



VISION DEVELOPMENTAL MILESTONES (cont.)		
Child's Age	Expected Behavior	Expected Completion*
10 to 12 months	Understands and accomplishes vision related motor tasks such as stacking blocks, putting pegs into round holes, crawling, standing, walking	12 mos.
1 to 2 years	Identifies geometric forms by placing blocks in appropriately shaped holes Shows interest in pictures Scribbles on paper	2 yrs.
2 to 3 years	Finds object that move out of sight without following its path Recalls visual images Puts together six-piece puzzles or matches objects out of six pairs of items	3 yrs.
3 to 4 years	Copies geometric figures Reading readiness present — responds to vision/speech-sound coordination activities like the television programs "Sesame Street" and "Electric Company"	4 yrs.
4 to 5 years	Recognizes names or colors	5 yrs.
5 to 6 years	Tells the difference in color shades Depth perception fully developed Vision approaches adult's	6 yrs.



INFANT WARNING SIGNS OF VISUAL PROBLEMS:

- ** Visually unresponsive
- ** Holds things very close to see them
- ** Bumps into large objects
- ** Cannot pick up small objects with accuracy
- ** Favors one eye when looking at objects
- ** One or both eyes turn in or out for noticeable periods of time
- ** Squints or closes one eye frequently

DSHS VISION SCREENING PROGRAM

The Texas Department of State Health Services (DSHS) provides assistance to vision screening programs for preschool — school-age children. Workshops are held around the state to train interested individuals to perform basic vision screening.

WHO ARE THE TRAINED SCREENERS AND THE SPECIALISTS?

1. **Trained Screeners** — In Texas, individuals who screen children for vision problems **must** be certified through DSHS unless their professional licenses permit such screening.
2. **Specialists** — People who are educated or trained to perform many specialized services for the visually impaired:
 - a. **Ophthalmologist** — a medical doctor trained in diagnosis and treatment of defects and diseases of the eye
 - b. **Optometrist** — a professional trained in vision disorders, evaluation for visual aids, and visual habilitation
 - c. **Optician** — a professional who grinds lenses, fits them into frames to the wearer's needs
 - d. **Orthoptist** — a professional who plans exercise programs for the development or restoration of normal teamwork of the eyes (binocular vision)
 - e. **Visual Handicap Educator** — an educator who is trained in techniques designed to increase a visually impaired individual's social adaptation skills, including learning and mobility skills



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VISION

HEALTH SCREENING and
CASE MANAGEMENT UNIT
HEALTH SCREENING GROUP



Experts agree that at least 80% of what a sighted person learns is through vision. Schools, television, and movies all use this knowledge effectively to present ideas to their audiences.

Vision is most commonly described in terms of an acuity measure, or the best a person can see. 20/20 is considered normal vision; while 20/50 prohibits driving in Texas without special aids, 20/70 is called a visual handicap, and 20/200 is known as "legal blindness." A person can see with uncorrectable 20/200 vision, but often too little is recognized to be very helpful.

Relative sizes of objects seen with specific acuities are illustrated by these "E's":

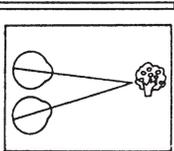


Vision can be hampered in a number of ways. Refractive errors can create distortions.

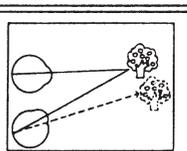
Three main classifications of refractive errors:
Farsightedness – one can see well at a distance
Nearsightedness – one can see well up close
Astigmatism – one has blurred vision

Muscle balance problems, or crossed eyes, can prevent the two eyes from lining up to see the same thing. When they work together to produce one image, this is called binocular vision.

Binocular Vision



Muscle Imbalance



Binocular vision lets us judge the size and distance of an object from simple observation. This is known as depth perception, an important factor for good mobility.

In a young child when there is a great difference between the images "seen" by each eye, binocular vision will not result. An adult may see two images, or double vision, but a child who is learning to use vision will begin to see only the better image. This can develop into a condition known as AMBLYOPIA — where both eyes are healthy but the brain uses only the information from the good eye and the other becomes "nonfunctional."

Amblyopia diminishes the person's ability to see binocularly, and it virtually reduces the vision to that of the one good eye. As a child grows older with this condition, it becomes extremely difficult to train the poorer eye to "see" within a normal range.

Along with refractive errors and muscle balance problems, injuries and various other physical conditions such as cataracts, glaucoma and detached retinas can create difficulty in seeing. Symptoms of vision difficulty may include:

APPEARANCE

- * Crossed eyes
- * Red eyes
- * Watery eyes
- * Crusty eyelids
- * Frequent styes
- * Cloudiness in or around pupil

BEHAVIOR

- * Holds body rigid while looking at distant objects
- * Thrusts head forward or backward while looking at distant objects
- * Avoids close work
- * Has short attention span
- * Turns head to use only one eye
- * Tilts head to one side
- * Places head close to book or desk when reading or writing
- * Blinks excessively
- * Rubs eyes often, frowns or loses place, especially when reading
- * Squints
- * Closes or covers one eye

COMPLAINTS

- * Headaches
- * Nausea or dizziness
- * Burning or itching of eyes
- * Sees blur when looking up from close work
- * Sees objects double
- * Undue sensitivity to light

TREATMENT for visual problems may include:

1. prescription for glasses or contact lenses,
2. surgery for severe muscle imbalance, cataracts, or severe glaucoma,
3. medication for infections, allergies, glaucoma, and other conditions, and
4. educational assistance for the visually impaired and legally blind (this may include visual aids and special classes or schools).



VISION DEVELOPMENTAL MILESTONES

Child's Age	Expected Behavior	Expected Completion*
Birth to	Pupils react identically to light changes Blinks at sudden light or object moving toward face Looks at people (faces) and objects momentarily or longer	Birth
1 to 2 months	Stares at people or objects Responds to people's faces Eyes follow a moving person or near object Seeks lighted areas	2 mos.
2 to 3 months	Inspects own hands Eyes follow an object 180 degrees Demands light for vision	3 mos.
3 to 4 months	Eyes move in active inspection of body, people, toys, surroundings Looks at objects placed in hand (beginning eye-hand coordination) Inspects own hands	4 mos.
4 to 5 months	Smiles in response to familiar adult Reaches for objects at least 1 foot away Notices small food objects at least 1 foot away	5 mos.
5 to 6 months	Eyes move together all the time Brings objects to mouth, looks at them, then looks into space Smiles at or pats mirror image	6 mos.
6 to 8 months	Picks up or touches small objects with "raking" motion Searches for hidden objects Shows color preference for reds and yellows Looks for dropped toys	8 mos.
8 to 10	Notices details of an object such as facial features on a doll, holes in a pegboard, geometric shapes Reaches for string	10 mos.

* If a child cannot perform at least two of the age-level tasks by the expected completion age, that child should be taken to an eye specialist for examination.