

What is Perception and why is Perceptual Skills Assessment (PSA) important?

Perception is the ability to extract and select information from the environment. Once information is extracted or selected, meaning has to be attached to the stimuli. The individual needs to understand what is seen. Perception provides visual cognitive information that is used in higher-order cognitive functions. Some children have perceptual problems that are often picked up by parents or teachers. When children lack in their perception skills, variety of problems can develop ranging from learning disability to trouble with motor skills.

Learning disability is the most common childhood disorder requiring special education services. Learning problems encompass a diversity of disorders including mathematics, written and oral language difficulties, reading disability, perceptual problems and disorders of attention. In a recent study of over 30000 second-grade children in 110 classroom across eight states, researchers identified that 15% of the children have learning disabilities.*
Reading disability is the most frequently encountered learning disability.

What symptoms will my child have that will warrant PSA?

- skipping words when reading
- reading slower than peers
- problems finishing assignments on time
- reversing letters
- inability to complete puzzles
- difficulty copying printed material or copying from the board
- problems with short-term memory
- inattentiveness in school
- problems with writing assignments

Why does an optometrist perform PSA?

Because an Optometrist is a primary vision care specialist, he/she will frequently be the first to see a child who is doing poorly in school. Parents will bring the child in for an eye examination, since vision is the first area investigated if a child is having learning problems. As a result, an optometrist has a de facto involvement in learning difficulties. The Optometrist's major professional connection with learning is in the visual motor skills and its related adjuncts. Visual motor skills have a strong base in optometric science therefore the Optometrist determines the specific problems in this area.

Visual system is separated into three inter-related areas; visual acuity, visual efficiency, and visual information processing. All Optometrists include detailed testing to determine the refractive status of a patient, and basic testing to access the overall visual efficiency of a patient. Only certain Optometrists offer the detailed analysis for oculomotor skills, and Perceptual Skills Assessment, required to assess the visual information processing of a patient. These more advanced testing techniques require special tests, time involvement, and extra commitment from the Optometrist.

How many office visits are required for PSA testing?

Before the beginning of PSA, each child is required to have full dilated eye examination to determine if there is need for glasses or any other visual therapy to correct for any deficiencies in eye teaming.

The full PSA examination sequence lasts on average of three visits, depending on the child's age, maturity, fatigue, and cooperation. These examinations are scheduled in one-hour blocks. This time limit is implemented mainly due to the difficulty of the tests. Most children score poorer when asked to perform beyond this time limit.

Doctor-parent conference concludes the examination sequence. During this conference, the results of the examinations are presented to the parents.

What are the areas of PSA testing?

- Visual and binocular functions
- Tracking skills (pursuits and saccades)
- Visual perceptual skills
- Spatial awareness and spatial planning
- Laterality and directionality
- Visual – motor integration
- Sequential memory
- Screening for auditory perceptual skills
- Dyslexia Determination Test (if necessary)
- Hyperactivity Index (if necessary)

What is the treatment for perceptual problems?

The treatment for perceptual problems is tailored according to each child's needs. The range of treatment varies from games like geo-board to specialized computerized programs and the use of specifically designed websites. Depending on the extent of the deficiency, collaboration with teachers, occupational therapists, parents, and the optometrist is often necessary. Most of the times, the treatment is tailored to be done at-home with monthly office visits the optometrist's office to check for the progression. However, there are instances when the treatment requires home therapy together with weekly office visits.