Complete Summary

GUIDELINE TITLE

Care of the patient with amblyopia.

BIBLIOGRAPHIC SOURCE(S)

American Optometric Association. Care of the patient with amblyopia. 2nd ed. St. Louis (MO): American Optometric Association; 1997. 57 p. (Optometric clinical practice guideline; no. 4). [177 references]

GUIDELINE STATUS

This is the current release of the guideline.

According to the guideline developer, this guideline has been reviewed on a biannual basis and is considered to be current as of 2004. This review process involves updated literature searches of electronic databases and expert panel review of new evidence that has emerged since the original publication date.

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SCOPE

DISEASE/CONDITION(S)

Amblyopia

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management

CLINICAL SPECIALTY

Optometry

INTENDED USERS

Health Plans
Optometrists

GUIDELINE OBJECTIVE(S)

- To identify patients at risk of developing amblyopia
- To accurately diagnose amblyopia
- To improve the quality of care rendered to patients with amblyopia
- To minimize the adverse effects of amblyopia
- To preserve the gains obtained through treatment
- To inform and educate parents, patients, and other health care practitioners about the visual complications of amblyopia and the availability of treatment

TARGET POPULATION

Children and adults suspected of having amblyopia

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis of Amblyopia

1. Patient History
2. Ocular Examination
    - Visual Acuity
    - Refraction
    - Monocular fixation
    - Ocular motor deviation
    - Sensorimotor fusion
    - Accommodation
    - Ocular motility
    - Ocular health assessment and systemic health screening

Management of Amblyopia

1. Optical Correction
2. Occlusion
3. Active Vision Therapy
4. Patient Education

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline developer performed literature searches using the National Library of Medicine's Medline database and the VisionNet database.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not stated

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The Reference Guide for Clinicians was reviewed by the American Optometric Association (AOA) Clinical Guidelines Coordinating Committee and approved by the AOA Board of Trustees.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Summarized by the National Guideline Clearinghouse (NGC):

Diagnosis of Amblyopia

The evaluation of a patient with amblyopia may include, but is not limited to the following areas. These examination components are not intended to be all inclusive because professional judgment and the individual patient's symptoms and findings may have a significant impact on the nature, extent, and course of the services provided. Each component is described in greater detail in the guideline document.

Potential Components of the Diagnostic Evaluation for Amblyopia

A. Patient History
B. Visual acuity
C. Refraction (noncycloplegic and cycloplegic)
D. Monocular fixation
E. Ocular motor deviation
F. Sensorimotor fusion
G. Accomodation
H. Ocular motility
I. Ocular health assessment and systemic health screening
J. Supplemental testing
    1. Electrodiagnostic testing
    2. Additional differential diagnostic testing

Management of amblyopia

Treatment should be directed toward the two primary etiologies of amblyopia: form deprivation and binocular inhibition. Amblyopia therapy effectively restores normal or near-normal visual function by eliminating eccentric fixation and/or developing more extensive synaptic input to the visual cortex. It improves monocular deficits of visual acuity, monocular fixation, accommodation, and ocular motility. The final step in amblyopia therapy, if possible, is to develop normal binocular vision. The establishment of binocular vision eliminates or significantly reduces the underlying binocular inhibition in unilateral amblyopia, which increases the probability of maintaining visual acuity improvements.

The following treatment options are discussed in greater detail in the guideline document:

- Optical correction
- Occlusion
- Active vision therapy

Management of deprivation amblyopia, isometropic amblyopia, anisometropic amblyopia, and strabismic amblyopia are discussed in greater detail in the guideline document.

The frequency and composition of evaluation and management visits for amblyopia are summarized in the following table:

Type of Patients	Evaluation Visits	Prognosis[1]	Treatment Options[2]	Frequency of FU visits	Estimat Total V visits
Monocular Form Deprivation Amblyopia	1-2	Fair, (if diagnosed and treated during critical period)	1. Surgery, optical correction 2. Surgery, optical correction, visual stimulation	1. Every 2-4 wks for 1 yr; every 6 mos thereafter 2. Every 2-4 wks for 1 yr; every 6 mos thereafter	
Binocular Form Deprivation Amblyopia	1-2	Fair, (if diagnosed and treated during critical period)	1. Surgery, optical correction 2. Surgery, optical correction, visual stimulation	1. Every 2-4 wks for 1 yr; every 6 mos thereafter 2. Every 2-4 wks for 1 yr; every 6 mos thereafter	
Isometropic Refractive Amblyopia	1-2	Good	1. Optical correction 2. Optical correction, vision therapy	1. Reevaluate in 4-6 wks; 2. Reevaluate in 4-6 wks; 2-6 mos FU after VT	10-15
Anisometropic Refractive Amblyopia	1-2	Good	1. Optical correction 2. Optical correction	1. Reevaluate in 4-6 wks; every 2-6 mos FU	15-25

			occlusion (part-time) 3. Optical correction occlusion (part-time) vision therapy	2. Reevaluate in 4-6 wks; every 2-4 wks FU 3. Reevaluate in 4-6 wks; 2-6 mos FU after VT	
Strabismic Amblyopia (Central Fixation)	1-2	Good	1. Optical correction, occlusion 2. Optical correction, occlusion, vision therapy	1. Re-evaluate in 4-6 wks; every 2-4 wks FU 2. Re-evaluate in 4-6 wks; 2-6 mos FU after VT	15-25
Strabismic Amblyopia (Eccentric Fixation)	1-2	Fair	1. Optical correction, occlusion 2. Optical correction, occlusion, vision therapy	1. Re-evaluate in 4-6 wks; every 2-4 wks FU 2. Re-evaluate in 4-6 wks; 2-6 mos FU after VT	25-35

[1] General prognosis; prognosis is improved during critical sensitive period of development, but compliance and motivation afford improvements into adulthood.
[2] Surgery is indicated in cases of congenital cataract and ptosis.
[3] Estimated visits may vary based on co-existing conditions, patient compliance, etc.

VA = visual acuity, REF = refractive status, MF = monocular fixation, BS = binocular status, FU = follow-up visit, VT = vision therapy, PRN = as necessary

CLINICAL ALGORITHM(S)

An algorithm is provided for Optometric Management of the Patient with Amblyopia.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

The prevalence, potential risks, and possible costs of untreated amblyopia contrasted with the good prognosis for patients treated at any age necessitate the involvement of optometrists in the diagnosis and treatment, or referral for consultation of patients with amblyopia.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Clinicians should not rely on this Clinical Guideline alone for patient care and management. Please refer to the references and other sources listed in the original guideline for a more detailed analysis and discussion of research and patient care information.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1994 (revised 1998; reviewed 2004)

GUIDELINE DEVELOPER(S)

American Optometric Association - Professional Association

SOURCE(S) OF FUNDING

Funding was provided by the Vision Service Plan (Rancho Cordova, California) and its subsidiary Altair Eyewear (Rancho Cordova, California)

GUIDELINE COMMITTEE

American Optometric Association Consensus Panel on Care of the Patient with Amblyopia

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

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GUIDELINE AVAILABILITY

Electronic copies: Available from the American Optometric Association Web site.

Print copies: Available from the American Optometric Association, 243 N. Lindbergh, Blvd., St. Louis, MO 63141-7811

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

The following is available:

- Answers to your questions about lazy eye. St. Louis, MO: American Optometric Association. (Patient information pamphet).

Print copies: Available from the American Optometric Association, 243 N. Lindbergh Blvd., St. Louis, MO 63141-7881; Web site, www.aoanet.org.

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NGC STATUS

This summary was completed by ECRI on December 2, 1999. The information was verified by the guideline developer as of January 27, 2000.

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