

# INTRODUCTION TO AUTISM SPECTRUM DISORDERS

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Hope Through Treatment

# OVERVIEW OF PRESENTATION

- PART ONE: WHAT IS ASD?
  - HISTORY
  - DIAGNOSIS/ THE SPECTRUM OF DISORDERS
- PART TWO: TREATMENT/RESEARCH
  - CLASSIFYING TREATMENT PROGRAMS
  - WHAT WORKS
- PART THREE: PARENTING AND TEACHING A CHILD WITH ASD
  - UNIQUE CHALLENGES
  - STRATEGIES
- PART FOUR: MATERIALS AND QUESTIONS

# PART ONE: WHAT ARE AUTISM SPECTRUM DISORDERS?



# POPULATION CHARACTERISTICS

- APPROXIMATELY 1 IN 150 CHILDREN
- 3 TO 4 TIMES MORE MALES THAN FEMALES
- 2-5/100 SIBLINGS DEVELOP AUTISM
- 25% DEVELOP SEIZURES
- APPROX. 50% HAVE IQs BELOW 50

# PERVASIVE DEVELOPMENTAL DISORDERS

- FIRST IDENTIFIED BY KANNER
- CHARACTERIZED BY SEVERE AND WIDESPREAD IMPAIRMENTS IN SEVERAL AREAS OF DEVELOPMENT:
  - RECIPROCAL SOCIAL INTERACTION SKILLS,
  - COMMUNICATION SKILLS, AND
  - THE PRESENCE OF STEREOTYPED BEHAVIOR, INTERESTS AND ACTIVITIES (TRIAD OF IMPAIRMENTS)

# HISTORY OF AUTISM

THE MOTHER DID IT	BIOLOGY DID IT	TODAY
<ul style="list-style-type: none"><li>•MYSTERIOUS DISORDER</li><li>•RESPONSE TO “EXTREME SITUATIONS” IN INFANCY</li><li>•MOTHER’S WITHHOLD AFFECTION FROM THERE CHILDREN CAUSING MORTAL FEAR (REFRIGERATOR MOTHER)</li><li>•PSYCHOLOGICAL PROBLEM</li><li>•RECOVERY IN A THERAPEUTIC MILIEU</li></ul>	<ul style="list-style-type: none"><li>•SPECIFIC DISEASE ENTITY</li><li>•COMPLEX RESPONSE TO GENETIC AND/ OR BIOLOGICAL EVENTS</li><li>•MOTHERS HAVE NOTHING WHATSOEVER TO DO WITH CAUSING AUTISM</li><li>•SYNDROME OF BIOLOGY AND GENETICS</li><li>•AUTISM IS A LIFELONG DISORDER</li></ul>	<ul style="list-style-type: none"><li>•MANY CLUES BUT NO SPECIFICS</li><li>•AUTISTIC CULTURE</li><li>•A DIFFERENT WAY OF BEING</li><li>•APPROPRIATE EDUCATIONAL INTERVENTION</li><li>•BIOLOGICAL COMPONENT</li></ul>



**PERVASIVE DEVELOPMENTAL  
DISORDER**

INCREASED VARIABILITY OF PRESENTATION



# DIAGNOSING ASD

- THERE IS NO DEFINITIVE “TEST” FOR AUTISM (NEVER KNOW FOR SURE)
- DIAGNOSIS IS BASED ON SPECIFIC OBSERVABLE CRITERIA

# DIAGNOSTIC PROCESS

- PARENT/CAREGIVER BECOMES CONCERNED ABOUT DEVELOPMENT
- PARENT BRINGS CONCERNS TO PRIMARY CARE PHYSICIAN
- REFERRAL TO DEVELOPMENTAL PEDIATRICIAN
- REFERRAL FOR MULTIDISCIPLINARY ASSESSMENT
- DIAGNOSIS SHARED WITH PARENTS
- REFERRAL FOR TREATMENT (PUF PROGRAM, SPECIALIZED SERVICES PROGRAM)

# ELEMENTS OF A DIAGNOSIS

- DEVELOPMENTAL HISTORY
  - MEDICAL INVESTIGATIONS (GENETIC TESTING, AUDITORY TESTING)
  - OBSERVATION ACROSS MULTIPLE ENVIRONMENTS
  - FORMAL TESTING (TO DETERMINE DEVELOPMENTAL LEVEL)
  - SPECIFIC TOOLS (CARS, ADOS, MCHAT)
- \* ULTIMATELY THE CHILD MUST SATISFY DSM-IV CRITERIA

# DSM-IV

- DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS – FOURTH EDITION (AMERICAN PSYCHIATRIC ASSOCIATION)
- CRITERIA ORGANIZED INTO THREE AREAS:
  - SOCIAL IMPAIRMENT
  - COMMUNICATION IMPAIRMENT
  - RESTRICTED/REPETITIVE BEHAVIOR

# **AUTISTIC DISORDER - SOCIAL IMPAIRMENT**

- **NONVERBAL SOCIAL BEHAVIOURS (EYE CONTACT, FACIAL EXPRESSIONS)**
- **DIFFICULTY DEVELOPING FRIENDSHIPS**
- **JOINT ATTENTION (SHOWING, POINTING OUT THINGS OF INTEREST)**
- **ONE SIDED INTERACTIONS**

# **AUTISTIC DISORDER - COMMUNICATION IMPAIRMENT**

- **NONVERBAL OR VERBAL SKILLS DELAYED**
- **DIFFICULTY INITIATING AND/OR MAINTAINING CONVERSATIONS**
- **REPETITIVE OR ODD LANGUAGE**
- **LIMITED IMAGINATION AND/OR SOCIAL PLAY SKILLS**

# **AUTISTIC DISORDER - BEHAVIORAL DIFFICULTIES**

- PREOCCUPATIONS/PERSEVERATIONS
- ROUTINES/RITUALS
- REPETITIVE MOTOR MANNERISM  
(STIMS)
- ATTENDING TO SPECIFIC PARTS AND  
MISSING BIG PICTURE OR MOST  
SALIENT ASPECT

# **AUTISTIC DISORDER - ASSOCIATED CHARACTERISTICS**

- SHORT ATTENTION SPAN
- SELF INJURIOUS BEHAVIOUR
- ODD RESPONSES TO SENSORY INPUT
- ABNORMALITIES OF MOOD
- UNEVEN SKILL DEVELOPMENT
- ABNORMALITIES IN EATING, DRINKING OR SLEEPING
- UNUSUAL FEARS/ANXIETY
- SPECIAL ABILITIES

# ASPERGER'S SYNDROME

- IMPAIRED SOCIAL SKILLS
- COMMUNICATION SKILLS TEND TO BE LESS IMPAIRED
- COGNITIVE SKILLS TEND TO BE LESS IMPAIRED
- OFTEN CLUMSY AND POORLY COORDINATED
- COMMON FACT BASED SPECIAL INTEREST
- USUALLY DIAGNOSED AFTER AGE THREE

\* WHAT IS THE DIFFERENCE BETWEEN HIGH FUNCTIONING AUTISM AND ASPERGERS?

# DIFFERENTIAL DIAGNOSIS AUTISM VS ASPERGER'S

- MOTOR SKILLS
- LANGUAGE ABILITIES
- COGNITIVE LEVEL
- INTERESTS
- SOCIAL ABILITIES
- PROGNOSIS

# ASPERGER'S SYNDROME ASSOCIATED FEATURES

- DEMANDING NATURE
- OPPOSITIONAL BEHAVIOUR
- DEPRESSION
- PERFORMANCE ANXIETY
- PERFECTIONISM
- ATTENTION SEEKING
- LEARNED HELPLESSNESS

# RETTS DISORDER

- ALMOST EXCLUSIVELY IN FEMALES
- PERIOD OF “NORMAL” DEVELOPMENT
- DEVELOPS BEFORE AGE 4
- MOTOR SKILLS SIGNIFICANTLY IMPAIRED (GAIT AND PURPOSEFUL HAND MOVEMENTS)
- ASSOCIATED WITH DECELERATED HEAD GROWTH AFTER FIVE MONTHS OF AGE

# CHILDHOOD DISINTEGRATIVE DISORDER

- ASSOCIATED WITH AT LEAST TWO YEARS OF NORMAL DEVELOPMENT
- CLINICALLY SIGNIFICANT LOSS OF AT LEAST TWO SKILLS
  - LANGUAGE
  - SOCIAL SKILLS
  - SELF HELP SKILLS
  - BLADDER/BOWEL CONTROL,
  - PLAY SKILLS
  - MOTOR SKILLS

# PERVASIVE DEVELOPMENTAL DISORDER NOT OTHERWISE SPECIFIED

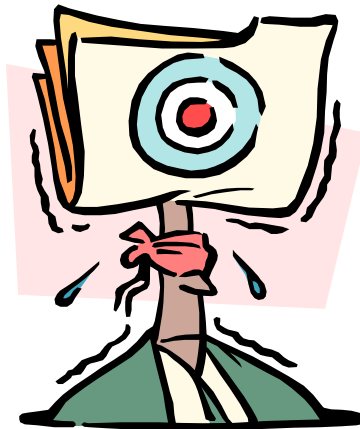
- DIAGNOSIS OF EXCLUSION (RULING OUT OTHER DISORDERS)
- SIGNIFICANT SOCIAL DEFICIT AND
  - COMMUNICATION DEFICIT OR
  - STEREOTYPED INTERESTS/BEHAVIOURS
- ALSO KNOWN AS ATYPICAL AUTISM

\*\* “in the autism ballpark, but not quite on the team”

# CO- MORBID CONDITIONS

- HAVING AUTISM MAKES THE CHILD MORE VULNERABLE TO OTHER TROUBLES

- SEIZURES/ EPILEPSY
- MENTAL RETARDATION
- ADD OR ADHD



\*\* AT WHAT AGE ARE CHILDREN WITH AUTISM MOST LIKELY TO DEVELOP SEIZURES?

# FRAGILE X

- DATA VARIES SAYING 4 TO 10% OF CHILDREN WITH AUTISM HAVE FRAGILE X
- NOT ALL CHILDREN WITH FRAGILE X HAVE AUTISM
- MOTOR, ATTENTION AND LEARNING PROBLEMS ARE COMMON
- VARYING DEGREES OF SOCIAL DIFFICULTY RANGING FROM SHYNESS TO SOCIAL WITHDRAWAL
- PHYSICAL FEATURES INCLUDE LARGE EARS, LONG NOSE AND HIGH FOREHEAD

# RED FLAGS (EARLY WARNING SIGNS)

- NO REACTION TO SOUND OR NAME
- PARENTS DESCRIBE BABY AS VERY “GOOD” OR VERY DIFFICULT (EXTREMES)
- DELAYED OR ABSENT SPEECH
- REPETITIVE PLAY OR BEHAVIOURS
- ODD RESPONSES TO SENSORY INPUT
- LOSS OF SKILLS

# FACTORS INFLUENCING DIAGNOSTIC PROCESS

- OTHER CHILDREN PRESENT IN HOME OR PARTICIPATION IN COMMUNITY GROUPS (FOR COMPARISON)
- GEOGRAPHY (ISOLATED VS URBAN AREA)
- AVAILABILITY OF EXPERIENCED PROFESSIONALS
- PARENT EDUCATION AND LANGUAGE
- PARENT PERSISTENCE
- PRESENCE OF OTHER CONDITIONS (E.G., DOWN SYNDROME)
- AWARENESS AND OBSERVATIONS OF EARLY CHILDHOOD PROFESSIONALS

# ETIOLOGY

- CONSIDERED A “FINAL COMMON PATHWAY” BECAUSE SEVERAL FACTORS/CONDITIONS MAY LEAD ASD
  - GENETIC
  - NEUROANATOMICAL DIFFERENCES
  - NEUROCHEMICAL DIFFERENCES
  - PRENATAL EVENTS (EXPOSURE TO RUBELLA)

# AUTISM MYTHS

- AUTISM IS CAUSED BY REFRIGERATOR PARENTING (COLD & DISTANT)
- INDIVIDUALS WITH AUTISM POSSES SPECIAL SKILLS OR TALENTS
- INDIVIDUALS WITH AUTISM AVOID ALL FORMS OF SOCIAL CONTACT
- AUTISM CAN BE CURED
- AUTISM CAN BE DEFINITELY DIAGNOSED WITH A “TEST”

# PROGNOSIS

- 10% OF INDIVIDUALS WITH AUTISM LIVE AND WORK INDEPENDENTLY AS ADULTS
- 33% HAVE PARTIAL INDEPENDENCE
- 50% REQUIRE SUBSTANTIAL ASSISTANCE
- APPROXIMATELY 75% OF AUTISTIC INDIVIDUALS REQUIRE NEUROLEPTIC MEDICATIONS TO MANAGE BEHAVIOUR/ANXIETY

# PART TWO: TREATMENT & RESEARCH



# CLASSIFYING TREATMENT PROGRAMS

## THREE BROAD CATEGORIES:

- BEHAVIORAL MODELS
  - LOVAAS/ABA
- RELATIONSHIP-BASED DEVELOPMENTAL MODELS
  - FLOORTIME/RDI
- COMBINED MODELS
  - LEAP/MIND INSTITUTE/ TEACCH

\*\*SOCIETY FOR TREATMENT OF AUTISM'S TREATMENT PHILOSOPHY BEST CHARACTERIZED AS "COMBINED" OR INTEGRATED IN NATURE

# BEHAVIORAL-DEVELOPMENTAL DEBATE

PROGRAMS TEND TO DIFFER ACCORDING TO:

- WHO “CONTROLS” THE FLOW OF EVENTS DURING THERAPY (CHOICE OF MATERIALS, ACTIVITIES)
- THERAPEUTIC CONTEXT (ARTIFICIALLY DESIGNED VS NATURALLY OCCURRING)
- REINFORCEMENTS UTILIZED
- REPETITION (EXACT/PREDETERMINED VS DETERMINED BY CHILD’S INTERESTS)

# ALTERNATIVE TREATMENTS

- AUDITORY INTEGRATION
- FACILITATED COMMUNICATION
- CHELATION THERAPY
- DIET THERAPIES
- VITAMIN THERAPIES
- ANTI-YEAST, ENZYMES

## WHAT WORKS?

- A COMBINATION OF VARIOUS METHODS (COMBINED) SEEM TO BE MOST EFFECTIVE

# CRITICAL TREATMENT FACTORS

- AGE AT WHICH TREATMENT INITIATED
- INTENSITY OF TREATMENT
- PARENTAL INVOLVEMENT
- INTEGRATION WITH TYPICAL PEERS
- SPECIALIZED PROGRAMMING
- MULTIDISCIPLINARY INVOLVEMENT
- FUNCTIONAL APPROACH TO BEHAVIOUR MANAGEMENT
- EMPHASIS ON DEVELOPMENT OF SOCIAL-COMMUNICATION SKILLS

# NEW YORK STATE PRACTICE GUIDELINES

- RECOMMENDED

- INTENSIVE BEHAVIORAL INTERVENTION
- THE USE OF PRESCRIBED MEDICATIONS TO ADDRESS SEVERE BEHAVIOURS (UNDER CARE OF PHYSICIAN)

- NOT RECOMMENDED

- AUDITORY INTEGRATION
- FACILITATED COMMUNICATION
- MUSIC THERAPY
- ANTI-YEAST TREATMENTS
- VITAMIN THERAPY
- DIET THERAPY (UNLESS SPECIFIC ALLERGIES IDENTIFIED)

# FINAL THOUGHTS (FROM THE NATIONAL RESEARCH COUNCIL)

THE COMMITTEE RECOMMENDS THAT EDUCATIONAL SERVICES BEGIN AS SOON AS A CHILD IS SUSPECTED OF HAVING AN AUTISM SPECTRUM DISORDER. THOSE SERVICES SHOULD INCLUDE

- A MINIMUM OF 25 HOURS A WEEK
- 12 MONTHS A YEAR
- SYSTEMATICALLY PLANNED, AND DEVELOPMENTALLY APPROPRIATE EDUCATIONAL ACTIVITIES.

## **FINAL THOUGHTS (FROM THE NATIONAL RESEARCH COUNCIL) – CON'D**

**THE PRIORITIES OF FOCUS SHOULD INCLUDE:**

- FUNCTIONAL SPONTANEOUS COMMUNICATION
- SOCIAL INSTRUCTION
- COGNITIVE DEVELOPMENT
- PROACTIVE APPROACHES TO PROBLEM BEHAVIORS
- SPECIALIZED INSTRUCTION IN A SETTING IN WHICH ONGOING INTERACTIONS OCCUR WITH TYPICALLY DEVELOPING CHILDREN.

# ASSISTING PARENTS TO BE CRITICAL CONSUMERS

- BE CAUTIOUS OF TREATMENTS THAT CLAIM TO “CURE”
- CONSIDER WHETHER THERE IS AN ASSESSMENT COMPONENT (TO INDIVIDUALIZE TREATMENT)
- CONSIDER THE THEORY BEHIND THE TREATMENT
- CONSULT LOCAL PROFESSIONALS
- CONSIDER IF THERE IS RESEARCH TO SUPPORT
- DETERMINE IF ANY NEGATIVE SIDE EFFECTS

# SOCIETY FOR TREATMENT OF AUTISM - PHILOSOPHY

SPECIALIZED SERVICES FOR THOSE WITH AUTISM SPECTRUM DISORDER WHO MEET THE CRITERIA AS OUTLINED IN THE FSCD ACT

- INDIVIDUALIZED
- INTENSIVE
- ACTIVITY-BASED INSTRUCTION
- LEAST RESTRICTIVE TREATMENT CONTINUUM (PROMPT HIERARCHY)
- COMMUNITY INCLUSION/INTEGRATION
- PARENTAL INVOLVEMENT/PARTICIPATION
- INTERDISCIPLINARY TEAM

# PART THREE: PARENTING AND TEACHING A CHILD WITH ASD



# **A CHILD WITH ASD – UNIQUE CHALLENGES**

- **DISORDER IS NOT VISUALLY OBVIOUS**
- **CRITICAL SKILLS (TOILET TRAINING, DRESSING, EATING) ARE OFTEN SLOW TO DEVELOP**
- **FORCED TO READ CHILD'S MIND DUE TO LIMITED COMMUNICATION SKILLS**
- **CHALLENGING BEHAVIOURS IMPACT FAMILY ACTIVITIES AND FUNCTIONING**

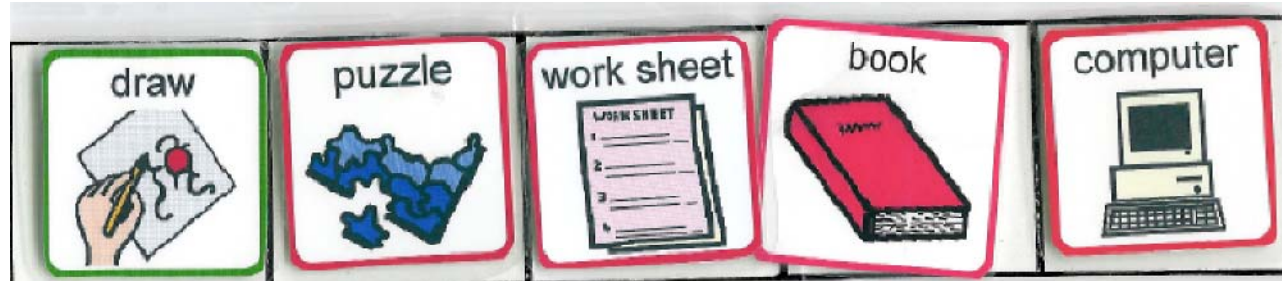
# A CHILD WITH ASD – UNIQUE CHALLENGES

- LACK OF SOCIAL CONNECTION
- FAMILIES REQUIRED TO MEET AND DEAL WITH A VARIETY OF PROFESSIONALS
- PARENTS BOMBARDED WITH INFORMATION OR UNABLE TO FIND INFORMATION
- FORCED TO EVALUATE A WIDE VARIETY OF TREATMENTS (SOME OF WHICH OFFER THE PROMISE OF A CURE)

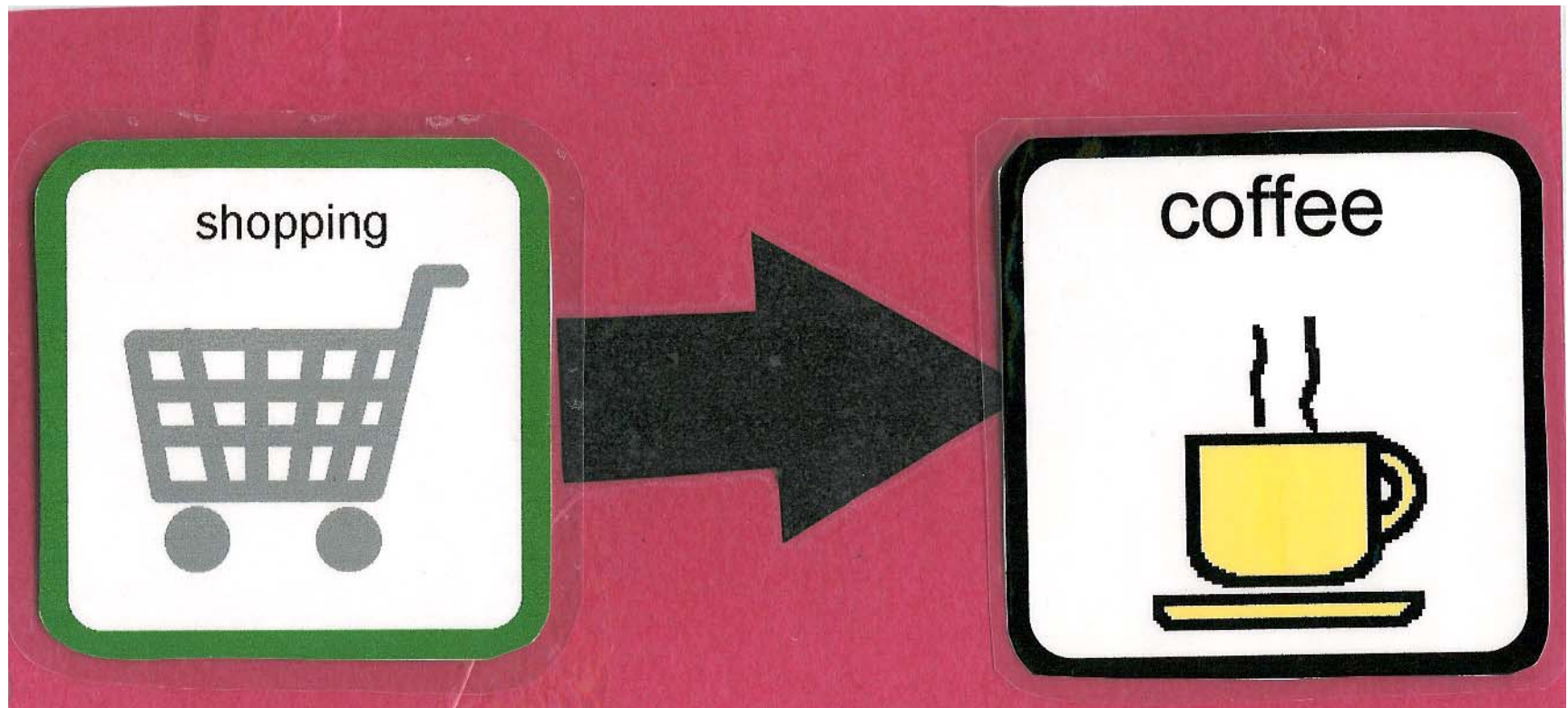
# TEACHING STRATEGIES FOR A CHILD WITH ASD

- TASK VARIATION
- PUSH BOUNDRIES
- GENERALIZED SKILL DEVELOPMENT
- REINFORCE APPROPRIATE BEHAVIOR
- SENSORY BREAKS
- PROACTIVE PLANNING
- VISUALS
- CONSISTENTCY
- TASK ANALYSIS
- SABATOGING THE ENVIRONMENT

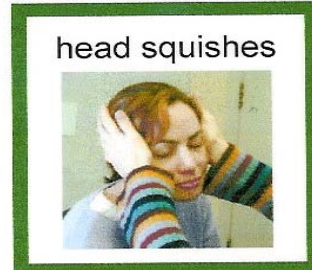
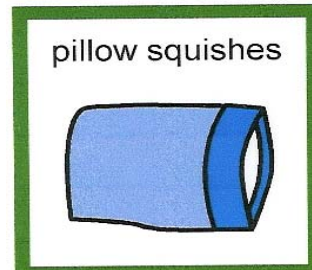
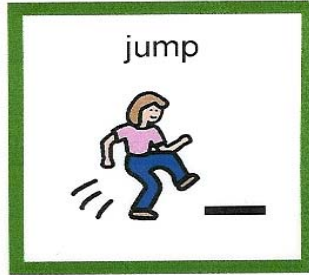
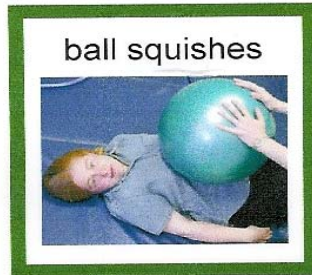
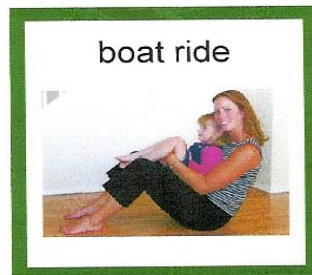
# SCHEDULE STRIPS



# IF...THEN CONTINGENCIES



# SENSORY BREAKS



# TASK ANALYSIS

turn on



get soap



rub hands



turn off



dry hands



# INCORPORATING STRATEGIES INTO TYPICAL SETTINGS

- EDUCATE OTHER CHILDREN ABOUT DIFFERENCES AND SIMILARITIES
- AVOID USING LABELS
- USING CLASSROOM VISUALS
- INCORPORATING SENSORY BREAKS
- FACILITATE INTERACTIONS

# HANDS ON AND QUESTIONS?



# RESOURCES

- SOCIETY FOR TREATMENT OF AUTISM
  - [www.calgaryautismtreatment.com](http://www.calgaryautismtreatment.com)
- CANADIAN AUTISM INTERVENTION RESEARCH NETWORK (CAIRN)
  - [www.cairn-site.com](http://www.cairn-site.com)
- AUTISM TREATMENT SERVICES OF CANADA
  - [www.autism.ca](http://www.autism.ca)
- GENEVA CENTRE FOR AUTISM
  - [www.autism.net](http://www.autism.net)