

# Distance Visual Acuity Screening - LEA SYMBOLS® or HOTV Wall Charts

## Ages

3 through 5 years.

## Purpose

To screen for clarity of vision when looking in the distance; to detect myopia, amblyopia, astigmatism, and/or anisometropia.

## Description

Visual acuity is checked using a standardized LEA SYMBOLS® or HOTV chart with 50% spaced rectangle boxes around each line.

## Equipment

- LEA SYMBOLS® or HOTV wall chart (10 foot); positioned at the child's eye level.
- LEA SYMBOLS®/HOTV response card or individual flash cards.
- Measuring tool for marking a 10-foot distance between the vision chart and the child.
- Age appropriate occluders.
- Table and chairs (optional).

## Screeners Qualifications

Can be performed by screeners who have received the recommended training by the Minnesota Department of Health or equivalent. Refer to Assessment Tools on the [Vision Screening Forms, Tools and Materials webpage \(www.health.state.mn.us\)](http://www.health.state.mn.us).

## Facilities

Room at least 12 feet long or greater, well-lit, and without glare or distractions.

## Notes

- LEA SYMBOLS® or HOTV wall charts and flip charts have either shapes or letters which are referred to generally as optotypes in this procedure.
- If a child requires assistance knowing which optotype to identify, the screener should point briefly beneath the optotype and quickly remove the pointer.
- Depending on the LEA SYMBOLS® or HOTV chart used, the lines split into two columns towards the bottom half of the chart. Use the right column for screening the right eye and the left column for screening the left eye.
- To get credit for a line with 5 optotypes, the child must correctly identify ANY 4 of 5 letters or shapes. To get credit for a line that has less than 5 optotypes, the child must correctly identify each optotype on that line.

## Procedure

1. Pre-condition the child to the process of screening by pointing to several optotypes on the wall chart and having the child say or match the optotypes on the response card.
2. Position the child with their eyes at a 10 foot distance from the chart (foot arches should be positioned on the 10 foot line if standing; the child's eyes should be positioned on the 10 foot line if sitting).
3. If the child wears corrective lenses or contacts, these should be clean and worn during the screening procedure. Position the occluder over the eyeglasses.
4. Screen the **RIGHT** eye first, with the **LEFT** eye occluded.
  - Start from the top line, ask the child to identify the first optotype on the RIGHT side of the chart moving down the lines until an optotype is missed.
  - Return to the line above the missed optotype and ask the child to identify each letter or shape on that line, reading left to right.
  - If the child correctly identifies 4 of the 5 optotypes on the line, move down to the next line and ask the child to identify the optotypes.
  - Continue to move down the lines on the right side of the chart until the child is unable to identify 4 out of 5 optotypes on a line.
5. To screen the **LEFT** eye, occlude the **RIGHT** eye.
  - Repeat the procedure using the optotypes on the LEFT side of the chart.
6. Record the visual acuity for each eye as 10/XX (20/XX) for the lowest line the child was able to correctly identify ANY 4 out of the 5 optotypes, or all the optotypes on a line that has less than 5 letters or shapes.

## PASS

Must be able to correctly identify ANY 4 out of the 5 optotypes on the critical passing line for age or better without a difference of two lines or more between the eyes in the PASS range.

### Age 3 years

- 10/25 (20/50) or better in each eye without a difference of two lines or more between the eyes.

### Age 4 years

- 10/20 (20/40) or better in each eye without a difference of two lines or more between the eyes.

### Age 5 years

- 10/16 (20/32) or better in each eye without a difference of two lines or more between the eyes.

## Rescreen/REFER criteria

The majority of children who do not meet passing criteria will be referred.

Some children may need rescreening. Rescreening should be performed if a child was unable to follow instructions, was overly distracted during the screening or was unable to complete the initial screening. Rescreening should occur as soon as possible but in no case later than 6 months from the initial screening date.

For more information on rescreening criteria, refer to the section on [Rescreening Untestable Children \(www.health.state.mn.us\)](http://www.health.state.mn.us).

Please note: children who resist having their eye covered during the screening phase should be suspected of having vision loss in the uncovered eye, rather than being uncooperative, and should be referred.

## REFER

### Age 3 years

- 10/32 (20/60) or worse in either eye or a difference of two lines or more between the eyes in the PASS range.

### Age 4 years

- 10/25 (20/50) or worse in either eye or a difference of two lines or more between the eyes in the PASS range.

### Age 5 years

- 10/20 (20/40) or worse in either eye or a difference of two lines or more between the eyes in the PASS range.

## Considerations for Screening Special Populations

The matching of the LEA SYMBOLS® or HOTV letters may be practiced before the screening. For some children with special needs, it may be useful to reproduce the response card, cut and space optotypes to allow for larger movements when matching the symbol.

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*To obtain this information in a different format, call: 651-201-3650.*