

Mastering Prism

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Timed Course Outline:

2.5 minutes - Introduction

Prism is a Wedge shaped piece of transparent material that refracts (bends or deviates) light rays toward the "Base", or, thicker part.

2 minutes - What is Prism?

The image, however is observed toward the "Apex", or thinner part

In An Ophthalmic Lens

A prism is still a wedge, but curved.

2 minutes - What is it used for?

A prism is used to place the image on the proper place on the retina.

This can correct conditions such as diplopia by moving the images together.

Or, on a damaged retina, prism can put the image on a more usable area.

2 minutes – Referring to eye deviation

Eso + phoria or tropia inward deviation

Exo + phoria or tropia outward deviation

Hyper + phoria or tropia upward deviation

Hypo + phoria or tropia downward deviation

1 minute - Causes

Brain problems

Nerve problems

Muscle Problems

2 minutes - Neutralizing Strabismus

Neutralization with prisms refers to optical correction of the deviation.

For example, if a patient has an eye deviation, prism can be used to correct this deviation so that diplopia is prevented and both eyes see a single image in the same place.

2 minutes - A bit about lenses

Lenses are made up of prism wedges all put together and curved to produce power.

Plus lenses have all the bases of these prisms in the center which makes the center thick and the edges thin

Minus lenses have all the bases of these prisms at the edge which makes the center thin and the edges thick.

Light rays passing through the center of a lens are not deviated.

As light passes through points away from the center, a prismatic effect, or, bending toward the base occurs.

5 minutes - A bit about prism

The optical center must be placed directly before the eyes which is why we take a PD.

On "yoked" Prisms, i.e. Base Right O.U., or, Base Down O.U.

5 minutes - Checking the Amount of Prism

5 minutes - Using Prentice's Rule

5 minutes - Other uses for Prentice's Rule

2 minutes - Checking for Horizontal Prism

Spot the P.D. in the lensmeter

If the P.D. is not as specified, re-spot at specified P.D. using a progressive chart and check there to determine the amount of prism induced.

2.5 minutes - Checking for Vertical Prism

where to check

5 minutes Slab-Off Prism

Corrects vertical imbalance

5 minutes - Slab-Off Prism

2 minutes - Other Effects