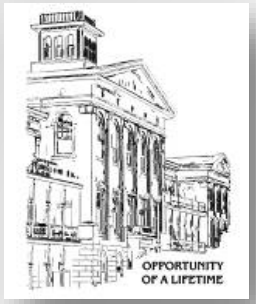
CHILDREN WITH HEARING LOSS AND OTHER DISABILITIES

ILLINOIS SCHOOL FOR THE DEAF OUTREACH



FREE training and consultation for Illinois children with hearing loss

bit.ly/ISDOutreach

Like us on Facebook

Search for Illinois School for the Deaf Outreach

State of Illinois
Dept. of Human Services
Illinois School for the Deaf Outreach

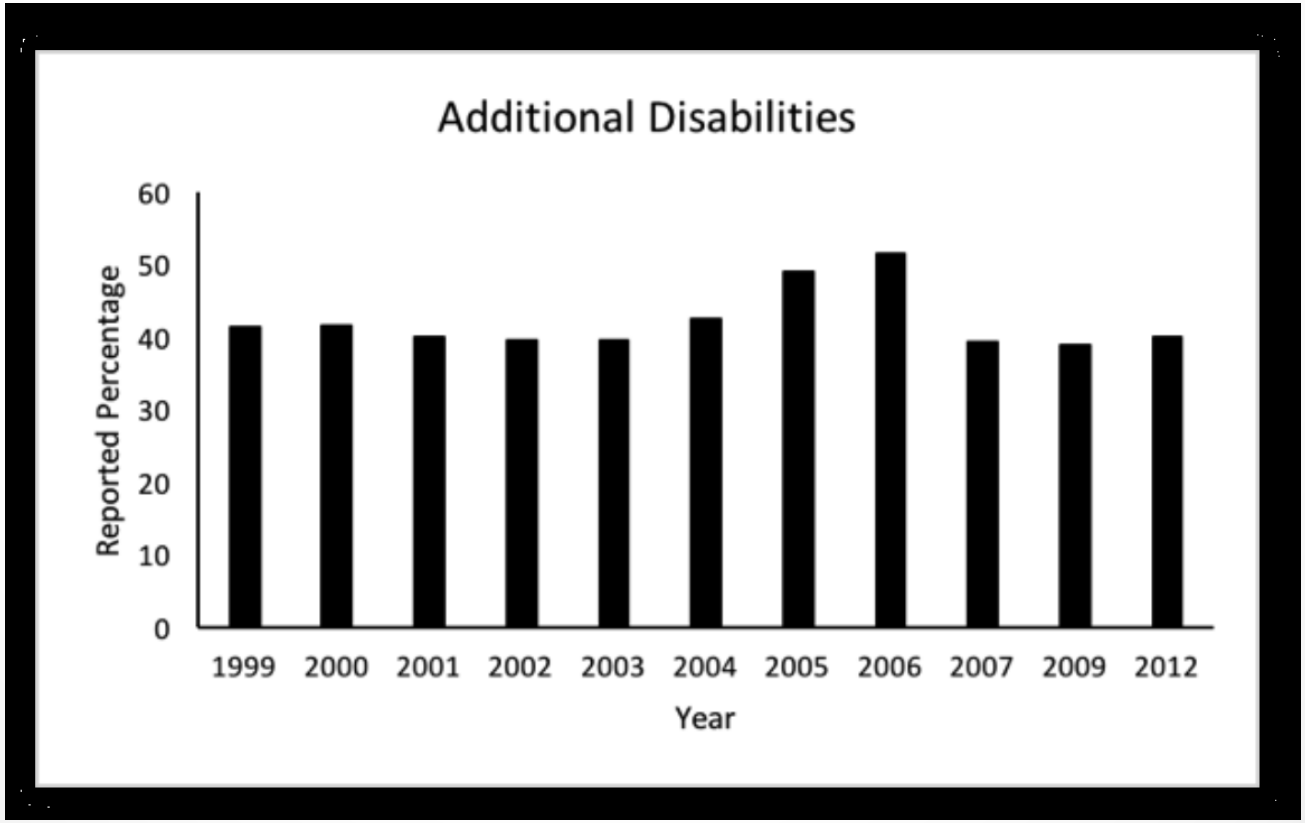
TOPICS FOR TODAY

- Syndromic Hearing Loss
- Sensory Processing Disorder
- ADHD
- Teacher Strategies
- Accommodation Strategies

WHO ARE THESE CHILDREN?
WHAT CAN WE DO?

HOW MANY CHILDREN ARE WE TALKING ABOUT?

Counting is difficult but we are estimating that 40% to 50% of students with hearing loss have another impacting disability.

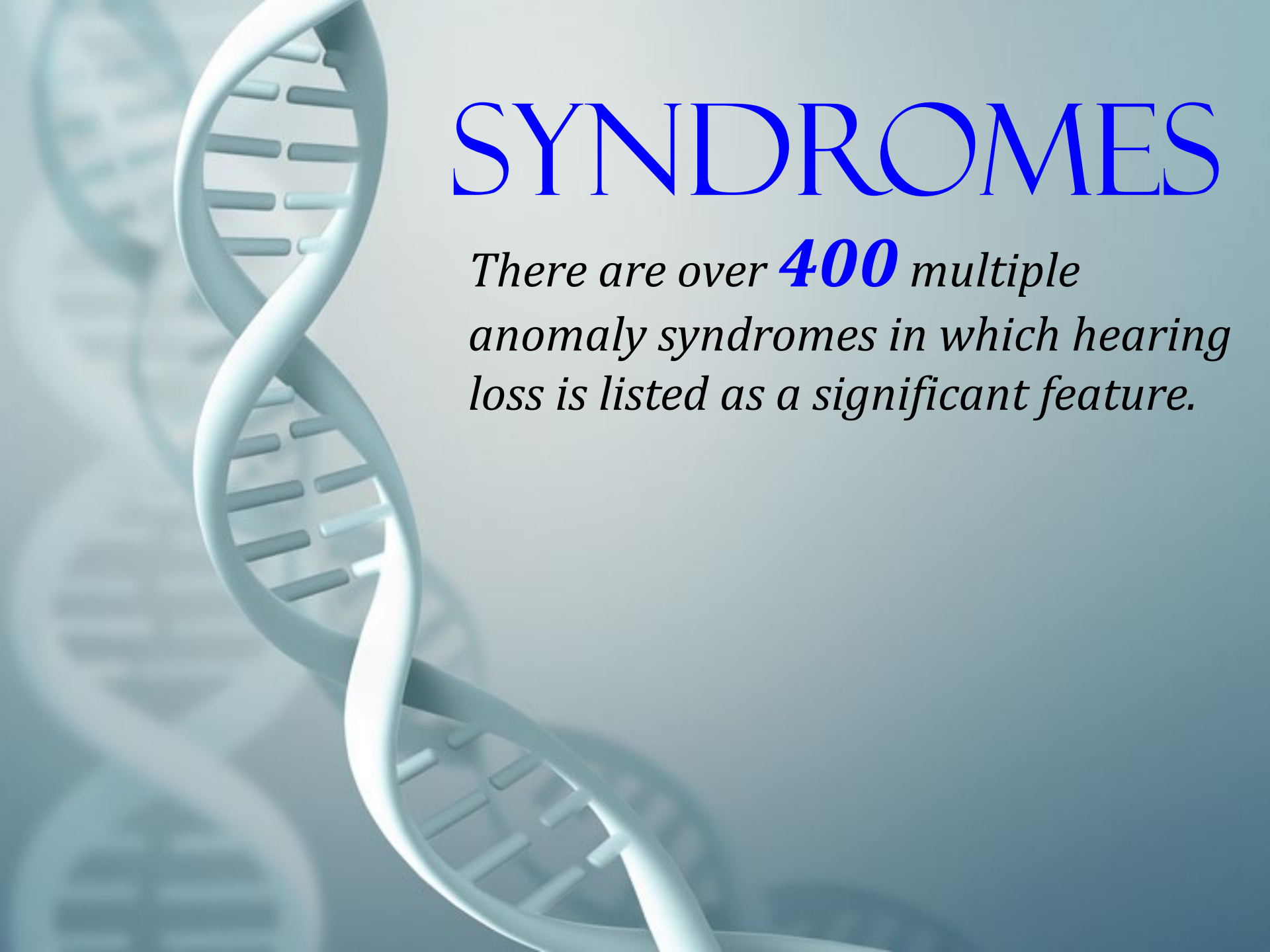


HOW DO WE FIND THESE CHILDREN?

- Teacher/therapist observation
- Parental Concern
- Team Collaboration
- Developmental Checklist
- Observation of academic or behavioral difficulties
- Observation of the child's performance in the environment

NOTE: There are virtually NO known tests for multiple disabilities and deafness.

LETS GET TO THE SPECIFICS:



SYNDROMES

*There are over **400** multiple anomaly syndromes in which hearing loss is listed as a significant feature.*

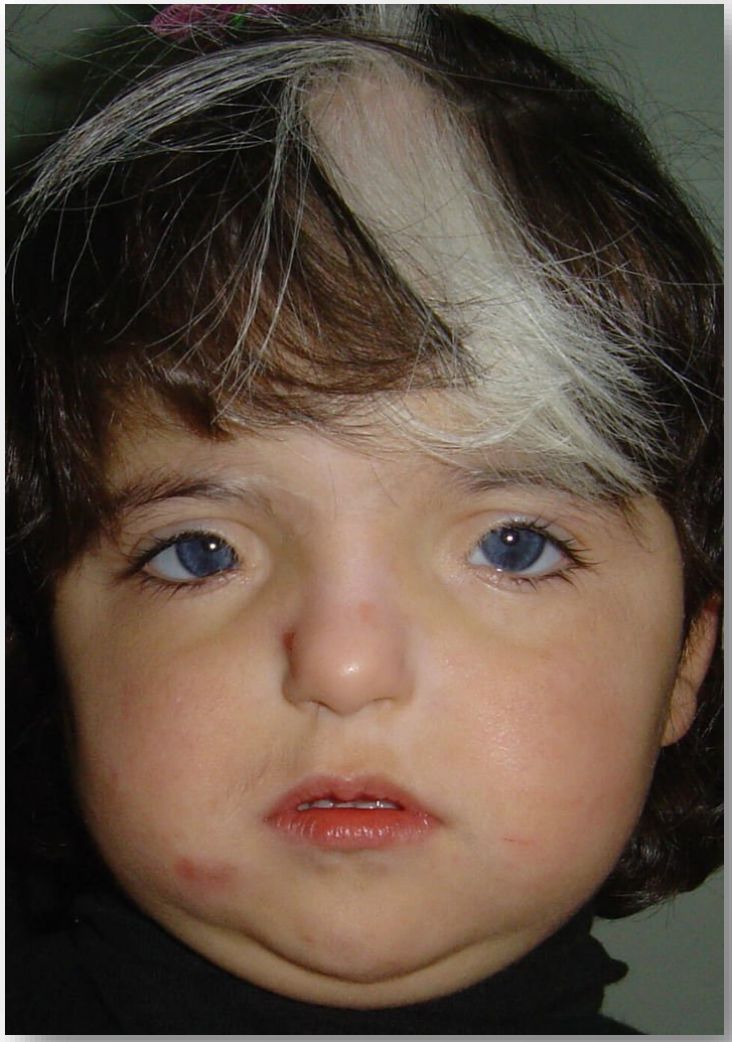
SYNDROMIC HEARING LOSS

- Waardenburg Syndrome
- Usher Syndrome
- Pendred Syndrome
- Stickler Syndrome
- CHARGE Syndrome
- Branchio-Oto-Renal (BOR) Syndrome
- Treacher-Collins Syndrome
- Neurofibromatosis Type II (NFII)
- Alport Syndrome

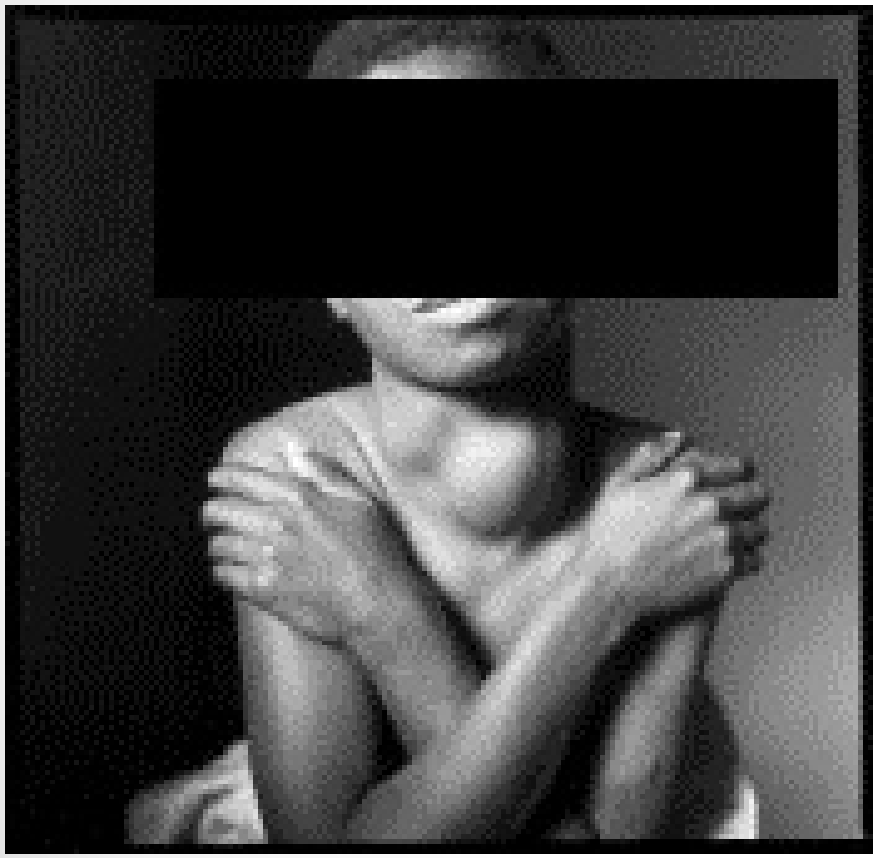

WHICH
ONES
CAN
WE
SEE?

WAARDENBURG SYNDROME

- 1 in 42,000 births
- syndromic hearing loss
- May be unilateral bilateral
- Sensorineural
- Features may show pigmentary changes including premature graying hair, white forelock, two different-colored eyes, and partial albinism
- Facial features may include fused eyebrows, widely-spaced eyes, high nasal bridge, and under-developed nose tip



PENDRED SYNDROME



- 7-8% of diagnosed HL at birth, actual prevalence unknown
- In most cases hearing loss is sensorineural and may be progressive
- Enlarged vestibular aqueduct is always seen
- Other inner ear malformations (Mondini malformation) may be present
- Balance dysfunction is present in most cases
- May be an associated enlarged thyroid gland (goiter)

STICKLER SYNDROME

- 1-3 in 10,000 births
- Hearing loss may be conductive, sensorineural, or mixed and may be progressive
- Facial features may include: small jaw with cleft palate, under-developed midface
- The eyes and some forms of Stickler may have severe and progressive near-sightedness, cataracts & retinal detachment
- Other findings may include bone/joint disorders, early adult-onset arthritis, and middle ear bone malformations

CHARGE SYNDROME

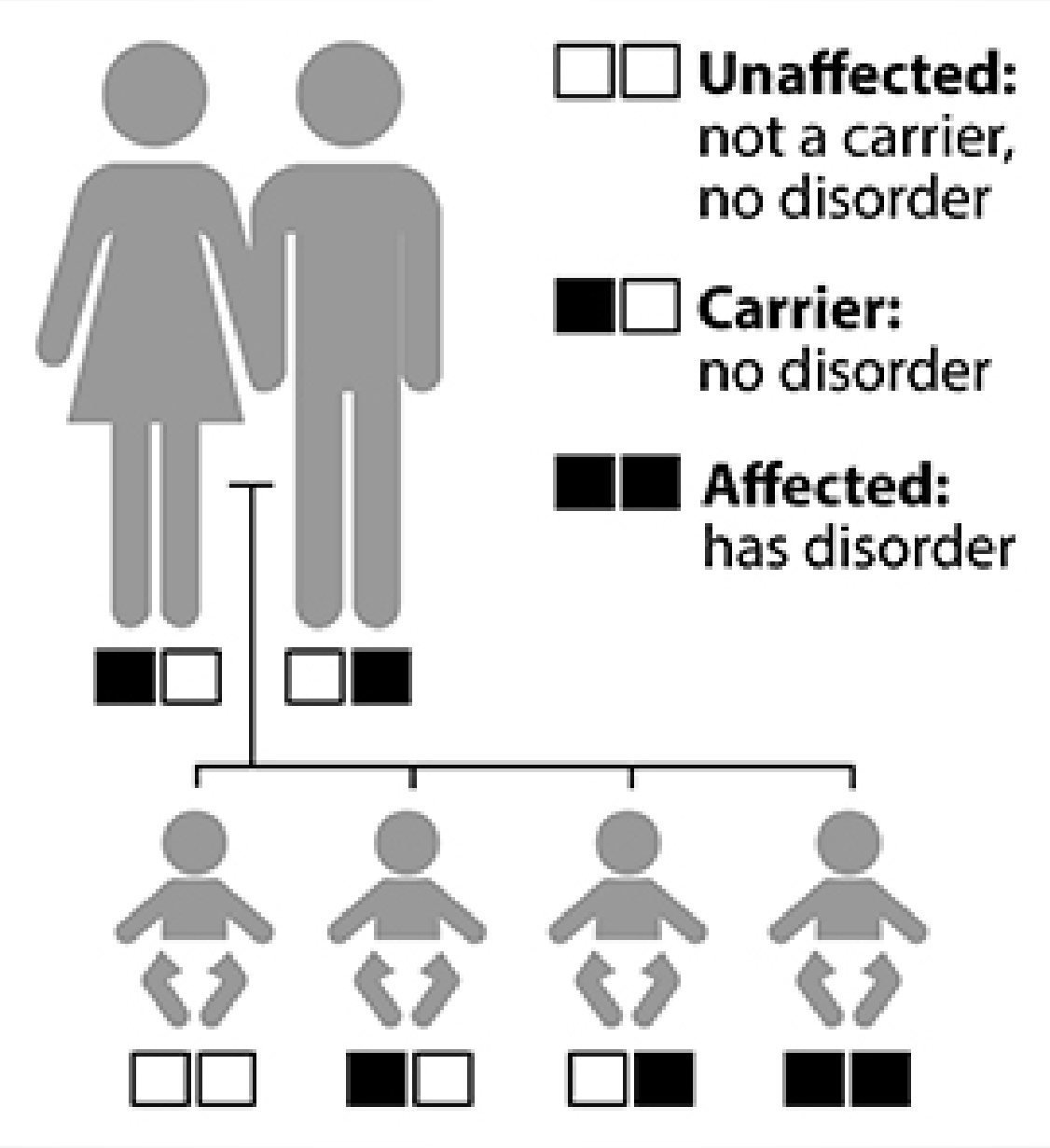
- 1 in 8,500 births
- Hearing loss may be mixed, conductive or sensorineural
- CHARGE is mnemonic for **C**olobomas (missing portion of the eye), **H**eart defects, **A**tresia (narrowing) of the choanae (the opening of the skull to the nose), **R**etardation of growth and development, **G**enital abnormalities and **E**ar changes
- 4 unique findings aiding in diagnosis are coloboma, choanael atresia, cranial nerve problems and unusually-shaped ears
- Hearing loss may be conductive, sensorineural or mixed and range from mild to profound

TREACHER-COLLINS SYNDROME

- 1 in 50,000 births
- Varying facial changes from un-noticeable to severe facial and ear alterations
- Downward slanting eyes
- Hearing loss in some cases, typically conductive in nature
- Smaller jaw

USHER SYNDROME

- 4 to 17 per 100,000
- accounts for about 50 percent of all hereditary deaf-blindness cases
- The condition is thought to account for 3 to 6 percent of all children who are deaf,
- and another 3 to 6 percent of children who are hard-of-hearing
- Hearing loss can be moderate to profound and progressive.
- Vision can vary from progressive decreased night vision to severe vision loss.
- Balance issue can be present.

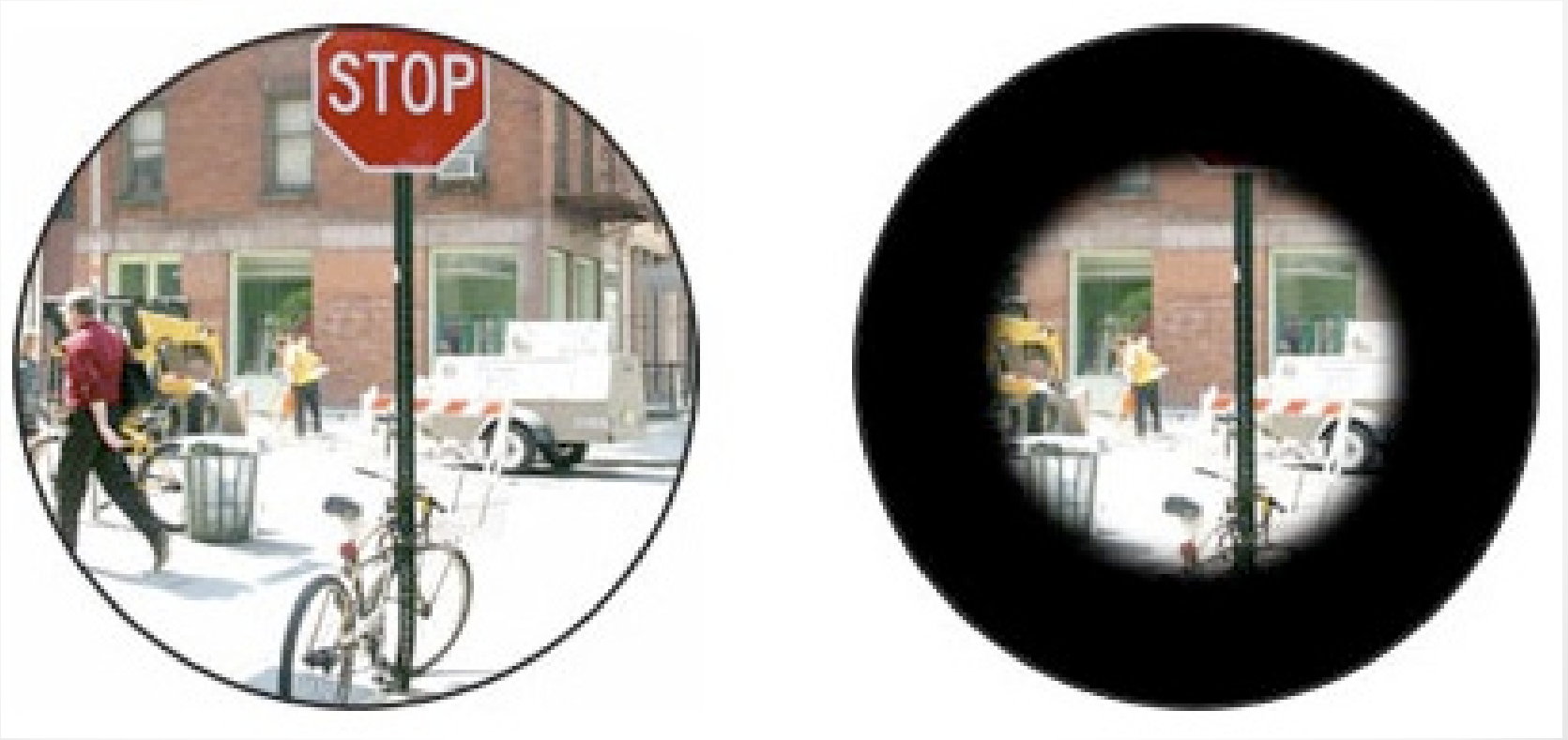

Unaffected:
not a carrier,
no disorder
Carrier:
no disorder
Affected:
has disorder

TYPES AND SYMPTOMS

	Type 1	Type 2	Type 3
Hearing	Profound deafness in both ears from birth	Moderate to severe hearing loss from birth	Normal at birth; progressive loss in childhood of early teens
Vision	Decreased night vision before age 10	Decreased night vision begins in late childhood or teens	Varies in severity; night vision problems begin in teens
Balance	Balance problems from birth	Normal	Normal to near normal; chance of later problems

Source: NIH/NIDCD

TUNNEL VISION



NIGHT VISION LOSS

WE'RE GOING TO FOCUS ON 3 COMMON COMORBID DISORDERS

SPD (**S**ensory **P**rocessing **D**isorder)

ADHD (**A**ttention **D**eficit **H**yperactivity **D**isorder)

Sensory Processing Disorder

We'll start with (SPD) Sensory Processing Disorder

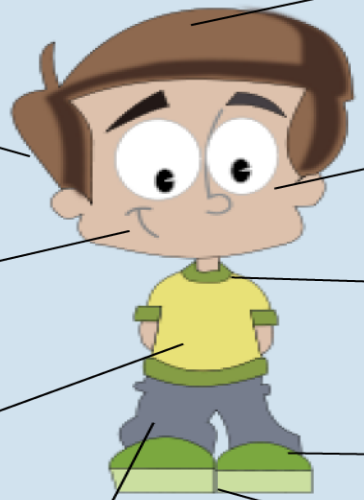
- We are constantly experiencing sights, sounds, touch and movement.
- How we process all of those sensations determines how well we function in our environment.
- Poor sensory integration is called Sensory Integration Dysfunction, now known as Sensory Processing Disorder.

The brain locates, sorts and orders sensations—Put's everything in it's proper place so we can recall it when we need it.

For most of us, sensory processing occurs automatically.

However, for up to 70% of students with learning disabilities the process is inefficient.

Some signs of Sensory Processing Disorder / SPD



May cover ears when there are loud sounds such as vacuums, hair dryers, etc. May even scream or cry.

May dislike hair being brushed or cut

May be sensitive to light

May have issues with food textures. Gagging is common when trying new things.

May cry or get upset over clothing tags or textures.

Can't be touched or can't be touched enough

May be an excessive risk taker, crashing into things

May show little or no reaction to stimulation, even pain or extreme hot and cold or overreaction to pain or hot and cold

May have poor coordination.

Fb/therockinautismmom

SENSORY DIFFERENCES

Hypersensitivity

I shield my eyes from sunlight

I don't like being touched

I always walk on my tiptoes

Hyposensitivity

I like to smell different objects

I like to touch different textures

I like to make different noises

HYPERSENSITIVITIES

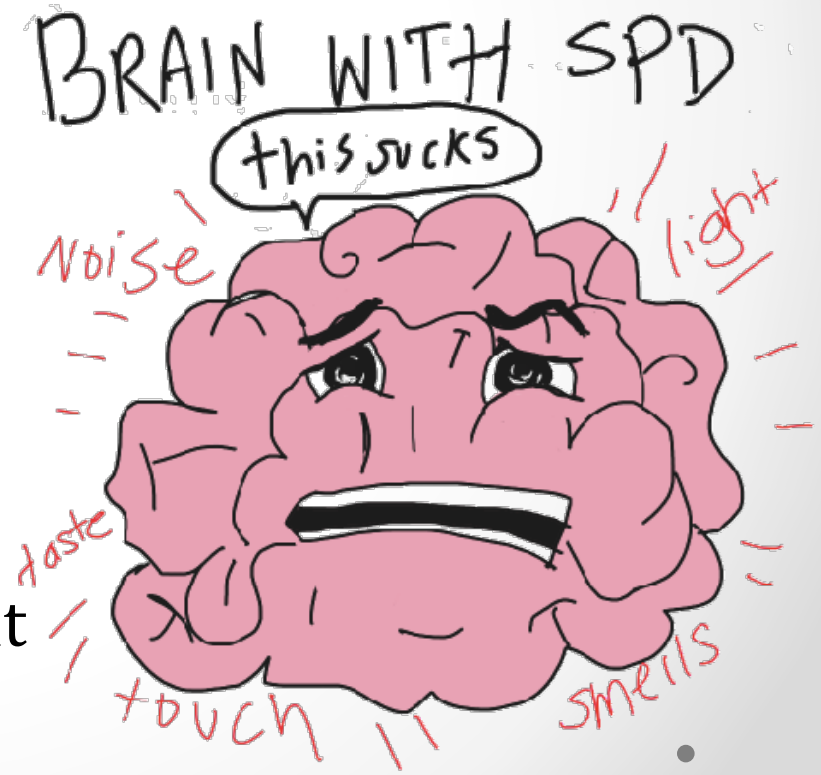
- Extreme response to or fear of sudden, high-pitched, loud or metallic noises like flushing toilets, clanking silverware, or other noises that seem inoffensive to others
- Fearful of surprise touch, avoids hugs and cuddling even with familiar adults
- Seems fearful of crowds or avoids standing in close proximity to others
- Extremely fearful of climbing or falling, even when there is no real danger i.e. doesn't like his or her feet to be off the ground and poor balance.

HYPOSENTSITIVITIES

- A constant need to touch people or textures, even when it's inappropriate to do so
- Doesn't understand personal space
- Clumsy and uncoordinated movements
- An extremely high tolerance for or indifference to pain
- Often harms other children and/or pets when playing, i.e. doesn't understand his or her own strength
- May be very fidgety and unable to sit still, enjoys movement-based play like spinning, jumping, etc.

MORE ON SPD

- Impulsive, lacking in self control
- Difficulty in making transitions from one situation to another
- Inability to unwind or calm self
- Poor self concept
- Delays in speech, language or motor skills
- Delays in academic achievement



FINE MOTOR CONCERNS

- Poor sitting posture
- Difficulty with handling pencil and paper
- Difficulty cutting (age appropriate)
- Lack of established hand dominance
- Fingers seem floppy, loose or stiff when doing an activity
- Unable to tie shoes

GROSS MOTOR CONCERNS

- weak, tires easily
- stiff, awkward, clumsy
- confuses right and left (beyond 7 years)
- difficulty catching, throwing
- reluctant to play on playground
- exaggerates falling in a sport - clowns it up
- slow learning to ride a bike

WHAT CAN BE DONE ABOUT IT?

- Individualized treatment plan may include:
  - Therapy in a sensory enriched environment
  - Lots of swinging, spinning, tactile, visual, auditory and taste opportunities
  - A combination of alerting, organizing and calming techniques
  - Attention to child's reaction to more vs. less complexity
  - Caregivers being taught correct techniques for additional "at home" therapy
  - Child's motivation and selection of activities guides the therapy

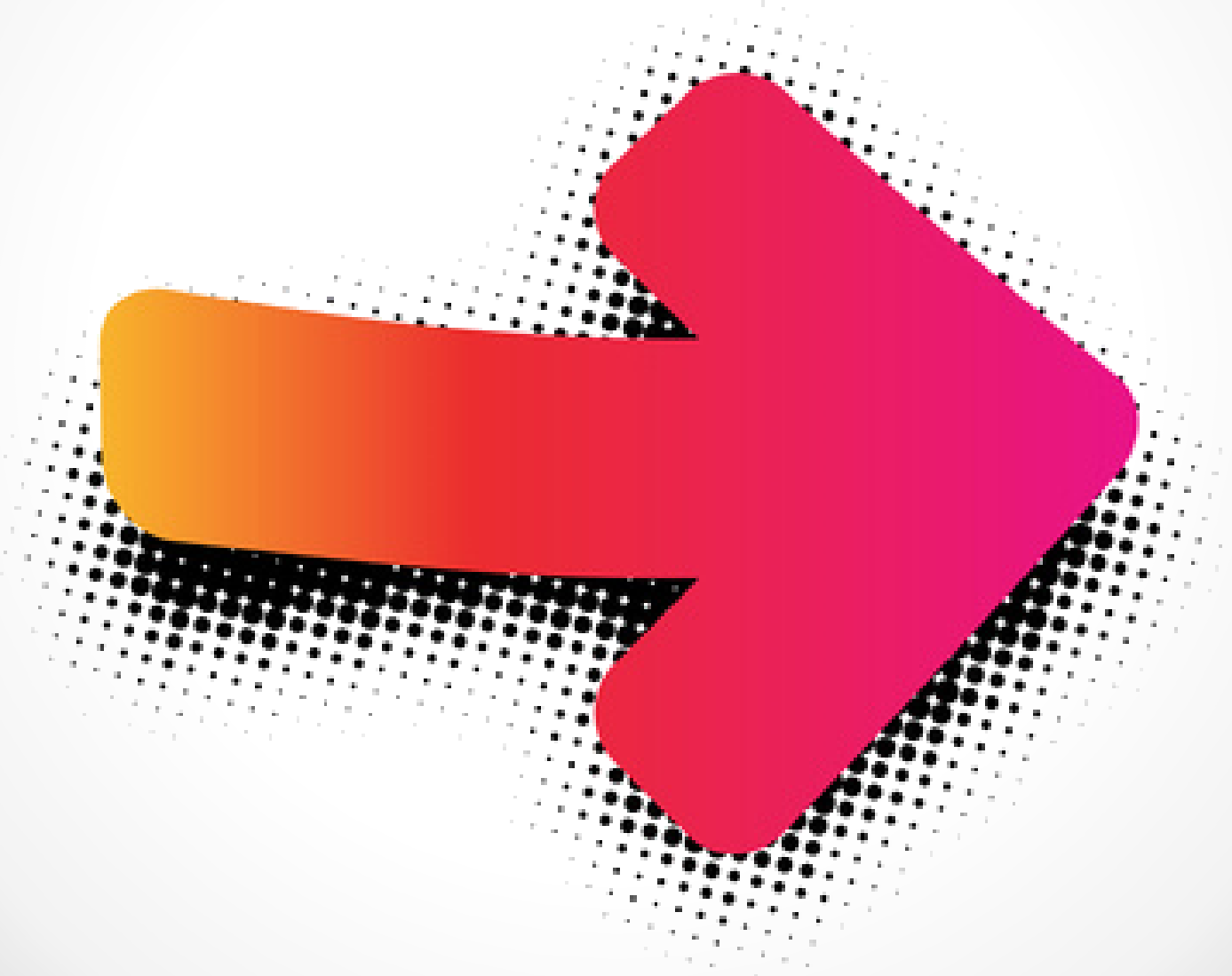
SENSORY PROCESSING TIPS

- Attention to child's needs/reaction.
  WHAT IS THE CHILD SEEKING?
- ACCOMODATIONS (move, stand)
- AWARENESS: Goal – Student learning to be aware of their state of being (need for calming or alerting, high/low) and what to do for themselves.
- SENSORY DIET
  - *PERHAPS* – therapy in a sensory rich environment
    - Swinging, spinning, tactile, visual, auditory, etc.

WHAT TYPES OF ACTIVITIES MIGHT BE USED BY THE OT?

- Therapeutic body brushing
- Lifting and pulling heavy thing
- Swinging/rocking
- Scooter board
- Deep joint compression
- A weighted vest
- Rolling a big ball over the body
- Dimming the lights
- Arts and crafts activities

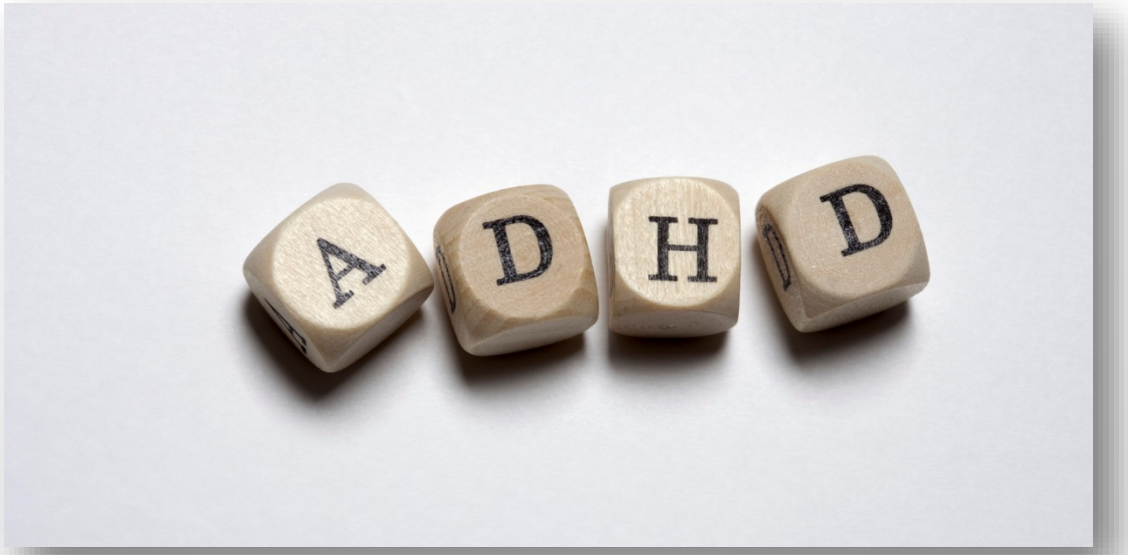
ON TO THE NEXT THING



ATTENTION DEFICIT HYPERACTIVITY DISORDER

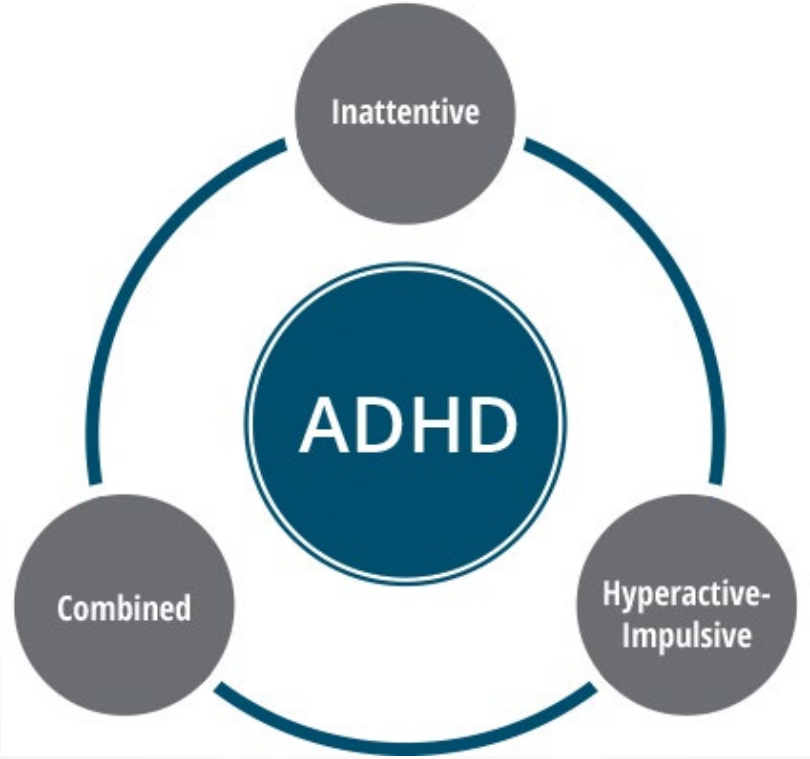
ADHD is a very complex neurobiochemical disorder.

Parents and teachers do **NOT** cause ADHD.



THERE ARE THREE SUBTYPES OF ADHD

- Predominately Inattentive Type
- Predominately Hyperactive-Impulsive Type
- Combined Type (inattention, hyperactivity-impulsivity)



INATTENTIVE CHALLENGES

- Lacks close attention to details or makes careless mistakes. Has difficulty keeping focus.
- Does not appear to listen
- Struggles to follow through with instructions.
- Difficulty with organization.
- Avoids or dislikes tasks requiring a lot of thinking.
- Loses things.
- Easily distracted.
- Forgetful in daily activities.

HYPERACTIVE CHALLENGES

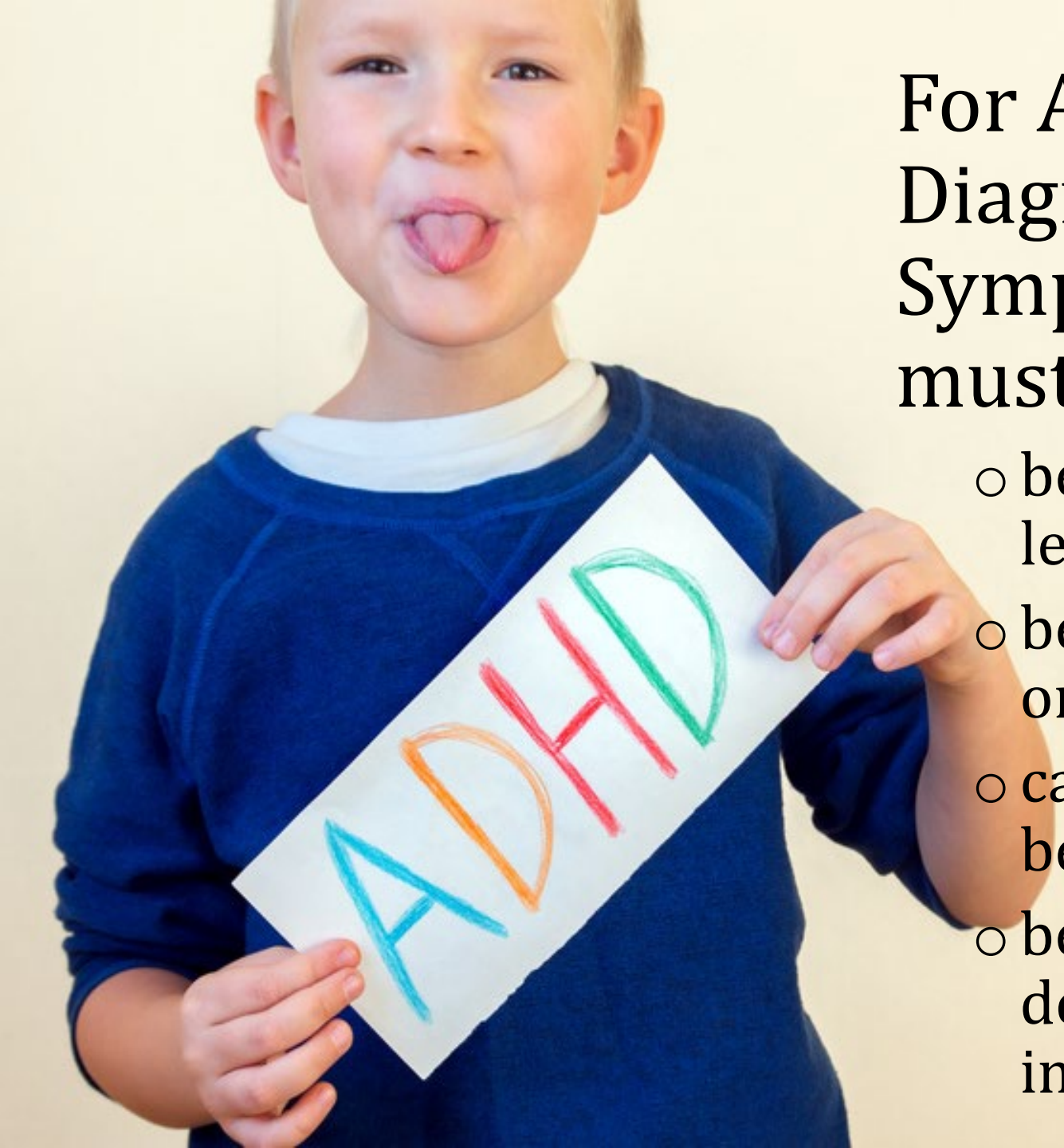
- Fidgets with hands or squirms in chair.
- Difficulty remaining seated.
- Runs about or climbs excessively (for children)
- Difficulty to quietly engage in activities.
- Acts as if driven by a racecar
  - Chatters excessively.
  - Impulsively blurts out
  - Difficulty waiting or taking turns.
  - Interrupts others.

combined type

Combination of inattentive and hyperactive

WHAT OTHER PROBLEMS MAY CO-EXIST WITH ADHD?

- Oppositional defiant disorder
- Conduct disorder
- Anxiety
- Depression
- Learning disabilities



For ADHD Diagnosis, Symptoms must:

- be present at least 6 months
- be present in 2 or more settings
- cause problems before age 7
- be developmentally inappropriate

WHAT IS THE RECOMMENDED TREATMENT APPROACH?

- Education of the patient, parent and teacher about the disorder
- Medication, usually from the class of drugs called stimulants (in recent years non stimulant drugs have been produced but the stimulant drugs tend to have better outcomes for most patients.
- Behavior therapy
- Other environmental supports, including an appropriate school program

SO WHAT CAN WE DO?

- Remember, it's not a matter of deliberate choice on the part of the child.
- Provide external incentives to follow the rules.
- Give extra praise and encouragement.
- Follow a step by step approach.
- Let the student earn special privileges.
- Alternate action with requests for attending.
- Consider a special diet and/or exercise program.

…AND WHAT ELSE?

- Minimize visual distraction where attention is required.
- Provide good listening environment for children with usable hearing.
- Agree on a small signal to help child remember to remain calm.
- Have child near you for ease of attention getting.
- Enlist parent help.
- Don’t sweat the small stuff.

WITH DETERMINING ACCOMMODATIONS BE SPECIFIC

WHY?

WHAT ABOUT EDUCATION PLANNING?

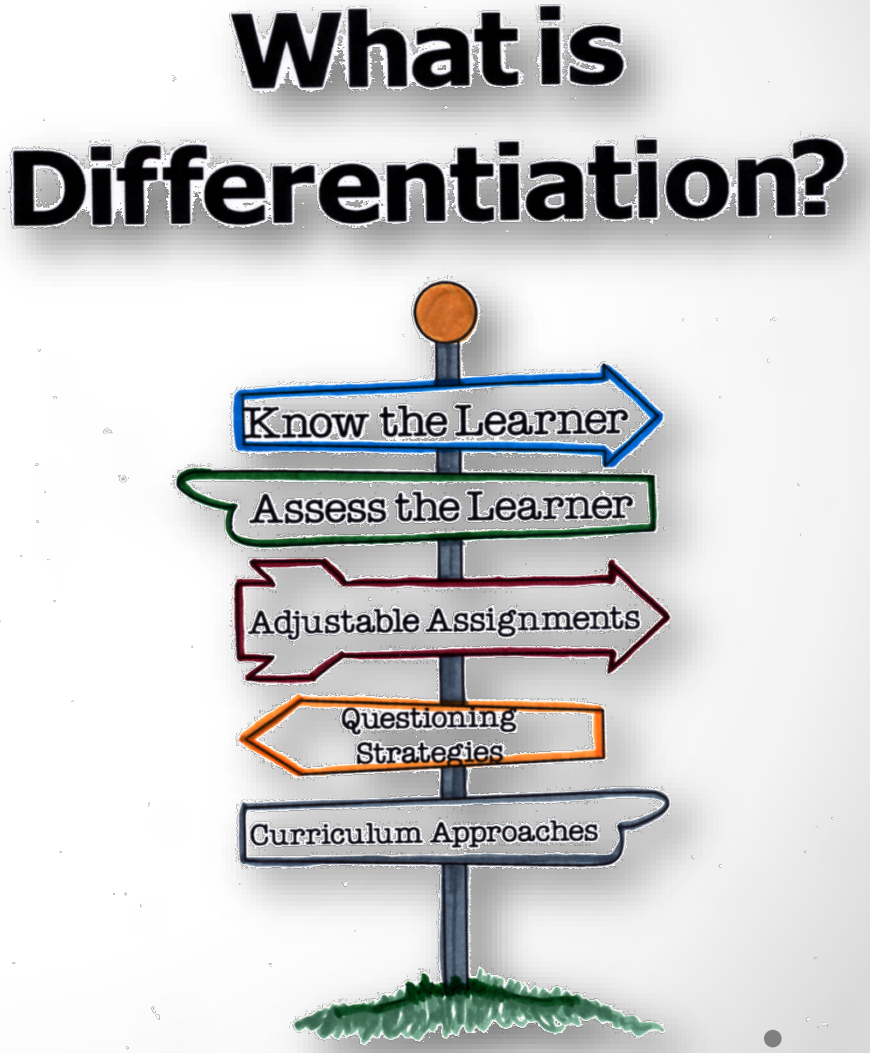
- Strive to develop independent functioning as much as possible
- Develop the IEP as a team
- Coordinate efforts and include all team members:
  - parents
  - teachers
  - support personnel
  - other professionals in direct contact with the child

Lets face it, few teachers are trained to teach children with additional disabilities.

DIFFERENTIATED INSTRUCTION

- Providing different avenues for acquiring content, processing or making sense of ideas, and developing products.

- It is NOT an individualized lesson plan
- It is NOT chaotic and unorganized
- It is NOT teaching to the 'middle'
- It is NOT just making a few accommodations and adaptations



KEY ELEMENTS OF DIFFERENTIATED INSTRUCTION

- Acknowledge similarities and differences
- Focus on “quality” not “quantity”
- Provide multiple approaches to content, process, and product
- Student centered
- Flexible grouping and pacing
- Collaborative
- Assessment is varied, on-going and guides instruction and learning tasks

We are not alone

Who else can help?

...

THE TEAM (IN AND OUT OF SCHOOL)

- Audiologist
- Classroom teacher
- Neurologist
- Occupational therapist
- Optometrist
- Ophthalmologist
- Otologist
- Teacher's aide
- Parents
- Pediatrician
- Physical therapist
- Psychiatrist
- School nurse
- School psychologist
- School social worker
- Special ed teacher
- Speech language pathologist

Occupational Therapists Can Help With…

- Small motor function
  - handwriting
  - drawing
  - eye-hand coordination
  - feeding/swallowing
  - speech skills (work with speech pathologist)
  - cognitive skills (work with classroom teacher)
  - sensory issues

PHYSICAL THERAPISTS CAN HELP WITH…

- Large motor function
  - balance
  - sitting
  - crawling
  - walking
  - running
  - riding a tricycle
  - using upper body
  - increasing strength

Speech and Language Therapists can help with…

- Using whatever means of communication is possible for the child
  - Work on articulation, breathing, tongue control, etc.
  - Role play appropriate social interaction
  - Practice making choices
  - Reinforce new vocabulary/language
  - Practice control of vocalization
  - Practice appropriate modulation
  - Reinforce turn taking behavior
  - Provide therapy for swallowing problems
  - Reinforce survival communication strategies

AUXILIARY SCHOOL PERSONNEL CAN SO HELPFUL!!!

- Dietitian
- Janitor
- Lunchroom staff
- Office staff
- Older students
- Parent volunteers
- Peers
- School volunteers

PARENTS ARE KEY!!!

- Parents can:
  - Maintain consistency in the student's life.
  - Help the student maintain self-discipline.
  - Help with homework...consistency in learning.
  - Encourage good nutrition and a good night's sleep.
  - Give positive reinforcement and encouragement.
  - Maintain home/school communication.
  - Provide outside activities that build self-esteem.
  - Provide love and acceptance.

Modifications and Accommodations

TIPS FOR ACCOMMODATIONS

- Environmental changes- preferential seating front (near teacher or interpreter), flexible seating
- Peer Notetaker, Teacher notes/outlines, Interpreter signs test
- Using different paper, spell-checker, Highlighted text, Word banks
- Peer buddy, Frequent teacher check-backs
- Multiple choice, Verbal/Sign responses
- Shorten assignments, Extra time

TIPS FOR MODIFICATIONS

- Reduced/altered: assignments, classwork
- Specialized or alternative curriculum
- Alternate book at student's level
- Simplified vocabulary/concepts
- Picture supports
- Calculator
- Grading

REMEMBER

Every student has some kind of talent.
It's our job to be "talent scouts".

EXCELLENT INFORMATION IS AVAILABLE FROM PARENT CENTER HUB

http://www.parentcenterhub.org/

NEED GUIDANCE OR HELP?

Contact me at:

Andrea Marwah,

ISD Outreach Consultant/Trainer

Andrea.Marwah@illinois.gov

bit.ly/ISD-Outreach2

331-702-8944

SOURCES

https://discoveryeye.org/night-blindness/

https://www.smartkidswithld.org/first-steps/what-are-learning-disabilities/central-auditory-processing-disorder-an-overview/

https://www.bonnieterrylearning.com/blog/11-auditory-processing-activities-you-can-do-without-spending-a-dime/

https://www.speechbuddy.com/blog/speech-therapy-techniques/activities-to-improve-language-skills-in-children-with-apd/

https://www.sensory-processing-disorder.com/sensory-integration-activities.html

https://themighty.com/2016/06/activities-for-children-with-sensory-processing-disorder/

https://harkla.co/blogs/special-needs/sensory-seeking-activities

https://www.nidcd.nih.gov/health/usher-syndrome

https://ldaamerica.org/types-of-learning-disabilities/