

**Child and Teen Checkups Screening  
Best Practices for Vision Screening  
Eye screening procedures for C&TC Health Care professionals.**

The following procedures (Observation, external inspection, corneal light reflection, cross cover, and for the children under age 3 (or those who are unable to read the visual acuity charts).

## **OBSERVATION**

- Ages:** 6 months through 3rd grade.
- Purpose:** To check for constant strabismus.
- Description:** Observing the child's eyes to see if they are properly aligned.
- Equipment:** None.
- Facilities:** Well-lighted room.
- Procedure:** The screener observes the child's eyes to see if one eye appears to turn in, out, up, or down in relation to the other. The position of the head for tilt (chin up or down) should also be noted.
- Pass:** Eyes are properly aligned and head position normal.
- Rescreen/Refer:** One eye appears to turn in, out, up, or down in relation to the other or abnormal head position.
- Considerations for screening special populations:**  
None

## EXTERNAL INSPECTION

- Ages:** 6 months through all grades.
- Purpose:** To check for signs of external eye disease or abnormalities.
- Description:** A systematic inspection of observable parts of the eye and surrounding tissue.
- Equipment:** None.
- Facilities:** Well-lighted area.
- Procedure:** If the child is wearing glasses, they may be removed in order to give the screener an unobstructed view of the area around the eyes. The area around the eyes should be checked for swelling and/or discoloration or excessive tearing. The eyes themselves should be checked in the order suggested by the acronym "WIPL."
- W - Whites:** The sclera should be white. There should be no discoloration or growths.
  - I - Iris:** The iris should be a complete circle. Both should be the same color.
  - P - Pupil:** The pupils should be clear and dark. There should be no cloudiness and they should be of equal size and round.
  - L - Lids and Lashes:** The lids in their natural, open position should give a full view of the pupil. The lids should be free of lumps (Chalazia). There should not be redness or crustiness along the margin or signs of a sty. The margin of the lid should be flush against the surface of the eye. The child should show normal blinking during observation period. Lashes should be present on the top and bottom lids of both eyes. Lashes should not turn in causing them to contact the conjunctiva.
- Pass:** Normal appearance of all parts of the eye.
- Rescreen/Refer:** Any abnormality noted.
- Considerations for screening special populations:**  
None.

## CORNEAL LIGHT REFLECTION

- Ages:** 6 months through 3rd grade.
- Purpose:** To check for milder degrees on constant strabismus.
- Description:** By noting the position of light being reflected in the pupils, the observer is able to check for a constant strabismus.
- Equipment:** Penlight (with target object).
- Facilities:** Normal or lower light level. Minimum number of light sources (windows, overhead lights, etc.)
- Procedure:** Position the child so that the target, the light source and the examiner's line of vision are at the midline in front of the child's eyes at a distance of 14-16 inches. Shine the penlight at the center of the child's forehead directly above the child's eyes. The small light should be between the eyes. Assure the child is focused on the target. The screener then observes the reflected light in each pupil.
- Pass:** The reflection of the light appears to be symmetrical in the pupil of each eye.
- Rescreen/Refer:** The reflections of light appear to be asymmetrical.
- Considerations for screening special populations:**  
None.

## CROSS COVER

- Ages:** 6 months through 3rd grade.
- Purpose:** To check for tendency of the eyes to misalign when fusion is interrupted.
- Description:** Observing the eye being uncovered for movement when the occluder is shifted to the other eye.
- Equipment:** Small, interesting target object or Gilbert.  
Occluder.
- Procedure:** Have the child focus on a target object held steady 14-16 inches in front of their eyes. Cover the right eye with the occluder, hold for a count of three (3).
- Pass the occluder quickly over the bridge of the nose to cover the left eye. Watch the right eye as it becomes uncovered for any movement.
- Hold the occluder over the left eye for a count of three (3).
- Pass the occluder quickly back over the bridge of the nose to cover the right eye again. Watch the left eye as it becomes uncovered for any movement.
- This procedure should be repeated two or three more times.
- Pass:** No observable movement of the eye being uncovered.
- Rescreen/Refer:** Repeatable movement or resistance by the child to having one eye covered but not the other, or uncovered eye moves out, up, or down (see reversed side).
- Considerations for screening special populations:**  
None.
- NOTE:** **When screening, an inward movement of the eye (exophoria) is observed, the test for vergence should be given.**
- Test for Vergence:** Hold a target (penlight or toy) 14-16 inches centered in front of the child's eyes (center point) and slowly move the target toward the child to a distance of 4 inches.
- Pass:** Both eyes follow the target easily and smoothly to a distance of 4 inches
- Refer:** Eyes do not follow in unison or movements are jerky, uneven, or "break" further than 4 inches from the bridge of the nose, or child uses head movements.
- Advise:** If this is the only procedure that the child does not pass, send an Advisory (Early Childhood or School Age) letter to Parent/Guardian.

## CROSS COVER TEST

WHEN AN EYE IS UNCOVERED THE DIRECTION OF MOVEMENT IS:	PROBLEM TYPE IS:	ACTION IS:
NONE	NORMAL	PASS
OUT	ESO-	REFER
UP	HYPO-	REFER
DOWN	HYPER-	REFER
IN	EXO- (DO CONVERGENCE: Can hold eyes to within 4" Cannot hold eyes to 4")	WATCH REFER

## TRACKING I BINOCULAR

- Ages:** 6 months to when visual acuity can be measured.
- Purpose:** To check for symmetrical movements of the eyes when following a moving target.
- Description:** The child's head is stabilized while a target is moved in horizontal, vertical and oblique patterns in relation to a center point on a visual axis. The target is also moved from the center point toward the child.
- Equipment:** Penlight or interesting target.
- Procedure:**
- Horizontal -**  
Hold the target (14-16 inches) centered in front of the child's eyes (center point) and slowly move the target horizontally to your right until the child's eyes are in their extreme left viewing position. (This should take 2-3 seconds.) Slowly move the target to your left, crossing the center point and continuing until the eyes are in the extreme right viewing position. (This should take 4-5 seconds.) Return target to center point.
- Vertical -**  
Start at the center point, raise the target until the eyes reach the extreme up viewing position. Lower the target through the center point until the eyes reach the extreme down viewing position.
- Oblique -**  
Start at the center point, raise the target until the eyes reach the extreme upper right viewing position. Lower the target through the center point until the eyes reach the extreme lower left viewing position. Repeat this procedure for the upper left to the lower right viewing position.
- Vergence -**  
Starting at the center point, move the target slowly toward the child to a distance of 4 inches.
- Pass:** Both eyes follow the target easily and smoothly.
- Rescreen/Refer:** Eyes do not follow in unison or movements are jerky, uneven, or "break" further than 4 inches from the bridge of the nose, or child uses head movements.

## TRACKING II MONOCULAR

- Ages:** 6 months to when visual acuity can be measured.
- Purpose:** To check for vision and the movement of the eye when it is following a continuously moving target with the other eye covered.
- Description:** Target is moved horizontally then vertically in relation to a center point on a visual axis of each eye.
- Equipment:** Penlight or interesting target.
- Procedure:**
- Horizontal -**  
Cover the left eye, attract the child's attention to a target (14-16 inches) centered in front of the child's right eye (center point), slowly move the target horizontally to your right until the child's eye is in its extreme left viewing position. (This should take 2-3 seconds.) Slowly move the target to your left, crossing the center point and continuing until the eye is in the extreme right viewing position. (This should take 4-5 seconds.) Return target to center point.
- Vertical -**  
Starting at the center point, raise the target until the eye reaches the extreme up viewing position. (This should take 2-3 seconds.) Lower the target through the center point until the eye reaches the extreme down view position. Return target to center point.
- Cover the right eye and repeat the procedure for the left eye.
- Pass:** Each eye follows the target easily and smoothly, with or without head movement.
- Rescreen/Refer:** The child does not attend to the target, either eye shows jerky movements, or the child objects to one eye being covered but not the other.
- NOTE:** Several different toys should be available to use as the target to hold the child's interest. This procedure is checking for vision. The child may follow with eye or head movements.

## MONOCULAR LOCALIZATION

- Ages:** 6 months to when visual acuity can be measured.
- Purpose:** To check for each eye's ability to shift gaze.
- Description:** Localization is evidenced by the smooth movement of the eye from one target to another, without moving the head.
- Equipment:** An occluder  
Two objects 2-4 inches in size with the same interest appeal
- Procedure:** After covering the left eye, hold two targets 14-16 inches in front of the child's eye and 14-16 inches apart. Attract the child's attention to one target then observe the shift or gaze as you attract attention to the other. Repeat this procedure four or five times for each eye.
- Pass:** The eyes move smoothly and easily from one target to the other.
- Rescreen/Refer:** Slow, halting, jerky movements or absence of a shift between the targets. Resistance by the child to having one eye covered but not the other.

## PUPILLARY LIGHT RESPONSE

- Ages:** 6 months to when visual acuity can be measured.
- Purpose:** To check for the pupils' reaction to light changes.
- Description:** Observing the child's pupil for symmetrical reaction to light.
- Equipment:** Penlight or other light source.
- Facilities:** Normal or lower light level.
- Procedure:** First observe the child's eyes noting if the pupils are of equal size. Approaching from the side, at eye level, shine the light into the right eye - the pupil should quickly constrict. Observe the left eye to see if it has equally constricted (consensual response). Remove the light - both eyes should dilate. Repeat the procedure on the left eye.
- Pass:** Pupils quickly constrict when light is introduced and almost as quickly dilate when light is removed. The pupils remain equal in size.
- Rescreen/Refer:** Sluggish or no response upon the introduction or removal of the light or the pupils become unequal in size.
- NOTE:** The screener may observe the pupils dilate and constrict several times after illumination. This is a normal occurrence called Hippus.

## RETINAL REFLEX

- Ages:** 6 months to when visual acuity can be measured.
- Purpose:** To check for abnormalities that block the flow of light within the eye by observing the reflected light from the retina.
- Description:** Observing symmetrical and equal intensity reflexes from the retinae.
- Equipment:** Ophthalmoscope.
- Facilities:** Normal to lower light level - minimum number of light sources (windows, overhead lights, etc.).
- Procedure:** Position the child so the circle of light from the ophthalmoscope falls just to the outside of both eyes. Looking through the ophthalmoscope you should observe a glow in both pupils simultaneously.
- Pass:** Reflexes are equal in symmetry of pattern, color and intensity.
- Rescreen/Refer:** A reflex that is altered in symmetry.