PROBLEM
The issue of learning disorders, including dyslexia, has become a matter of increasing personal and public concern. Inability to read and comprehend is a major obstacle to learning and may have far-reaching social and economic implications. Concern for the welfare of children with dyslexia and learning disabilities has led to a proliferation of diagnostic and remedial treatment procedures, many of which are controversial. This policy statement addresses these issues, which are of importance to affected individuals, their families, teachers, physicians, allied health personnel, and society.

POLICY
A broad-based consensus of educators, psychologists, and medical specialists recommend that individuals with dyslexia or related learning disabilities should receive (1) early comprehensive educational, psychological, and medical assessment; and (2) educational remediation combined with appropriate psychological and medical treatment.

BACKGROUND
Reading is a complex function that involves integrating multiple factors related to an individual's experience, ability, and constitution. Although it is obvious some children do not read well because they have trouble seeing, research has shown that the majority of children and adults with reading difficulties experience a variety of language defects that stem from complex, altered brain morphology and function, and that the reading difficulty is not due to altered visual function per se. In addition, a variety of secondary environmental factors may also have a detrimental effect on the learning process.

This statement has been approved by the Council on Child and Adolescent Health. The recommendations in this statement do not indicate an exclusive course of treatment or procedure to be followed. Variations, taking into account individual circumstances, may be appropriate.

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though the eyes are obviously necessary for vision, the brain interprets visual symbols. Therefore, correcting subtle visual defects cannot alter the brain’s processing of visual stimuli. Children with dyslexia or related learning disabilities have the same ocular health statistically as children without such conditions.7 There is no peripheral eye defect that produces dyslexia or other learning disabilities,8,9 and there is no eye treatment that can cure dyslexia or associated learning disabilities.

4. Role of the Physician. Ocular defects should be identified as early as possible and, when correctable, managed by the ophthalmologist. These treatable conditions include refractive errors, focusing deficiencies, eye muscle imbalances, and motor fusion deficiencies. The ophthalmologist may be consulted early, but if no ocular defect is found, the child should be referred to a pediatrician to coordinate required multidisciplinary care.

5. Controversies. Eye defects, subtle or severe, do not cause reversal of letters, words, or numbers. No scientific evidence supports claims that the academic abilities of dyslexic or learning-disabled children can be improved with treatment based on (a) visual training, including muscle exercises, ocular pursuit, tracking exercises, or “training” glasses (with or without bifocals or prisms)10-12; (b) neurological organizational training (laterality training, crawling, balance board, perceptual training)13-15; or (c) tinted or colored lenses.16,17 Some controversial methods of treatment result in a false sense of security that may delay or even prevent proper instruction or remediation. The expense of these methods is unwarranted, and they cannot be substituted for appropriate remedial educational measures. Claims of improved reading and learning after visual training, neurological organization training, or use of tinted or colored lenses are typically based on poorly controlled studies that rely on anecdotal information or testimony. These studies are frequently carried out in combination with traditional educational remedial techniques.

6. Role of Education. Teaching children, adolescents, and adults with dyslexia and learning disabilities is a challenge for educators since no single educational approach is applicable to all. The psychologist may help with educational diagnosis and classification. Physicians, including pediatricians, otolaryngologists, neurologists, ophthalmologists, and other appropriate medical specialists may assist in dealing with health problems. Since remediation may be more effective during the early years, early diagnosis is paramount.18,19 The educator ultimately plays the key role in providing help for the learning-disabled or dyslexic child or adult.

SUMMARY

Dyslexia and other related learning disabilities are serious problems. The American Academy of Pediatrics, through its Committee on Children with Disabilities and the Section on Ophthalmology, the American Academy of Ophthalmology, and the American Association for Pediatric Ophthalmology and Strabismus strongly support the need for early diagnosis and educational remediation. There is no known eye or visual cause for dyslexia and learning disabilities, and no effective visual treatment. Multidisciplinary evaluation and management must be based on proven procedures demonstrated by valid research.

Committee on Children with Disabilities, 1991 to 1992
Alfred Healy, MD, Chair
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Ruth K. Kaminer, MD
Robert La Camera, MD
John A. Nakashi, MD
John R. Poncher, MD
Virginia Randall, MD
Renee C. Wachtel, MD
Philip R. Ziring, MD

Liaison Representatives
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Ross Hays, MD, American Academy of Physical Medicine and Rehabilitation
Joseph G. Hollowell, MD, Centers for Disease Control and Prevention
Center for Environmental Health and Injury Control
Jeri Nelson, MD, Association for Retarded Citizens of America

Section Liaison
Harry Gawaner, MD, Section on Rheumatology

American Academy of Ophthalmology
Public Health Committee
Subcommittee on Learning Disabilities
Eugene M. Helveston, MD, Chair
Edward R. O’Malley, MD
Gunter von Noorden, MD
Donald K. Mousel, MD
Scott M. MacRae, MD

American Association for Pediatric Ophthalmology and Strabismus

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