



# XCELLENCE IN EYE CARE

## THE EYE INSTITUTE

### ***Amblyopia*** ***(Lazy Eye)***

#### **What is amblyopia?**

Amblyopia is a condition in which vision in one or both eyes cannot be corrected to 20/20 even after the correct eyeglasses have been prescribed. In a child with normal visual development, the brain receives information from both the right eye and the left eye and combines the two to see one clear picture of the world. This “combining” of information from both eyes is called “fusing or fusion.” Amblyopia occurs when the brain is unable to “fuse” or combine the information from both the right eye and the left eye. When the brain is unable to fuse this information, it learns to ignore or “suppress” information from one eye. This leads to a lack of development or deterioration of vision in the eye not being used.

Amblyopia is caused by a crossed eye or wall-eye condition or by unequal optical prescriptions in the two eyes. Generally, amblyopia will only develop in children if the causative problem starts before the age of six-years-old. Fortunately, however, amblyopia can be treated at almost any age.

Another term sometimes used by the public when referring to amblyopia is “lazy eye.” This is not the best way to think about this condition. The eye is not lazy; rather, because of differences between the two eyes, the brain cannot fuse information from both eyes and shuts off or ignores information from one eye.

#### **What types of amblyopia can occur?**

The three most common types are:

- **Refractive Amblyopia (due to a difference between the two eyes)**  
This is a condition in which the optical correction is very different between the two eyes. One eye, for example, may be very farsighted while the other is only slightly farsighted.
- **Refractive Amblyopia (due to a high degree of optical correction in both eyes)**  
This is a condition in which the optical correction is very high in both eyes. Because the child has not worn glasses, the vision will be poorly developed in both eyes.
- **Strabismic Amblyopia (due to misalignment of the two eyes)**  
This is a condition in which one eye is either turned in or turned out at all times. The turned eye is not used by the brain leading to a deterioration or lack of vision development in that eye.

#### **How common is amblyopia?**

Approximately three percent of children and young adults have amblyopia.

## What are the problems and symptoms associated with amblyopia?

The main problem associated with amblyopia is poor vision in one or both eyes. The child doesn't usually complain because vision in the good eye is perfect. If amblyopia is due to poor optics in one eye, you will not even be suspicious because the eyes appear normal. You will not see a crossed eye or any other obvious sign of a problem. Only a vision screening or professional eye examination can detect this problem. This is one reason we recommend a full, professional eye examination at six months and three-years of age.

## How is amblyopia treated?

If the problem is due to the optics of the eyes, eyeglasses must be prescribed and need to be worn at all times. In addition, the good eye will either need to be patched or an eye drop called atropine will be placed in the good eye to force the weaker eye to be used. The number of hours of patching and the dosage of atropine varies from case to case.

In addition, we often prescribe **home-based therapy** using a computer program or other procedures to enhance the effect of the glasses, patching, or atropine. Generally, the process takes about six months, but the most dramatic improvement in vision occurs in the first three months. Of course, results depend on the child wearing the glasses at all times and using the patch or drops as instructed.

If the basis for the amblyopia is an eye turn, glasses may not be necessary, but patching or atropine will still be required. Follow up visits are necessary for the doctor to determine if the treatment is working.

In some cases, eyeglasses, patching and atropine are not enough to completely solve the problem. In these cases, the child may need **VISION THERAPY**.

**Vision therapy** is a treatment approach that involves weekly office visits. During these visits, carefully selected and sequenced activities are practiced by the patient. This treatment is designed to hasten the recovery of good vision, improve focusing and eye teaming ability.

Any other questions can be directed to Karen Pollack:  
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