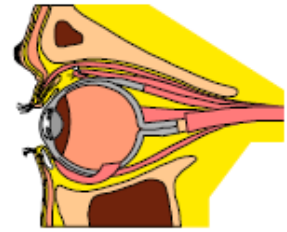


VISUAL IMPAIRMENTS & BLINDNESS



DEFINITION:

Visual Impairment (VI) is an impairment in vision which, even with correction, adversely affects an individual's educational performance. This term includes individuals who are partially sighted and blind.

TYPES OF VISION:

Refractive Vision (Acuity): The degree of detail that can be seen in an object. The product of light rays bending and reaching receptors (rods and cones) of the retina. Refraction is influenced by the size and shape of the eyeball which changes with age. Refractive vision includes myopia (nearsightedness), hyperopia (farsightedness) and astigmatism (blurring or distortion of the image).

Visual acuity is commonly tested using the Snellen Eye Chart. The effect of impaired vision can negatively impact motor development. The age onset commonly determines future problems in these areas.

Refractive problems are commonly corrected using prescription glasses or surgery.

Orthoptic Vision: Refers to the activity of the six external muscles of the eye responsible for providing coordinated movements of the eyes. Orthoptic vision includes binocular vision (the ability of the eyes to coordinate), depth perception (including strabismus, amblyopia and alternating) and nystagmus (constant involuntary movement of the eyeballs).

Orthoptic vision problems can sometimes be treated with surgery; however, the problem may be corrected with a special lens or with eye exercises. When depth perception problems exist, students should refrain from participating in activities that require judging where in space moving objects are located.

INDICATORS OF VISUAL IMPAIRMENTS:

- Lack of coordination in directing vision of both eyes
- Difficulty visually tracking an object
- Avoidance of climbing apparatus
- Difficulty going down steps one at a time
- Sensitivity to normal light levels
- Walking overcautiously and hesitantly
- Faltering and stumbling when walking even on an even surface
- Walking down steps using a marked time pattern
- Body tension

- Eyelids are crusted and red
- Eyes are bloodshot
- Frequent rubbing of the eyes
- Squinting

Motor development is delayed in blind infants, especially in mobility and locomotion. Particular concerns are delays in development of play and social skills. Motor performance of individuals with visual impairments are also lower than their sighted peers.

Individuals with visual impairments have lower physical fitness than sighted peers. The degree of the visual impairment, age, and gender all affect fitness scores. The more severe the visual impairment, the lower the physical fitness. Lack of instruction and practice, inactive lifestyles and overprotection all contribute to the lower levels of fitness (Sherrill, 2004).

TEACHING TIPS FOR INDIVIDUALS WITH VISUAL IMPAIRMENTS:

- Ensure optimal lighting to ensure use of residual vision.
- Keep equipment and objects in the same place
- Keep the activity area free of clutter.
- Alter the playing surface texture (i.e., sand, dirt, asphalt) or increase or decrease the grade to indicate play area boundaries.
- Place audio devices inside balls and bean bags; use beepers by goals and bases.
- Use brightly colored equipment and boundaries, that differ from the ground (red balls on green grass, blue lines on tan floor).
- Allow the individual to use an "anchor" for orientation when running ?a sighted partner or a rope suspended at hip level.
- Use a movement exploration approach to maximize movement opportunities.
- Use equipment with a wide variety of textures.
- Insist the individual wear eye protection (goggles).

SPORTS FOR THE VISUALLY IMPAIRED AND BLIND:

According to the International Blind Sports Association (IBSA), competition is divided into four classifications

- **Class B1** - There is no light perception in either eye up to light perception. There is an inability to recognize the shape of a hand at any distance or in any direction.
- **Class B2** - From the ability to recognize the shape of a hand up to visual acuity of 20/600 and/or a visual field of less than 5 degrees in the best eye with the best practical eye correction.
- **Class B3** - From the visual acuity above 20/600 and up to visual acuity of 20/200 and/or a visual field of less than 20 degrees and more than 5 degrees in the best eye with the best practical eye correction.

- **Class B4** - From the visual acuity above 20/200 and up to visual acuity of 20/70 and a visual field larger than 20 degrees in the best eye with the best practical eye correction.

RECOMMENDED WEB SITES:

[American Council of the Blind](#)

[Guidedogs Association](#)

[A Blind Net](#)

[Information Sheet Home](#)

[International Blind Sport Association](#)

[United States Association of Blind Athletes](#)

[Blind Outdoor Leisure Development](#)

[National Dissemination Center for Children with Disabilities](#)

[Strategies for teaching students with disabilities](#)

Developed by Texas Woman's University Graduate Adapted Physical Education Program in cooperation with Denton ISD (French, 1997; Heuttig, 1999). Updated by Stephanie Bowerman, Doctorate Student (Fall 2007).

Information on this sheet contains only suggested guidelines. Each student must be considered individually, and in many cases, a physician's written consent should be obtained.