

What is Amblyopia...?

- Amblyopia (**lazy eye**) is a reduction in visual capacity due to interruption of the developing visual system during the sensitive period in childhood. This produces decreased visual acuity via defect of central visual processing in the absence of any demonstrable abnormality of the optic pathways.
- The eye may look normal, but the brain favors the other eye. **The condition carries an increased lifetime risk of serious visual loss in the fellow eye.**(1)

Diagnosis

- **Visual acuity:** Is reduced with no other detectable organic cause and despite full refractive correction.
- **Neutral - density filters:** May help to differentiate amblyopia from organic causes of reduced visual acuity. (1)

Aetiology and Classification

Normal development of the visual system and central visual processing requires bilateral focused foveal images with retinal correspondence during a critical period lasting to until around 8 or 9 years of age. Any interruption to such stimulation can lead to amblyopia the degree of amblyopia varies depending on the child's age and the severity of interruption, with severe reductions in stimulation before the age of 2 years producing the most profound amblyopia. (1)

Amblyopia can be classified according to its aetiology:

- **Strabismic**
- **Anisometropic**
- **Ametropic**
- **Stimulus Deprived** (2)



Figure showing the diagnosis of amblyopia (1)



Figure showing the treatment of amblyopia (2)

Treatment and Prevention

Amblyopia must be treated before the end of sensitive period of visual development.

Occlusion : patching of the better - seeing eye to encourage use of the amblyopic eye is the mainstay of treatment .

Atropine penalization : 1% can be given to blur the vision in the better eye. (2)

Conclusion

Prevention and treatment of amblyopia forms the bulk of the workload of the most childhood's eye service. Sensitive period during which acuity of an amblyopic eye can be improved is usually up to 7-8 years in strabismic amblyopia where good binocular function is present.

References

- 1.. Sundaram, V. and Benjamin, L. (2014). *Training in ophthalmology*. Oxford: Oxford University Press.
- 2.. Kanski, J. and Kubicka-Trzaska, A. (2013). *Clinical ophthalmology*. Edinburgh: Churchill Livingstone Elsevier.