

ADD - ADHD - Learning Disabilities

Ask Dr. Z - Alternative Holistic ADD, ADHD, LEARNING DISABILITIES, BEHAVIORAL DISORDERS Help

DEFINING THE PROBLEM

From 1990-1995 there is a 250% increase in Ritalin (methylphenidate) use in the US.

By 1997, there is a 700% increase in Ritalin use.

About 80 percent of the 11 million prescriptions doctors write for that medication each year treat childhood ADHD.

The production of Adderall and Dexedrine, also used to treat ADHD, has risen 2,000 percent in nine years.

Spending on ADHD drugs has increased 122% over the past two years.

The increasing use of stimulant medication to treat ADHD in the United States differs significantly from practices in the rest of the world. The U.S. produces and consumes about 85 percent of the world's production of methylphenidate.

This recent and dramatic increase suggests that disorders which fall into the Attention Behavioral Continuum (ABC disorders) are not strictly genetic problems.

A REAL PROBLEM?

OR SIMPLY A CONVENIENT VEHICLE FOR DRUG COMPANY PROFIT?

Interviews with educators provided a resounding Yes. Experienced teachers report a significant observational change in kids over the last 15 years, noting a general global decrease in language and cognitive abilities.

Jane Healy, in her book "Endangered Minds", investigated the rise of ABC disorders. She found both overdiagnosis and overmedication, but nevertheless identified this as a real problem that is getting progressively worse.

She evaluated standardized test scores for 4th graders, comparing the 1960s to 1980s, and noted a huge decrease in the difficulty of the tests. Despite this, scores decreased during this period, and continue to do so, particularly in measurements of language skills and cognitive abilities.

In NYC, there is a 55% increase in Learning Disability diagnoses from 1983-1996.

California reported Autism diagnoses increased by 210% from 1987-1998

other states have shown 1000% increases.

In 2000, 1 in 6 kids fall into the ABC spectrum

1 in 10 kids have some form of affective disorder.

Surgeon General Satcher recently called for a complete overhaul in the nation's approach to child mental health services. Only 1 in 5 ABC kids get any treatment, mostly medication.

SCIENTIFIC DATA: WHAT DO WE ACTUALLY KNOW?

ADHD and most other learning disabilities seem to show

decreased activity in frontal lobes and other subcortical structures demonstrated via PET scans and functional MRI, particularly in boys.

Stimulant medication, especially dopamine uptake inhibitors (Ritalin) seem to improve symptoms, at least temporarily.

Boys are affected more than girls, in an 8:1 ratio, some estimates are much higher.

High comorbidity (overlap) of symptoms: 50% of kids with one diagnosis within the ABC have at least one other ABC diagnosis, and the majority have more than one.

Kids are often on 3-5 different medications as a result.

No obvious pathology exists in any of these kids.

However, the sensorimotor loop involving the prefrontal cortex, basal ganglia, cerebellum, and thalamus demonstrates both decreased activity and reduced anatomical size, particularly in the right brain and the left cerebellum.

Diagnoses are typically vague, made with checklists from the DSM 4, involving parental interviews and vague subjective symptoms. These stand as syndrome disorders, based on groupings of symptoms only, the vast majority of which overlap.

Recent thought places these as a constellation of symptoms on a continuum, the Attention Behavioral Continuum (ABC), comprising at least all of the following:

Attention Deficit Disorder (ADD)

Attention Deficit Hyperactivity Disorder (ADHD)

Learning Disability (LD)

Obsessive Compulsive Disorder (OCD)

Tourette's Syndrome

Pervasive Developmental Delay (PDD)

Asperger's Syndrome

Sensory Integration Disorder (SID)

Apraxia and Apraxia of Speech

Central Auditory Processing Disorder (CAPD)

Autism

All of these are similar in their underlying neurological mechanism, involving the prefrontal cortex, the basal ganglia, the thalamus and the cerebellum.

Three typical cases:

ADD/ADHD: Boy with good verbal skills, a strong vocabulary, and grade-level math skills. Met 14 of 18 criteria necessary for diagnosis. Hyperactive, disorganized, did not listen to parents or teachers.

Learning Disability : Girl labeled as nonreader by age 8. Speech and language delay, difficulty with word calling and retrieval, could not recall letters or numbers and apply phonics.

Autism: Boy diagnosed at age 3. Never acquired language, nonverbal. Exhibits many self-stimulating activities, hand-flapping and head-rocking. Little or no eye contact, focuses in small objects or details.

These are typically seen as 3 completely different disorders, with different genetic etiologies, but their histories show more similarities than differences.

TYPICAL EARLY HISTORIES

ABC kids are predominantly born to mothers with histories of allergies and/or immune difficulties, often with prenatal exposure to toxins or pesticides.

They tend to be breech births, with prenatal or neonatal oxygen deprivation, cerebral swelling, or other birth injury, but no obvious brain damage or disorder.

They typically manifest with colic or other digestive disorders, and alternate between chronic constipation and diarrhea, and reflux or projectile vomiting and pyloric stenosis.

They tend to present with allergies, asthma, thrush, yeast infections, and progressive eczema.

Most have had immunization reactions of some kind, and tend to regress or show significant slowing or stoppage of development at roughly 18 months.

Often show sleep disturbances, and regularly have some degree of decreased muscle tone (hypotonia) and sensory processing difficulty.

YEARS 2-3

Diet becomes increasingly limited to wheat and dairy in every combination. Tend towards hypersensitivity to foods and food textures.

Manifest with allergic symptoms, both dietary and environmental.
Often show abnormal eye movements, strabismus and nystagmus.
Abnormal or delayed crawling, often skip stages of crawling before walking.
Clumsy, with floppy or hypotonic movements. Often show toe-in or knock-kneed gait patterns.
Common thread: all have some history of motor, digestive, sensory, and immunological dysfunction.
All appear to be similar problems of varying degrees of severity.

HOW TO EXPLAIN THE DIFFERENCES

Brain Hemisphericity: All ABC disorders can be categorized as typically right or left brain disorders.

Example: Attention deficits exist for 2 reasons:

Inability to pay attention or fixate, which are right brain functions, or lack of intention, motivation and interest, which are functions of the left brain.
All ABC disorders can be categorized in a similar fashion, and which a much greater degree of specificity than this.

THE GENDER ISSUE: WHY MORE BOYS THAN GIRLS

Distinct differences exist between male and female brains, and these are accentuated in early development.

Males are typically right brain dominant, with a larger right frontal lobe.
As a result, adult males typically have better right brain skills than women.
Maternal health is a necessary condition for appropriate fetal brain development. Maternal hormonal levels during pregnancy (especially estrogen) appear critical in this process for proper fetal male brain development.

Females tend to be better with left brain skills, such as language, calculation, and so on.
Females also tend to have a much greater degree of brain symmetry than males, with the primary asymmetry being a slightly larger left posterior temporal lobe for speech and language access.
As a result, if they suffer some form of insult early in development, they will be much more capable to compensate for this injury than will males.
The male brain thus appears to be much more susceptible to maternal stress than the female brain.
Physical, chemical, and emotional stressors all alter the maternal hormone level, which tends to primarily affect male brain development.
Other than hormonal influences, early brain development after birth is intimately tied to the motor system, especially the cerebellum. Boys are more affected by lack motor development than girls.

The majority of ABC disorders involve the right brain, and males are much less able to recover from an early right brain insult than females.

Language disorders, which are generally more left brain issues, are more evenly distributed between males and females. Males predominate here as well, since the female brain in early development tends to heal more quickly.

WHY THE SUDDEN RISE OVER THE PAST 15 TO 20 YEARS?

Many teachers interviewed tie the rise in ABC problems to an overall decrease in physical activity in kids.
Children in general are becoming much more sedentary.
The rise in ABC disorders correlates to the increase in juvenile obesity levels (currently 24-35% of kid population, compared with only 12% in early '90s).
Since the advent of TVs, VCRs and computers, we have seen an increase in anxiety and affective disorders that mirror the ADD increase. This represents the adult manifestation of the same problem.

Motoricity appears to be the key to appropriate brain development.

Motoricity and cognition are essentially the same process, as we shall explain later.

The most common "answers" to this problem have been genetics and imbalances in neurotransmitters.

These "answers" appear too simplistic.

The next articles in this series will deal with the following issues:

the uniqueness of the human brain and bipedalism,

the brain hemispheres,

motoricity and cognition,

the consequences of sedentary lifestyle (decreased motor activity),

the manifestations of imbalance between the brain hemispheres,

the brain and the contemporary American diet,

Dr. Z's "All Possibilities!" program,

BHSC (Brain Hemisphere Specific Chiropractic),

Interactive Metronome and more.

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