



Wasatch View Eye Care [www.wasatchview.com](http://www.wasatchview.com)  
Jeff Mellor, OD, MEd, FAAO-Optometrist  
10412 S. 2200 W. 2135 W. Main Street, B101  
South Jordan, UT 84095 Lehi, UT 84043  
(801) 858-2020 (801) 702-8550

## Amblyopia

### Overview

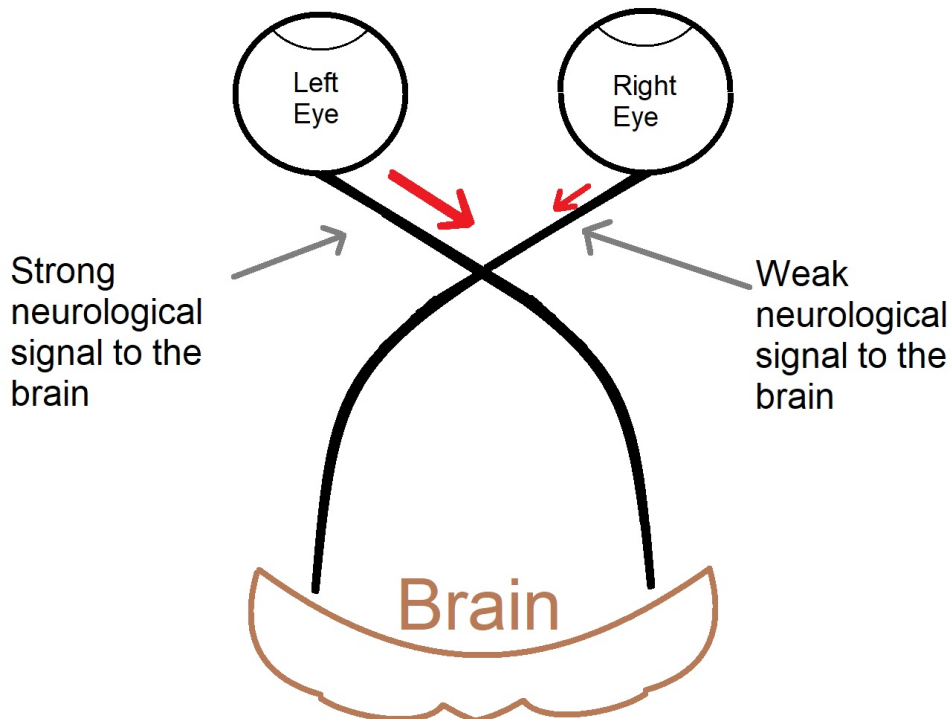
Amblyopia or a “lazy eye” is where a weak eye sees poorly compared to the other eye because of a poor neurological connection to the weaker eye when both eyes have the proper eyeglass prescription. The poor vision is also not related to any eye disease. It is caused by visual deprivation to an eye during early neurological development between the eye and visual cortex of the brain. During infancy and early childhood development the visual cortex is forming neurological connections to the eyes. If an eye is deprived of visual stimuli at this time, a strong neurological connection is not formed or “hard-wired”. In other words, the brain will permanently “tune out” a bad eye because it never got “clear reception” from it. Treatment involves removing the source of visual deprivation and patching of the stronger eye. This treatment is much more successful when done at an early age. Amblyopia occurs in about 2 out of every 100 children. This is why it is strongly recommended that every child get an eye exam sometime between the ages of 3 to 5 years old.



Clear



Blur



## **Signs & Symptoms**

A patient with amblyopia will notice decreased best corrected vision in the weaker eye. Parents may notice their child's head turn more to look at objects or that they get fussy when the weaker eye is covered up. It is often very difficult to detect in small children. Because one eye does not see as well as the other there is a deficit in binocularity, which affects depth perception or the "3-D" effect. Amblyopia increases the chances of eye trauma to the weaker eye and people with it should wear protective lenses made of polycarbonate or Trivex.

## **Causes**

The visual deprivation that leads to amblyopia may be caused by a large eyeglass prescription in one eye and not the other, an eye turn (strabismus) or a cataract. It can be anything that obscures vision in one eye during the neurological development of the optic pathway between the eye and visual cortex of the brain.

## **Testing and Evaluation**

A proper evaluation for amblyopia is done by having your eye doctor do a comprehensive eye exam. During the exam testing needs to be done that assesses the need for an eyeglass prescription, eye alignment and ocular health. Amblyopia is a diagnosis of exclusion that is considered only when there is no sign of any eye diseases that could cause decreased vision in one eye.

## **Management**

The first form of treatment for amblyopia is removing or reducing the cause of visual deprivation. For refractive error it is getting a proper eyeglass or contact lens prescription. Strabismus surgery can be done to shorten certain eye muscles to make the eyes align properly. Cataracts need to be removed so both eyes will see clearly also.

The second form of treatment is blurring of the good eye to try to improve the vision in the weak eye. This forces use of the weak eye and stimulates neurological connections to form. *It needs to be done with correction for only two hours a day with intensive visually demanding tasks over a period of six to eight weeks.* The younger a patient is when patching is started, the better the visual recovery will be and the older a patient is the harder it will be. Ways of blurring the stronger eye include a physical patch, taping up the lens in a pair of glasses or using atropine eye drops. Atropine drops work best for children that won't wear an eye patch.



## Websites

All About Vision: <http://www.allaboutvision.com/conditions/amblyopia.htm>

American Optometric Association:

<https://www.aoa.org/healthy-eyes/eye-and-vision-conditions/amblyopia?sso=y>

National Eye Institute:

<https://www.nei.nih.gov/learn-about-eye-health/eye-conditions-and-diseases/amblyopia-lazy-eye>

