Well Being Journal Vol. 16, No. 2 ~
March/April 2007

The Physical, Emotional and Psycho-social Impact of Psychotropic Drugs on the Development of Children

by Gwen Olsen

To date, there is no independent test that can medically validate Attention Deficit Hyperactivity Disorder (ADHD). In fact, there is an absence of clear scientific, empirical evidence (empirical meaning that it can be repeated, tested, measured, verified) proving that ADHD is a neuro-developmental disability. As such, many doctors claim that the causes of ADHD symptoms are entirely speculative and cannot be proven to be an abnormality of the brain.

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ADHD is one of many psychiatric diagnoses that are based solely on the subjective observation by another individual of a maladaptive cluster of behaviors and attitudes. Identification of these symptoms as a biochemical imbalance in a child's brain often ignores the social, psychological, and environmental factors which may be contributing to these problematic behaviors.

There are currently 2.5 million American children labeled with ADHD. Therefore, it is important to examine the social implications, risks, and clinical facts about the medications currently utilized as treatment for this disorder. Prescriptions for psychotropic drug use in children increased dramatically in recent years. The FDA released data this year showing that 78,000,000 prescriptions were written for ADHD drugs in kids from 1999 to 2003.

Currently, the most common form of treatment for ADHD is stimulant drugs such as Ritalin, Adderall, Strattera and Concerta.

In 1971, the Drug Enforcement Administration classified Ritalin (methylphenidate) along with other amphetamine drugs as Schedule II substances based on the United Nations Convention on Psychotropic Substances. This category indicates these drugs have significant risk of abuse and limited medicinal value. Other Schedule II drugs include: cocaine, morphine, opium and barbiturates.

Stimulant drugs have a site of action in the dopamine pathways of the brain. This is known to predispose some people to psychotic episodes. A recent review conducted by the FDA found almost 1,000 reports of psychosis or mania possibly linked to ADHD drugs--which included Adderall, Concerta, Ritalin, and Strattera-from Jan. 1, 2000 through June 30, 2005. A large number of the psychosis-related cases were reported in children 10 years of age or less, an age group not highly predisposed to psychotic episodes. Many suffered from both visual and tactile hallucinations involving insects, snakes and worms. Hallucinations are traumatic destabilizing symptoms of severe pathology that can have long lasting repercussions on mental function and emotional stability.

The FDA estimates that only 1-10% of all adverse reactions are identified and reported. Because of their unique biological makeup and developing kidneys and livers, it is often difficult for children to metabolize and eliminate drugs, or they can be rapid metabolizers and experience withdrawal between doses. They are three times as likely as adults to experience adverse pharmacologic reactions and interactions. However, a child's ability to identify side effects and/or articulate and communicate them to their caretakers is limited compared to adults. Therefore, it can be presumed that the incidents of psychosis in children having a causal relationship to stimulant drug use are grossly under reported and not accurately represented by these figures.

Clinical research has consistently shown that 40% of all children fail to tolerate or respond to stimulant therapy and about twice as many respond just as well to non-pharmacological interventions. The prestigious MTA study conducted by the National Institute of Mental Health concluded that long-term outcomes for medicated children

demonstrate diminishing returns over time, and artificial behavioral improvements dissipate when treatment is withdrawn.

Additionally, stimulant drugs are known to frequently cause jitteriness, tremors, loss of appetite, insomnia, nausea, abdominal pain, dizziness, headache, blood pressure and pulse changes, depression, sadness, over stimulation of the brain, aggression, anxiety, and tachycardia in children. There have been rare reports of Tourette's syndrome. Antidote drugs are then added in order to control these unwanted effects. Antidepressants, mood stabilizers, antipsychotic drugs, anxiolytics, and blood pressure medications are often prescribed concomitantly to children with ADHD, and have the ability to potentiate one another's negative side effects.

Symptoms resulting from a child's negative reaction to a stimulant can be easily mistaken as a comorbid psychiatric disorder such as depression, anxiety, bipolar illness, obsessive compulsive disorder, or schizophrenia. Clinical guidelines indicate that these disorders also require pharmacologic intervention. If more drugs are added to already toxic brain chemistry, it can result in the exacerbation of life-threatening symptoms and rapid clinical deterioration of the child's mental status. Any drug that induces hallucinations, mania, or psychotic behavior should be discontinued immediately. Antipsychotic drugs should never be added when the symptoms are a direct result of drug toxicity.

All of the various categories of psychiatric drugs present their own individual set of risks in children. In 2004, antidepressants received a black box warning for inducing suicidal ideation in children. The majority of the clinical studies conducted with children taking antidepressants have proved them to be no more effective than placebos in the treatment of depression. Patients treated for mild to moderate depression are highly susceptible to suggestion--
children more so than adults. Even when a child does respond positively to antidepressant therapy, the improvement can often be attributed to the drug's placebo effect or the formation of a supportive relationship with a therapist or counselor.Strattera is a selective noradrenergic reuptake inhibitor (SNRI) indicated for ADHD that, in

addition to its black box for suicide issued in September 2005, also received a black box warning for severe liver damage in December 2004.Regulators required stronger warnings relating to cardiovascular risk, stroke, and sudden death to be issued on all ADHD stimulants in March 2006. Adderall products carry a black box warning of the high potential for amphetamine abuse. (The recreational abuse of stimulants is now epidemic in our nation's schools.) It warns that misuse of amphetamines may cause sudden death and serious cardiovascular adverse events. The old label previously warned that amphetamines could exacerbate symptoms of behavior disturbance and thought disorder in patients with preexisting psychotic disorder. However, the updated labeling notes stimulants at usual dosages can cause psychotic or manic symptoms, such as hallucinations, delusional thinking, or mania in children and adolescents. Atypical antipsychotics, such as Zyprexa, Abilify, Seroquel and Geodon, can cause permanent disfiguring tics and dyskinesias, akathisia, mania, neuroleptic malignant syndrome, weight gain, as well as diabetes. None of these drugs are currently approved for use in children, although 2.5 million children were prescribed antipsychotics in 2002-50% of the time for ADHD.There are social implications to be considered as well as the emotional impact on a child who is labeled with a learning disability and/or a mental disorder. It may delay the development of a child who is not allowed to work through social issues and the maturation process without drugs. Labels can follow a child throughout life in their academic, employment and medical records. Children who have been on psychostimulants past the age of 12 are not eligible for service in the armed forces of the United States. Children labeled as "different" may be singled out by their peers and further subjected to social isolation, ridicule, and teasing. Even proponents of drug therapy admit that "children, particularly boys, often feel that taking medicine is like admitting something scary is wrong with them, admitting they are 'retarded' or 'crazy' or 'stupid,' all labels they are struggling to throw off. They frequently feel embarrassed or humiliated in taking medication." (Driven to Distraction, p. 236)Strict drug policies in schools require students on medications to report daily to the school nurse in order to get them. Children may feel ashamed when called out of class to take drugs. Shame is very destructive to the developing psyche. Even when

children feel safe and comfortable enough to discuss their fears, anger, and disappointments with an adult, children do not often express their shame. Internalizing shame-based emotions can fuel feelings of guilt, depression, loneliness, isolation, and low self-esteem.Not only can stimulant drugs delay social development in children, but there is considerable evidence that a child's physical development is also stunted with long-term use. All stimulants impair growth, not only by suppressing appetite but also by disrupting growth hormone production. A reduction in linear growth is a red flag that may indicate interference with the rejuvenation of muscle, kidney, liver, brain and other organ tissue. For this reason, practitioners often recommend "drug holidays" in order to allow the body to experience normal growth spurts in the absence of medication.The drastic increases in cortisol caused by stimulants can cause permanent changes in brain pathology. Developing brains are more susceptible to brain damage than adult brains. Brain damage caused by long-term stimulant usage may not be noticeable until the child's brain is fully developed.Unfortunately, withdrawal symptoms in the form of depression, agitation, insomnia, irritability, anxiety, aggression, paranoia, hallucinations and suicidal ideation can also develop with the rapid discontinuation of any stimulant. Some children may experience withdrawal symptoms with a single missed dose. Therefore, in order to minimize withdrawal reactions, it is imperative that discontinuation of any psychotropic drug be done under strict medical supervision and with a slow and steady downward titration of the drug over time.The risk-to-benefit ratio of any drug profile must be carefully considered before it is administered to a child. But the serious danger posed to children by potent, mind-altering chemicals warrants closer investigation and greater awareness on the part of parents and teachers alike. Full disclosure about these products is necessary in order to protect the vulnerability of patients, and preserve the right to informed consent for children's guardians.Gwen Olsen, author of Confessions of an Rx Drug Pusher (2005)