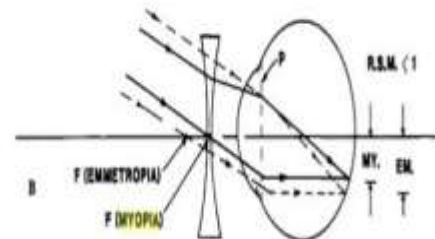
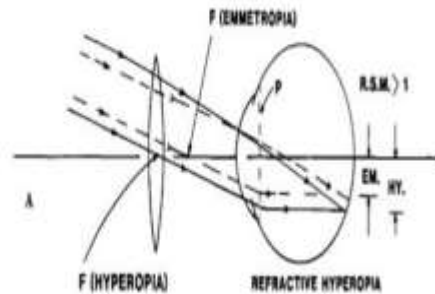
Magnification by a Spectacle Lens


The magnification brought about by a spectacle lens will be discussed in more detail in Chapter 16. For the present, two commonly used terms will be defined. **Spectacle Magnification.** This is the magnification brought about by a correcting lens, it compares the retinal image size with the correcting lens to that without the lens. It is due to both the power and the shape (or form) of the lens. As shown in the above examples, for both axial and refractive anisotropia a

plus lens enlarges the retinal image size of the eye in question, whereas a minus lens reduces the retinal image size. **Relative Spectacle Magnification.** This is the comparison of the size of the retinal image of the theoretical (dioptric) emmetropic eye, as discussed above and shown in Figures 5-24 and 5-25, relative spectacle magnification depends upon whether the anisotropia is axial or refractive; the image size being essentially the same as that for the emmetropic eye in axial anisotropia, but magnified in hyperopia and smaller in myopia, as compared to the emmetropic eye, in refractive anisotropia.

References

1. Foady, M.H. *Visual Optics*, Vol. 1, pp. 322-346. The H.K. Lewis Press, London, 1965.
2. Swette, A., Neupert, A., Davis, J.B., Shorrock, M., and Taitel, J.W. *Anisometropia and Its Correction: A Study of the Correction of the Optical Component of the Eye*. Medical Research Council Special Reports Series, No. 205, H. K. Lewis, 1956a, London, 1957.






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F	N	SYM	KOPPT	LCPNFC	PSHCV	VOTOS	CNSK	PKOZ	
100	100	100	100	100	100	100	100	100	100
E	W	3NE	0000	0000	0000	0000	0000	0000	0000
100	100	100	100	100	100	100	100	100	100
C	O	000	0000	0000	0000	0000	0000	0000	0000
100	100	100	100	100	100	100	100	100	100
5 2 8	9 0 2 6 9	6 7 0 8 1	3 5 7 9 2	5 2 8 3 5					
1 3 4	5 7 8 4 3	2 8 4 2 8	7 0 3 6 8	4 9 6 5 7					
	4 8 9 2 5	5 6 7 2 6	8 4 8 9 0	0 3 7 7 5					

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Unilateral Pseudophakia

Case 1

- 6 ys old child .
- H/O RE traumatic cataract for which cataract extraction and IOL implantation.
- A wrong **over plus** IOL was implanted by mistake.

• RE: **-10.0 -1.0 75**

BCVA : **0.8**

• LE : Emmetrope

UCVA : **1.0**

ANISEIKONIA

IOL Exchange



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Unilateral Pseudophakia

Case 2

- 6 ys old child .
- H/O RE traumatic cataract for which cataract extraction and IOL implantation.
- IOL was implanted and RE was rendered **Emmet rope**.
- LE is never touched.

• RE (**pseudophakic**) : Emmetrope UCVA : **1.0**

• LE : **-10.0 -1.0 75** (**axial myopia**) BCVA : **0.9**

Glasses can be used



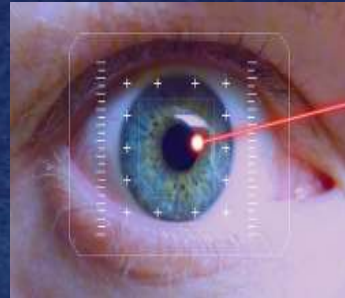
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2 -High ametropia

WHY YES?

- To get rid of heavy glasses .
- Less aberrations (prismatic effect)
- Better look



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2 -High ametropia

WHY NO ?

- Error is changing.
- Child is still growing and ectasia may occur.



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3- facial diformities ,psychological disorders or behavioral problems



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What to do?

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LASIK

Better to avoid

- **Flap complications.**
- **Difficult examination.**
- **PRK is much safer**



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Phakic IOLs



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Clear lens extraction



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- Anisometropia is **NOT AN ABSOLUTE** contraindication to glasses.
- Axial anisometropia doesn't cause anisekonia.
- Refractive surgeries for a metropia have **EXTREMELY LIMITED** Indications in pediatrics



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Thank You!

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