

Any and all use of these documents should cite the following references:
The Vision in Preschoolers Study Group. Comparison of Preschool Vision Screening Tests as Administered by Licensed Eye Care Professionals in the Vision in Preschoolers Study. *Ophthalmology* 2004;111:637-650. Preschool Vision Screening Tests Administered by Nurse Screeners Compared with Lay Screeners in the Vision in Preschoolers Study. *Invest Ophthalmol Vis Sci* 2005;46:2639-2648.

Versions and Ductions

What Are You Testing?

Versions test binocular ocular motilities. Ductions test monocular motilities. Ductions are necessary only if abnormalities are detected while testing versions.

What You Need to Do the Test:

1. A transilluminator for the target.
2. If using a Heine instrument, use the tip for the transilluminator.

Getting Ready:

1. Seat the child (without eyeglasses) at arm's length from the examiner.

How You Do the Test:

Versions:

1. It is often helpful to stabilize the child's head with your left hand and move the target with your right hand.
2. Hold a transilluminator about 30 cm from the child in primary gaze.
3. Move the target to your right until the eyes are no longer able to follow. A slight end-point nystagmus (sometimes present) is normal.
4. Next, move the target up and down until the eyes cannot follow. Lift the eyelids on downgaze.
5. Return the target to the extreme right horizontal position and move the target to the opposite extreme left horizontal position.
6. Repeat the up and down positions on this side.
7. Return the target to the center and repeat the up and down positions.
8. Note any restrictions, relative overactions or underactions, A or V patterns, misalignment not in primary gaze, or other abnormalities.
9. If no abnormalities are observed, testing is completed.

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Ductions:

1. The monocular procedure is necessary only if abnormalities are noted with the binocular procedure described above.
2. Have the child fixate on a transilluminator at 30 cm (without eyeglasses) as above. Occlude the left eye.
3. Move the light so the right eye is adducted about 23 degrees and move the light straight up, keeping the light directed towards the eye.
4. Move the light down, keeping the light directed towards the eye.
5. Next, move the light so the eye is adducted 40 to 50 degrees. Move the target straight up, keeping the light directed towards the eye.
6. Move the light down, keeping the light directed towards the eye.
7. Maintaining the light in the horizontal plane, position the light in front of the eye being tested and move the light straight towards the nose.
8. Maintaining the light in the same horizontal plane, move the light directly towards the ear.
9. Note any restrictions.
10. Repeat monocular testing by occluding the right eye and asking the child to move the left eye.

What You Tell the Child:

1. Tell the child to fixate on the transilluminator as you move it.
2. It is often helpful to talk about the light in an effort to encourage the child to look at it. You can make comments about looking into the light to see what the child ate for breakfast, to see if a fairy lives inside the light, etc.

What You Write Down:

1. If you observe no binocular abnormalities, mark "**Full and Smooth.**"
2. If you observe binocular abnormalities, mark all that were observed: "**Restrictions,**" "**Under/Overactions,**" "**A/V Patterns,**" "**Misalignment,**" or "**Other.**"
3. Mark "**Unable**" if you are not able to test versions on the child (e.g., due to uncooperativeness).
4. If ductions were performed, write in your observations on the data form.
5. At the end of the data form, you may record other pertinent findings. For example, if you identify a syndrome such as Duane's retraction syndrome, you may note it there.

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Remember!

1. Use the transilluminator, do not use a penlight.
2. Encourage the child to fixate on the transilluminator.
3. It may be helpful to stabilize the child's head with your left hand.

VIP Study Group