



Exploring Neurodiversity

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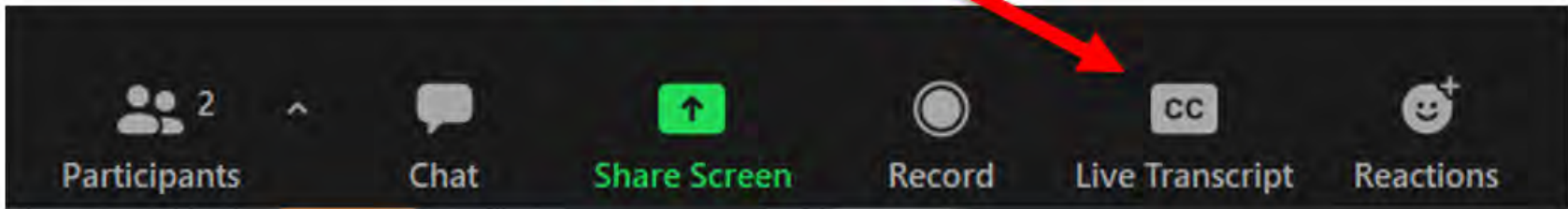


Pennsylvania
Department of Human Services

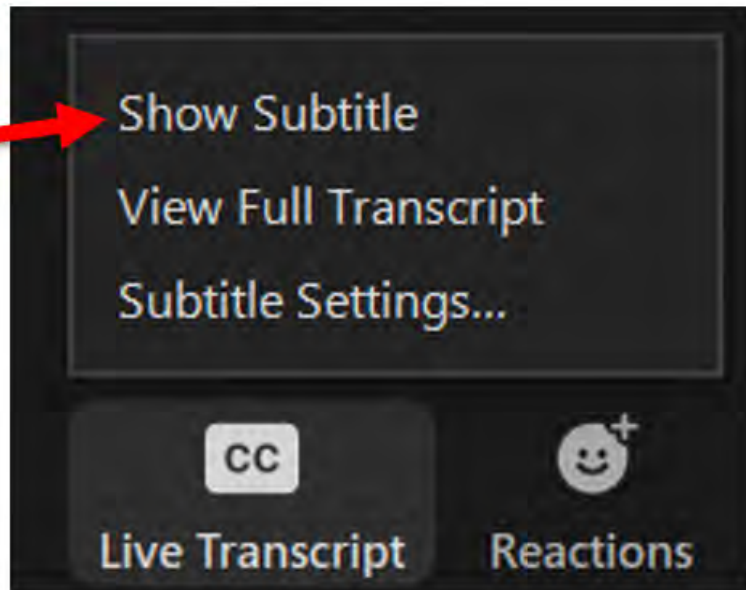


To Turn on Captions

Step 1



Step 2





The Special Populations Unit



Every person has an effective way to communicate in order to express choice and ensure their health and safety.



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Quick Note on the Words we Use

- Person-first language
 - Individual with autism
- Identity-first language
 - Autistic person
- Everyone is different, everyone has their own preferences
 - Just ask what they prefer!
 - Today, we will use both



Quick Note on Accessibility

- We value equal accessibility
- We aim to:
 - Avoid acronyms
 - Use high contrast colors
 - Use accessible fonts
 - Ensure our presentation is accessible for people who use screen readers
 - Be inclusive with our language and image choices

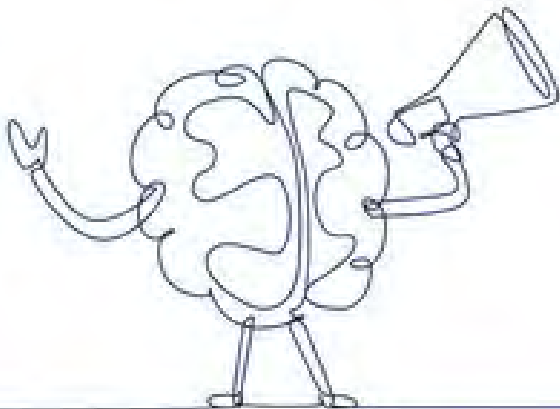


Agenda

- What is Neurodiversity
- Diagnosis and Impacts
- Trauma Connection
- What we can do
- Resources



What is Neurodiversity?



What do you think
Neurodiversity is?





Neurodiversity

The term neurodiversity was coined in the 1990s to fight stigma and promote acceptance of people with Autism Spectrum Disorder.

The term now also includes other conditions that involve neurological differences, such as:

- Attention-Deficit / Hyperactivity Disorder
- Dyslexia
- Dyscalculia
- Dysgraphia

Note: Other things may also be included depending on the source.





What does the term Neurodiversity mean?

Neuro = Brain;

Diversity = Differences and Variety within a group;
Differences and variations of brains and minds



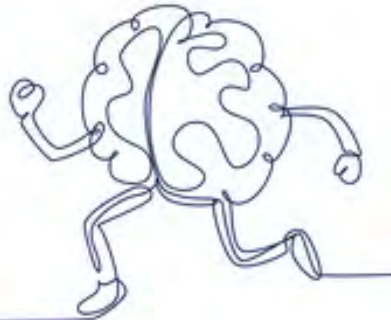
There are many differences in the way people's brains work and this affects how people perceive and respond to the world.

Reminder

- Neurodivergent refers to an individual who is “different” from the “norm”
- It is dialectical (2 things at the same time)
- It has strengths and opportunities as well as areas for growth and change
- Not something that is "wrong" with a person
- A different way of viewing and interacting with the world based on brain differences



Diagnoses and Impacts

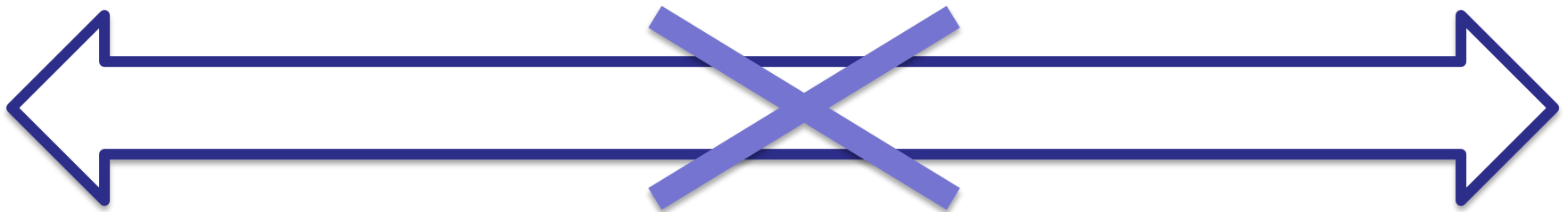


▶ What is Autism Spectrum Disorder (ASD)?

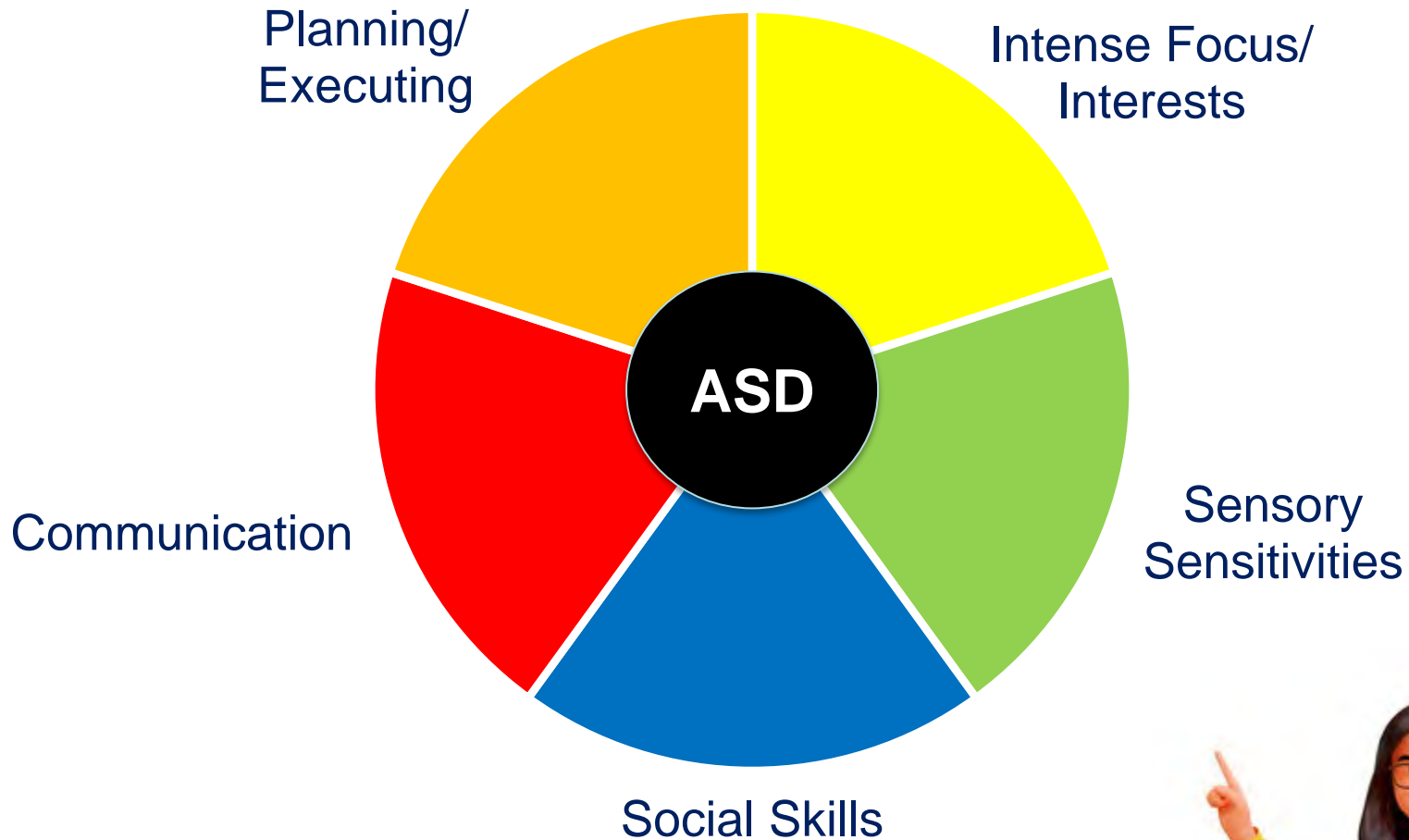
A developmental disorder caused by differences in the brain. The two main symptom areas are social communication and interaction, and involves restricted, repetitive behaviors. It is a lifelong disorder.

“Spectrum” indicates that autism appears in different forms with varying levels of intensity and presentation.

It is not linear and individual differences must always be considered.



How to Conceptualize the Spectrum

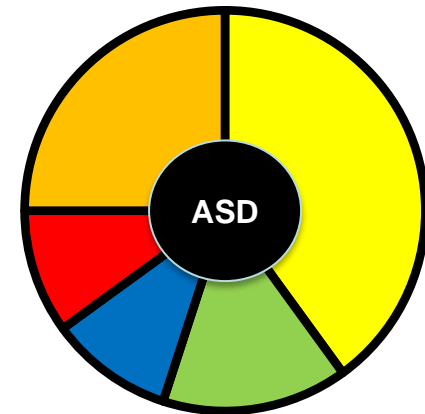


Each person experiences their own unique strengths, symptoms, and challenges and they can change over time.



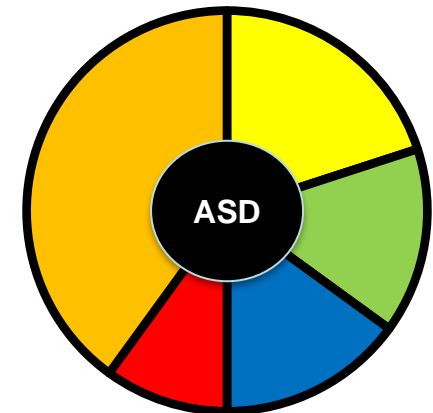
Intense Focus/ Interests

- Fixations on interests
- Intense depth of knowledge about interests (savant syndrome)
- Long periods of time spent engaged in interest
- Difficulty transitioning away from interests
- Attachment to objects
- Need for routine and order
- Attention to detail
- Great memory and recall



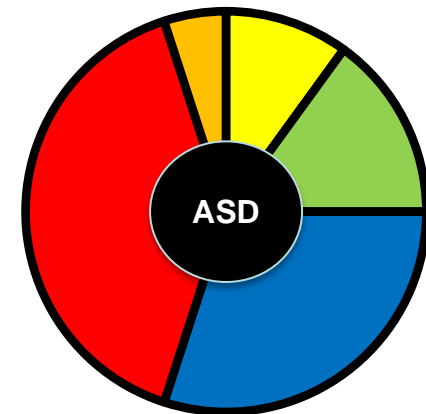
▶ Planning/ Executing

- Impulse control
- Challenges focusing on things not of interest
- Difficulty seeing the big picture
- Moving from one task to another may be tough
- Multitasking is hard
- Setting goals and knowing how to reach them
- Organizing thoughts and actions
- May be analytical, may spot patterns and repetition's others don't



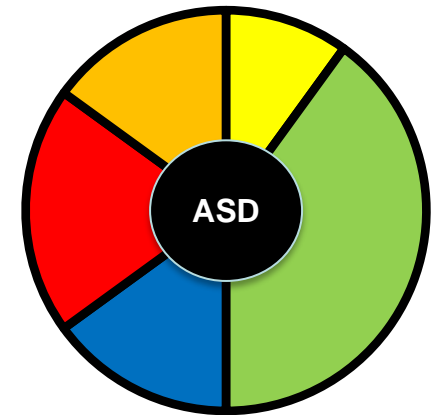
Communication

- Conversation (two-way communication) may be difficult, understanding social rules of conversation
- Monologuing or speaking at length about a specific topic
- Repetitive speech, Echolalia (repeating others' words or sentences)
- May speak in a way that assumes the person they're conversing with knows everything they know
- Unusual voice quality or modulation
- Voice too loud or too quiet
- Difficulty understanding others body language, tone, facial expressions, and gestures
- May not use speech or have limited speech
- May have novel and creative ways of expression



Sensory Sensitivities

- Sensitive to loud sounds, certain temperatures, lights, or smells
- May notice stimuli that others don't
- Stimming or self-stimulation to self-regulate in response to stimuli
- Skilled in observation
- Crowds or commotion may be a challenge
- Changes can be tough
- Food sensitivities, especially textures
- Sensitivity to clothing or shoes
- Dislike of touch or touching certain things
- Prefer certain repetitive movements



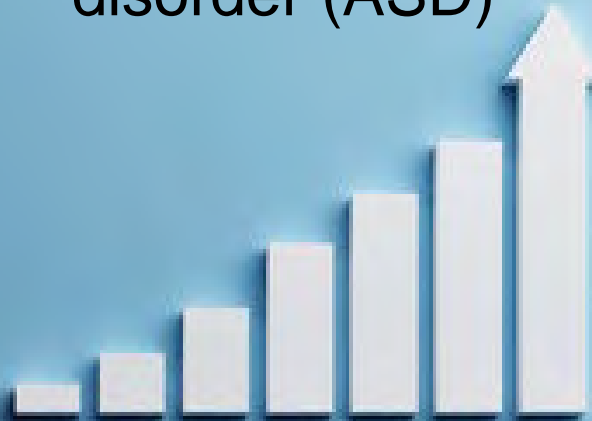
Social Skills

- May not initiate interactions with peers
- Difficulty interpreting what other are thinking and feeling
- May have a hard time seeing another's perspective
- Less likely to judge others
- Jokes, sarcasm, and figures of speech may not be understood
- Rigid thinking
- May struggle to label, understand and regulate emotions
- Reading social cues may be hard
- Tend to be honest and truthful



Number of People with Autism

About 1 in 36 children
has been identified
with autism spectrum
disorder (ASD)



What is Attention-Deficit / Hyperactivity Disorder (ADHD)?

There are three different presentations:

Inattentive
Hyperactive-Impulsive
Combined



Inattentive ADHD

- Often misses details
- May have trouble holding attention on tasks or activities
- Following through on instructions and finishing tasks is hard
- May not seem to be listening when spoken to
- Trouble organizing tasks and activities
- Avoids, dislikes, or is reluctant to do tasks that require mental effort over a long period of time
- Often loses things necessary for tasks
- Easily distracted
- Forgetful in daily activities
- Tend to be creative thinkers



▶ Hyperactive-Impulsive ADHD and Combined

- Often fidgets with or taps hands or feet, or squirms in seat
- “On the go” acting as if “driven by a motor”
- Feeling of restless
- Tend to be creative thinkers
- May have intense focus on preferred tasks
- Spontaneous and open to new experiences
- High energy levels
- May hyperfocus
- May talk excessively
- Impulsive, trouble waiting
- Can have obsessions or narrow interests

Combined: Symptoms of both inattention and hyperactivity-impulsivity



Number of people with ADHD in the U.S.



An estimated
6 million
children (ages 3 to 17)
have been diagnosed

An estimated
8.7 million
adults
have been diagnosed

What is Dyslexia?

A specific learning disorder

It may include, difficulty:

- Reading
- Accuracy and spelling
- Connecting letters seen on a page with the sounds they make, resulting in reading being a slower and effortful process
- Recognizing and writing letters

Tend to do well thinking outside the box, have a strong imagination, and learn easier through meaning rather than memorization.

One in five students, or 15-20% of the population, has a language-based learning disability. Dyslexia is the most common of the language-based learning disabilities.



What is Dyscalculia?

A specific learning disorder

Difficulties learning number related concepts or using the symbols and functions to perform math calculations. It can include difficulties with:

- number sense,
- memorizing math facts,
- math calculations,
- math reasoning, and problem solving

Often exceptional at reading and writing.

Experts estimate it affects between 3% and 7% of people worldwide.



What is Dysgraphia?

A specific learning disorder

Difficulties with putting one's thoughts on to paper.

Problems with writing, including difficulties with:

- spelling,
- grammar,
- punctuation, and
- handwriting

May include pain or discomfort with writing.

May have difficulties with other fine motor skill activities.

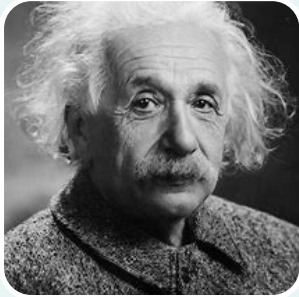
Dysgraphia is present in 7-15% of school-aged children





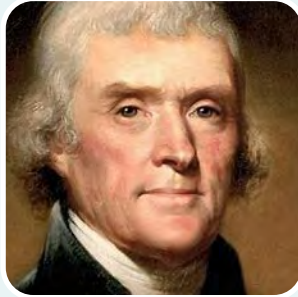
Do you know of any influential people who were most likely neurodivergent?





Albert Einstein

Physicist,
Dyslexia



Thomas Jefferson

Founding
Father and
3rd
President,
Autism



Emily Dickinson

Poet,
Autism



Tom Wiggins

Pianist,
Autism



Bill Gates

Microsoft,
Dyslexia
and ADHD



We are all different!
and
We are all important!

All of our diverse expressions
need to be respected.



The Cultural Connection

- Culture and intersectionality are always at play, as well
- Different countries and people groups see neurodiversity in different ways
- Some languages may not have words to describe neurodiversity and the experiences of those who are neurodivergent
- Based on cultural influence, someone may be:
 - more or less willing to accept or divulge a label or diagnosis
 - more or less prone to masking
 - unaware that there is support available
 - more or less willing to engage in helpful supports



The Trauma Connection



What is Trauma?

“Exposure to actual or threatened death, serious injury or sexual violence in one (or more) of the following ways:

- Directly experiencing the traumatic event;
- Witnessing, in person the event as it occurred to others;
- Learning that the traumatic event occurred to a close family member or close friend- in cases of actual or threatened death of a family member or friend, the event must have been violent or accidental;
- Experiencing repeated or extreme exposure to aversive details of the traumatic event ”



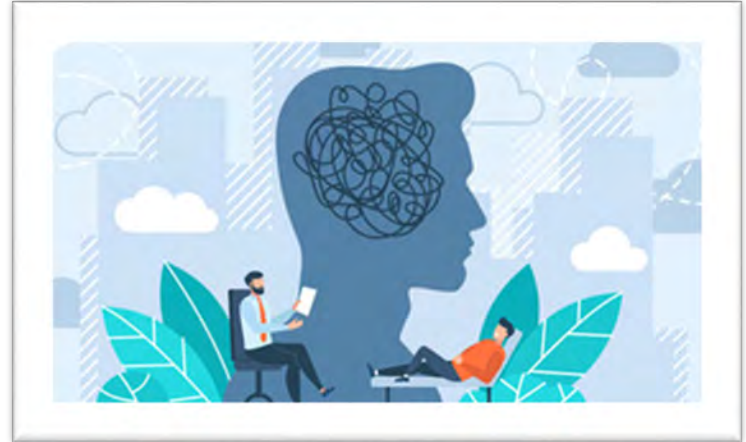
Remember...

- Trauma is largely defined by the person who experiences it.
- Using only the criteria that is set forth in the Diagnostic and Statistical Manual of Mental Disorders 5 is limiting.
- Emotional abuse, exclusion, isolation, and more are also traumatic to people.
- Being neurodivergent can be experienced as a trauma in and of itself because you are automatically different and treated differently by many, sometimes even your own family.

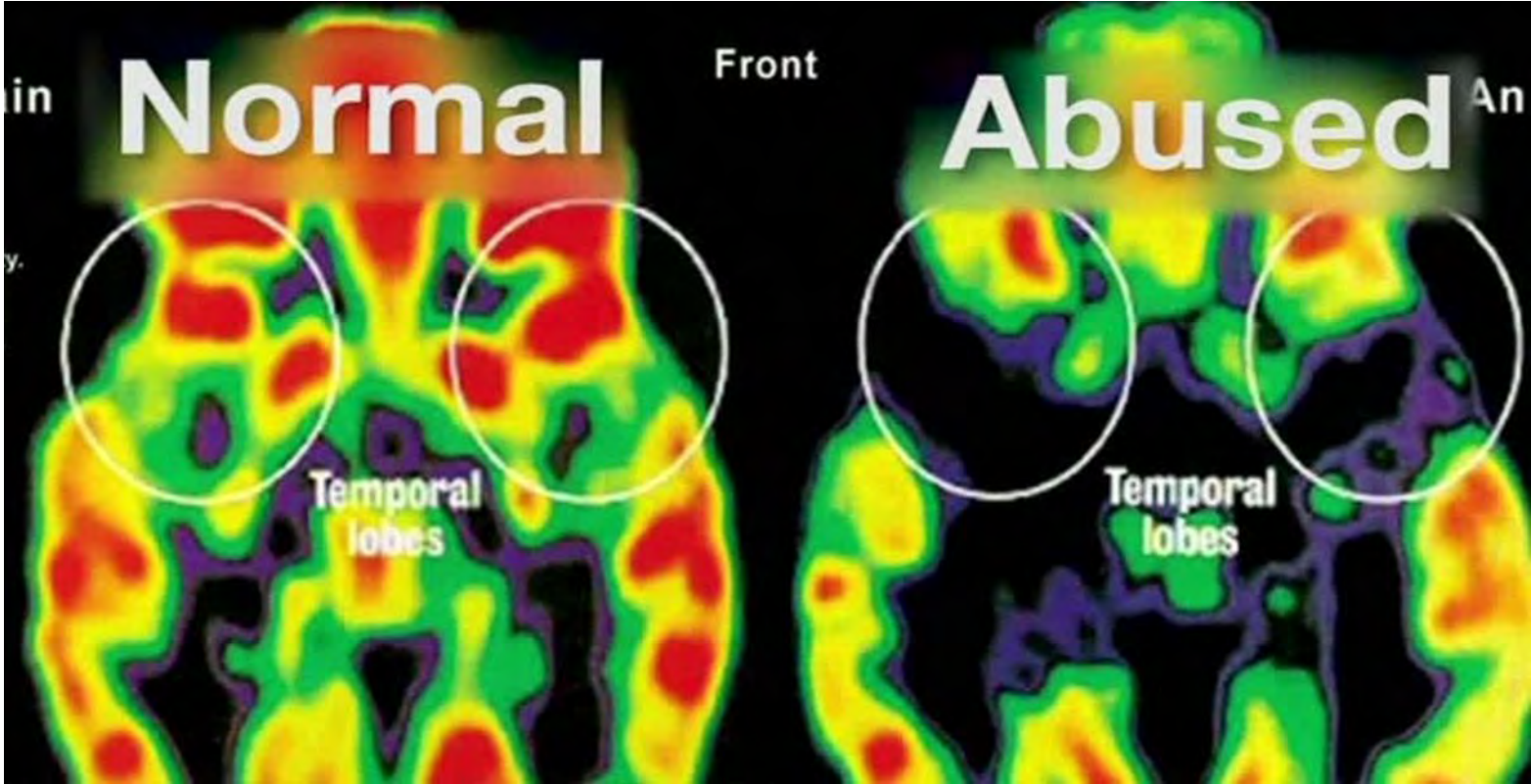


Does Trauma Cause Neurodivergence?

- Children who are abused and neglected especially in the early years (0-5) more frequently have diagnoses of Autism, ADHD, and other learning problems
- This could be because:
 - Deprived of having appropriate interactions and relationships to develop a neurotypical brain
 - Chronic stress changes the chemistry of the brain and body leading to overarousal and dysregulation



▶ Brain Differences



Higher Risk



- Neurodivergent individuals are at a higher risk for experiencing trauma
 - Not only abuse and neglect but also bullying, exclusion, and social isolation
 - Individuals with Autism are up to 3 times as likely to experience traumatic events
 - Children with ADHD are more likely to experience head injuries, fractures, and burns
- Neurodivergent individuals are also at a higher risk of developing Post-traumatic Stress Disorder (PTSD)





What can
we do?

**Transform
our
approach!**



Support Executive Functioning Skills

- Executive functioning is the foundation for learning

| | | |
|----------------------|-----------------|-----------------|
| Impulse control | Self-monitoring | Problem solving |
| Emotional regulation | Planning | Task initiation |
| Attention | Working memory | Flexibility |

- Use calendars and to do lists
- Organization; be a model and teach them skills
- Use timers
- Exercise before starting work or task
- Chunking projects or assignments into smaller pieces
- Instead of just telling information, also write it down
- Teach coping strategies for managing stress

Make the Connection

- Watch for red flags

| | | |
|-----------------------------|-------------------------|-----------------------|
| Mimicking abusive behaviors | Increased stimming | Loss of skills |
| New or worsening fears | Withdrawal or isolation | Communication changes |
| Self injurious behaviors | Mood changes | Etc. |

- Create and maintain a safe space
- Understand any communication needs and if there may need to be additional supports or adaptations.
 - Such as communication boards to augment communication
- Social stories and materials in plain language
- Check in and have conversations about safety

Reshaping Environments

- Consider the space/environment
 - Lights
 - Noise
 - Visuals
 - Tactiles
 - Odors
 - Ability to move around, if needed



- Minimize distractions when you can
 - In person and remote
- Be flexible

Communication Tips

- Make sure you have their attention before communicating
- Be mindful of ambiguity
 - Be direct and concise; Nonverbal communication may not be understood or may have more weight
 - Be multimodal, when possible; use language and nonverbal language to communicate
- Be patient and wait; give the person time to process
 - We all process information at different rates
 - Give the person some quiet time to respond
- Minimize interruptions
- Virtual/Remote
 - Captions
 - Individuals may process or produce language at a different rate; reading the words as well as hearing them can improve understanding
 - Background noise may pose barriers; captions may allow for people to turn off the volume or wear noise canceling headphones and still attend



Be Accepting

- Don't expect eye contact
 - We all stim in one way or another
 - Stimming is self-stimulation; repetition of movements, sounds, words, etc. to help the person regulate, cope, or express themselves.
 - Fidgets
 - Ask the person what might be helpful to them
 - Be open to discussion and feedback
-
- Masking is adjusting behavior or hiding certain characteristics depending on who we are with
 - For example; pushing through sensory discomfort
 - Research suggests that attempts to “mask” are associated with exhaustion, burnout, anxiety, depression, stress, reduced well-being, and suicidality.





What is something
else you can you
do?





Resources!



Office of Developmental Programs

- The mission is to support Pennsylvanians with intellectual disabilities and/or autism to achieve greater independence, choice, and opportunity and live Everyday Lives.
- A Supports Coordinator (SC) will help you locate, coordinate, and monitor services and supports through an Individual Support Plan (ISP)
- Waiver services such as behavior support, residential services, habilitation, respite, assistive technology, adaptations, employment services, therapies, transportation, etc.
- First step is to register with your County Office
- [Link to learn more about ODP](#)
- [MyODP.org](#)





Communication Land...Series

Communication Land Alzheimer's Disease

DEFINITION

Alzheimer's disease is a type of dementia that causes problems with memory, thinking, and behavior. Symptoms usually develop slowly and get worse over time, becoming severe enough to interfere with daily functioning.

Source: alz.org



HOW IT MAY IMPACT COMMUNICATION

- Communication can look different day by day and hour by hour



STRATEGIES TO SUPPORT COMMUNICATION

- Ask the person directly how to best communicate with them
- Sentences should be direct and short
- Don't assume the individual does/doesn't understand; this may fluctuate
- Tune into their facial expressions, body language, tone, and behaviors to recognize communication attempts and respond accordingly
- Use touch to make a connection
- Use senses such as scents to make connections to people and memories
- Remind the person of your name
- Get their attention by using their name before beginning a communication attempt (if possible, establish eye contact or give a touch cue)
- It's best for one person to speak at a time and avoid speaking above other noise
- Offer choices instead of open-ended questions
- Be aware of your facial expressions, tone, and body language
- Multiple approaches may be helpful - including notes, calendars, pictures, labels, and lists to support communication
- Don't comment on their repetition of phrases or questions



Diagnoses Included:

- Alzheimer's Disease
- Angelman Syndrome
- Apraxia of Speech
- Attention Deficit Hyperactivity Disorder
- Autism Spectrum Disorder
- Borderline Personality Disorder (BPD)
- Central Auditory Processing Disorder
- Cerebral Palsy
- CHARGE Syndrome
- Communication Disorder
- Conduct Disorder
- Cornelia de Lange Syndrome
- Cortical Visual Impairment
- Deaf-Blindness
- Disruptive Mood Dysregulation Disorder (DMDD)
- Down Syndrome
- Dyslexia
- Fetal Alcohol Spectrum Disorder
- Hearing Loss
- Huntington's Disease
- Idiosyncratic speech
- Language Deprivation
- Limited English Proficiency (LEP)
- Long COVID
- Multiple Sclerosis (MS)
- Parkinson's Disease
- Post-Traumatic Stress Disorder (PTSD)
- Reactive Attachment Disorder
- Rett Syndrome
- Schizophrenia
- Sensory Processing Disorder
- Stroke
- Stuttering
- Tourette Syndrome
- Traumatic Brain Injury
- Usher Syndrome
- Visual Impairment

psUnit@pa.gov

Pennsylvania's leading source of autism-related resources and information. 877-231-4244

The ASERT Collaborative is funded by the Office of Developmental Programs, PA Department of Human Services.



Communication Profile

- Quick one-page tool
- Having a starting point for communication is always helpful

My Communication Profile

My name is:

| | |
|---------------------------------------|---|
| How I share information | How I take in information |
| How to best support my communication? | |
| Things I enjoy | Things that may interfere with my communication |

Adapted from My iVivCourse Portfolio One-Page Profile



Final Thought

There is no single experience – we all experience the world differently.

- Neurodiversity enhances the human experience and is valuable in all environments.



Transforming our approach for
neurodiversity acknowledges this
and
ensures that all people can
participate to the best of their ability!

Thank you

If you have questions, feel free to email us:

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References

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- <https://childmind.org/article/what-is-neurodiversity/>
- <https://www.psychologytoday.com/us/basics/autism/neurodiversity-and-the-benefits-autism>
- Centers for Disease Control
- Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD)
- www.dyslexiacenterofutah.org
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