Understanding
Visual Processing
And How it Affects Learning

Homeschooling
WITH DYSLEXIA
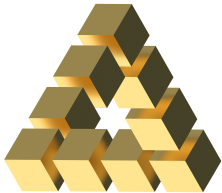Educate yourself so you can educate your child.

What Is Visual Processing?

Visual processing is the process of recognizing and interpreting information taken in through the sense of sight.

Understanding Visual Processing Disorders

In Visual Processing Disorder the brain has trouble accurately **processing** signals that come from the eyes.

8 Types of Visual Processing Weaknesses
Visual Discrimination

The ability to recognize details in visual images

Can have difficulty seeing the differences between
two similar letters, shapes, or objects.

8 Types of Visual Processing Weaknesses
Visual Figure Ground Discrimination

The ability to filter visual information that is not
important so that you can focus on relevant
visual information.

Figure ground perception allows us to find the
detailed visual information even when it is part
of a busy background.

8 Types of Visual Processing Weaknesses
Visual Sequencing or Visual Sequential Memory

Visual sequential memory is the ability to remember
and recall a sequence of objects and/or events in the
correct order.

The ability to remember what order in which we see
objects is crucial when learning the basics of
literacy and math.

8 Types of Visual Processing Weaknesses
Visual Motor Processing or Integration

Visual motor integration is the ability to interpret visual information and respond with a motor action.

Kids may bump into things, place things on the edges of tables or counters where they fall off, "miss" their seats when they sit down, etc.

Affects writing, organization on paper, and the ability to transition between a worksheet or keyboard.

Writing within the lines or margins can be tough and they may have trouble copying from a book.

8 Types of Visual Processing Weaknesses

Visual Memory

Visual memory is the ability to immediately recall what the eye has seen.

Visual memory is necessary for most academic tasks such as reading, spelling, reading comprehension, science, math, copying from the board, etc.

8 Types of Visual Processing Weaknesses

Visual-spatial Relationships

Visual spatial relationship is the ability to visually perceive two or more objects in relation to each other and to yourself.

Can effect your motor skills, body awareness, problem solving, activities of daily living and your overall performance in school.

8 Types of Visual Processing Weaknesses

Visual Closure

Visual closure is a visual perceptual skill that allows you to know what an object is even when the object is only partially visible.
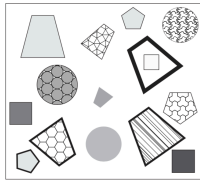
Visual closure is necessary to quickly view objects and mentally determine what they are before we see the entire object.

It is required for reading quickly, reading fluently and predicting differences in similar words.

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8 Types of Visual Processing Weaknesses

Visual Form Constancy

Form constancy is a visual perceptual skill that allows you to understand that a form, shape, object stays the same even when it changes it size, position or is in a different environment.

What Causes Visual Processing Disorder?

Is it a Vision Issue or a Processing Issue?

Signs of Vision Issues

- Tilts or moves head while reading or writing

- Covers one eye when reading or writing

- Loses place or leaves out words when reading or writing

- Complains of tired eyes, rubs eyes, watering eyes during reading and writing work

- Reading or writing deteriorates as the lesson goes on

- Reads very slowly with a great deal of effort

- Easily distracted due to extreme amount of effort to maintain visual focus doing schoolwork

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Vision Therapy and Dyslexia

Vision therapies
DO NOT
cure or help with dyslexia.

Signs of Visual Processing Disorder

Doesn't pay attention to visual tasks.

Easily distracted by too much visual information.

Is restless or inattentive during video or visual presentations.

Does a sloppy job, for instance, sweeping the floor.

Lacks interest in movies or television.

Signs of Visual Processing Disorder

Difficulty with tasks that require copying (taking notes from a board)

Reverses or misreads letters, numbers, and words.

Bumps into things.

Difficulty writing within lines or margins.

Trouble spelling familiar words with irregular spelling patterns (quite - quiet)

Signs of Visual Processing Disorder

Can't remember phone numbers

Poor reading comprehension when reading silently

Can't remember facts that were read silently

Skips words or entire lines when reading

Says his eyes hurt, rubs eyes a lot

Signs of Visual Processing Disorder

Has below-average reading comprehension and writing skills, despite strong (spoken) comprehension and verbal skills

Has weak math skills; frequently ignores function signs, omits steps, and confuses visually similar formulas

Routinely fails to observe or recognize changes in bulletin board displays or posted notices

Signs of Visual Processing Issues

Preschool

Trouble focusing

Seems clumsy

Trouble with ABCs

Signs of Visual Processing Issues

Elementary School

Difficulty with writing

Lack of fine motor skills

Trouble with reading

Difficulty with math

Sings of Visual Processing Issues

Middle School

Poor memory

Difficulty looking up information

Often getting lost

Signs of Visual Processing Issues
High School

Difficulty getting things done

Disorganized

Poor sense of direction

Forgetful

Diagnosing Visual Processing Disorder

1. Pediatrician

2. Pediatric Ophthalmologist or Optometrist

3. Neuropsychologist or Educational Psychologist

4. Behavioral Optometrist
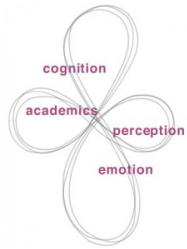

Treatments for Visual Processing Disorder

There are no medications or recognized 'cures' for Visual Processing Disorder

Often comorbid with other learning issues like dyslexia and ADHD
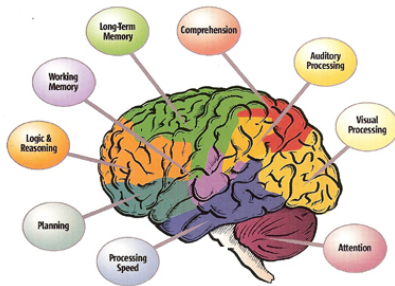
If signs and effects are severe, have psycho-educational testing

Therapies for Visual Processing Issues

Educational Therapy

cognition

academics

perception

emotion

Visual Processing Disorders and Dyslexia

Long-Term Memory

Comprehension

Auditory Processing

Working Memory

Visual Processing

Logic & Reasoning

Planning

Processing Speed

Attention

Activities for Building Visual Processing Skills

Visual Discrimination Skills

Sorting games

Matching games

Puzzles

Circle letters or words in magazines or books

Play dominoes

Play Lotto or Bingo with picture cards

Do letter, number or word searches

Activities for Building Visual Processing Skills

Visual Figure Ground Discrimination

Play 'I Spy'

Make 'I Spy' games

Hidden picture type puzzles

Pick up Sticks and matching games

Color by number activities

Word searches and jigsaw puzzles

Scan and find certain words in written text

Activities for Building Visual Processing Skills
Visual Sequencing

Make patterns with beads, small toys or household objects and have your child copy the pattern.

Create movement patterns for your child to copy such as clap hands 2x, jump up 3x and spin 1x.

Cut up simple comic strips for your child to put back in sequence

Play charades acting out daily routines

Place items on a tray in order, cover it up and mix the items. See if your child can put them back in order.

Simon, Mastermind, Loopz

Activities for Building Visual Processing Skills

Visual Motor Processing or Integration

Practice, practice, practice ball skills - catching, throwing, kicking, and hitting. Start with larger balls.

Practice large movements to form letters and numbers (also called 'air writing'

Use stencils, dot-to-dot puzzles, mazes, and coloring books - emphasize coloring in the lines

Practice lacing activities with beads simple sewing etc

Copy designs using wooden blocks, interlocking blocks, etc

Play movement games that encourage right/let discrimination, avoiding obstacles, stopping/starting, etc

Activities for Building Visual Processing Skills

Visual Memory

Look at a picture together and talk about what you see.
Cover the picture and see what details they can remember

Play 'What's Missing?' Place several objects on a tray, remove
one, have child figure out which one is missing.

Play the 'Memory Game' Place several objects on a tray. Let
your child look for 1-2 minutes. Cover up and see how many
they can remember.

Activities for Building Visual Processing Skills

Visual-Spatial

Play movement activities such as obstacle course or
playground equipment

Play movement games with boundaries such as tag,
hopscotch, hula hoop games.

Complete chores such as setting the table, dusting or
sweeping where child has to move around objects

Play with building toys such as wooden blocks, interlocking
blocks, and railroad tracks.

Activities for Building Visual Processing Skills

Visual Spatial

Complete projects such as model cars or craft kits
where you have to follow directions such as glue this
circle to the yellow square.

Practice copying pictures from paper then increase the
challenge by copying a picture from far away.

Play board games that require you to move your pieces
in certain directions such as checkers or chess.

Complete multi-step craft activities such as origami.

Activities for Building Visual Processing Skills

Visual Closure

Partially hide objects or toys and ask the child what is hiding without revealing the entire object.

Cover up parts of a picture and see if the child can guess what the image is.

Play "Find the Object": pick any small object in your house such as a clothes pin. Hide the clothes pin with a part of the clothes pin showing. Your child has to find the hidden clothes pin.

Complete Dot to Dot puzzles or jigsaw puzzles

Find a simple picture in a magazine and fold it in half. Glue it on a piece of paper. See if the child can finish drawing the other side of the picture.

Activities for Building Visual Processing Skills

Visual Form Constancy

Complete puzzles

Use shape sorters and other games that require space, letter or number matching

Place different sized shapes in a bag. Ask child to reach in without looking and find a small square or large rectangle.

Go on a scavenger hunt to find 10 circles or letter A's

Match pictures to real life objects (ie picture of a lollipop + real coin = both are circles

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Accommodations for Visual Processing Disorder

What are accommodations?

The term "accommodation" is used to describe an alteration of environment, curriculum format, or equipment that allows a person with a learning disability to gain access to content and/or complete assigned tasks.

Accommodations With Materials

Let your child use a slant board or 3-ring binder to bring work closer to his visual field.

Allow the use of wide-ruled paper or graph paper for math.

Darken or highlight lines margins on paper.

Accommodations With Teaching Techniques

Don't rely solely on visual instructions. Give oral as well as written instructions.

Describe out loud andy visual presentations.

Provide a notetaker.

Allow time to summarize each lesson before moving on.

Include simple diagrams or images to help clarify long written directions.

Allow time fo your child to ask questions.

Accommodations for During Class Time

Find curriculum with uncluttered pages and simple directions

Write directions in a different color than the rest of the print

Allow your child to write his answers on a separate sheet of paper so he can focus on writing thoughtful responses rather than on fitting their responses into small spaces

Use highlighting or sticky note flags to draw attention to important information on worksheets

Draw a bold, black borders around math problems to help the student focus on one item at a time

Ask for oral reports instead of written responses

Accommodations for During Class Time

Use a reading guide strip or a blank index card to block out other lines of text while reading

Use audiobooks and tape class lectures

Reduce visual distractions by folding a worksheet or using blank pieces of paper to cover up part of the page

Use a highlighter to highlight information while reading

Assistive Technology for Visual Processing Weaknesses

Speech-to-text

Spell checkers

Apps for typing into PDFs

Apps for lining up math problems

Note taking apps for typing in phone numbers, passwords etc

Audiobooks

TechFinder at understood.org

Final Thoughts

Keep learning

Keep observing

Offer lots of practice

Celebrate victories

www.HomeschoolingWithDyslexia.com