

# What is Autism?

- In Autism, neurological problems develop. These problems make it difficult for a person to communicate and form relationships with others.
- Autism is a spectrum disorder, ranging from severe to mild.
- The symptoms of autism typically show by the age of three. These children often avoid eye contact and do not interact with others. Children with autism may also be resistant to attention.

# History

- Kanner and Asperger named the condition during the Second World War. It became more widely known throughout the following thirty years.
- Hermelin and O'Connor's work was the foundation to psychological studies in autism.
- Autism affects approximately one in five hundred people. Five times more boys than girls are diagnosed with autism.

# Common Characteristics

- Children with autism are faced with:
  - Language difficulties
  - Repetitive and obsessive behaviours
  - Sensory issues
  - Memory recall difficulties
  - Deficits in frontal lobe's ability to carry out executive functions

# Autism Spectrum Disorder

5 Subcategories:

1. Autistic Disorder -low function
2. Asperger's -high function, good grammatical language when talking about their interests
3. Childhood Disintegrative Disorder (CDD)-rare
4. Rett's Disorder -only females
5. Pervasive Developmental Disorder -not specified

# Low Functioning Autism (Autistic Disorder)

## LFA

- IQ < 80
- requires support to accomplish daily routine

**Individuals with LFA are faced with a number of challenges such as:**

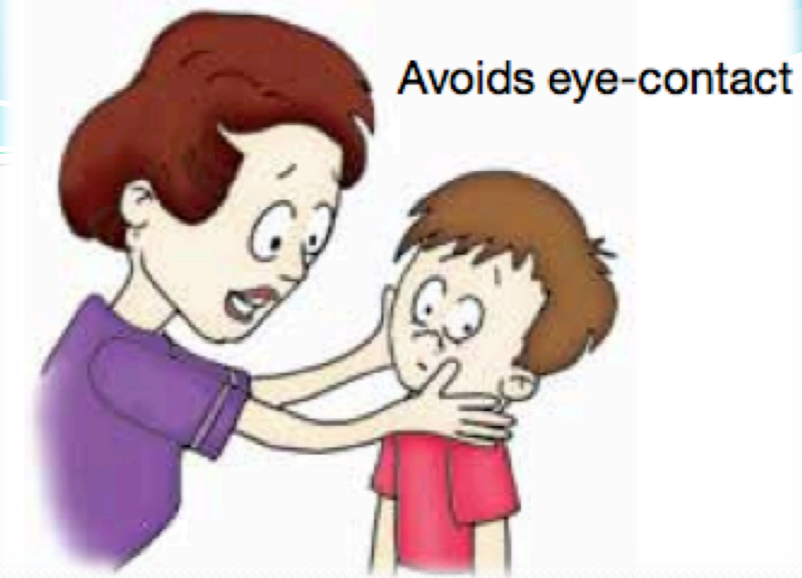
- language impairment (verbal and non verbal communication)
- social impairment
- repetitive behaviours
- unusual responses to sensory experiences
- self injurious behaviour
- motor Issues

\*no two children display ASD in the same way

\*children considered low-functioning are able to gain language and social skills and can move to the high-functioning side of the spectrum

# Language Impairment

- Mute throughout life
- May not understand what other people say
- Delay in language
- Can't sustain a conversation
- Confusion of pronouns (I, my, you)
- *Echolalia* (repeat what is hear)
- Common to scream or grab what they want
- Lack of nonverbal gestures (pointing, head shake, nod)



# Social Impairment

- Avoids eye contact
- Rarely smiles
- Prefers to be alone
- Seems to be hearing impaired
- Seldom respond to anger or affection
- May not seek physical comfort from parents or caregiver
- Unable to view another person's perspective or emotions
- Physically aggressive when in strange and overwhelming environments
- Difficult to recall verbal information
- Unusual display of emotions (giggle or cries for no reason)
- Impulsive



# Repetitive/ Bizarre Behaviours

- Flicking of fingers in front of eyes, spinning, flapping, rocking
- Obsessive about learning about one subject
- Sitting in the same place daily
- Staring at the ceiling fan
- Children with ASD often have a parents that have obsessive-compulsive traits (genetically they both have an enlarged limbic system)
- Excessively lines up toys
- Attracted to one objec

Lining up toy cars





# Unusual Responses to Sensory Experiences

- Highly sensitive to certain sounds, textures, tastes, smells and colour
- The feeling of some clothes can be unbearable
- Loud sounds like the vacuum and telephone will cause a ASD child to scream and cover ears
- may not like bright colours, strong smells, being touched or experiencing different foods
- Finds ways to get deep-pressure or heavy impact applied to body





# Motor Issues

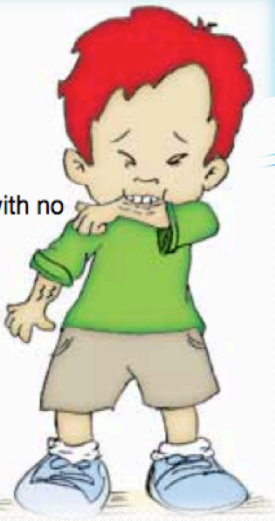
- Fine motor deficit
- Poorly coordinated walking/stepping
- Poor depth perception
- Toe-walking
- Exceptional balance or clumsy
- drooling



Fine Motor Deficits

# Safety Issues/Self Injurious Behaviour

Self-biting with no apparent pain



- No sense of danger
- Don't recognized situations where they may get hurt
- Ripping and scratching at skin
- Pulling out own hair by the handfuls
- No fear of heights
- Head-banging
- Self-biting



# High Functioning Autism (HFA) and Asperger's Syndrome

## What is the difference?

- Very similar
- HFA is diagnosed earlier as it includes early language delays
- People with both HFA and Asperger's Syndrome have average or high IQ and typically no language or intellectual disability
- Can be considered the same in a classroom

# HFA and Asperger's Syndrome

## Causes

Autism runs in families. The underlying causes, however, are not known. Potential causes under investigation include:

Inherited genetic conditions

Other medical problems

Environmental factors

# HFA and Asperger's Syndrome

## Causes

The fact that higher levels of anxiety, depression, OCD, and Tourette's syndrome as well as other tic disorders often occur in families with children with autism suggests some relationship between these different mental processes.

# HFA and Asperger's Syndrome

## Physical symptoms

- A delay in motor skills
- Difficulty in fine motor skills like writing
- strong reactions to textures, smells, sounds, sights, or other stimuli that others might not even notice, such as a flickering light.

# Social interactions and communication symptoms

- Lack of eye contact
- A lack of skill in interacting with others
- Non-speaking or repetitive speaking patterns
- Little understanding of the abstract uses of language, such as humor or give-and-take in a conversation



# HFA and Asperger's Syndrome

## Social interactions and communication symptoms

- Want to make social connections but don't know how to do it.
- Lack the skills to read facial expressions and detect emotions.
- Unsuccessful attempts at social interactions may result in bullying, rejection, frustration and depression..
- Values creativity over co-operation.

# HFA and Asperger's Syndrome

## cognitive and learning profile

- The development of special interests that is unusual in their intensity and focus.
- Preference for routine and consistency.
- Different not defective way of thinking
- Strong desire to seek truth
- Focus on details that may seem of no importance no others
- High anxiety in a normal classroom setting
- May be very honest and direct
- May have a personal unusual sense of humor

# Process For Assessment

- Develop an IEP to develop any classroom constructs to support the student
- Have documented team meeting to document supports that were implemented
- Referral by doctor to BCAAN: BC Autism Assessment Network, where specially trained pediatricians, speech pathologists, audiologists, etc will form a diagnosis
- They will use clinical and observable tests to make a diagnosis

# Components of the Clinical Diagnostic Assessment

- History from multiple sources
- Mental status examination
- Evaluation of developmental level
- Review of community records and prior assessments
- Consultation with other disciplines

# Criteria For Funding:

- a diagnosis of ASD must have been made by appropriately qualified professionals
- the ASD must adversely affect educational performance;
- a current IEP is in place that includes: individualized goals with measurable objectives, adaptations and/or modifications where appropriate,
- the strategies to meet these goals, and measures for tracking student achievement in relation to the goals;
- Ongoing special education service(s) are provided; the services being provided are beyond those offered to the general student population and are proportionate to level of need(s);
- the special education services are outlined in the IEP and directly relate to the student's identified special needs; and
- reduction in class size is not by itself a sufficient service to meet the definition.

# Adapting Physical Environment:♪

- decide which areas in the classroom are more conducive to learning as many students with Autism Spectrum Disorders display difficulty self-modulating sensory information.♪
- if a student over reacts to auditory stimulation it isn't a good idea to put them near the door.♪
- students who have trouble coping with fluorescent lights may experience more success by the window.♪
- if students are preoccupied with the alphabet or computers it is beneficial to position their desks so these items aren't visible.♪
- many students with Autism have relatively subtle sensory issues. (Example: if a student is sensitive to certain smells he or she may have a difficult time attending to structured tasks when sitting near peers wearing cologne or perfume.)♪
- defining physical space that is associated with a specific activity in a concrete manner can be helpful. (Example: students with ASD may be more successful doing group activities on the floor, if a space is defined for them. You can use mats, or squares for all the students in the group so that attention isn't drawn to the ASD student.)♪
- if an ASD student has trouble concentrating when his/her peers are present in the immediate area have their locker or cubby at the end of the row.♪

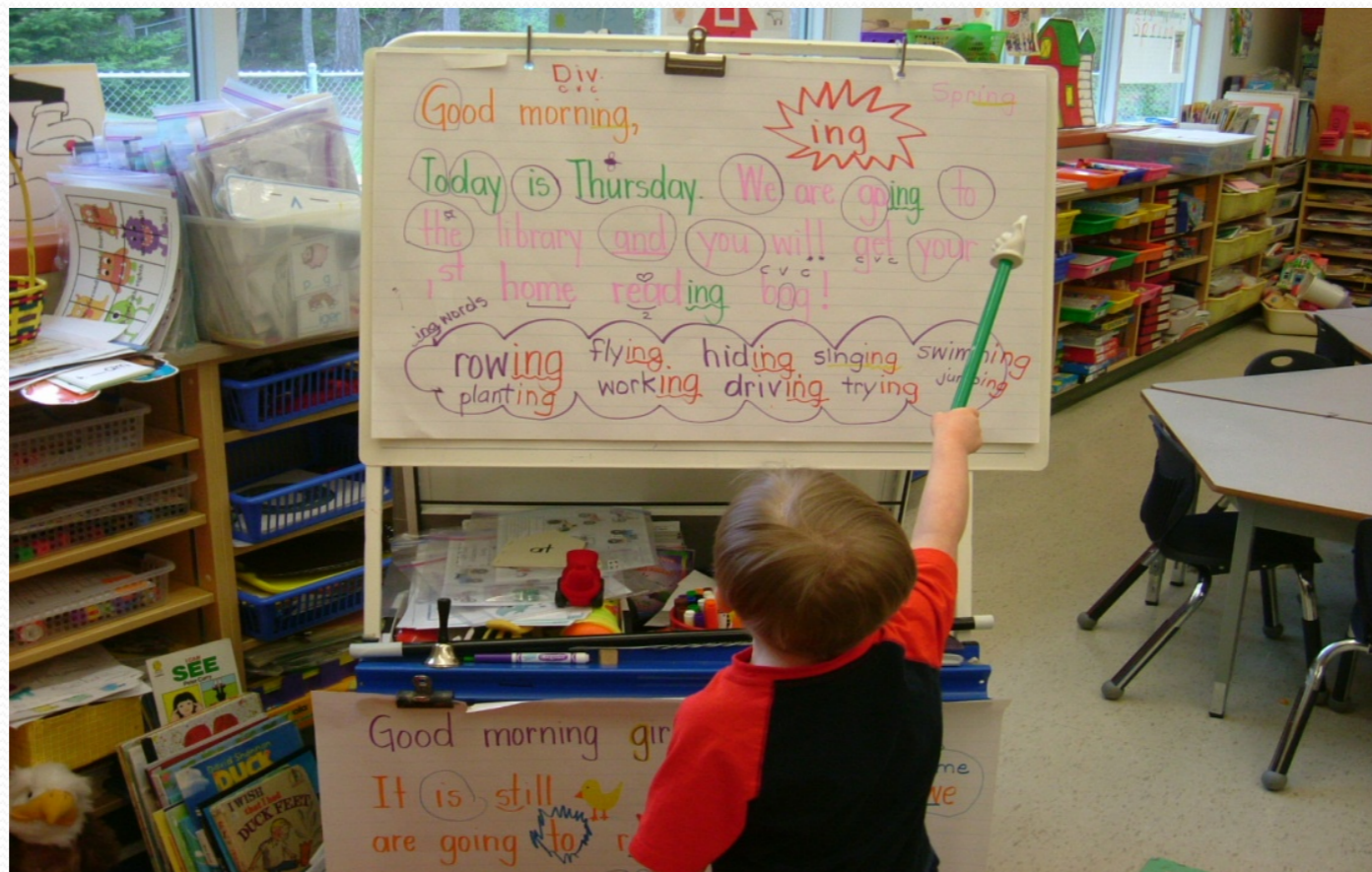
# Classroom Strategies:♪

- Visual schedules on the blackboard and on the child's desk.♪
- Incorporate **music** into your classroom lessons as Autistic children respond well to music therapy. ♪
- Students who display a high level of motor restlessness and have a difficult time inhibiting movement for an extended periods of time may need **inflated seat cushions** or therapy balls in order to be more attentive.♪
- **Raised line paper** creates a more obvious physical boundary and can help students print between the lines easier.♪
- **Spatial concepts** such as left and right, are often difficult for students with ASD to understand. It might be necessary to **mark their shoes** in an unobtrusive manner to ensure they are placed on the correct foot.♪
- Some students are distracted by irrelevant information (Example: page numbers, lines, pictures). It may be necessary to **eliminate extraneous details** from books and worksheets.♪
- Some students find **glossy surfaces distracting**. It might be necessary to adapt books and desktops to give surfaces a matte finish.♪



## Adapting Instruction:♪

- it is not always necessary to adapt lessons.♪
- in some situations it may be necessary to provide some supports like peer partners for students to be successful.♪
- sometimes it is necessary to adapt the actual lesson or classroom activity.♪  
These adaptations can be relatively minor (Example: adjusting the size of the task) to major revisions (Example: altering the content or difficulty level.♪
- In some instances programming may involve individualized functional goals that are addressed within the classroom. ♪







## Strategies For Communication:♪

- PECS – Picture Exchange System
- Board Maker – Computer program of visuals
- IPAD – Various Apps (Example: Starfall)
- Social Stories – A story that is about a part of their routine that they are having trouble with or just learning. (Example: Toileting routine or social skills like how to ask someone to play)

# Motor Skills:

## Fine Motor

- Cutting skills – adapted scissors may help students cut paper more effectively and independently
- Making letters and shapes out of play dough
- Practicing lines and shapes to get ready to print or write
- Practice tracing our letters and numbers (Raised felt like numbers or letters with arrows showing which direction you print the letters or numbers in)
- Using books where the student pushes buttons to get the book to do something
- Getting the child to practice colouring and using a pencil. ( Use varying pencil shapes to see what works better for the child)
- Occupational Therapist (OT) – are an excellent resource for ideas on how to adapt equipment to ensure that students with ASD experience success
- zipper extensions and/or shoes with velcro closures can allow students to dress independently
- Gripper adapters may be needed for pencils, spoons, and toothbrushes for students who display fine motor difficulties
- students who experience great difficulty with fine motor tasks may be more successful using computers to complete written assignments. Some respond positively to early literacy software



## Motor Skills Continued:

### Gross Motor:♪

- Riding bikes, scooters, pedalo♪
- Catching and throwing balls♪
- Things Physiotherapist gets an EA to do (Example: Jumping on a small trampoline that has a handle for safety)♪
- Skipping or Jumping up and down on the ground♪
- Standing up playing an African drum strengthens the ♪ core muscles.♪
- blowing bubbles, a whistle, or blowing a feather in the ♪ air helps to strengthen muscles used for speech.♪

♪



## Adapting Evaluation Methods:

- existing report card and evaluation formats may not have the capacity or flexibility to provide relevant information on the learning and progress of an ASD student. You may have to create a separate system to evaluate the student's progress and communicate this information. Before you introduce a new concept or unit you need to consider how students with ASD will be expected to demonstrate their learning.

### Example:

- test recognition skills (multiple choice tests) versus recall skills. (tests which require students to form the right answers)
- specify the amount of prompting or supervision required for doing specific tasks.
- reduce the length of tests
- give oral tests
- evaluate skills based on observation and performance.
- let students use tools like dictionaries, counting blocks, or calculators.
- complete baselines and post-teaching skill checklists to assess skill development.



## References:♪

1. How The Special Needs Brain Learns, David Sousa, Corwin Press, Thousand Oaks, California, 2007.♪
2. Teaching Students With Autism: A Resource Guide For Schools, British Columbia Ministry of Education Special Programs Branch, 2000.♪
3. Topics in Autism, Activity Schedules for Children with Autism: Teaching Independent Behaviour, Lynn E. McClannahan, Ph.D., & Patricia J. Krantz, Ph.D., Woodbine House Inc., Bethesda, MD, 1999.♪
4. Students With Autism: Characteristics and Instruction Programming for Special Educators, Jack Scott, PH.D., Claudia Clark, M.S., and Michael Brady, PH.D., Singular Publishing Group, San Diego, California, 2000.♪
5. Teaching Students With Autism Spectrum Disorders: Programming For Students With Special Needs Series, Alberta Learning Special Programs Branch, Learning and Teaching Resources Branch, Ministry of Learning, Edmonton, Alberta, 2003. ♪



# Resources

- <http://www.aspergersyndrome.org/Home.aspx>
- <http://www.autismoutreach.ca/>
- [http://setbc.org/setbc/topics/autism\\_dev\\_dis.html](http://setbc.org/setbc/topics/autism_dev_dis.html)
- <http://www.cdc.gov/ncbddd/autism/facts.html>
- Frith, U. (2008). Autism : A Very Short Introduction. Oxford: Oxford University Press.

Sousa, David A. (2001). How the Special Needs Brain Learns. Thousand Oaks, CA: Corwin Press, Inc.

# Resources

- The National Autistic Society, *Autism: a selective Guide to Books and Other Resources*. Retrieved September 20, 2013, from <http://www.autism.org.uk/about-autism/autism-and-asperger-syndrome-an-introduction/reading-lists/autism-a-guide-to-resources.aspx#Journals>
- Autism Canada Foundation, *Autism Physician Handbook*. Retrieved September 20, 2013 from <http://www.autismcanada.org/resources/physicianhandbook.html>
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