

## **ATTENTION DEFICIT DISORDER**

Attention deficit disorder is defined by the DSM 111 R as “developmentally inappropriate inattention and impulsivity , with or without hyperactivity.”

- ◆ ADD is implicated in learning disorders and except for cases of severe and profound mental retardation can influence the behavior of children at any cognitive level.
- ◆ ADD is estimated to effect 5 - 10 percent of school aged children.
- ◆ ADD is seen 10 times more frequently in boys than girls.
- ◆ Cause is unknown.

### **Symptoms and Signs**

- ◆ ADD with hyperactivity is diagnosed when the signs of over activity are obvious.
- ◆ Many ADD children do not exhibit signs of over activity but most exhibit restlessness and jitteriness, short attention span and poor impulse control.
- ◆ Inattention - failure to finish tasks started, easily distracted, difficulty concentrating on tasks requiring sustained attention.
- ◆ Impulsivity - acting before thinking, difficulty taking turns, problems organizing work, constant shifting from one activity to another.
- ◆ Children with ADD are often described as always on the go.

### **Associated or Secondary Symptoms**

Motor incoordination, nonlocalized “soft” neurologic findings, perceptual motor dysfunctions, difficulty with visual motor tasks such as copying and printing, EEG abnormalities, emotional lability, opposition, anxiety, aggressiveness, low frustration tolerance, poor peer relationships, less responsive to positive and negative reinforcement, little consideration for long term consequences of behaviors, right - left confusion.

Up to 25% of ADD children exhibit signs of depression.

### **Onset**

Onset occurs primarily before three years old and invariably before 7 years old.

Hyperactivity tends to diminish with age but residual symptoms may extend well into adulthood. Follow up studies have shown that children identified as ADD do not grow out of their difficulties. Problems in adolescence and adulthood occur predominantly as academic failure, low self-esteem, and difficulty learning appropriate social behavior. Some studies conclude that adolescents and adults with histories of ADD have a high incidence of personality trait disorders and antisocial behavior; most continue to display impulsivity, restlessness and poor social skills

## Diagnosis

Primary signs are behavioral varying with time and situation. No particular signs or neurologic symptoms are specific making diagnosis difficult. The predominant mode of identification is rating scales and checklists which are often unable to distinguish ADD from other behavioral disorders. This collected data is often based on subjective observations made by untrained personnel. Social and medical histories and school reports are essential for diagnosis.

## Naturopathic Diagnostic Evaluation

- ◆ Children demonstrating signs and symptoms of ADD are evaluated for sensitivity to foods, hormones and neurotransmitters. If sensitivity is indicated desensitizing treatment is initiated.
- ◆ Most suspected cases of ADD are tested for heavy metal intoxication through either hair or urine analysis.
- ◆ Most suspected cases of ADD are tested for nutritional status. Low levels of B vitamins, essential fatty acids and minerals over extended periods contribute to nervous system abnormalities.

## Treatment

No single treatment has been completely effective for all children. Most effective treatments include optimal nutrition and nutritional supplements where required, heavy metal detoxification and allergy/phenolic desensitization.

## Heavy Metals

In a review of literature Doctor's Data Lab Inc. found numerous studies that indicated that disturbed children had higher hair **lead** levels than controls and levels of lead previously thought harmless may be associated with emotional disturbances in children. Learning disabled children were found to have higher hair lead levels than controls. Performance IQ negatively correlated with hair exposure levels in a study of healthy school children without exposure to lead whose hair lead levels were all below toxic levels. Neurotoxic effects of lead are demonstrable in neuronal systems using acetylcholine, dopamine, and GABA as neurotransmitters, which in turn are viewed as integral in some current theories of aggression. **Cadmium's** adverse effect on brain metabolism includes a depressive effect on norepinephrine, serotonin, and acetylcholine. Increased hair cadmium concentrations have been linked to learning and behavior disorders as have interactions between lead and cadmium and lead with mercury. The effects of the combination of lead and **aluminum** were greater than the sum of their individual effects. **Arsenic** is found to negatively correlate with some cognitive functions, specifically spelling. Arsenic levels may be elevated from drinking water when living in areas close to smelters. Reduced academic ability has been correlated with increased levels of mercury. Sources of mercury include dental amalgams and a diet that includes fish and marine mammals.

Aluminum is associated with hyperactivity, psychosis, impaired memory and congenital anomalies.