

# Autism and EMS Response

*Public Safety Workgroup 2010*



**If you have met one person  
with autism...**

**...you have met one person with  
autism!**



# As a Result of this Training, You Will Be able to:

- Give very basic information about Autism Spectrum Disorders (ASD)



- Identify characteristics of ASD
- Identify suggestions for responding to public safety encounters



# Why should Public Safety Personnel recognize autism spectrum disorders?

- Provide for the safety and welfare of all clients--go home safe to your families
- Promote positive, proactive community relations
- Make best use of available time & resources
- Enhance communication skills
- Avoid exposure to liability



# What is the prevalence of Autism?



# 1:88 Children



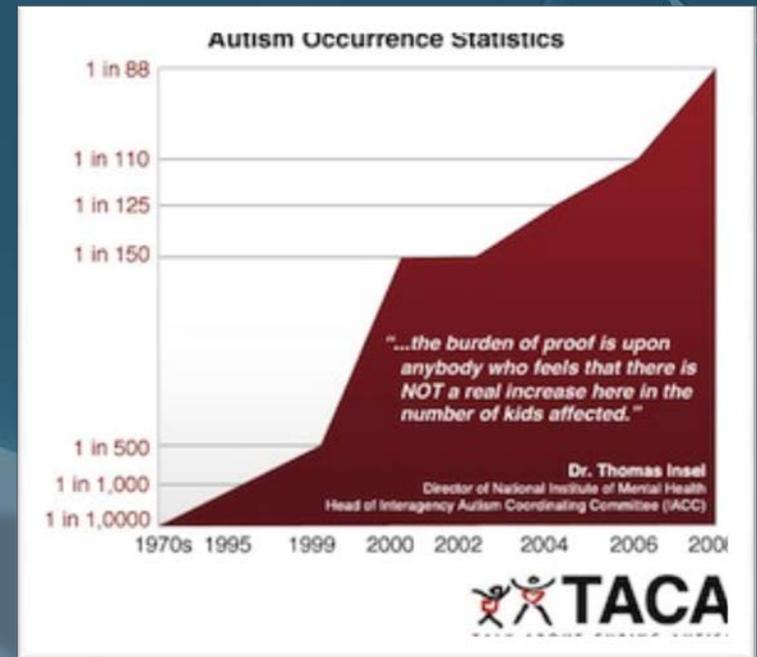
## 4-5 Times More Prevalent in Males



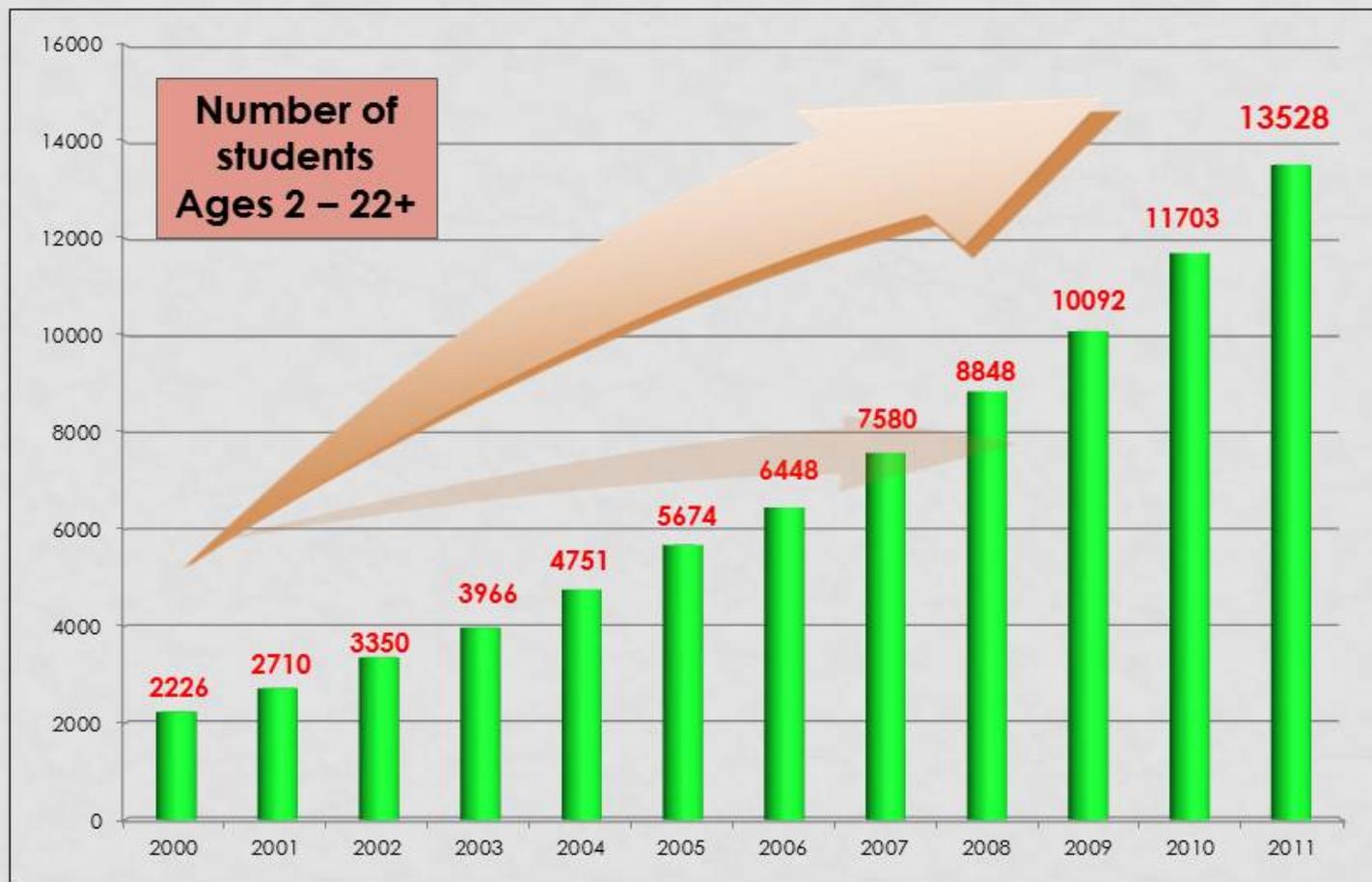
## 1:54 Boys – 1:252 Girls

# Statistics

- New case is diagnosed approximately every 20 minutes nationwide
- More than 72 children diagnosed every day
- Fastest growing developmental disability
- 10-17% annual growth



# Autism in Virginia Public Schools

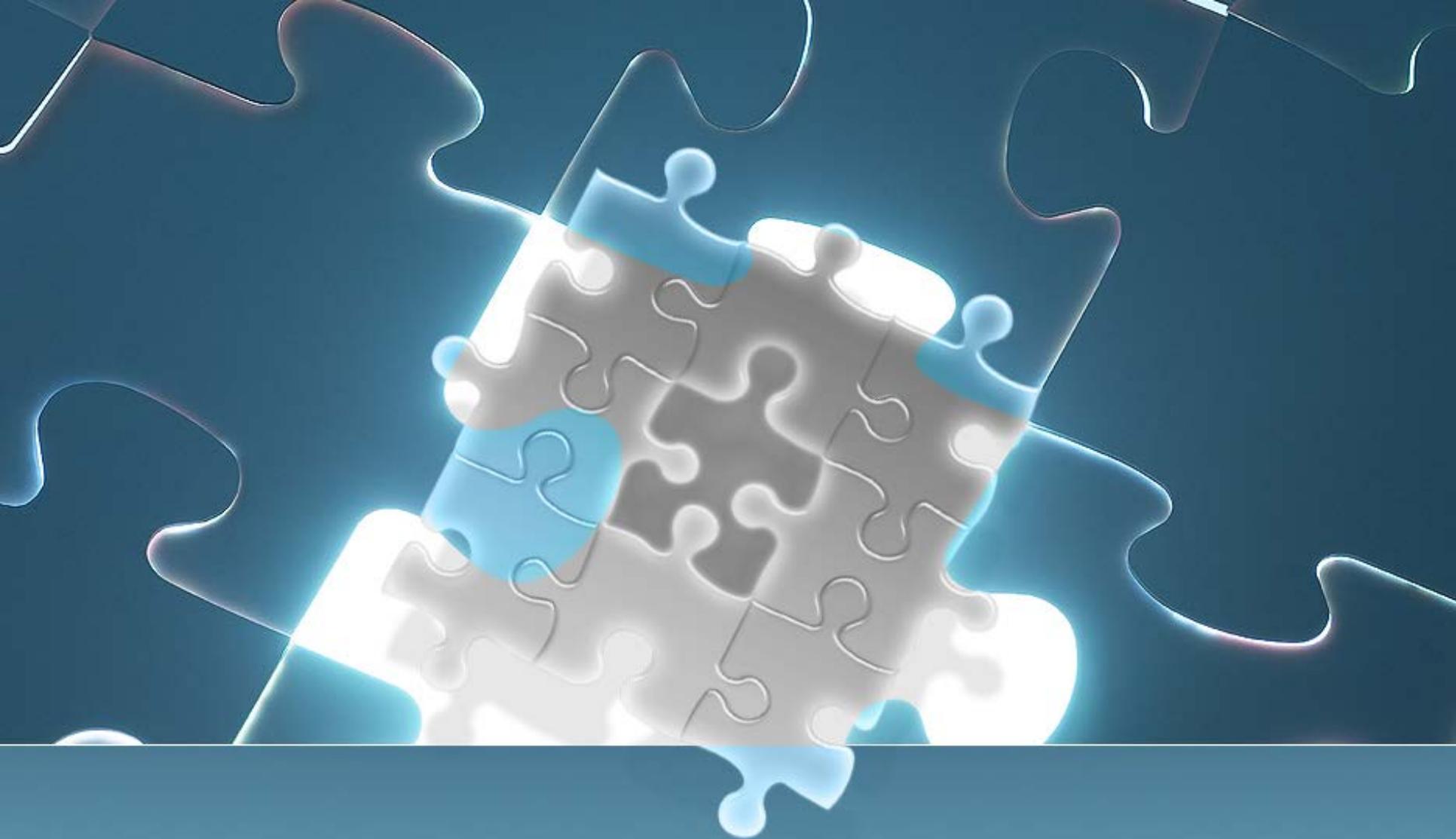


Virginia Department of Education May 2012



# No Single Cause; No Single Cure

- There are many possible causes being investigated
- Various combinations of genetic and environmental factors are suspected
- For each individual with autism, there are interventions which are likely to reduce the impact of autism on that individual
  - Educational
  - Behavioral
  - Medical/nutritional



# The Basics of Autism



# Autism is.....

- Complex neurobiological disorder that impacts the normal development of the brain in the areas of social interaction and communication skills

**Not a Mental Illness or Psychosis**



# Pervasive Developmental Disorders (also known as Autism Spectrum Disorders)

- 299.00 Autistic Disorder
- 299.80 Pervasive Developmental Disorder, Not  
Otherwise Specified
- 299.80 Asperger's Disorder
- 299.80 Rett's Disorder
- 299.10 Childhood Disintegrative Disorder





# AUTISM

## Social Interactions

(2)

Impairments in non-verbal behaviors

Failure to develop developmentally appropriate relationships

Lack of spontaneous seeking to share enjoyment, interests, or achievements with others

Lack of social or emotional reciprocity

## Communication

(1)

Delay or total lack of the development of spoken language

Marked impairment in the ability to initiate or sustain a conversation with others

Stereotyped and repetitive use of language or idiosyncratic language

Lack of varied, spontaneous make-believe or social imitative play

## Behavior

(repetitive or restrictive)

(1)

Persistent preoccupation with parts of objects

Stereotyped and repetitive motor mannerisms

Inflexible adherence to specific, nonfunctional routines or rituals

Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus

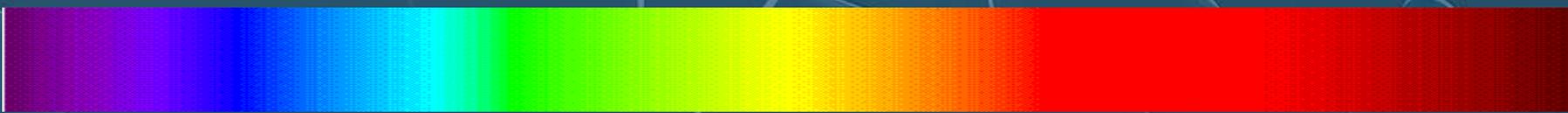


# Diagnosis

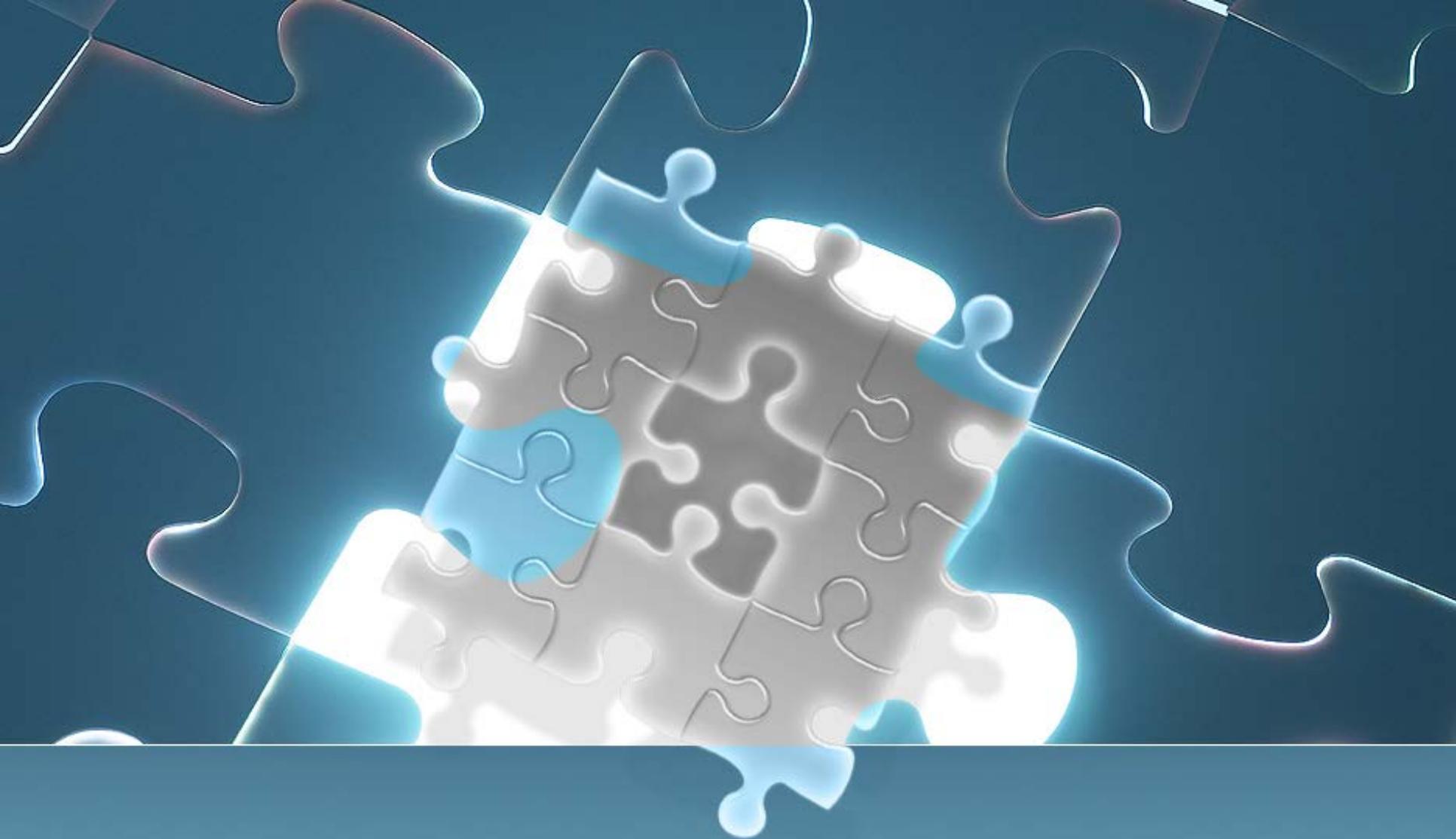
- No medical detection
- Characteristics occur before the age of 3
- Diagnosed at any age
- Multi-disciplinary assessment
  - medical history review
  - clinical observation
  - formal and informal surveys, assessments, and interviews



# A Spectrum Condition



- Low, middle, high functioning
- Varying terms for diagnosis
- Independence level determines where they fall on the spectrum
- Lifelong



# Common Challenges & Behaviors



# Common Challenges

- Sensory Deficits
- Poor Social Skills
- Attention Deficits
- Aggression
- Inappropriate behaviors



# Examples

- *Inappropriate behaviors*
  - Trespassing
  - Issues related to sexuality (indecent exposure)
  - Involvement with younger individual(s)
  - Struggles to get away from perceived danger (assault)
  - Vocal noises at inappropriate times
  - Illegal use of internet (pornography)



# Additional Challenges

- Adolescence
- Depression
- Communication Disorders
- Need for Consistency/Predictability
- Visual Impairments/Deficits



# Additional Challenges

- Other co-morbid disorders seen in the general population
- Seizure disorder
- Intellectual disability
- Other factors



# Behavior found in Autism

- Noncompliance (Appear to be ignoring commands)
- Self-stimulatory behavior (Arm Flapping)
- Self-Injurious behavior (Hitting themselves)
- Aggression (Outbursts)
- Non-contextual vocalizations (Verbal Outbursts)



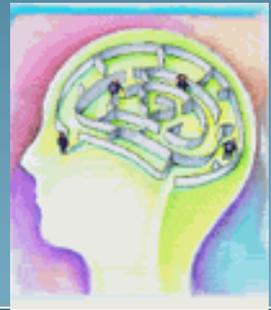
## Other Behaviors cont...

- Rituals and compulsions (Stacking or Lining things up)
- Atypical reactions to:
  - sensory stimuli (Highly agitated over flashing blue or red lights/sirens)
  - changes in the environment
  - changes in routines (Summer time transitioning back to school)



**Why do so many children  
with autism have  
“behavior” problems?**

# Basic neurobiology of autism spectrum disorders

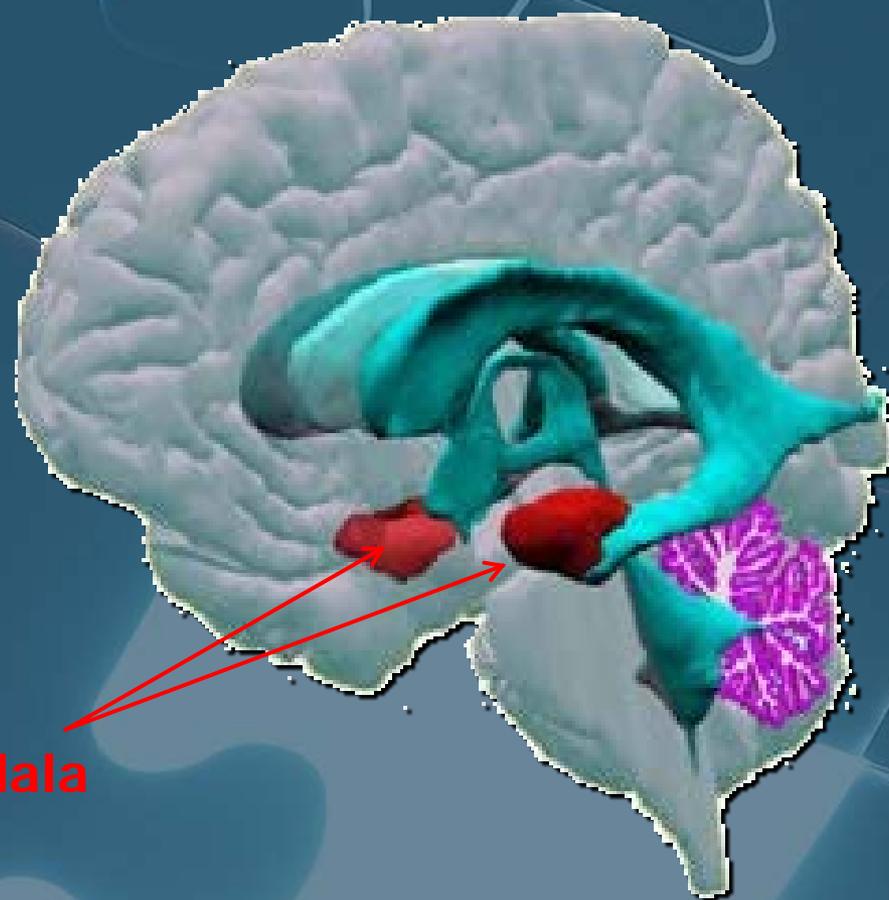


- Lack of understanding about strategies to help individuals with autism cope with stressors in their environments
- Brain structure
- Lack of appropriate interventions





# Brain Structure Implications



**Amygdala**



# Sensory Impairments

- Less familiar sensory systems exist within our bodies which operate without conscious thought and cannot be observed.
  - Interoceptive - internal
  - Vestibular Sense – movement/balance
  - Proprioceptive – muscles and joints pressure

**Individuals with autism typically have tremendous sensory dysfunction. Sensory integration dysfunction is the inability to process certain information received through the senses.**

# A Spider Beside Her

How the body reacts to fear

## AMYGDALA

The moment you recognize a threat, this almond-shaped structure in your brain directs a cascade of changes in your body so that you can respond appropriately: fight, flight, or squish.



## EYES

Your pupils dilate to let in more light, heightening perception.



## HEART

It beats faster, raising blood pressure to speed circulation.



## LUNGS

You'll breathe more rapidly, infusing blood with oxygen for your muscles.



## ADRENAL GLANDS

Located just above the kidneys, they release the stress hormone cortisol, which heightens your awareness and focus. The glands also generate epinephrine, a hormone that raises heart rate and signals the liver to release stored energy.



## GUT

Your stomach may clench, and your intestines will slow down or stop activity altogether so that blood can be shunted to major muscles and the brain.



## SKIN

Blood flow to the skin decreases; experts believe this is to minimize blood loss if you're injured.



## MUSCLES

Throughout the body, they tense in preparation.





# Fight, Flight or Freeze

- Individuals with autism may be unable to process the sensory stimuli, causing them to feel danger or fear.
- The individuals will instinctively respond to protect themselves (Fight or Flight)





# Wandering

- The number one cause of death of individuals with autism involve incidents associated with wandering, which include exposure to the elements and drowning
- Children with autism are typically drawn to water sources

**Search water sources first**



# Auditory Processing Deficits

May be identified by:

- speech and language problems,
- sensitivity to sounds,
- poor attention,
- difficulty following directions,
- difficulty expressing them self,
- difficulty with listening comprehension, as well as reading comprehension,
- difficulty with social interactions,
- auditory self-stimulation such as constant humming, and self-talk



# Theory of Mind

Many individuals with autism:

- Do not understand that other people have their own points of view
- Have difficulty understanding the emotions, beliefs, and attitudes of others
- Cannot easily anticipate what others will do or say in various situations

Resources:

Dr. Steven Edelson (2003) [www.autism.org/mind](http://www.autism.org/mind)  
Dr. Simon Baron-Cohen (1995) *Mindblindness*  
Dr. Uta Frith (1993) Article in *Scientific American*



# **IMPACT ON FAMILY, SCHOOL & COMMUNITY**



# Bullying: Perfect Targets

Don't have the social skills to avoid bullies

- Engage in behaviors that are “odd”
- Don't realize the need to report
- Don't realize they are being bullied
- Want friends at any cost
- If they do report, they don't explain it well



# Autism Impacts Communities

- Increase in Special Services
- Increased funding from localities
- More individuals being served locally within the community

Communities have been using creative funding to supports individuals with autism and their caregivers



# Public Safety Encounters with Person/Family/Caregivers

- Traumatic for everyone, particularly individual with autism
- Affected individual may act out further
- Feelings of helplessness and anger
- Confusion, panic of individual; catastrophic reaction



# Public Safety Encounters with Person/Family/Caregivers

- Frustration at lack of understanding of role of the authorities (Think police will show up and arrest)
- Anxiety from the unknown – what's going to happen next?
- Embarrassment



# **PUBLIC SAFETY CONCERNS**



# Public Safety Concerns

- 7 times more likely to attract the attention of the police, because their unique communication styles and social characteristics may frighten or disturb some people (Curry K, Posluszny M., Kraska S, 1993).
- More likely to be victimized. 90% of individuals with developmental disabilities experience sexual abuse – estimated that only 3% are reported (Valenti-Hein, D. & Schwarts., L., 1995)



# Public Safety Concerns

- Approximately 50% are non-verbal or have difficulty speaking under stress
- 49% of people with developmental disabilities who are victims of sexual violence will **experience 10 or more** abusive incidents (Valenti-Heim and Schwartz. 1995)



# Public Safety Concerns

- Medical
  - Accompanying medical conditions, such as: seizure, asthma, hypotonia--low muscle tone
  - Medication requirements
  - High or low reaction to pain (Hypo/Hypersensitive)



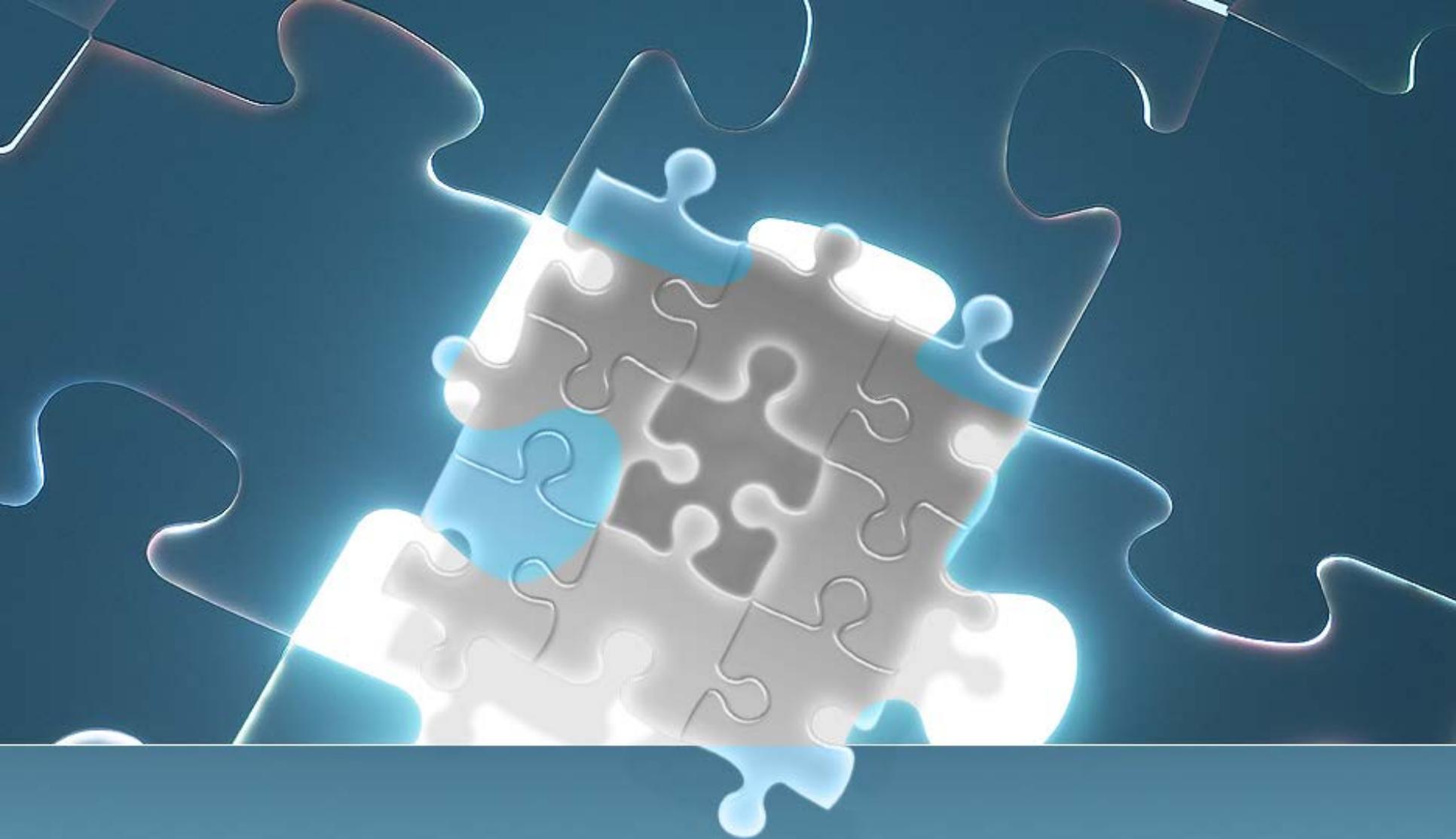
# Public Safety Concerns

- Risks associated with danger will often have little or no significance to persons with ASD.
  - Elopement
  - Self-injury
  - Inability to swim could result in drowning



# Typical Behaviors

- Fidgeting
- Swearing
- Making noises
- Grimacing
- Rapid movements
- Disinhibited
- Tensing Muscles
- Name calling
- Increasing/decreasing of voice
- Verbal threats
- Acts impulsively emotionally



# Suggested Responses and Interventions



# Upon First Contact with Public Safety:

A person with Autism may:

- Mimic your words and body language (Echolalia)
- Answer no, yes or why to all questions
- Not respond to stop or other commands



# Upon First Contact with Public Safety:

A person with Autism may:

- Invade personal space of others
- React poorly to changes in routine
- Not recognize badge, uniform or marked vehicle



# Question: Is Sensory Over-stimulation Affecting the Behavior?

Evaluate behaviors being displayed

Move person to a quiet place

**Calm breeds calm**



# "Golden Rules"

- Assume cognition!
- Make sure the individual has an effective functional communication system in place!  
(pictures, sign language, typing or paper and pencil/pen)

# Communication Boards

5	 <p><b>Angry</b> I've lost control. I'm not listening anymore. I could hit, kick, or bite. I need a quiet place to calm down.</p>
4	 <p><b>Overwhelmed</b> Everything is too hard. I'm losing control and need to leave the environment I'm in. Give me space.</p>
3	 <p><b>Frustrated</b> I'm not getting it. I'm showing signs of stress. I should take a break now.</p>
2	 <p><b>Anxious</b> Trying to stay focused, but having a hard time staying on task. Use calming strategies now.</p>
1	 <p><b>Happy</b> Ready and willing to work.</p>

<p>I don't feel good</p> 	<p>I am bleeding.</p> 	<p>I am in pain.</p> 
<p>I have a sore throat.</p> 	<p>I have a headache.</p> 	<p>I have a stomachache.</p> 
<p>My tooth hurts</p> 	<p>I have to vomit.</p> 	<p>I feel dizzy.</p> 
<p>I have a rash.</p> 	<p>My leg hurts me.</p> 	<p>I have a back ache.</p> 
<p>Can you help me?</p> 	<p>I have a fever.</p> 	<p>I am taking medicine.</p> 

<p><b>First</b></p> <p>homework</p> 	<p><b>Then</b></p> <p>choice time</p> 
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# Obtain assistance from a family member or Caregiver

- Ask for assistance with de-escalation
- Try to obtain information, such As:
  - Medications
  - What are their interests (fixations, obsessions)
  - Trigger Words
  - Calming Mechanisms or Techniques (food, toys, verbal praise)
  - Mode of Communication (pictures, sign language)



# Responding

- Protect the patient, the environment and others
- Remove the audience
- Be non-confrontational
- Support use of relaxation techniques – (model deep breaths)



# Responding

- Use few words – Less is More!
- Be flexible – the individual with ASD cannot
- Do not take behaviors personally
- Allow to continue self-stimulatory behavior
- Allow time to respond



# Responding

- Evaluate environment and reduce sensory influences
  - Sirens
  - Lights
  - Crowds
  - K-9 Partner
  - Odors
  - Touch
  - Helicopters



# Responding

- Be alert to sudden outbursts
- Use environmental barriers if necessary
- Be aware of Fight, flight or Freeze response
- Avoid touching if possible



# Responding

- Simple and direct instructions – may need to repeat or rephrase and allow for a delayed response
- Avoid use of jargon, slang – speak literally
- Evaluate for serious physical injury
- Reassure the individual that you are there to help



# Responses

- May need to model compliance  
"Show me your hands", "Sit in this chair"
- Acknowledge compliance  
"Good job!", "Thank you for...."

**"Only one responder should do the talking,  
and don't allow unnecessary talking  
around the subject."**



# Additional Response Techniques – cont'd

- As soon as possible:
  - Look for medic alert jewelry
  - Evaluate for injuries

Refer to laminated card from  
Debbaudt/Legacy Productions



# If Restraint Becomes Necessary

**DO NOT VIOLATE YOUR DEPARTMENT'S POLICY**

- Restrain with knowledge (Hyper/Hyposensitive)
  - Hypotonia-low muscle tone
  - Seizures
- Restraint asphyxia
- Turn on side often



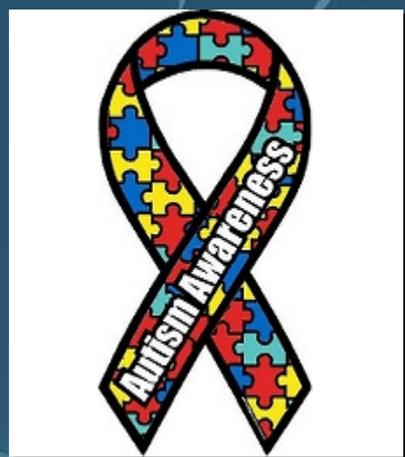
# Be Proactive...

- Community Events- Public Safety Awareness
  - Photos with Uniformed Personnel
- Encourage participation in Public Safety Training Opportunities
- Project Lifesaver International



# Be Proactive...

- Establish partnerships with families, educators and autism advocacy groups
- 911 Data Base
- Exchange of information during Roll Call





- The more you know, the better the encounter will go.
- You may avoid injury, and possibly decrease number of future encounters



# Training Video

- Approximately 20 minutes long
- Includes clips:
  - Wandering,
  - Search
  - Aerial Search
  - Communication Dilemmas
  - Communication Tips



# Autism, Fire-Rescue & EMS

**Dennis Debbaudt**

Articles, Books, Videos, Response Cards

**[www.autismriskmanagement.com](http://www.autismriskmanagement.com)**

**[ddpi@flash.net](mailto:ddpi@flash.net)**

**(772) 398-9756**



# Questions





# **Thank You!**

## **Contact Information**

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