MYOPIA

If you need to wear eyeglasses to see clearly you have a *refractive error*. There are four types of refractive error: *myopia* (near sightedness), *hyperopia* (far sightedness), *astigmatism* and *presbyopia* (age related inability to focus up close).

As rays of light pass through the eye they are "refracted" so they will land on the retina and produce a sharp image (like a camera being in focus). If the rays of light are not bent properly, blurry vision may result and then you have a "refractive error". The ideal condition of sharp vision is *emmetropia*, and occurs only with a perfectly matched bending of light and length of the eyeball. Unfortunately, the coordination between the power of the eye and shape of the eye are not perfect and most people have refractive errors. Whether or not we prescribe glasses depends on how bothersome the condition is for any given person.

If your distance vision is blurry but near vision is clear you have near sightedness, also known as *myopia*. Myopia results from the power of the eye being too great to see distance objects, with the light focusing in front of the retina.

Although you would think that an eye too powerful would be good, it isn’t in the case with myopia. It merely serves to shift your focus to the near point, blurring distance vision. To correct myopia we prescribe minus powered lenses. Minus powered lenses are thicker on the edges than in the middle. The overall thickness of the lenses will depend on the degree of myopia.

The causes of myopia are not completely understood. In a few cases we can prevent further increases in myopia by eye exercises, rigid contact lens wear or prescribing reading glasses. Most cases of myopia are a result of family genetics and environmental stress, such as excessive near work and eye strain. Regular optometric care can prevent visual discomfort and keep you seeing efficiently.

Having a refractive error does not mean that your eyes are "bad" or "weak". Just as some people are tall or short, some have small hands and others large feet, those having myopia usually have eyes that are simply too powerful and “over focused” for near objects at the sacrifice of distance vision.