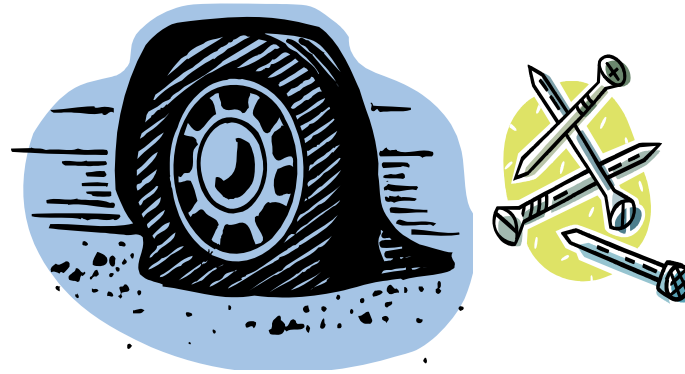


This is the Place ADHD

**“Don’t try to fix the tire
without removing the nail.”**



**Addiction and Attention Deficit/Hyperactivity
Disorder (ADHD):**

The Link

Presented by

Michael S. Londe, Ph.D., L.A.D.C., C.R.A.D.C.

with Mary R. Londe, B.S., ECE

The diagnosis of Attention Deficit Hyperactivity Disorder is increasing.

According to The U.S. Centers for Disease Control and Prevention:

- **22% increase** from 2003 – 2007 from 4.4 million to 5.4 million children (ages 4-17 years).
- **9.5% of children** between the ages of 5-17 years have ADHD.

*ADHD Among Children Aged 5-17 Years in the U.S., 1998-2009

*Nation Survey of Children's Health

www.cdc.gov/nchs/data/databriefs/db70.htm

The Adult ADHD Population?

- Pete Quily, a research analyst in the field of ADHD, and an ADHD coach, reports that the consensus in research indicates anywhere from 5% to 7% of the adult population has ADHD. www.adultaddstrengths.com
- Other researchers question the exact % of Adult ADHD.

They believe that ADHD is often times misdiagnosed as something else, such as depression, bi-polar disorder, anxiety disorder, among others, or simply undiagnosed.

Sterling, Ron. Adult ADD Fact Book, 2011. Unsheepable Publications; Barkley, RA, ADHD in Adults: What The Science Says, 2008. Guilford Press

Why should Addiction Professionals be concerned with these statistics....?

Research connecting ADHD and addictions has been available for several years, yet **I have never found ADHD addressed in any continuing education for addiction professionals.** Dr. Londe Last 30 years



- **35% of 298 treatment-seeking cocaine abusers met DSM-III-R criteria for childhood ADHD.**

These abusers were:

younger at presentation for treatment
reported more severe substance use
experienced earlier onset of cocaine abuse
reported more frequent and intense cocaine use
experienced higher rates of alcoholism
more had received PREVIOUS TREATMENT.



**Comprehensive Psychiatry. 1993 Mar-Apr; 34 (2): 75-82.*

- **24% of Psychoactive Substance Abusers had ADHD.**

Among 201 randomly selected participants from 2 chemical dependency treatment centers, 48 (24%) were found to meet DSM-IV criteria for ADHD.

Conclusion: A significant overrepresentation of ADHD exists among inpatients with psychoactive substance use disorders.



*Journal of Clinical Psychiatry. 2000 Apr; 61(4):244-51

- **32% of Cocaine Users and Alcoholics had ADHD.**

Of 136 inpatients with SUD (substance use disorder) diagnosis (cocaine vs. alcohol vs. cocaine/alcohol) 32% had ADHD.



* American Journal of Drug Alcohol Abuse. 1999 Aug; 25(3): 441-8.

- **70% of Crystal Meth (Methamphetamine) Inpatients had ADHD.**

51 meth-dependent inpatients were screened for childhood ADHD using the Wender Utah Rating Scale upon admission. 36 (70.6%) screened positive for ADHD and *reported significantly more frequent meth use prior to baseline*. After abstinence, the ADHD group continued to show difficulty with attention and memory. ***All 10 non-completers of the program had screened positive for ADHD.***

*Journal of Addiction Disorders. 2005; 24(3): 133-52.



- **83% of Inhalant Abusers and 55% of Methamphetamine abusers in Japan had ADHD.**



Of 54 meth users, 55% had ADHD; and of 12 inhalant abusers, 83% had ADHD. (The Wender Utah Rating Scale was used.)

**Psychiatry Clinical Neuroscience. 2005 Feb; 59(1): 102-5.*

And addictive behaviors are among the co-occurring problems. . .



*‘Pharmacologic Approaches to the Treatment of **Pathological Gambling**’* as reported in

**Medscape Psychiatry & Mental Health eJournal. 1998;3(3)*

... **“PG (Pathological Gambling) is highly comorbid with mood disorders, substance abuse, and attention-deficit/ hyperactivity disorder.”**

- *‘Highlights From the 13th Annual Meeting of the American Association for Addiction Psychiatry’*
“Pathological Gambling” found at * www.medscape.com

...**“The co-occurrence of ADHD is estimated at about 20%”**

What is Attention Deficit Hyperactivity Disorder (ADHD)? What causes ADHD? What are the consequences of ADHD?

Crash course on ADHD...pay close attention!

'Housekeeping' first:

The primary focus of this presentation as a whole is the link between ADHD and addictions. Therefore, the information I present on ADHD will be brief. I will try to be as thorough as possible. We believe this information is important for you to know as an addictions counselor.

Information for further study on the subject is recommended, and sources are provided in the handout/additional information section attachment.

My main sources for information

I have done a tremendous amount of research on the internet, searching journals, and reading numerous books. **Most of the information presented on ADHD will be taken from the following books.** Other info will be cited separately.



I chose to share the most recent research/information I've found. As with many fields of science, research continues, and what was once believed to be true, has since been proven wrong, or questionable. I encourage you to keep that in mind when you choose to continue to investigate ADHD.

Book list



- **ADULT ADD FACT BOOK** by Ron Sterling, M.D.

Published in November 2011, by Unsheapable Publications

Quick, to-the-point, no-frills explanation of ADHD and his hypothesis on ADHD. He cites over 880 references to support his statements.

- **TAKING CHARGE OF ADULT ADHD** by Russell A. Barkley, PhD (with Christine M. Benton)

Published in 2010 by Guilford Publications.

Dr. Barkley, has dedicated his career to child psychology, with Adult ADHD being his latest quest. Highly recommended when helping others with ADHD or as a resource for those who have ADHD.

A couple more. . .



- **THE SCIENCE OF ADHD** *A Guide for Parents and Professionals* by Chris Chandler

Published in 2010, by Wiley-Blackwell,

This is a very thorough, detailed look at all aspects and possibilities on ADHD. He cites over 1280 references.

- **HEALING ADD** *The Breakthrough Program That Allows You to See and Heal the 6 Types of ADD* by Daniel G. Amen, M.D.

Published in 2001 by Berkley Books.

This presents a somewhat different way at screening and treating ADHD. Dr. Amen explains his personal research process and findings. His writings are worth consideration by those serious in learning all the facts.

Last, but not least. . .

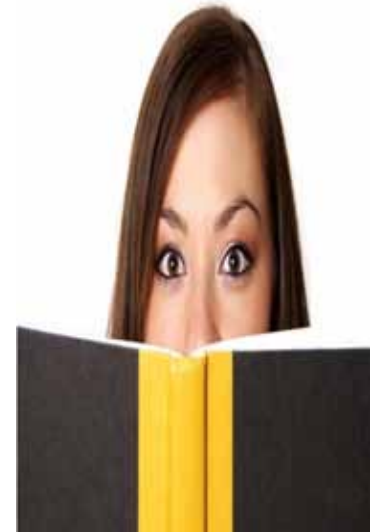
- **INTEGRATIVE TREATMENT FOR ADULT ADHD... A practical easy-to-use guide for clinicians.** By Ari Tuckman, Psy.D. MBA.

Published in 2007 by New Harbinger Publications, Inc.

Dr. Tuckman's goal is to provide would-be practitioners a comprehensive guide to learn about ADHD and appropriately address the issues concerning successful ADHD treatment, as well as other issues that may arise, such as substance abuse treatment.

A quick look at the history of its labels

- 1940s: Brain Dysfunction
- 1950s: Hyperkinetic Syndrome
- 1960s: Minimal Brain Dysfunction
- 1968: Hyperactive Child Syndrome
- 1980s: Attention Deficit Disorder
with/without hyperactivity
- 1994: Attention Deficit Hyperactivity
Disorder



Highlights of the Attention Deficit Hyperactivity Disorder (ADHD) News Media Briefing, www.medscape.com

Attention Deficit Hyperactivity Disorder (ADHD) is recognized by many Major Organizations as a legitimate diagnosis



Abundant scientific research has led major mainstream medical, psychological, and educational organizations in the U.S. to conclude that ADHD is ***a real neurological, biological disorder.***

* Impact of ADHD At Work and School, and Prevalence of Associated Conditions Revealed in New Survey., 2011 www.ADHDawarenessweek.org October

These Organizations Include:



- American Medical Association
- American Academy of Pediatrics
- National Institute of Mental Health
- Centers for Disease Control and Prevention
- American Psychiatric Association
- American Academy of Child & Adolescent Psychiatry
- U.S. Department of Education

ADHD is included in the American Psychiatric Association's Diagnostic and Statistical Manual for Mental Disorders (DSM-IV-TR).



The International Consensus Statement on ADHD (2002)

Clinical Child and Family Psychology Review, Vol. 5, No.2, June 2002

Compiled and signed by 86 international professionals in the field of ADHD and ADHD research, using over 500 references.









It was prompted by deep concern about “the periodic inaccurate portrayal of ADHD in media reports.”

They clearly and emphatically state:

ADHD is NOT a benign disease. It can cause devastating problems.

The report continues:

Those who suffer with ADHD are more likely to:

- Drop out of school (32-40%) 
- Have few or no friends (50-70%) 
- Experience teen pregnancy (40%) 
- Speed excessively and have multiple car accidents 
- Engage in anti-social activities (40-50%) 
- Underperform at work (70-80%) 
- Experience depression (20-30%) and personality disorders as adults (18-25%) 
- Experience substance abuse/addiction 

Russell Barkley (2010) points out:

Kids with ADHD are more likely to:

- Spend time in a hospital burn unit
- Be involved in pedestrian-auto or bicyclist-auto accident
- Be poisoned
- Break bones
- Have head injuries
- Lose teeth because of injuries



\$77 BILLION in lost income is attributed to ADHD annually in the USA



Joseph Biederman, M.D. (Professor of Psychiatry, Harvard Medical School and Chief of Pediatric Psychopharmacology at Massachusetts General Hospital),

He lists the ***average loss of household income*** per adult with ADHD to range anywhere from **\$8,900 to \$15,400** per year, depending on the econometric model used.



Issues to be considered include school drop-out rate, lack of college degrees, days absent from work, unemployment, underemployment.

* www.medicalnewstoday.com

Margaret Weiss, M.D. PhD,

Clinical Professor, University of British Columbia,

Reminds us of other costs/issues to look at when talking about the effects of undiagnosed/untreated ADHD:



- **Mental health treatment** (depression, addiction, anxiety) hospitalization/drugs, etc.
- **Education costs** (repeating a grade/lost days/special education costs/tutors/drop out rates)



- **Health care costs:** ER visits, accidents, smoking, Fetal Alcohol Syndrome costs, etc.

- **Criminal justice system costs:** courts, prisons, victims



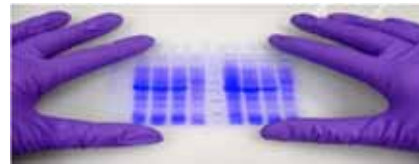
- **Social welfare system:** unemployment, foster care, other social welfare programs



Abundant research tells us:

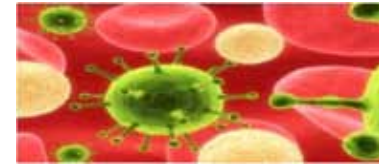


- ***ADHD is a neurobiological brain disorder.***
- ***Genetics are involved in the development of ADHD***
- ***Brain size and structure of an ADHD brain is different than that of a non-ADHD brain***
- ***Definite deficits in the amount and/or functions of the neurotransmitters dopamine and norepinephrine (and possibly serotonin) create a **chemical imbalance** which effects processes in the brain.***



Genes linked to ADHD

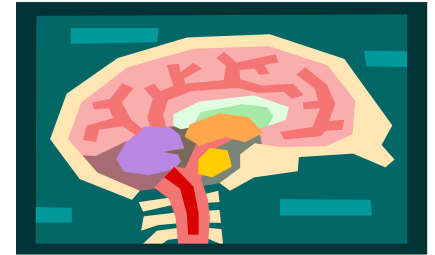
Research tells us:



- Specific **genes** have been identified as predisposing factors in developing ADHD. It is, therefore, hereditary.

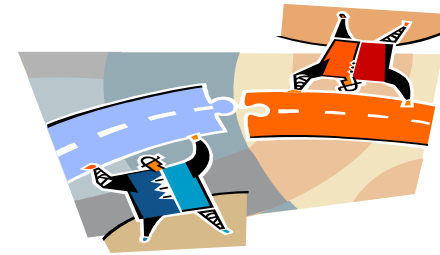
Chandler compares the heritability rate of ADHD with that of the heritability rate of *height*. Height has a rating of .88 and studies in ADHD estimate the heritability rate of ADHD to range from .75 to .91. The rating of 1 being entirely genetic and 0 entirely non-genetic.

Brain Size and Structure



- **Brain structure/size** is different in the ADHD brain compared to that of the non-ADHD brain.
 - Assessment of **general brain volume** has found reductions in ADHD patients.
 - Studies to date indicate that there is a reduction in both **gray and white matter** in ADHD brains, especially in the prefrontal cortex.
 - There is a reduction in **cortical volume and folds** within the cortex.
 - **Studies have also been done** on the Basal Ganglia, the Cerebellum, the Hippocampus and the Amygdala.

Neurotransmitters



- **Dopamine, norepinephrine, serotonin deficit**

The ‘bridges-out’ concept by Sterling is a very simplified explanation of how these work. *The nerve cells are compared to small pieces of road, and the neurotransmitters are temporary bridges between these roads which transport information between cells. If there are not enough ‘bridges,’ the information does not get to where it needs to go. OR* If the bridges do not stay in place long enough for the transmission of information to be completed, *the messages don’t get through.*

Research does NOT support the hypotheses that ADHD is caused by:

- Lack of will power, or choice, or ‘character’
- Parenting styles
- Too much television viewing/video game playing
- Too much sugar intake
- Food additives
- Society/peer pressure



Although the interaction of environmental factors with the biological factors may have an impact on the development and/or expression of ADHD, this alone is not the causal factor.

Different types of ADHD

'Different strokes for different folks'

- **DSM-IV-TR Criteria**

- ADHD, Combined Type
- ADHD, Predominantly Inattentive Type
- ADHD, Predominantly Hyperactive-Impulsive Type

- **Dr Amen lists 6 types**

- Type 1: Classic ADD
- Type 2: Inattentive ADD
- Type 3: Overfocused ADD
- Type 4: Temporal Lobe ADD
- Type 5: Limbic ADD
- Type 6: “Ring of Fire” ADD

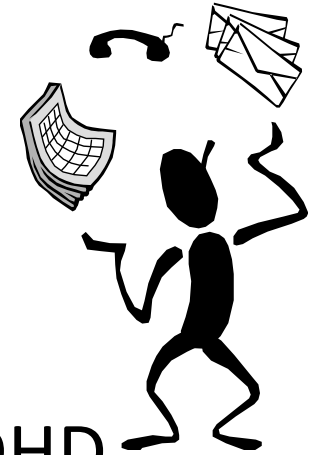
Dr. Amen's 6 Types of ADD

What you need to know:

SPECT is 'single photon emission computed tomography.' It is a nuclear medicine study that **evaluates brain blood flow and activity patterns.** Dr. Amen believes that SPECT is easier to perform, less expensive, and involves less radiation than PET (positron emission tomography) studies. (pg. 44).

Based on over 10,000 brain SPECT studies and over 15,000 patient evaluations, Dr. Amen identifies 6 different types of ADD. (pg.67)

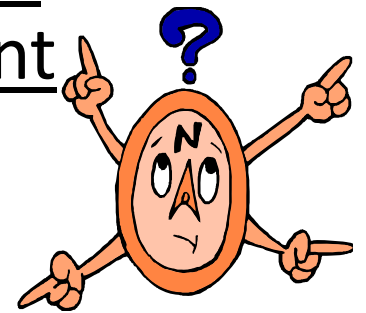
Type 1: Classic ADD



As the label states, it is the classic view.

It is comparable to the DSM criteria. This is what people think of when they think of ADHD.

These people are easily distracted; have trouble concentrating; have a poor attention span; have trouble listening to others, often procrastinates; is forgetful; loses things; talks excessively; interrupts or intrudes on others; makes careless mistakes (poor attention to detail); poor organization of environment & time; fidgety and in constant motion (hands, feet, etc.); impulsive; and hyperactive.



Type 2: Inattentive ADD



These people exhibit the core symptoms of ADD, except these people are NOT hyperactive/impulsive. In addition to being disorganized, easily distracted, and lacking concentration, they day-dream excessively; appear apathetic and un-motivated; feel tired, sluggish and are slow-moving; complain of being bored; and appear to be spacey or seem preoccupied. **This group is often undiagnosed because they do not exhibit the hyper-activity/impulsivity people often associate with ADHD.** Instead they are labeled as lazy, slow, unmotivated and a 'couch potato.'

Type 3: Overfocused ADD



Dr. Amen considers this the third most common type of ADD. These people have all of the core ADD symptoms plus tremendous trouble shifting attention, therefore exhibiting a tendency to 'get stuck' or locked into negative thought patterns or behaviors. Other symptoms include: worries excessively; is oppositional and argumentative; has a tendency toward compulsive behaviors; has difficulties seeing options in situations; gets locked into a course of action; needs to have things done a certain way or becomes very upset.

Type 4: Temporal Lobe ADD



These people with ADD also have problems with temper, mood stability, learning disabilities, and memory problems. They may have periods of quick temper or rages with little provocation; misinterpret comments as negative when they are not; have periods of panic/fear for no specific reason; have dark thoughts that may involve suicidal or homicidal ideas; have a 'short fuse.' They have a tendency to become increasingly irritable, then explode, then recede, and is often tired after a rage.

Dr. Amen tended to see this in correlation with previous head injuries.

Type 5: Limbic ADD



- The ADD core symptoms are present in addition to negativity; moodiness; sadness; low energy; chronic low self-esteem; frequent feelings of hopelessness, helplessness, or excessive guilt; lowered interest in things that are usually considered fun; sleep changes (too little or too much); frequent irritability.

This is where ADD and depression intersect, according to Dr. Amen. In diagnosis, Dr. Amen explains that depression tends to be a cyclic illness, whereas the symptoms of Limbic ADD can be seen for a prolonged period of time, extending back into childhood.

Type 6: “Ring of Fire” ADD



- **Type 6: “Ring of Fire” ADD:** often angry or aggressive; sensitive to environment; has frequent or cyclic mood changes (highs & lows); is inflexible or rigid in thinking; insists on having own way; periods of mean, nasty, or insensitive behavior; excessive talkative-ness; talks fast; excessive impulsivity; unpredictable behavior; appears anxious or fearful; sensitive to noise/touch/light.

Adults with bipolar disorder have manic episodes, while people with “R.o.F.” ADD do not. Bipolar children tend to be cyclic in their mood and behavior problems. They have times when they are ‘awful,’ irritable, and aggressive, and they have times when things are relatively normal. “R.o.F.” ADD kids tend to have problems on a more consistent basis.

DSM-IV considerations:



- Many clinicians who work with adults have issues with using the DSM-IV as sole diagnostic criteria. As a group, they point out that the criteria is slanted toward child-oriented examples, and does not accurately describe adult difficulties.
- Barkley, Weiss, Brown, Wender, Amen, and Connor (to name a few) have all developed screenings and rating scales they believe are more accurate and appropriate for adult diagnosis. These are all similar.

'Red flags,' common signs and symptoms:



Issues common in ADHD:



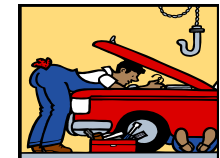
- High caffeine intake, cigarette smoking, substance abuse



- Learning struggles; dropping out of school/college



- Many projects going at the same time, but few ever getting completed.



- Forgets to do things in the future (prospective memory)



(cont.)

**SORRY WE
MISSED YOU!**

- Procrastination in many areas



- Impulsive behavior: spending, blurting out whatever is on their mind, does not read or listen to directions before starting something new.



- Thrill-seeking behaviors, tickets for speeding/reckless driving.



- History of diagnosis or family history of ADHD



- Financial problems

Phrases that are common:

- No matter how hard I try, I just can't turnoff my brain at night so I can sleep. Thoughts keep popping in.
- No, I don't lose my keys. I always leave them in the same place. (...in the car???)
- I'm always late for.... Even when I'm all dressed & ready to go.
- I've had (several) jobs in the past (?) years. I get fired for being late...or I get bored with the job and quit.



- I don't read well. I can't remember what I've read and have to go back and reread the paragraph/page again.
- Teachers were always after me in school to. . .

- Sit still



- Pay attention



- Get my homework turned in on time



- Stop talking



- Quit clowning around



Proper diagnosis process



Because ADHD statistically co-exists with other disorders (4 of 5 with ADHD also have another ‘comorbid’ condition), it is especially important that the formal diagnosis be made by a psychiatrist/psychologist experienced/knowledgeable in the field of ADHD. Usually those most experienced with ADHD diagnosis/ treatment are Child Psychiatrists and Psychologists.

The process should definitely include a thorough examination of the patient's childhood experience; symptoms and problems must have been present by age of 7 years. It is also important that information be corroborated by someone who knows the person well: parent, sibling, spouse, close friend.



Very recently the American Pediatric Association recommends that children as young as 3 years can and should be evaluated for ADHD. They do not recommend medication as a first line of treatment at this age.



Treatment for ADHD

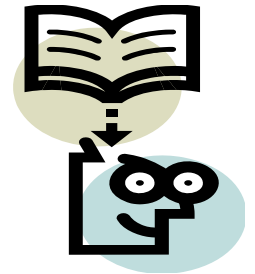
- **Medication**

- Among the **safest, most effective, & best studied of all drugs used to treat psychiatric conditions** (Barkley; Chandler; Amen; Tuckman)



- **Education**

- Understanding what is happening, why it is happening, and how it is effecting you and your life: include family when possible.
Knowledge is power



- **Coaching**

- Not just obvious advice; strategies for learning new ‘habits’

- **Psychotherapy**

- Addressing ADHD issues
- Assess and address co-morbid conditions

- **Alternative or ‘add-on’ therapies**

- Music



- Exercise programs



- Foods and supplements



- Neurofeedback



Stimulant Medication...it works!

Methylphenidate (Ritalin family) and amphetamine (Adderall family) are among the most researched, safest of all drugs used to treat psychiatric conditions.



Success rate for ADHD medications is probably unrivaled by any other treatment for any other disorder in psychiatry. (Barkley; Tuckman; Sterling)



Studies show that ADHD medications can:

- Normalize the behavior of 50-65% of those with ADHD
- Substantially improve the behavior of another 20-30%

New forms of stimulant meds.

- **Pro-drug: Brand name: Vyvanse**

– A member of the amphetamine family, contains lisdexamfetamine dimesylate. The medication can only be activated inside

the digestive tract. A chemical that occurs naturally in the digestive tract splits the lysine from the d-AMP, allowing it to work.



- **The Patch: Brand name: Daytrana**
 - Contains methylphenidate, which is absorbed through the skin.



- **The Pump: Brand name: Concerta**
 - As it absorbs water from the digestive system in a continuous, even flow, it squeezes out methylphenidate continuously for 8-12 hours or more.



Other meds. used to treat ADHD

- **Atomoxetine: Brand name: Strattera.**



- Non-stimulant; does not have the potential of abuse as stimulants.
- Prevents norepinephrine from being reabsorbed by the nerve cells once released.

- **Bupropion: Brand name: Wellbutrin**



- Developed as an antidepressant
- Sterling cautions it may be over-stimulating for some ADHD brains.

Other tri-cyclic and SSRI antidepressants are sometimes used successfully.

Amen has an extensive list of medications he uses to treat different types of ADHD. Chandler notes that Modafinil, clonidine, and guanfacine are among other medications being used successfully.

To learn more. . .

To learn more about the education, coaching, psychotherapy, and alternative/add-on therapies, you will need to do your research.

They are **very important parts** of the treatment of ADHD, but you may not be involved in that process.

OR . . . You may.



IT'S TIME FOR CHANGE

شكراً

תודה

धन्यवाद

Bedankt



Gracias

Obrigado!

Vielen
Dank

THANK
YOU