

Vision Screening Results—Definitions

Refractive error occurs if the eye cannot focus light properly on the retina. It usually causes blurry vision and in most cases can be corrected with eyeglasses (Astigmatism, Hyperopia, Myopia). Some refractive errors, if not corrected early enough, can lead to permanent vision loss in the affected eye (see Anisometropia below). This is known as amblyopia, or “lazy eye”. Amblyopia can result from any condition causing one eye to be significantly stronger than the other; this may include anisometropia, strabismus (see corneal reflex below), opacities, ptosis (drooping eyelids), or other conditions.

Anisometropia is a significant difference in the power of the eyes. The screener uses the spherical equivalent measurement to calculate whether one eye is significantly stronger than the other. If the difference in the two spherical equivalent measurements is 1.00 D or greater, a referral is generated. A significant difference may indicate the potential for amblyopia, or “lazy eye”.

Astigmatism results in blurry vision because the eyes are not able to sharply focus light. Young children have some degree of astigmatism, measured as “cylinder”, so a referral will not be generated unless this number is equal to or above the number given in the heading. This number changes with age, as the degree of astigmatism that is normal decreases as a child’s age increases.

Hyperopia / Myopia **Hyperopia** is better known as farsightedness; **Myopia** is better known as nearsightedness. In these refractive errors, the eye is not shaped/sized to properly complement its focusing power (light doesn’t focus directly on the back of the eye as it should), resulting in blurry vision up close (hyperopia) or at a distance (myopia). Young children typically have some degree of refractive error (more commonly hyperopia), so these numbers change as the child’s age increases and the acuity a child their age would be expected to have improves. The higher the number, the more significant the deficiency. (+) numbers indicate hyperopia; (-), myopia.

Corneal Reflex / Symmetry measurements screen for potential muscle imbalance or misalignment of the eyes (strabismus). Cases where the eyes are not aligned properly can result in difficulty with three-dimensional vision, tracking while reading, blurriness or discomfort, and/or potentially permanent loss of vision in the affected eye (amblyopia or “lazy eye”).

Anisocoria means unequal pupil size. This can, in some cases, indicate a mass in the eye or a neurological disorder. If there is more than 1mm difference in the sizes of the right and left pupil, a referral will be generated.

***NOTE**—An “n/a” result for all categories may be returned if the measurements are out of range or too inconsistent for the equipment to provide a value. This is often caused by a vision problem, sometimes significant, and will result in a REFER result, as a complete eye exam is recommended.