

Eyeglass World

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The most common equipment to correct refractive error is eyeglass, world first vision correction method. They can many types of error including nearsightedness (myopia), farsightedness (hyperopia) and astigmatism.

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Eyeglass are consisting of lenses and frame. The frames are usually made from plastic or metal. The lenses were originally made from glass, later on they are made from plastic polycarbonate. Plastic lenses have many advantages over glass lenses. They are harder to shatter so it is far less dangerous than the glasses one. The weight of plastic is also less than glass. But the best advantage is that plastic can be compacted in great density in order to improve the index of refraction correction so it can be made into very thin lenses even if the patient suffer from heavy abnormalities.

One may be surprised that Eyeglasses or spectacles have been used for vision correction and eye protection for almost 1,000 years. We have many theories about the invention of the first wearable eyeglasses in the world. But the one who is credited for this invention is Salvino D'Armato in 1284. The early glasses can correct the farsightedness in aged people by using convex lenses but no one can explain how these lenses can correct eyesight error. Until 1604, Johannes Kepler reveal the secret of optics and correctly explain the mechanism of concave and convex lenses which can also be used to correct both nearsightedness and farsightedness.

Lenses can divided into three types of its characteristic as follow:

First, the concave lenses, they are thin in the center and thick on the edge. These lenses can be used to correct nearsightedness (myopia) by its power to refocus the light at further spot where patient focus point exist.

Second, the convex lenses can be used to correct farsightedness (hyperopia). These lenses has center thickness larger than its edge so it's have power to refocus the light to the nearer spot where patient focus point exist.

Last, the cylindrical lenses which have unbalance curvature, having curve in one direction more than the other. This can help correcting astigmatism by moving the light focus point to the side where patient focus point exist. This type of lenses was built by an astronomer name George Airy in 1825.

The later development of eyeglasses are consisting of the multifocal

lenses, lenses frame, lenses holding method, scratch free lenses, non shatter lenses, radiation filter lenses, etc..

Using eyeglasses to correct your eyesight error have many advantages over the other method. It's have no risk involving eye surgery failure like the other correction method. The eyeglasses itself can be fashionable and improve your characteristic. It is easier to equip eyeglasses and you don't have to worry about the hygiene much. And the best of all, It is the cheapest way to correct your refractive error (if you didn't pick the ultra super shiny slim and stylish frame of course).

However, there are also disadvantage comparing to the other error correction method such as the poor side view, the reflection on glasses, loosing and slippery when equip, vision fogged in high humid area, annoying vision on rainy and snowy day, unable to equip sunglasses, scratch may reduce your vision and it is uncomfortable in many activities