

# **Early Assessment and Recommendations for At-Risk Children**

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# Presentation Overview

- ▶ Early identification issues
- ▶ Assessment basics (when, where, how)
- ▶ Specific disorders – (dyslexia, ADHD, etc.)
- ▶ Non-specific conditions – (executive dysfunction, etc.)
- ▶ Psychological issues
- ▶ Considerations for adolescents

# Common Reactions

Isn't assessment just labeling?

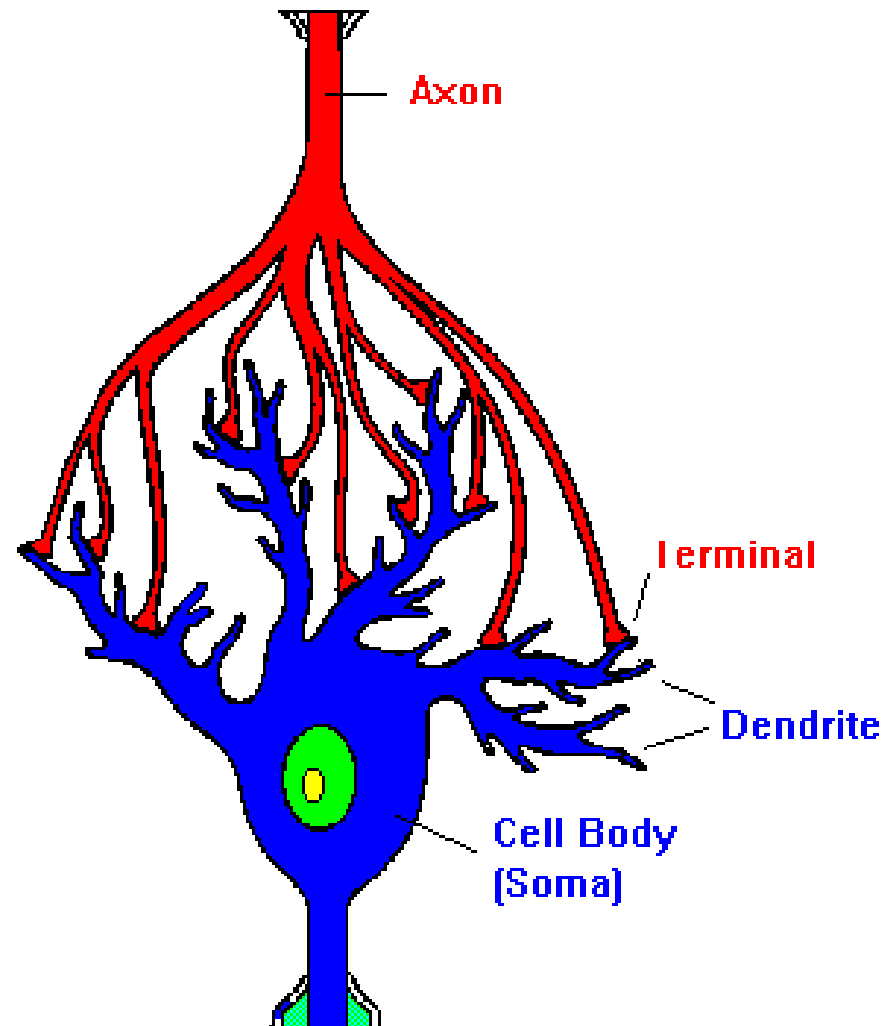
Aren't these conditions overdiagnosed?



# Importance of Early Identification

- ▶ Brain plasticity
- ▶ Remediation effectiveness
- ▶ Falling behind
- ▶ Emotional impact

# Brain Plasticity



# **Risk Factors for Disorders Related to Learning**

- ▶ Family history
- ▶ Prenatal issues
- ▶ Prematurity, low birth weight, or birth trauma
- ▶ Chronic ear infections
- ▶ Certain medical conditions
- ▶ Lead poisoning
- ▶ Neurological condition or injury

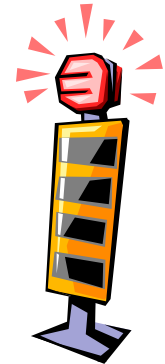
# When are Warning Signs Apparent?

<b>Disorder</b>	<b>Typical age at time of diagnosis</b>	<b>Age when warning signs <i>may</i> first become apparent</b>
Dyslexia	9-18+ years	0-4 years
Attention-Deficit/ Hyperactivity Disorder (ADHD)	7-18+ years	0-4 years
Speech and Language Disorders	5-18+ years	0- years

# Recognizing Warning Signs

## *For parents:*

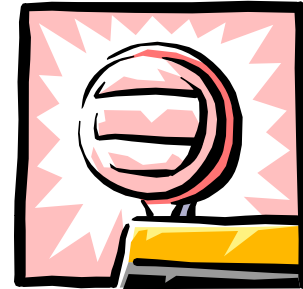
- ▶ Consider risk factors
- ▶ Be familiar with normal developmental timeline
- ▶ Observe same-age peers
- ▶ Gather information from others
- ▶ Don't allow others to dismiss your concerns



# Recognizing Warning Signs

## *For educators:*

- ▶ Educate yourself about signs
- ▶ Understand parent concerns
- ▶ Learn about concerns from previous teachers
- ▶ Identify your *specific* concerns
- ▶ Trust your experience and instincts



# **Some Warning Signs of Potential Problems 0-3 years**

- ▶ Not meeting developmental milestones
- ▶ Trouble following directions
- ▶ Lack of interest in books
- ▶ Highly distractible; extremely restless

# Some Warning Signs of Potential Problems **PRESCHOOL**

## Speech/language

- ▶ Pronunciation difficulties
- ▶ Limited vocabulary; word-finding difficulties
- ▶ Trouble rhyming words
- ▶ Problems expressing wants and needs
- ▶ Trouble understanding and following directions
- ▶ Lack of interest in books or stories

# Some Warning Signs of Potential Problems **PRESCHOOL**

## Cognitive

- ▶ Trouble learning basic concepts

## Behavior

- ▶ Highly distractible; extremely restless; disruptive; impulsive

## Social

- ▶ Trouble interacting with peers

## Motor

- ▶ Poor coordination; slow to develop

# Some Warning Signs of Potential Problems

## GRADES K-4

### Language and Academic Skills

- ▶ Trouble learning connection between letters and sounds
- ▶ Making consistent errors of reading/spelling
  - ▶ Letter reversals (*b/d*) and inversions (*m/w*)
  - ▶ Transpositions (*felt/left*) and substitutions (*house/home*)
- ▶ Skipping lines when reading text
- ▶ Trouble copying from chalkboard

# Some Warning Signs of Potential Problems

## GRADES K-4

### Language and Academic Skills cont.

- ▶ Transposing numbers (231/123)
- ▶ Confusing arithmetic signs (+, -, x, ÷)
- ▶ Slow to remember facts
- ▶ Problems learning concept of time and reading a clock
- ▶ Left/right disorientation

# **Some Warning Signs of Potential Problems GRADES K-4**

## Executive Skills

- ▶ Trouble with organization, planning, time management
- ▶ Difficulty getting started; frequent procrastination
- ▶ Forgetfulness; frequently misplacing items
- ▶ Missing/late assignments

# **Some Warning Signs of Potential Problems GRADES K-4**

## **Behavior**

- ▶ Highly distractible; extremely restless; impulsive; disruptive

## **Social/Emotional**

- ▶ Trouble interacting with peers; decline in self-esteem
- ▶ Difficulty controlling emotions and emotional response

## **Motor**

- ▶ Poor coordination; prone to accidents

# Why to Seek an Initial Evaluation

- ▶ To help explain observed difficulties
- ▶ To secure documentation of a disability
- ▶ To identify strengths as well as weaknesses
- ▶ To obtain recommendations for:
  - Academic accommodations
  - Learning strategies
  - Possible interventions

# Common Reasons NOT to Seek an Evaluation

- ▶ Child may “grow out of it”
- ▶ Child is late-born
- ▶ Child is just “immature”
- ▶ Child is a boy; Child is a girl
- ▶ Child is simply bored or underchallenged
- ▶ Not a good match between child and teacher

# Considering Evaluation Options SCHOOL DISTRICT

## PROS

- ▶ Free
- ▶ Established timeframe
- ▶ Possibly includes various disciplines
- ▶ Recognized by public schools

## CONS

- ▶ Predetermined test battery
- ▶ Limited testing
- ▶ Cannot assess for certain conditions
- ▶ Testing will not result in specific diagnosis
- ▶ Testing vs. Assessment

# Considering Evaluation Options

## PRIVATE

### PROS

- ▶ Test battery not predetermined
- ▶ Completed by doctoral level evaluator
- ▶ Testing can result in specific diagnosis
- ▶ Can assess for other conditions

### CONS

- ▶ Fee range -- \$800-2000+ (but may be covered by insurance)
- ▶ No timeframe for completion
- ▶ May not be recognized by public schools

# Types of Evaluations SCHOOL DISTRICT

*Includes some or all of the following:*

- ▶ Speech/Language
- ▶ Social
- ▶ Behavioral observation
- ▶ Cognitive (IQ)
- ▶ Academic (achievement *only*)

# Types of Evaluations

## PRIVATE

*Types of available evaluations:*

- ▶ Psychoeducational
- ▶ Psychological
- ▶ Neuropsychological
- ▶ Psychiatric
- ▶ Medical

# Before the Evaluation

## Some questions to consider asking the evaluator:

- ▶ Does evaluator meet with parents?
- ▶ Who performs the testing?
- ▶ What cognitive and academic areas do you assess?
- ▶ Is evaluator experienced with age group? With particular condition?
- ▶ Does evaluator assess psychological and behavioral functioning?
- ▶ For adolescents, do assessments meet criteria for school, standardized testing, and colleges?

# What Can an Evaluation Identify?

Specific Learning Disorder

Attention-Deficit/Hyperactivity Disorder  
(ADHD)

Speech/Language Disorder

# What Can an Evaluation Identify? cont.

Nonverbal Learning Disability

Learning Disorder Not Otherwise Specified (NOS)

Pervasive Developmental Disorder (PDD)

Psychiatric Conditions



# Components of an Assessment for a Specific Learning Disorder

## ***Essential:***

- ▶ History
- ▶ Intellectual ability (IQ)
- ▶ Academic achievement



## ***“Optional” but recommended:***

- ▶ Emotional and behavioral functioning
- ▶ Neurocognitive functioning

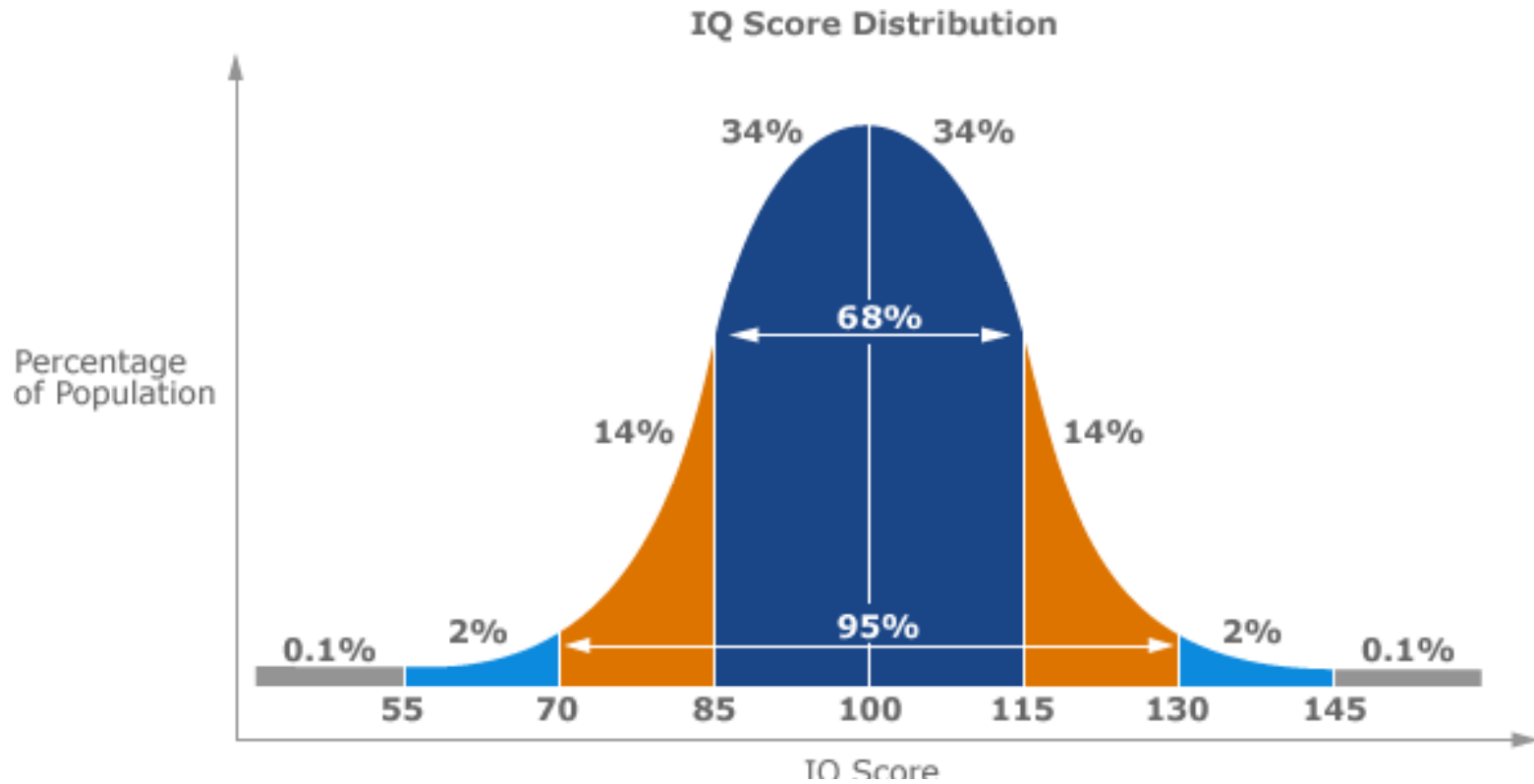
# Specific Learning Disorder

How is a specific learning disorder diagnosed?

- ▶ Discrepancy model
- ▶ Response to Intervention (RTI)
- ▶ Intraindividual differences model

# Discrepancy Model

*Looks for a significant discrepancy between student's intellectual potential and academic achievement*



# Discrepancy Model

## **PROS:**

- ▶ Quantifiable
- ▶ Specific guidelines for diagnosis

## **CONS:**

- ▶ How do we assess preliterate children?
- ▶ Wait to fail
- ▶ Overdiagnosis/underdiagnosis

# Response to Intervention (RTI)

- ▶ Screening
- ▶ Scientific, research-based intervention
- ▶ Response to intervention as part of the evaluation procedure

# Response to Intervention (RTI)

## **PROS:**

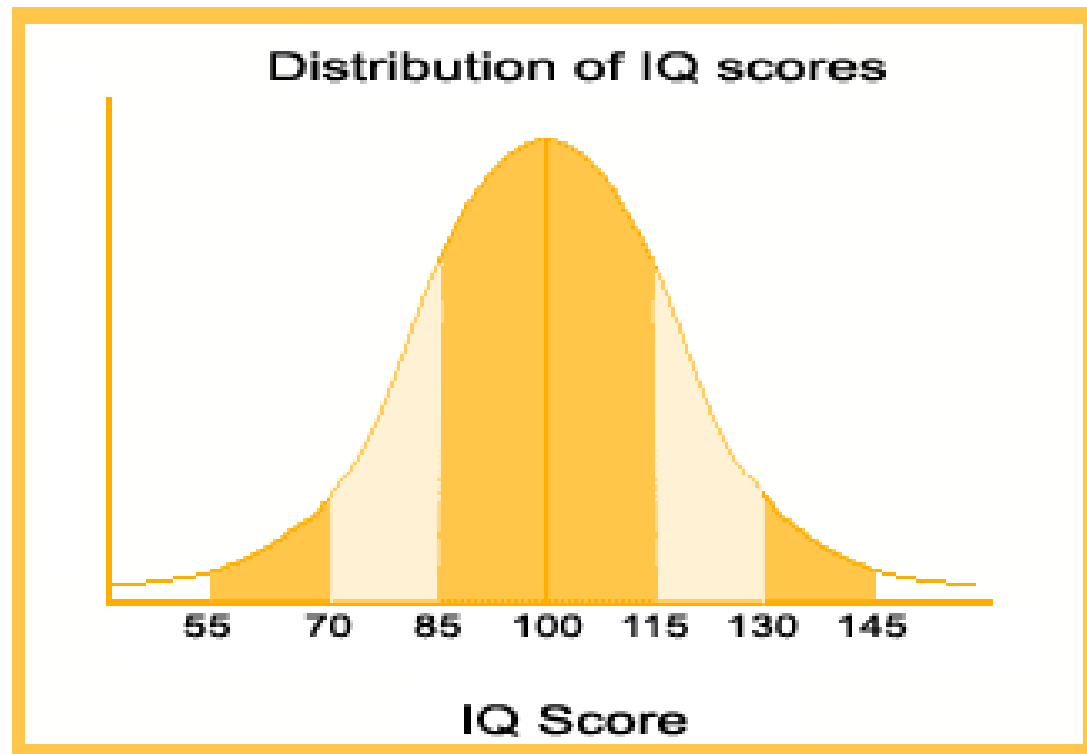
- ▶ Early identification of potential learning problems
- ▶ Use of research-based interventions

## **CONS:**

- ▶ Vague criteria for identifying a “response” and a subsequent “disability”

# Intraindividual Differences Model

*Looks for significant discrepancy within student's overall abilities to identify unexpected variation or unevenness in development*



# Intraindividual Differences Model

## **PROS:**

- ▶ Quantifiable
- ▶ Can distinguish subtypes of learning disorders
- ▶ Can identify skills to be targeted for intervention

## **CONS:**

- ▶ Generally requires neuropsychological testing (more specialized, costly, and time-consuming)

# Dyslexia



# Dyslexia

- ▶ Affects about 5-17% of school-age children
- ▶ About 30% of individuals with dyslexia have comorbid ADHD
- ▶ Genetics plays a significant role



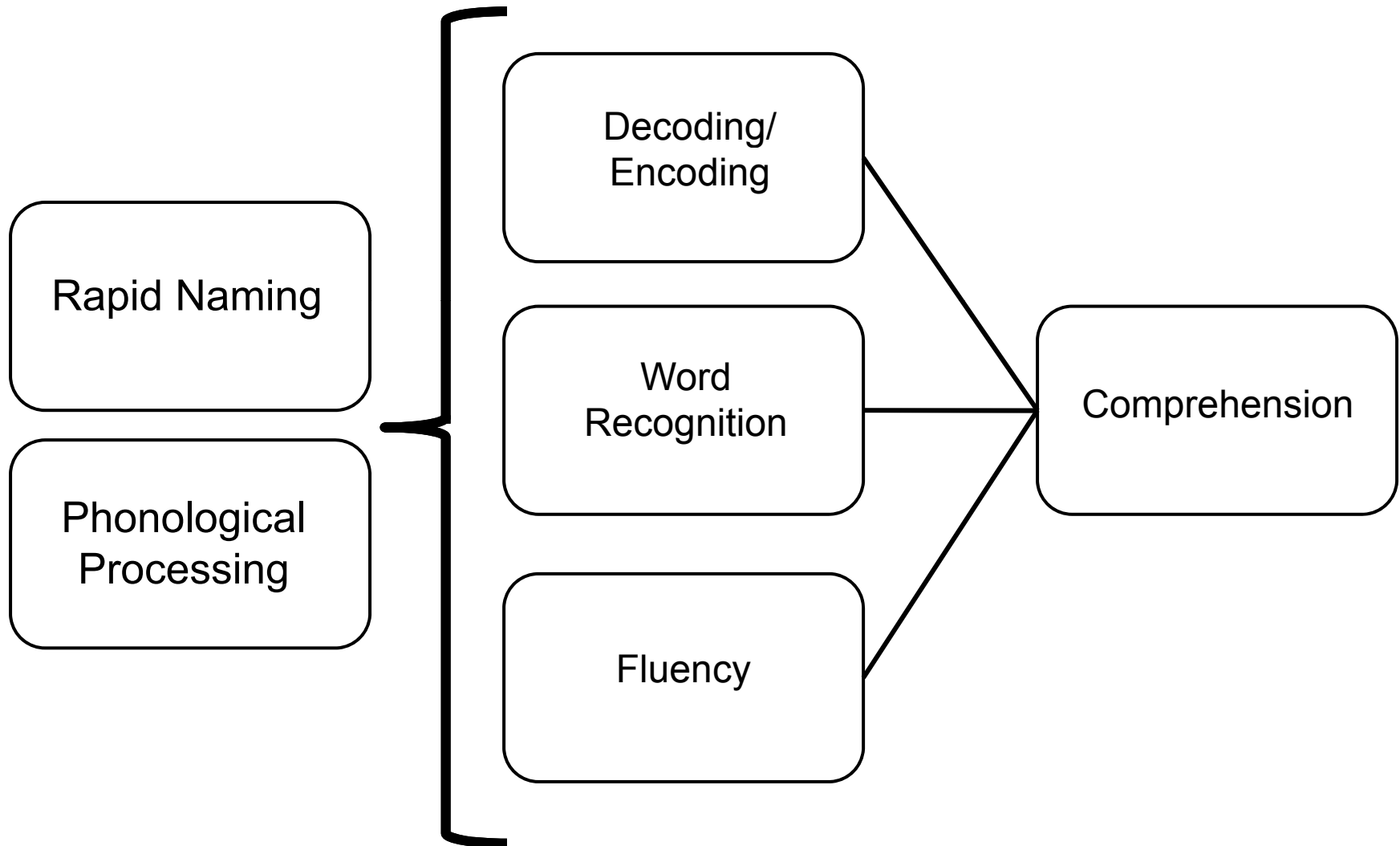
# Dyslexia

## What is it?

Dyslexia is a specific learning disability that is **neurological** in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties **typically result from a deficit in the phonological component of language** that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

*- International Dyslexia Association (IDA) 2002*

# Reading-related Skills



# Dyslexia

## Connecticut Longitudinal Study (Sally Shaywitz, M.D.)

- ▶ Continuum
- ▶ Boys  $\approx$  girls
- ▶ Chronic nature
- ▶ Phonological processing

# Phonological Processing

The process of breaking a word down into its component sounds or phonemes



# Phonemic Awareness

*Deficits in phonemic awareness might lead to problems with the following tasks:*

Phoneme segmentation

Phoneme deletion

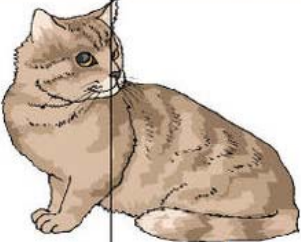
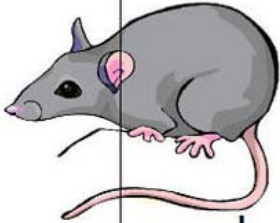


Phoneme substitution

Phoneme matching



# Phonemic Awareness cont.

Blending

 c a t	 r a t
 c a n	 f a n

Rhyming

# Rapid Naming

The ability to analyze  
and name objects or  
letter/digit patterns  
rapidly



# Early Identification of Reading-related Problems

What skills to assess?

- ▶ Phonemic awareness and phonological processing
- ▶ Letter/word recognition
- ▶ Language skills:
  - Vocabulary development
  - Verbal memory
  - Language expression and comprehension

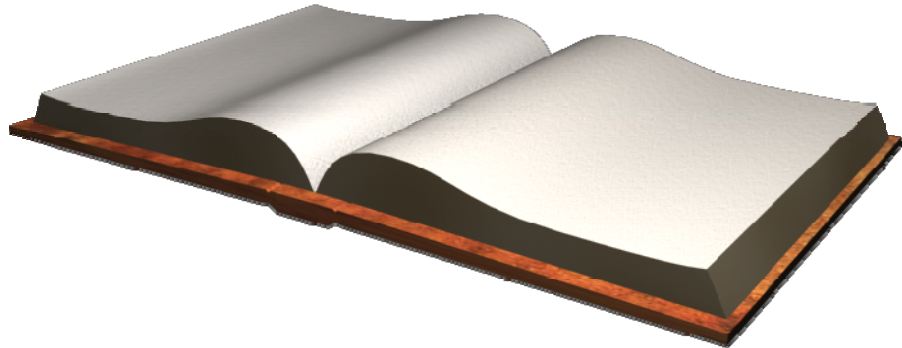
# "Second-Level" Reading Skills

Word Recognition

Decoding

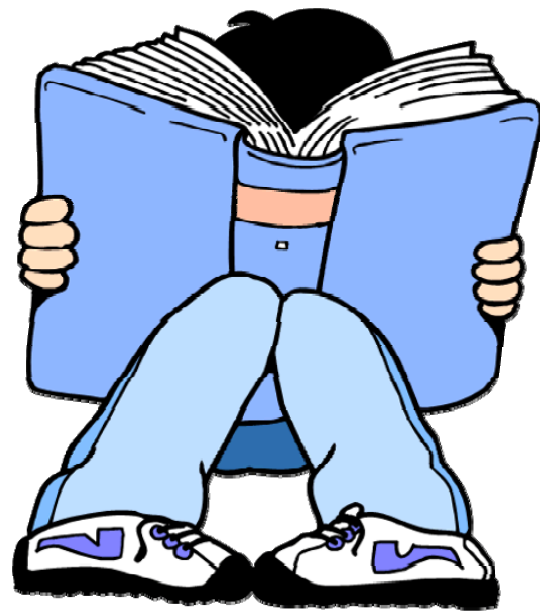
Encoding

Fluency



# Comprehension

- ▶ Multiple cognitive demands
- ▶ Role of comprehension in dyslexia



# Dyslexia

## Recommendations for Young Children

- ▶ Specialized instruction
- ▶ Use multisensory learning techniques
- ▶ Consider assistive technology
- ▶ Pursue additional evaluation/intervention as needed (e.g., speech/language, audiology)
- ▶ Provide extra time for practice and performance
- ▶ Consider school placement

# Dyslexia

## Additional Recommendations for Older Children

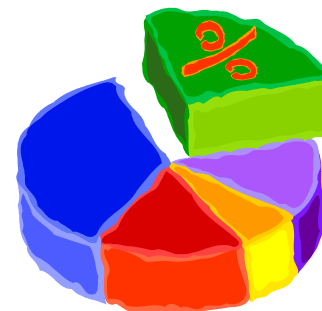
- ▶ Allow extended time
- ▶ Consider alternate test formats
- ▶ Avoid calling on student to read aloud
- ▶ Do not penalize for errors of spelling
- ▶ Consider note-taking options
- ▶ Carefully consider foreign language options

# Dyscalculia



# Dyscalculia

- ▶ Affects about 5-8% of school-age children
  - 15-50% comorbid dyslexia
  - 10-25% comorbid ADHD
- ▶ Affects boys and girls fairly equally
- ▶ Family history is a significant risk factor
- ▶ Problems can persist throughout school years



# Subtypes of Dyscalculia

## Procedural Subtype

- ▶ Difficulties understanding, learning, and using procedures

## Semantic Memory Subtype

- ▶ Difficulties with arithmetic and retrieving math facts

## Visuospatial Subtype

- ▶ Difficulties interpreting and understanding spatially represented numerical concepts

# Early Identification of Math-related Problems

Young children may have difficulties with:

- ▶ Understanding number concepts
- ▶ Learning basic number names
- ▶ Counting
  - One-one correspondence
  - Stable order
  - Cardinality
- ▶ Understanding arithmetic concepts



# Dyscalculia

## Recommendations for Young Children

- ▶ Individualized instruction
- ▶ Use multisensory learning techniques
- ▶ Use concrete materials to teach abstract concepts
- ▶ Reduce the need for memorization initially
- ▶ Provide extra time for practice and performance
- ▶ Avoid drilling math facts
- ▶ Consider school placement

# Dyscalculia

## Additional Recommendations for Older Children

- ▶ Allow calculators
- ▶ Allow extended time
- ▶ Minimize memorization
- ▶ Modify assignments
- ▶ Consider partial credit

# Dysgraphia



# Dysgraphia

- ▶ Affects about 10% of school-age children
- ▶ Inconsistent findings for male-to-female ratio
- ▶ Persists over time
- ▶ Unclear about dysgraphia as an independent learning disorder

# Dysgraphia

## Possible Areas of Deficit

- ▶ Handwriting
- ▶ Spelling
- ▶ Punctuation
- ▶ Sentence structure and grammar
- ▶ Vocabulary and theme development
- ▶ Organization



# Dysgraphia

## Recommendations for Young Children

- ▶ Individualized instruction
- ▶ Use multisensory learning techniques
- ▶ Avoid penalizing student for handwriting
- ▶ Consider assistive technology
- ▶ Pursue additional evaluation/intervention as needed (e.g., occupational, speech/language)
- ▶ Provide extra time for practice and performance
- ▶ Consider school placement

# Dysgraphia

## Additional Recommendations for Older Children

- ▶ Allow extended time
- ▶ Modify assignments
- ▶ Consider alternate test formats
- ▶ Do not penalize for errors of spelling or mechanics
- ▶ Consider note-taking options
- ▶ Carefully consider foreign language options



# ADHD



# ADHD Subtypes

Predominantly Inattentive Type

Predominantly Hyperactive/Impulsive Type

Combined Type



# How is ADHD diagnosed?

Evaluation of current symptoms

Assessment of early history

Behavioral observations



# Who can diagnose ADHD?

Psychologist

Psychiatrist

Pediatrician/Physician

Nurse practitioner



# ADHD

## General Recommendations

- ▶ Pursue additional evaluation as needed (e.g., psychological, psychoeducational)
- ▶ Consider treatment
- ▶ Parent involvement
- ▶ Collaboration between parents and teachers
- ▶ Consider school placement

# ADHD in the Classroom

## Recommendations for Young Children

- ▶ Preferential seating
- ▶ Call on student regularly
- ▶ Walk by desk, touch on shoulder
- ▶ Chunk learning and assignments
- ▶ Provide breaks
- ▶ Do not remove privilege of recess
- ▶ Positive reinforcement for efforts to improve

# ADHD in the Classroom

## Additional Recommendations for Older Children

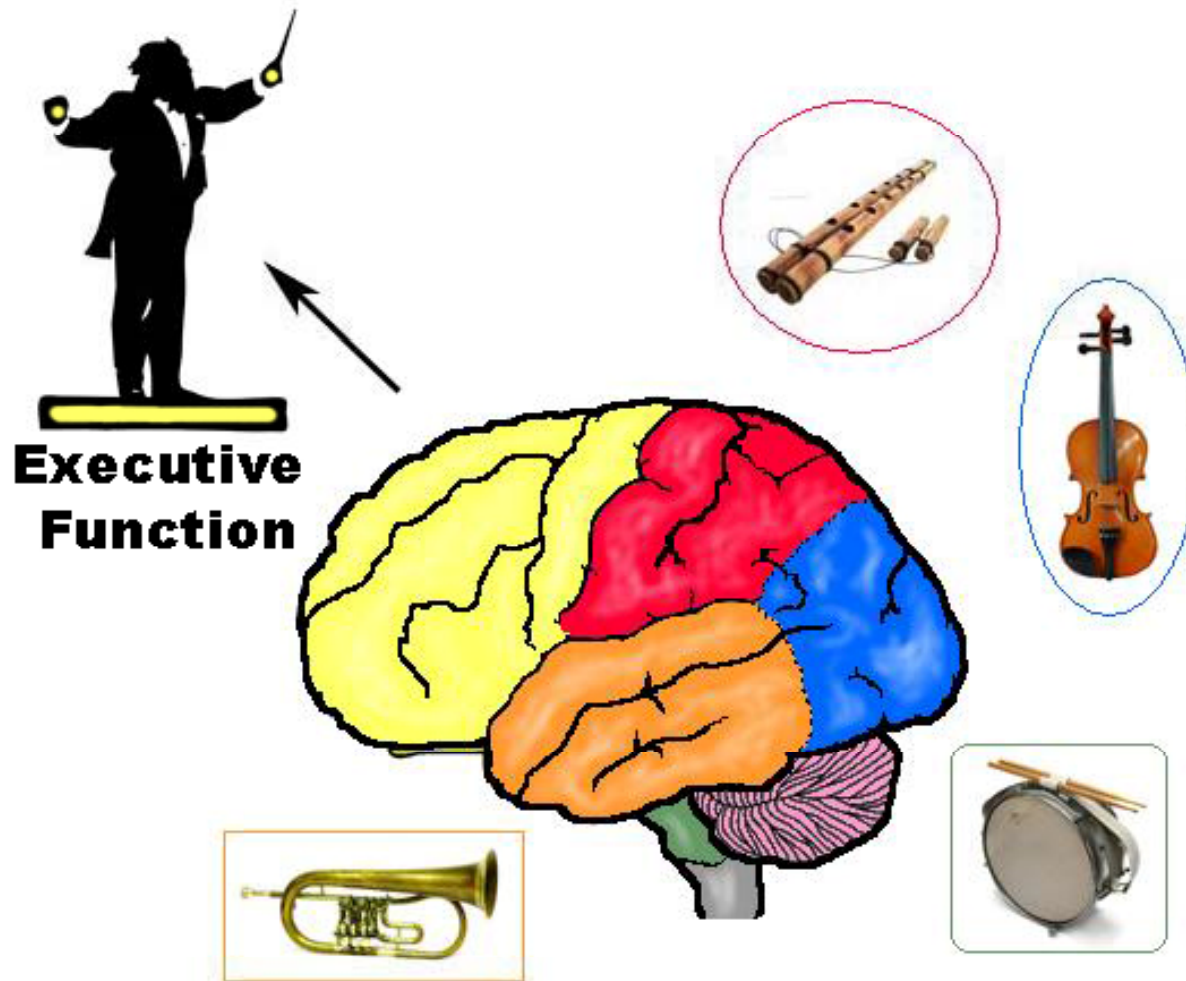
- ▶ Testing accommodations
- ▶ Allow breaks as needed
- ▶ Maximize organization
  - Provide weekly/monthly assignment sheets
  - Provide written/verbal clarification of assignment requirements
  - Provide study guides
- ▶ Consider note-taking options

# ADHD at Home

## Recommendations

- ▶ Frequent breaks while studying
- ▶ Minimize environmental distractions
- ▶ Use a timer
- ▶ Experiment with noise filters
- ▶ Parent involvement
- ▶ Executive coaching
- ▶ Positive reinforcement for efforts to improve

# Executive Functioning



# Executive Functioning

## Executive function skills include:

- ▶ Planning
- ▶ Organization
- ▶ Time management
- ▶ Task initiation
- ▶ Cognitive flexibility
- ▶ Working memory
- ▶ Sustaining and shifting attention
- ▶ Goal-setting
- ▶ Response inhibition
- ▶ Sustaining effort and motivation
- ▶ Self-regulation of emotional expression
- ▶ Frustration management
- ▶ Self-monitoring
- ▶ Metacognition  
(thinking *about* thinking)

# Executive Functioning

## Addressing the Problem

- ▶ Consider getting additional support
- ▶ Develop a contract
- ▶ Goals – setting, reminders, frequent feedback
- ▶ Directive parent involvement
- ▶ Be prepared to make frequent modifications

# Example

## Teacher Communication Form

Teacher's Comments	Monday
<input type="checkbox"/> Yes <input type="checkbox"/> No	Turned in assignments
<i>poor</i> 1   2   3   4   5 <i>excellent</i>	Attention
<i>poor</i> 1   2   3   4   5 <i>excellent</i>	Participation
<i>poor</i> 1   2   3   4   5 <i>excellent</i>	Behavior
<input type="checkbox"/> Correct	Assignment due for tomorrow
Teacher's Signature _____	

# Auditory Processing Disorder (APD)

A deficiency in the way auditory information is processed and interpreted by the brain

Deficiencies in one or more of the following areas:

- ▶ Sound localization
- ▶ Auditory discrimination
- ▶ Filtering out competing acoustic signals
- ▶ Managing degraded signals

*-American Speech-Language-Hearing Association (ASHA) 1996*

# Common Signs and Symptoms of Auditory Processing Disorder (APD)

- ▶ Trouble paying attention to auditory information
- ▶ Trouble remembering auditory information
- ▶ Problems carrying out multistep instructions
- ▶ Poor listening skills
- ▶ Needs more time to process information
- ▶ Language difficulties (e.g., confuse sounds in words)
- ▶ Limited vocabulary
- ▶ Difficulties with reading and spelling

# Recommendations to Minimize Impact of APD in the Classroom

- ▶ Preferential seating
- ▶ Acoustic treatment of the room
- ▶ Teacher speaks toward open classroom space
- ▶ Assistive technology
- ▶ Use of visual aids



# Learning Disorder Not Otherwise Specified (NOS)

Examples of cognitive impairments that can interfere significantly with learning:

- ▶ Slowed processing speed
- ▶ Deficits in learning and memory
- ▶ Executive skill dysfunction
- ▶ Nonverbal learning skills (Nonverbal Learning Disability)



# Psychological Issues

Why assess psychological functioning?

- ▶ Psychological issues can both *result from* and *contribute to* learning problems
- ▶ Psychiatric conditions can exacerbate existing learning or attention-related disorders
- ▶ Sometimes learning problems are most adequately explained by psychological issues

# Psychological Issues

Common psychological issues that co-occur with learning disorders and ADHD:

- ▶ Anxiety
- ▶ Depression
- ▶ Low self-esteem
- ▶ Behavior problems (e.g., oppositional behavior, conduct problems)
- ▶ Substance abuse

# Specific Psychiatric Conditions

Some common diagnoses made *in combination with*  
OR *instead of* specific learning disorder/ADHD:

- ▶ Obsessive-Compulsive Disorder (OCD)
- ▶ Anxiety Disorder
- ▶ Dysthymic Disorder
- ▶ Major Depressive Disorder
- ▶ Adjustment Disorder
- ▶ Eating Disorder

# How to Make Sense of Test Results

- ▶ Ask questions
- ▶ Consider intellectual potential
- ▶ Understand areas of strength
- ▶ Recognize and research areas of difficulty
- ▶ Acknowledge limitations of testing
- ▶ Get assistance in implementing recommendations



# Considerations for Adolescents

- ▶ Gaps in knowledge
- ▶ Executive skill deficits
- ▶ Avoidance of schoolwork
- ▶ Social and emotional challenges
- ▶ Can benefit from remediation
- ▶ Can benefit from academic and standardized testing accommodations



# Some Warning Signs of Potential Problems

## **GRADES 5-12**

- ▶ History of problems
- ▶ Trouble recalling learned information
- ▶ Reads slowly; poor reading comprehension
- ▶ Frequent trouble with spelling
- ▶ Executive skill deficits

# Some Warning Signs of Potential Problems

## GRADES 5-12

- ▶ Difficulty with handwriting; awkward pencil grip
- ▶ Problems setting goals
- ▶ Avoids effortful tasks
- ▶ Low standardized test scores
- ▶ Problems completing tests/assignments within standard time limits

# Some Warning Signs of Potential Problems

## GRADES 9-12

- ▶ Frequent “careless errors” on assignments/tests
- ▶ Trouble sustaining effort and motivation
- ▶ Unexpected limitations in judgment/insight
- ▶ Written work – trouble with organization; lack of detail
- ▶ Slow in grasping abstract concepts

# Reasons for a Reassessment

- ▶ Assess change over time
- ▶ Evaluate response to interventions
- ▶ Assess current functioning in relation to new demands
- ▶ Eligibility requirements
- ▶ Address additional questions or concerns



# Final Thought



“Once we accept our limits,  
we go beyond them.”

~Albert Einstein

# Contact information

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