# NEWSLETTER

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     "Centri ADHD e consenso dei famigliari".



# **BIBIOGRAFIA ADHD NOVEMBRE 2010**

Journal of Abnormal Child Psychology: An official publication of the International Society for Research in Child and Adolescent Psychopathology. 2010 Oct;38:971-83.

**EXAMINING MANUAL AND VISUAL RESPONSE INHIBITION AMONG ADHD SUBTYPES.** 

## Adams ZW, Milich R, Fillmore MT.

This study compared inhibitory functioning among ADHD subtype groups on manual and visual versions of the stop task. Seventy-six children, identified as ADHD/I (n = 17), ADHD/C (n = 43), and comparison (n = 20) completed both tasks. Results indicated that both ADHD groups were slower to inhibit responses than the comparison group on both tasks. Comparison children were faster to inhibit than activate responses on both tasks. Children in the ADHD groups also demonstrated this robust pattern on the manual task. However, on the visual task, the ADHD groups evidenced slowed inhibition comparable to the time required to activate responding. This implies that the visual task is more sensitive than the manual task to inhibitory deficits associated with ADHD. The ADHD/I and the ADHD/C groups did not differ on most measures, suggesting that neither stop task is effective in differentiating the subtypes. These findings extend work highlighting the role of disinhibition in ADHD, and contrast recent work suggesting divergence between ADHD subtypes.

Paediatr Perinat Epidemiol, 2010;24:597-601.

ATTENTION DEFICIT/HYPERACTIVITY DISORDER IN PRIMARY SCHOOL CHILDREN OF TABRIZ, NORTH-WEST IRAN. Amiri S. Fakhari A. Maheri M. et al.

This study aimed to estimate the prevalence of attention deficit/hyperactivity disorder (ADHD), as well as its subtypes, in elementary school children and their demographic characteristics. A random clustered sample of elementary students was selected from schools of Tabriz, North-West Iran. The clinical diagnosis of ADHD was based on DSM-IV-TR criteria using an interview with children who were selected as scoring high on the Conner's teacher rating scale. A total of 30 schools and 1658 students were evaluated. The prevalence rate of clinical ADHD in the elementary students of Tabriz was 9.7%. Only two had been diagnosed previously. The mean age (standard deviation) was 9.39 (1.27) years. ADHD was more common among boys, students of the third level and children with an un-educated mother or father. It was not related to the type of school, age or birth order. Students with ADHD had lower school performance and orderliness reported by the school. Inattentiveness was more common among schoolgirls while the most common subtype was the combined one. Inattentive students had a significantly lower school performance. ADHD is common in elementary schools of this region and is correlated with poor performance. Greater awareness of parents and teachers concerning children at risk is necessary for an early diagnosis.

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Mol Psychiatry. 2010;15:1053-66.

A COMMON VARIANT OF THE LATROPHILIN 3 GENE, LPHN3, CONFERS SUSCEPTIBILITY TO ADHD AND PREDICTS EFFECTIVENESS OF STIMULANT MEDICATION.

## Arcos-Burgos M, Jain M, Acosta MT, et al.

Attention-Deficit/Hyperactivity Disorder (ADHD) has a very high heritability (0.8), suggesting that about 80% of phenotypic variance is due to genetic factors. We used the integration of statistical and functional approaches to discover a novel gene that contributes to ADHD. For our statistical approach, we started with a linkage study based on large multigenerational families in a population isolate, followed by fine mapping of targeted regions using a family-based design. Family- and population-based association studies in five samples from disparate regions of the world were used for replication. Brain imaging studies were performed to evaluate gene function. The linkage study discovered a genome region harbored in the Latrophilin 3 gene (LPHN3). In the world-wide samples (total n6360, with 2627 ADHD cases and 2531 controls) statistical association of LPHN3 and ADHD was confirmed. Functional studies revealed that LPHN3 variants are expressed in key brain regions related to attention and activity, affect metabolism in neural circuits implicated in ADHD, and are associated with response to stimulant medication. Linkage and replicated association of ADHD with a novel non-candidate gene (LPHN3) provide new insights into the genetics, neurobiology, and treatment of ADHD.

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Int J Immunopathol Pharmacol. 2010;23:873-80.

ATTENTION-DEFICIT HYPERACTIVITY DISORDER AND INTELLECTUAL DISABILITY: A STUDY OF ASSOCIATION WITH BRAIN-DERIVED NEUROTROPHIC FACTOR GENE POLYMORPHISMS.

# Aureli A, del Beato T, Sebastiani P, et al.

Symptoms of attention-deficit hyperactivity disorder (ADHD) have been found in several studies of children with intellectual disabilities (ID) but the two diseases are not always associated. Several lines of evidence implicate the involvement of brain-derived neurotrophic factor (BDNF) in ADHD, and it may also be relevant in ID due to its known involvement in the development of the central nervous system (CNS) and in learning/memory functions. We genotyped paediatric patients with ADHD and ID for the Val66Met and 270 C/T polymorphisms in BDNF. Diagnosis of ADHD and ID was confirmed by the clinicians in accordance with DSM-IV criteria. The G/A genotype of the Val66Met SNP was associated with both ADHD and ID, and the G allele was significantly associated with ADHD. The C/C genotype of the C270T SNP was significantly overrepresented in both ADHD and ID groups compared with the controls. Data suggest that both BDNF polymorphisms could play a role in the etiology of ADHD. In addition, we present the first results suggesting that these BDNF SNPs are significantly associated with ID.

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J Psychiatr Res. 2010;44:1058-62.

REVISITING THE ASSOCIATION BETWEEN MATERNAL SMOKING DURING PREGNANCY AND ADHD.

# Ball SW, Gilman SE, Mick E, et al.

**Objective**: Studies examining the relationship between maternal smoking during pregnancy and the development of Attention Deficit Hyperactivity Disorder (ADHD) among offspring have yielded mixed results, with some studies suggesting a strong association and others finding no association. These studies have varied in quality of design and measures. The purpose of this study was to evaluate the association between maternal smoking during pregnancy and offspring ADHD, using detailed prospective smoking data and subsequent follow-up data from the Collaborative Perinatal Project (CPP).

**Method**: Maternal smoking status was collected throughout pregnancy during the original CPP study. Offspring were followed-up in early adulthood and questioned about ADHD symptoms and diagnosis. Logistic regression was used to model the association between maternal smoking during pregnancy and ADHD. Linear and logistic regression were used to examine clinical characteristics and remission rates associated with ADHD in relation to maternal smoking.

**Results**: No association was found between maternal smoking during pregnancy and offspring ADHD. Further, no differences in age of onset, number of symptoms, or likelihood of remission were found among ADHD subjects with and without a history of maternal smoking during pregnancy.

**Conclusions**: These findings do not support the hypothesis that maternal smoking during pregnancy is causally related to ADHD. Ongoing research should continue to strive to identify those environmental or genetic factors that may enhance the impact of maternal smoking on ADHD or that may be associated more clearly with the development and potential prevention of ADHD.

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Journal of Attention Disorders. 2010 Nov;14:247-55.

PARENT PERCEIVED IMPACT OF SPANIARD BOYS' AND GIRLS' INATTENTION, HYPERACTIVITY, AND OPPOSITIONAL DEFIANT BEHAVIORS ON FAMILY LIFE.

Bauermeister JJ, Puente A, Martínez JV, et al.

**Objective**: This study examined the impact of inattention, hyperactivity, and oppositional defiant disorder (ODD) behaviors and gender on family life.

**Method**: We created scales for the Family Experiences Inventory (FEI) in a nonclinical sample of Spaniard families with children ages 6 to 12 years (N = 369) and analyzed the perceived impact of these three behavior dimensions on family experiences.

**Results**: Multiple regression analyses indicated that ODD behaviors were uniquely correlated with Total FEI and its dimensions. Inattention was also uniquely related to higher negative Impact on School Relations and lower Positive Impact on Parents scales. Finally, gender—hyperactivity interactions indicated that boys with higher hyperactivity scores were more likely to score higher on the FEI Total, School Relations, and Siblings scales, and more likely to score lower on the Positive Impact on Parents scale than girls.

**Conclusions**: These findings suggested that parents perceive greater child-related impact and place greater burden from having a male child with hyperactivity. Inattention, hyperactivity, and oppositional defiant behaviors are associated with global parent—child interactive stress but the pattern of associations will vary depending upon the behavior, child gender, and context of family life examined.

Journal of Clinical Child and Adolescent Psychology. 2010 Nov;39:825-36.

A CONTROLLED TRIAL OF WORKING MEMORY TRAINING FOR CHILDREN AND ADOLESCENTS WITH ADHD.

## Beck SJ, Hanson CA, Puffenberger SS, et al.

This study assessed the efficacy of a 5-week, intensive working memory training program for 52 children and adolescents (ages 7-17) who had Attention-Deficit/Hyperactivity Disorder (ADHD) and other comorbid diagnoses. This study provided a treatment replication since the waitlist control group also completed training and was included in the follow-up data analyses. Parents and teachers completed paper-and-pencil measures of working memory, executive functioning, and ADHD symptoms at baseline, posttreatment, and 4-month follow-up. Parent ratings indicated that participants improved on inattention, overall number of ADHD symptoms, initiation, planning/organization, and working memory. Teacher ratings approached significance at posttreatment and at 4-month follow-up on and Initiate scale. Working memory training appears promising as an intervention in improving executive functioning and ADHD symptoms.

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Isr Med Assoc J. 2010;12:531-35.

OBJECTIVE MEASURES OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: A PILOT STUDY.

## Berger I, Goldzweig G.

**Background**: Most aspects of attention-deficit/hyperactivity disorder diagnosis rely on subjective judgment. Computerized continuous performance tests are designed to improve the validity of the process but are controversial due to low odds ratios. There is a need to find more definitive measures of assessment.

**Objectives**: To test the validity and reliability of a new tool, a computerized continuous performance functions test, which includes a multi-task approach designed to achieve a higher odds ratio of assessment.

**Methods**: We applied this test to 58 children aged 6-12 years: 45 were diagnosed as ADHD and 13 non-ADHD children served as a control group.

**Results**: The CPF test was able to differentiate between non-ADHD and ADHD children. CPF test results were more accurate than other continuous performance tests. The results were statistically significant in all test parameters, confirming the test's validity and reliability.

**Conclusions**: The CPF test includes a combination of tasks based on an algorithm designed to test several domains of attention. In this pilot study the CPF test was found to be a valid and reliable tool for the diagnosis of ADHD in children. This test might increase the diagnostic utility of computerized tests. The research points to the need for developing a more definitive process for ADHD diagnosis.

Arch Pediatr Adolesc Med. 2010;164:930-34.

ASSOCIATION BETWEEN ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN ADOLESCENCE AND SUBSTANCE USE DISORDERS IN ADULTHOOD.

## Brook DW, Brook JS, Zhang C, et al.

**Objectives**: To determine whether attention-deficit/ hyperactivity disorder (ADHD) in adolescence is related to substance use disorders (SUDs) in adulthood and whether conduct disorder (CD) mediates this relationship.

**Design**: A prospective design incorporating 5 assessments in participants spanning the mean ages of 14 to 37 years. Two baseline assessments were taken at ages 14 and 16 years, and 3 outcome assessments were taken between ages 27 and 37 years.

Setting: United States.

**Participants**: A community sample of individuals initially drawn from upstate New York in 1975 and observed to a mean age of 37 years.

**Interventions**: The Diagnostic Interview Schedule for Children was used to assess ADHD and CD and the University of Michigan Composite International Diagnostic Interview was used to assess SUDs. Main

Outcome Measure: A diagnosis of SUDs given to participants in adulthood.

**Results**: The odds ratios for ADHD and CD in adolescence as related to SUDs in adulthood were 1.9 and 3.5, respectively. The association between ADHD and SUDs, however, was indirect because CD served as a mediator between ADHD and SUDs.

**Conclusions**: Pediatricians should focus on adolescent ADHD when it progresses to CD because CD is a major predictor of SUDs in adulthood.

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Journal of Clinical Child and Adolescent Psychology. 2010 Nov;39:726-40.

COGNITIVE CONTROL AND ATTENTIONAL SELECTION IN ADOLESCENTS WITH ADHD VERSUS ADD.

# Carr L, Henderson J, Nigg JT.

An important research question is whether Attention Deficit Hyperactivity Disorder (ADHD) is related to early- or late-stage attentional control mechanisms and whether this differentiates a nonhyperactive subtype (ADD). This question was addressed in a sample of 145 ADD/ADHD and typically developing comparison adolescents (aged 13-17). Attentional blink and antisaccade tasks were used to assay early-and late-stage control, respectively. ADD was defined using normative cutoffs to ensure low activity level in

children who otherwise met full criteria for ADHD. The ADD group had an attenuated attentional blink versus controls and ADHD-combined. The effect was not produced using DSM—IV definition of ADHD-primarily inattentive type or DSM symptom counts. ADHD-combined showed greater weakness in response inhibition, as manifest in the antisaccade task. Combining tasks yielded an interaction differentiating group performance on the two tasks.

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J Sleep Res. 2010;19:535-45.

ASSOCIATION BETWEEN SYMPTOMS AND SUBTYPES OF ATTENTION-DEFICIT HYPERACTIVITY DISORDER AND SLEEP PROBLEMS/DISORDERS.

## Chiang HL, Gau SSF, Ni HC, et al.

This study aimed to investigate the association between attention-deficit hyperactivity disorder (ADHD) symptoms and subtypes, and sleep schedules, daytime inadvertent napping, and sleep problems/disorders in children and adolescents with and without ADHD. The sample included 325 patients with ADHD, aged 10-17 years [male: 81.5%; combined type (ADHD-C): 174; predominantly inattentive type (ADHD-I): 130; predominantly hyperactive-impulsive type (ADHD-HI): 21], and 257 children and adolescents without lifetime ADHD (non-ADHD). We conducted psychiatric interviews with the participants and their mothers before making the diagnoses of ADHD, other psychiatric disorders, and sleep problems or disorders. We also collected the medication treatment data and parent and teacher reports of ADHD symptoms. Multilevel models were used for data analyses controlling for sex, age, psychiatric comorbidities, and treatment with methylphenidate. The ADHD-C and ADHD-I groups had more daytime inadvertent napping. In general, the three subtypes were associated with increased rates of sleep problems/disorders. Specifically, ADHD-C rather than ADHD-I was associated with circadian rhythm problems, sleep-talking, nightmares (also ADHD-HI), and ADHD-I was associated with hypersomnia. The most-related sleep schedules and problems for inattention and hyperactivity-impulsivity were earlier bedtime, later rise time, longer nocturnal sleep, more frequent daytime napping, insomnia, sleep terrors, sleep-talking, snoring, and bruxism across informants. The findings imply that in addition to the dichotomous approach of ADHD and considering the psychiatric comorbid conditions, ADHD subtypes and symptom dimensions need to be considered in clinical practice and in the research regarding the association between ADHD and sleep problems/disorders.

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Curr Psychiatry Rep. 2010;12:403-08.

USE OF TREATMENT SERVICES FOR ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN LATINO CHILDREN. *Eiraldi R, Diaz Y*.

This article reviews recent research that examines service use for attention-deficit/hyperactivity disorder among Latino children. Using MEDLINE, PsycInfo, and PubMed, literature searches were conducted for research published between January 2008 and April 2010 that specifically focused on Latino children or included a sufficient sample of Latino children and examined racial/ethnic differences between groups. Eight studies regarding general service use, treatment with medication, and parenting interventions were identified and are reviewed herein. Results of these studies highlight important factors associated with the continued mental health service use disparities among Latino children, such as parental attitudes toward service use. Results also provide much-needed data with regard to adapting and engaging Latino parents into parenting interventions. Suggestions for clinical practice and future research are discussed.

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Arch Gen Psychiatry. 2010 Nov;67:1179-86.

ATTENTION-DEFICIT/HYPERACTIVITY DISORDER, CONDUCT DISORDER, AND YOUNG ADULT INTIMATE PARTNER VIOLENCE.

## Fang X, Massetti GM, Ouyang L, et al.

**CONTEXT**: Studies based on clinical samples suggest a connection between childhood attention-deficit/hyperactivity disorder (ADHD) and later intimate partner violence (IPV) perpetration.

**OBJECTIVE**: To examine the association between retrospectively reported childhood ADHD and conduct disorder (CD) symptoms and the perpetration of physical IPV in a population-based sample of young adults.

**DESIGN, SETTING, AND PARTICIPANTS**: The study population consisted of 11 238 participants (mean [SD] age, 22.0 [1.7] years) in the National Longitudinal Study of Adolescent Health. Multinomial logistic regressions and propensity score matching were used to analyze the relationships of IPV with symptoms of ADHD domains (hyperactive/impulsive and inattentive) and symptoms of CD as well as with ADHD and CD dichotomized on the basis of symptom criteria.

**MAIN OUTCOME MEASURES**: Respondents' answers to the 2 questions in the wave III survey reflecting perpetration of physical violence toward a partner were used to define IPV perpetration. Intimate partner violence perpetration resulting in injury or not was assessed with a follow-up question.

**RESULTS**: Conduct disorder significantly predicted IPV perpetration both with and without injury. Controlling for CD and hyperactivity/impulsivity, inattention independently predicted young adult IPV perpetration without injury. Controlling for inattention and CD, no significant relationship between hyperactivity/impulsivity and IPV perpetration without injury was found. Results were different regarding IPV perpetration resulting in injury. Hyperactivity/impulsivity, but not inattention, independently predicted IPV perpetration resulting in injury. In categorical analyses, CD predicted both types of IPV, and ADHD significantly predicted IPV perpetration resulting in injury but did not significantly predict IPV perpetration without injury.

**CONCLUSIONS**: Conduct disorder is consistently associated with violence in intimate relationships. Controlling for CD, there is also an association between ADHD and IPV. Results suggest the need for services and treatment strategies that specifically address the risks for violence and promote healthy intimate relationships for youths with CD and ADHD.

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J Dev Behav Pediatr. 2010 Oct;31:641-48.

USE OF ANTIDEPRESSANTS DURING PREGNANCY AND RISK OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN THE OFFSPRING.

## Figueroa R.

**Objective**: Little is known about the impact of in utero exposure to antidepressants on children's long-term mental health. This study analyzed the impact of exposure to antidepressants during pregnancy on the risk of attention-deficit/hyperactivity disorder (ADHD) in the offspring.

**Methods**: Claims-based data from 38,074 families were used to identify deliveries, parental mental health diagnoses, maternal exposure to antidepressants, and diagnosis or treatment for ADHD in the children. Multiple logistic regressions were performed using the presence of ADHD in the child by the age of 5 years as the dependent variable.

**Results**: A diagnosis of ADHD in the mother or the father was associated with higher rates of ADHD in the children (OR = 4.15, p < .001 and OR = 3.54, p < .001, respectively). A diagnosis of bipolar disorder (OR = 5.08, p < .001), psychotic disorders (OR = 4.05, p = .02), or depressive disorders (OR = 2.58, p < .001) in the mother, but not in the father, increased the risk of ADHD in their children. Exposure to bupropion during pregnancy (OR = 3.63, p = .02), especially during the second trimester (OR = 14.66, p < .001), was strongly associated with increased risk of ADHD, whereas exposure to selective serotonin reuptake inhibitors was not (OR = 0.91, p = .74).

**Conclusion**: Children of mothers treated with bupropion during pregnancy have an increased risk of being diagnosed with ADHD; a possible causal effect needs to be further studied. Assessing the mental health of caregivers should be considered as part of the evaluation and treatment of children with ADHD.

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J Child Adolesc Psychopharmacol. 2010;20:365-75.

A 6-MONTH, OPEN-LABEL, EXTENSION STUDY OF THE TOLERABILITY AND EFFECTIVENESS OF THE METHYLPHENIDATE TRANSDERMAL SYSTEM IN ADOLESCENTS DIAGNOSED WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

# Findling RL, Katic A, Rubin R, et al.

**Objective**: The aim of this study was to evaluate the tolerability and effectiveness of the methylphenidate transdermal system (MTS) over 6 months in adolescents with attention-deficit/hyperactivity disorder (ADHD).

**Methods**: This was an industry-sponsored, 30-center, open-label study of subjects aged 13-17 years with ADHD. Subjects were dose-optimized with MTS (10-30mg/9 hours) over 5 weeks and then dose-maintained for up to 5 months. Tolerability evaluations included treatment-emergent adverse events (TEAEs) and dermal responses. Effectiveness was assessed with the ADHD-Rating Scale-IV (ADHD-RS-IV).

**Results**: A total of 162 subjects received MTS treatment. The majority of TEAEs (>99%) were mild or moderate in intensity, and the most frequently reported TEAE was decreased appetite (15.4%). Thirteen subjects discontinued the study due to TEAEs. The majority (93.6%) of dermatologic reactions indicated mild erythema. There was significant improvement in mean ADHD-RS-IV total scores from study entry to end point (p<0.001).

**Conclusion**: Slightly more than half (54.0%) of subjects completed this 6-month, open-label extension study of MTS; the primary reason for discontinuation was withdrawn consent (36.0%). Reported TEAEs and skin tolerability findings were similar to those observed with MTS use in children and adolescents. MTS treatment resulted in a decrease in ADHD symptoms as rated by clinicians.

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J Child Adolesc Psychopharmacol. 2010;20:355-64.

TIME COURSE AND PREDICTORS OF HEALTH-RELATED QUALITY OF LIFE IMPROVEMENT AND MEDICATION SATISFACTION IN CHILDREN DIAGNOSED WITH ATTENTION-DEFICIT/ HYPERACTIVITY DISORDER TREATED WITH THE METHYLPHENIDATE TRANSDERMAL SYSTEM.

Frazier TW, Weiss M, Hodgkins P, et al.

**Objective**: The aim of this study was to evaluate the time course and predictors of improvement in health-related quality of life (HRQL) and medication satisfaction in children diagnosed with attention-deficit/hyperactivity disorder (ADHD) and treated with the methylphenidate transdermal system (MTS).

**Methods**: Temporal relationships between ADHD symptoms, medication satisfaction, and HRQL measures were examined via latent growth curve, structural path, and growth mixture models.

Results: Higher levels of medication satisfaction at the end of titration predicted greater increases in family HRQL (p=0.004) and, to a lesser extent, child HRQL (p=0.068) throughout the study. At 4 of 6 (p<0.05) and 5 of 6 (p<0.10) contemporaneous time points, ADHD symptoms predicted child HRQL. At 2 of 6 (p<0.05) and 3 of 6 (p<0.10) contemporaneous time points, ADHD symptoms predicted family HRQL. ADHD did not predict child or family HRQL improvements at subsequent time points. A uniform pattern of change for child HRQL was noted, with most HRQL change following the pattern of symptom change during titration. Three distinct patterns of change were noted for family HRQL.

**Conclusions**: In most cases, medication satisfaction, ADHD symptoms, and HRQL improved simultaneously, suggesting that HRQL was not a delayed response to improvement in symptoms. Children showed a uniform pattern of improvement in HRQL that followed symptom change; three distinct patterns of change were found for improvement in family HRQL. Clinical Trial Registry: #NCT00151970.

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Cerebellum. 2010;9:429-32.

MEGALOGRAPHIA IN CHILDREN WITH CEREBELLAR LESIONS AND IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

# Frings M, Gaertner K, Buderath P, et al.

Structural changes of the cerebellum have been reported in attention-deficit/hyperactivity disorder (ADHD) in several studies. The cerebellum is a structure essential for motor coordination and motor learning. Beside behavioral deficits, children with ADHD often show slight motor abnormalities. In the present study, handwriting was examined in both children with ADHD and children with cerebellar lesions. By writing the same sentence several times, letter height increased in the ADHD and cerebellar groups but not in controls. Comparable disorders of handwriting in cerebellar and ADHD children support previous studies, which suggest a contribution of cerebellar dysfunction to motor abnormalities in ADHD. However, an involvement of non-cerebellar dysfunctions in ADHD cannot be excluded.

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Journal of Attention Disorders. 2010 Nov:14:267-72.

PREVALENCE OF METHYLPHENIDATE PRESCRIPTION AMONG SCHOOL-AGED CHILDREN IN A SWISS POPULATION: INCREASE IN THE NUMBER OF PRESCRIPTIONS IN THE SWISS CANTON OF VAUD, FROM 2002 TO 2005, AND CHANGES IN PATIENT DEMOGRAPHICS.

## Gumy C, Huissoud T, Dubois-Arber F.

**Objective**: Methylphenidate is prescribed for children and adolescents to treat ADHD. As in many Western countries, the increase in methylphenidate consumption is a public concern in Switzerland. The article discusses the authors' assessment of prescription prevalence in 2002 and 2005 for school-aged children in the canton of Vaud.

**Method**: Pharmacy prescription information is available from the regional public health authority. Descriptive analyses are conducted on an anonymized database of the years 2002 and 2005. Data for each year are compared to assess trends in methylphenidate prescription prevalence.

**Results**: The findings show an increase from 0.74% to 1.02% in the number of prescriptions for 5- to 14-year-old children, particularly in prescriptions for girls. Data also show important geographical differences in prescription.

**Conclusion**: The prevalence of methylphenidate prescription is lower in Switzerland than other Western countries, particularly the United States. However, some aspects of prevalence are similar, including the increase per year, demographics, and geographic characteristics.

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Appl Cogn Psychol. 2010;24:827-36.

WORKING MEMORY DEFICITS CAN BE OVERCOME: IMPACTS OF TRAINING AND MEDICATION ON WORKING MEMORY IN CHILDREN WITH ADHD.

# Holmes J, Gathercole SE, Place M, et al.

10.1002/acp.1589.absThis study evaluated the impact of two interventions-a training program and stimulant medication-on working memory (WM) function in children with attention deficit hyperactivity disorder (ADHD). Twenty-five children aged between 8 and 11 years participated in training that taxed WM skills to the limit for a minimum of 20 days, and completed other assessments of WM and IQ before and

after training, and with and without prescribed drug treatment. While medication significantly improved visuo-spatial memory performance, training led to substantial gains in all components of WM across untrained tasks. Training gains associated with the central executive persisted over a 6-month period. IQ scores were unaffected by either intervention. These findings indicate that the WM impairments in children with ADHD can be differentially ameliorated by training and by stimulant medication.

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Lipids Health Dis. 2010;9.

SUPPLEMENTATION OF POLYUNSATURATED FATTY ACIDS, MAGNESIUM AND ZINC IN CHILDREN SEEKING MEDICAL ADVICE FOR ATTENTION-DEFICIT/HYPERACTIVITY PROBLEMS - AN OBSERVATIONAL COHORT STUDY.

## Huss M, Volp A, Stauss-Grabo M.

**Background**: Polyunsaturated fatty acids are essential nutrients for humans. They are structural and functional components of cell membranes and pre-stages of the hormonally and immunologically active eicosanoids. Recent discoveries have shown that the long-chained omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) also play an important role in the central nervous system. They are essential for normal brain functioning including attention and other neuropsychological skills.

Materials and methods: In our large observational study we monitored 810 children from 5 to 12 years of age referred for medical help and recommended for consuming polyunsaturated fatty acids (PUFA) in combination with zinc and magnesium by a physician over a period of at least 3 months. The food supplement ESPRICO(registered trademark) (further on referred to as the food supplement) is developed on the basis of current nutritional science and containing a combination of omega-3 and omega-6 fatty acids as well as magnesium and zinc. Study objective was to evaluate the nutritional effects of the PUFA-zinc-magnesium combination on symptoms of attention deficit, impulsivity, and hyperactivity as well as on emotional problems and sleep related parameters. Assessment was performed by internationally standardised evaluation scales, i.e. SNAP-IV and SDQ. Tolerance (adverse events) and acceptance (compliance) of the dietary therapy were documented.

**Results**: After 12 weeks of consumption of a combination of omega-3 and omega-6 fatty acids as well as magnesium and zinc most subjects showed a considerable reduction in symptoms of attention deficit and hyperactivity/impulsivity assessed by SNAP-IV. Further, the assessment by SDQ revealed fewer emotional problems at the end of the study period compared to baseline and also sleeping disorders. Mainly problems to fall asleep, decreased during the 12 week nutritional therapy. Regarding safety, no serious adverse events occurred. A total of 16 adverse events with a possible causal relationship to the study medication were reported by 14 children (1.7%) and only 5.2% of the children discontinued the study due to acceptance problems. Continuation of consumption of the food supplement was recommended by the paediatricians for 61.1% of the children.

**Conclusion**: Our results suggest a beneficial effect of a combination of omega-3 and omega-6 fatty acids as well as magnesium and zinc consumption on attentional, behavioural, and emotional problems of children and adolescents. Thus, considering the behavioural benefit in combination with the low risk due to a good safety profile, the dietary supplementation with PUFA in combination with zinc and magnesium can be recommended.

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J Sleep Res. 2010;19:546-51.

CIRCADIAN MOTOR ACTIVITY AFFECTED BY STIMULANT MEDICATION IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

# Ironside S, Davidson F, Corkum P.

Attention-deficit/hyperactivity disorder (ADHD) is a highly prevalent disorder occurring in approximately 3-5% of school-aged children. The core symptoms of ADHD are effectively treated with stimulant medications such as methylphenidate; however, there are also negative side effects, including insomnia. It has been suggested that administration of stimulant medication may alter the timing or regularity of circadian motor activity levels. This study aimed to investigate the impact of stimulant medication on the strength and timing

of circadian rhythms in 16 stimulant medication-naive children with ADHD. Participants were monitored for changes in motor activity during a 3-week blinded placebo-controlled medication trial to examine the impact of immediate-release methylphenidate hydrochloride. Motor activity was measured by actigraphy, and 24-h activity profiles were analysed using cosinor analyses to identify measurable changes in circadian rhythms. The children in this sample demonstrated significant increases in motor activity during the sleep-onset latency period. They also showed a significant reduction in relative circadian amplitude and a phase-delay in the timing of the daily rhythm. Clinicians and parents of children being treated with stimulant medication for ADHD should be aware that stimulant medication may cause disruption of sleep/circadian rhythms. Behavioural strategies to improve sleep may be useful for children experiencing these negative effects from medication.

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Behav Ther. 2010;41:491-504.

PARENTING COGNITIONS AND TREATMENT BELIEFS AS PREDICTORS OF EXPERIENCE USING BEHAVIORAL PARENTING STRATEGIES IN FAMILIES OF CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

Johnston C, Mah JWT, Regambal M.

We tested a model of mothers' parenting efficacy and attributions for child ADHD behaviors as predictors of experiences with behavioral treatment. The model proposed that mothers' beliefs regarding the acceptability and effectiveness of behavioral strategies would intervene between mothers' cognitions about parenting and child behavior and their treatment experiences. Participants were 101 mothers of 5- to 10-year-old children (82% male) with ADHD. Mothers reported their parenting efficacy and attributions for child behavior, and then received a single session of treatment teaching 2 behavior management strategies. Then, mothers reported their beliefs regarding the acceptability and effectiveness of these strategies. A follow-up phone interview 1 week later assessed mothers' experiences in using the behavioral strategies. The overall model fit the data. Attributions of child ADHD behavior as more pervasive, enduring, and within the child's control were related to seeing behavioral treatment as more acceptable, but neither attributions nor treatment acceptability predicted treatment experience. However, mothers with higher parenting efficacy viewed the behavioral strategies as more likely to be effective, and this pathway significantly predicted positive treatment experience. Implications for understanding the variables that contribute to parental decision-making and treatment participation for childhood ADHD are considered.

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Schizophr Bull. 2010 Nov;36:1167-86.

OCULOMOTOR AND PUPILLOMETRIC INDICES OF PRO- AND ANTISACCADE PERFORMANCE IN YOUTH-ONSET PSYCHOSIS AND ATTENTION DEFICIT/HYPERACTIVITY DISORDER.

# Karatekin C, Bingham C, White T.

The goals of the study were to examine inhibitory deficits on the antisaccade task in 8- to 20-year olds with youth-onset psychosis or attention deficit/hyperactivity disorder (ADHD) and healthy controls and to examine if age-related changes in performance differed across groups. In addition to the conventional measures of performance, pupillary dilations were used to obtain estimates of phasic and tonic level of arousal. Results showed that the psychosis, but not the ADHD, group had elevated antisaccade error rates; however, variability of error rates was high in all groups. These inhibitory failures were accompanied by a lower level of momentary cognitive effort (as indexed by pupillary dilations). The largest differences between the control and clinical groups were found not in the expected indices of inhibition but in the probability of correcting inhibitory errors and in variability of antisaccade response times, which were correlated with each other. These findings did not appear to be attributable to a deficit in maintaining task instructions in mind in either disorder or lack of motivation in ADHD. Instead, results point to impairments in

both clinical groups in sustaining attention on a trial-by-trial basis, resulting in deficits in self-monitoring. Thus, results show inhibitory deficits in the context of more general attentional impairments in both disorders.

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Journal of Attention Disorders. 2010 Nov:14:281-91.

A COMPOUND HERBAL PREPARATION (CHP) IN THE TREATMENT OF CHILDREN WITH ADHD: A RANDOMIZED CONTROLLED TRIAL.

Katz M, Levine AA, Kol-Degani H, et al.

**Objective**: Evaluation of the efficacy of a patented, compound herbal preparation (CHP) in improving attention, cognition, and impulse control in children with ADHD.

**Method Design**: A randomized, double-blind, placebo-controlled trial.

**Setting**: University-affiliated tertiary medical center.

Participants: 120 children newly diagnosed with ADHD, meeting DSM-IV criteria.

**Intervention**: Random assignment to the herbal treatment group (n = 80) or control group (placebo; n = 40); 73 patients in the treatment group (91%) and 19 in the control group (48%) completed the 4-month trial.

**Outcome measure**: Test of Variables of Attention (TOVA) administered before and after the treatment period; overall score and 4 subscales.

**Results**: The treatment group showed substantial, statistically significant improvement in the 4 subscales and overall TOVA scores, compared with no improvement in the control group, which persisted in an intention-to-treat analysis.

**Conclusions**: The well-tolerated CHP demonstrated improved attention, cognition, and impulse control in the intervention group, indicating promise for ADHD treatment in children.

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Arch Gen Psychiatry. 2010 Nov;67:1168-78.

STRUCTURE AND DIAGNOSIS OF ADULT ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: ANALYSIS OF EXPANDED SYMPTOM CRITERIA FROM THE ADULT ADHD CLINICAL DIAGNOSTIC SCALE.

Kessler RC, Green JG, Adler LA, et al.

**CONTEXT**: Controversy exists about the appropriate criteria for a diagnosis of adult attention-deficit/hyperactivity disorder (ADHD).

**OBJECTIVE**: To examine the structure and symptoms most predictive of DSM-IV adult ADHD.

**DESIGN**: The data are from clinical interviews in enriched subsamples of the National Comorbidity Survey Replication (n = 131) and a survey of a large managed health care plan (n = 214). The physician-administered Adult ADHD Clinical Diagnostic Scale (ACDS) was used to assess childhood ADHD and expanded symptoms of current adult ADHD. Analyses examined the stability of symptoms from childhood to adulthood, the structure of adult ADHD, and the adult symptoms most predictive of current clinical diagnoses.

**SETTING**: The ACDS was administered telephonically by clinical research interviewers with extensive experience in the diagnosis and treatment of adult ADHD.

**PARTICIPANTS**: An enriched sample of community respondents.

MAIN OUTCOME MEASURE: Diagnoses of DSM-IV /ACDS adult ADHD.

**RESULTS**: Almost half of the respondents (45.7%) who had childhood ADHD continued to meet the full DSM-IV criteria for current adult ADHD, with 94.9% of these patients having current attention-deficit disorder and 34.6% having current hyperactivity disorder. Adult persistence was much greater for inattention than for hyperactivity/impulsivity. Additional respondents met the full criteria for current adult ADHD despite not having met the full childhood criteria. A 3-factor structure of adult symptoms included executive functioning (EF), inattention/hyperactivity, and impulsivity. Stepwise logistic regression found EF problems to be the most consistent and discriminating predictors of adult DSM-IV /ACDS ADHD.

**CONCLUSIONS**: These findings document the greater persistence of inattentive than of hyperactive/impulsive childhood symptoms of ADHD in adulthood but also show that inattention is not specific to ADHD because it is strongly associated with other adult mental disorders. In comparison, EF problems are more specific and consistently important predictors of DSM-IV adult ADHD despite not being in the DSM-IV, suggesting that the number of EF symptoms should be increased in the DSM-V/ICD-11.

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Behav Brain Funct. 2010;6.

Possible association of norepinephrine transporter -3081(A/T) polymorphism with methylphenidate response in attention deficit hyperactivity disorder.

Kim BN, Kim JW, Hong SB, et al.

**Background**: Attention-deficit/hyperactivity disorder (ADHD) is a heritable disorder characterized by symptoms of inattention and/or hyperactivity/impulsivity. Methylphenidate (MPH) has been shown to block the norepinephrine transporter (NET), and genetic investigations have demonstrated that the norepinephrine transporter gene (SLC6A2) is associated with ADHD. The aims of this study were to examine the association of the SLC6A2 -3081(A/T) and G1287A polymorphisms with MPH response in ADHD.

**Methods**: This study enrolled 112 children and adolescents with ADHD. A response criterion was defined based on the Clinical Global Impression-Improvement (CGI-I) score, and the ADHD Rating Scale-IV (ARS) score was also assessed at baseline and 8 weeks after MPH treatment.

**Results**: We found that the subjects who had the T allele as one of the alleles (A/T or T/T genotypes) at the -3081(A/T) polymorphism showed a better response to MPH treatment than those with the A/A genotype as measured by the CGI-I. We also found a trend towards a difference in the change of the total ARS scores and hyperactivity/impulsivity subscores between subjects with and without the T allele. No significant association was found between the genotypes of the SLC6A2 G1287A polymorphism and response to ADHD treatment.

**Conclusion**: Our findings provide evidence for the involvement of the -3081(A/T) polymorphism of SLC6A2 in the modulation of the effectiveness of MPH treatment in ADHD.

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Sci Total Environ. 2010;408:5737-43.

ASSOCIATION BETWEEN BLOOD LEAD LEVELS (<5(MU)G/DL) AND INATTENTION-HYPERACTIVITY AND NEUROCOGNITIVE PROFILES IN SCHOOL-AGED KOREAN CHILDREN.

Kim Y, Cho SC, Kim BN, et al.

**Objectives**: The association between low blood lead levels (< 5 (mu)g/dL) and the inattention-hyperactivity symptoms and neurocognitive profiles of school-aged Korean children was investigated.

**Methods**: We measured blood lead levels in 256 Korean children aged 8-10. years. Teachers completed the Attention-Deficit Hyperactivity Disorder Rating Scale (T-ARS)-IV to assess inattentive and hyperactive symptoms. Parents completed the Korean version of the Learning Disability Evaluation Scale (K-LDES). Children performed neurocognitive tests [The Continuous Performance Test (CPT), the Children's Color Trails Test, and the Stroop Color and Word Test (SCWT)].

**Results**: A linear regression analysis indicated that the blood lead concentrations were associated with the inattention scores [. B=. 4.8, S.E.=. 1.6, 95% confidence interval (CI): 1.5-8.0], the hyperactivity subscores (3.1, 1.4, 0.3-5.9), and the total score (7.9, 2.9, 2.1-13.6) on the T-ARS; the number of omission errors on the CPT (20.6, 7.1, 6.5-34.6); the listening (-1.4, 0.7, -2.8 to -0.1), reading (-2.1, 0.7, -3.4 to -0.7), writing (-2.0, 0.7, -3.4 to -0.6), spelling (-2.2, 0.7, -3.7 to -0.7), and calculating (-1.8, 0.7, -3.1 to -0.4) scores on the K-LDES; and the color-word score on the SCWT (-6.7, 3.4, -13.3 to -0.1). A logistic regression analysis indicated that the probability of inattentive and hyperactive symptoms was increased with higher blood lead levels in boys with an odds ratio of 2.768 [. B=. 1.018, S.E.=. 0.487, p=. 0.036, 95% CI: 1.066-7.187].

<b>Conclusion</b> : This study suggests that even low blood lead levels (< 5 (mu)g/dL) are associated with inattentive and hyperactivity symptoms and learning difficulties in school-aged children.
Scandinavian Journal of Psychology. 2010 Oct;51:439-48.  THE ATTENTION AND EXECUTIVE FUNCTION RATING INVENTORY (ATTEX): PSYCHOMETRIC PROPERTIES AND
CLINICAL UTILITY IN DIAGNOSING ADHD SUBTYPES.  Klenberg L, Jämsä S, Häyrinen T, et al.  This study presents a new inventory, the Attention and Executive Function Rating Inventory (ATTEX), and
examines the psychometric properties and the clinical utility of ATTEX in identifying the attention deficit hyperactivity disorder combined type (ADHD-C) and the ADHD predominantly inattentive type (ADHD-I) in school environments. A normative sample of Finnish 7- to 15-year-old children and adolescents (N = 701)
and a clinical sample consisting of children with ADHD-C (N = 190) and ADHD-I (N = 25) were examined with the ATTEX and the ADHD Rating Scale-IV. The ATTEX and its scales had good internal consistency reliability (0.67-0.98) and criterion validity (0.68-0.95). Normative data was provided for the total normative
sample and for boys and girls separately. Gender differences were noted in the ATTEX scores, boys having consistently higher scores on all ATTEX scales. The effect of age was significant only for one of the ten scales, the Motor hyperactivity scale, 7-year-olds having more problems of hyperactivity than 14-year-
olds. Lower parent education level and the child's learning difficulties were related to higher ratings of EF problems in ATTEX. When different cutoff scores for boys and girls were applied, ATTEX was sensitive in
identifying children with attention deficit disorders. In addition, ATTEX was accurate in differentiating children with ADHD-I from children with ADHD-C. In this Finnish sample, ATTEX showed solid

J Abnorm Psychol. 2010 Nov;119:713-25.

ODD DIMENSIONS, ADHD, AND CALLOUS-UNEMOTIONAL TRAITS AS PREDICTORS OF TREATMENT RESPONSE IN CHILDREN WITH DISRUPTIVE BEHAVIOR DISORDERS.

psychometric properties and could be used as a reliable tool in the diagnostic evaluation of ADHD-C and

## Kolko DJ, Pardini DA.

ADHD-I.

To answer several questions pertinent to DSM–V, the authors examined the predictive validity of pretreatment oppositional defiant disorder (ODD) dimensions, attention-deficit/hyperactivity disorder (ADHD), and callous—unemotional (CU) traits in relation to several treatment outcomes in 177 children diagnosed with ODD or conduct disorder (CD). Multiple informants completed diagnostic interviews and rating scales at 6 assessment points (pretreatment to 3-year follow-up) to document emotional and behavioral outcomes. After controlling for pretreatment CD, the ODD dimension of hurtfulness was related to treatment-resistant CD, delinquent behaviors, and externalizing problems. In contrast, the ODD dimension tapping irritability was associated with treatment-resistant ODD, internalizing problems, and global functional impairment following treatment. Whereas pretreatment ADHD was associated with posttreatment ODD and social problems, it was unrelated to posttreatment CD symptoms and diagnosis. Contrary to predictions, CU traits were unrelated to any posttreatment outcomes after controlling for other covariates. These findings remained after controlling for measures of pretreatment global functional impairment.

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Schizophr Res. 2010;124:152-60.

DEFICITS IN VISUAL SUSTAINED ATTENTION DIFFERENTIATE GENETIC LIABILITY AND DISEASE EXPRESSION FOR SCHIZOPHRENIA FROM BIPOLAR DISORDER.

# Kumar CTS, Christodoulou T, Vyas NS, et al.

**Background**: There is mounting evidence for shared genetic liability to psychoses, particularly with respect to Schizophrenia (SZ) and Bipolar Disorder (BD), which may also involve aspects of cognitive dysfunction. Impaired sustained attention is considered a cardinal feature of psychoses but its association with genetic liability and disease expression in BD remains to be clarified.

**Methods**: Visual sustained attention was assessed using the Degraded Symbol Continuous Performance Test (DS-CPT) in a sample of 397 individuals consisting of 50 remitted SZ patients, 119 of their first degree relatives, 47 euthymic BD patients, 88 of their first degree relatives and 93 healthy controls. Relatives with a personal history of schizophrenia or bipolar spectrum disorders were excluded. Performance on the DS-CPT was evaluated based on the response criterion (the amount of perceptual evidence required to designate a stimulus as a target) and sensitivity (a signal-detection theory measure of signal/noise discrimination).

**Results**: We found no effect of genetic risk or diagnosis for either disorder on response criterion. In contrast, impaired sensitivity was seen in SZ patients and to a lesser degree in their relatives but not in BD patients and their relatives. These findings were not attributable to IQ, medication, age of onset or duration of illness.

**Conclusions**: Our results argue for the specificity of visual sustained attention impairment in differentiating SZ from BD. They also suggest that compromised visual information processing is a significant contributor to these deficits in SZ.

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Arch Gen Psychiatry. 2010 Nov;67:1159-67.

SEPARATION OF COGNITIVE IMPAIRMENTS IN ATTENTION-DEFICIT/HYPERACTIVITY DISORDER INTO 2 FAMILIAL FACTORS.

# Kuntsi J, Wood AC, Rijsdijk F, et al.

**CONTEXT**: Attention-deficit/hyperactivity disorder (ADHD) is associated with widespread cognitive impairments, but it is not known whether the apparent multiple impairments share etiological roots or separate etiological pathways exist. A better understanding of the etiological pathways is important for the development of targeted interventions and for identification of suitable intermediate phenotypes for molecular genetic investigations.

**OBJECTIVES**: To determine, by using a multivariate familial factor analysis approach, whether 1 or more familial factors underlie the slow and variable reaction times, impaired response inhibition, and choice impulsivity associated with ADHD.

**DESIGN**: An ADHD and control sibling-pair design.

**SETTING**: Belgium, Germany, Ireland, Israel, Spain, Switzerland, and the United Kingdom.

**PARTICIPANTS**: A total of 1265 participants, aged 6 to 18 years: 464 probands with ADHD and 456 of their siblings (524 with combined-subtype ADHD), and 345 control participants.

**MAIN OUTCOME MEASURES**: Performance on a 4-choice reaction time task, a go/no-go inhibition task, and a choice-delay task.

**RESULTS**: The final model consisted of 2 familial factors. The larger factor, reflecting 85% of the familial variance of ADHD, captured 98% to 100% of the familial influences on mean reaction time and reaction time variability. The second, smaller factor, reflecting 13% of the familial variance of ADHD, captured 62% to 82% of the familial influences on commission and omission errors on the go/no-go task. Choice impulsivity was excluded in the final model because of poor fit.

**CONCLUSIONS**: The findings suggest the existence of 2 familial pathways to cognitive impairments in ADHD and indicate promising cognitive targets for future molecular genetic investigations. The familial distinction between the 2 cognitive impairments is consistent with recent theoretical models--a

developmental model and an arousal-attention model--of 2 separable underlying processes in ADHD. Future research that tests the familial model within a developmental framework may inform developmentally sensitive interventions.

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Journal of Clinical Child and Adolescent Psychology. 2010 Nov;39:761-75.

PREDICTIVE VALIDITY OF A CONTINUOUS ALTERNATIVE TO NOMINAL SUBTYPES OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER FOR DSM-V.

## Lahey BB, Willcutt EG.

Three subtypes of attention-deficit/hyperactivity disorder (ADHD) based on numbers of symptoms of inattention (I) and hyperactivity-impulsivity (HI) were defined in the Diagnostic and Statistical Manual of Mental Disorders (4th ed.) to reduce heterogeneity of the disorder, but the subtypes proved to be highly unstable over time. A continuous alternative to nominal subtyping is evaluated in a longitudinal study of 129 four- to six-year-old children with ADHD and 130 comparison children. Children who met criteria for all subtypes in Year 1 continued to exhibit greater functional impairment than comparison children during Years 2 to 9. Among children with ADHD in Year 1, I and HI symptoms differentially predicted teacher-rated need for treatment and reading and mathematics achievement scores over the next 8 years in controlled analyses. Consistent with other studies, these findings suggest that the use of diagnostic modifiers specifying the numbers of I and HI symptoms could reduce heterogeneity and facilitate clinical intervention, prognosis, and research.

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Infant Ment Health J. 2010:31:630-46.

# SLEEP PATTERNS OF 7-WEEK-OLD INFANTS AT FAMILIAL RISK FOR ATTENTION DEFICIT HYPERACTIVITY DISORDER. Landau R, Sadeh A, Vassoly P, et al.

Sleep patterns of 26 seven-week-old boys at familial risk for attention deficit hyperactivity disorder (ADHD) and 18 control infants were compared by objective (actigraph) and subjective (maternal sleep diary) measures, over five consecutive 24-hr periods. Actigraph findings indicated that the groups differed on stability (SD) of quiet sleep only during the day. Reports in maternal sleep diaries indicated that they also differed on stability of waking and stability of sleep duration, again only during the day. No group differences were found in terms of average scores, whether calculated for the entire 24-hr periods, for nights, or for days. Mothers in the risk group reported that fathers were less involved in infant care than did those in the control group. These findings suggest that as early as 7 weeks of age, infants at risk for ADHD differ from controls only on stability of their sleep patterns during the day, when environmental regulatory factors are more intensive.

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Pediatrics, 2010:126:e1033-e1038.

CLINICAL UTILITY OF THE VANDERBILT ADHD RATING SCALE FOR RULING OUT COMORBID LEARNING DISORDERS. Langberg JM, Vaughn AJ, Brinkman WB, et al.

**OBJECTIVE**: The goal was to examine the clinical utility of using the Vanderbilt Attention-Deficit/Hyperactivity Disorder (ADHD) Rating Scale (VARS) to determine when to refer children with ADHD for learningdisorder (LD) evaluations.

**METHODS**: A total of 128 stimulant-naive children with ADHD, 7 to 11 years of age, were included in the study. The parents and teachers of 128 children with diagnosed ADHD completed the VARS. The reading, numerical operations, and spelling subtests from the Wechsler Individual Achievement Test, Second Edition, were used to identify children with a comorbid LD. We examined the predictive validity and clinical utility of the VARS performance items for ruling in/out the presence of a comorbid LD.

**RESULTS**: Thirty-eight percent of the samples met the criteria for a comorbid LD. A cutoff score of 7.5 for the sum of the VARS parent and teacher reading items had excellent clinical utility for ruling out both reading and spelling LDs. Cutoff scores of 4 for the VARS teacher reading and writing items had excellent utility for ruling out comorbid reading and spelling LDs, respectively. None of the VARS performance items effectively identified or ruled out math LDs.

**CONCLUSION**: The VARS performance items should be used with an interview about school functioning and a review of school records to rule out the presence of a comorbid reading or spelling LD for children with diagnosed ADHD.

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Int J Adolesc Med Health. 2010;22:275-83.

THE EFFECT OF HEMISPHERE SPECIFIC REMEDIATION STRATEGIES ON THE ACADEMIC PERFORMANCE OUTCOME OF CHILDREN WITH ADD/ADHD.

## Leisman G, Melillo R, Thum S, et al.

The development and normal function of the cerebrum is largely dependent on sub-cortical structures, such as the cerebellum and basal ganglia. Dysfunction in these areas can affect both the nonspecific arousal system and information transfer in the brain. Dysfunction of this sort often results in motor and sensory symptoms commonly seen in children with ADD/ADHD. These brain regions have been reported to be underactive, with that underactivity restricted to the right or left side of the sub-cortical and cortical regions. An imbalance of activity or arousal of one side of the cortex can result in a functional disconnection similar to that seen in split-brain patients. Since ADD/ADHD children exhibit deficient performance on tests thought to measure perceptual laterality, evidence of weak laterality or failure to develop laterality has been found across various modalities (auditory, visual, tactile) resulting in abnormal cerebral organization and associated dysfunctional specialization needed for lateralized processing of language and non-language function. This study examines groups of ADD/ADHD elementary school children from first through sixth grade. All participants were administered all the subtests of the Wechsler Individual Achievement Tests, the Brown Parent Questionnaire, and given objective performance measures on tests of motor and sensory coordinative abilities (interactive metronome). Results measured after a 12-week remediation program aimed at increasing the activity of the hypothesized underactive right hemisphere function, yielded significant improvement of greater than two years in grade level in all domains except in mathematical reasoning. Results are discussed in the context of the concept of functional disconnectivity in ADD/ADHD children.

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European Child & Adolescent Psychiatry. 2010 Oct;19:747-53.

ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN THE OFFSPRING FOLLOWING PRENATAL MATERNAL BEREAVEMENT: A NATIONWIDE FOLLOW-UP STUDY IN DENMARK.

# Li J, Olsen J, Vestergaard M, et al.

Severe prenatal stress exposure has been found to increase the risk of neuropsychiatric conditions like schizophrenia. We examined the risk of attention-deficit/hyperactivity disorder (ADHD) in the offspring following prenatal maternal bereavement, as a potential source of stress exposure. We conducted a nationwide population-based cohort study including all 1,015,912 singletons born in Denmark from 1987 to 2001. A total of 29,094 children were born to women who lost a close relative during pregnancy or up to 1 year before pregnancy. These children were included in the exposed cohort and other children were in the unexposed cohort. We used Cox regression to estimate hazard ratios for ADHD, defined as the first-time ADHD hospitalization or first-time ADHD medication after 3 years of age. Boys born to mothers who were bereaved by unexpected death of a child or a spouse, had a 72% increased risk of ADHD [hazard ratio (HR) 1.72, 95% confidence interval (CI) 1.09–2.73]. Boys born to mothers who lost a child or a spouse during 0–6 months before pregnancy and during pregnancy had a HR of 1.47 (95% CI 1.00–2.16) and 2.10

(95% CI 1.16–3.80),	respectively.	Our findings	suggest	that	prenatal	maternal	exposure t	to severe	stress
may increase the risk	of ADHD in the	ne offspring.							

Complement Ther Med. 2010;18:175-83.

RANDOMIZED-CONTROLLED STUDY OF TREATING ATTENTION DEFICIT HYPERACTIVITY DISORDER OF PRESCHOOL CHILDREN WITH COMBINED ELECTRO-ACUPUNCTURE AND BEHAVIOR THERAPY.

Li S, Yu B, Lin Z, et al.

**Objective**: To study the effectiveness of electro-acupuncture with behavior therapy on preschool children with attention deficit hyperactivity disorder (ADHD).

**Methods**: 180 preschool children with ADHD diagnosed by DSM-IV were classified into three subtypes: predominantly inattentive subtype (PI subtype, 60 cases), predominantly hyperactive-impulsive subtype (HI subtype, 60 cases) and combined subtype (CT subtype, 60 cases). In each subtype, the patients were recruited randomly into experimental group, which received electro-acupuncture and behavior therapy; and control group, which received sham electro-acupuncture and behavior therapy. The treatment efficacy was evaluated by measuring the change in core symptoms of ADHD according to the standard enacted by the national traditional Chinese medicine committee after 12 courses of treatment (lasted 12 weeks) and relapse rate was evaluated after a half-year follow up.

**Results**: (1) In PI subtype, 11 cases showed effectiveness with treatment and 12 cases showed improvement with treatment among experimental group, while five cases showed effectiveness and 12 cases showed improvement among control group; in HI subtype, 10 cases showed effectiveness and 17 cases showed improvement among experimental group, while four cases showed effectiveness and 14 cases showed improvement among control group; in CI subtype, 12 cases showed effectiveness and 12 cases showed improvement among experimental group, while five cases showed effectiveness and 12 cases showed improvement among control group; The overall comparison manifested that the efficacy of experimental group was better than that of control group (p<0.05). (2) The core symptoms of experimental group were significantly decreased than that of control group at half-year follow up (p<0.05).

**Conclusion**: The treatment of ADHD in preschool children with electro-acupuncture combining behavior therapy has positive effect in reducing symptoms of ADHD. Adverse events are mild to patients. It is recommendable for this combined therapy, while multi-center RCT needs to be further studied.

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Developmental Psychology. 2010 Nov;46:1543-55.

A MIXTURE-MODEL APPROACH TO LINKING ADHD TO ADOLESCENT ONSET OF ILLICIT DRUG USE.

## Malone PS, Van Eck K, Flory K, et al.

Prior research findings have been mixed as to whether attention-deficit/hyperactivity disorder (ADHD) is related to illicit drug use independent of conduct problems (CP). With the current study, the authors add to this literature by investigating the association between trajectories of ADHD symptoms across childhood and adolescence and onset of illicit drug use, with and without controlling for CP. In a longitudinal panel study of a community sample of 754 girls and boys recruited in kindergarten, this research question was examined with a combination of growth mixture modeling (to model parent-reported ADHD symptom trajectories) and survival analysis (to model youth-reported initiation of illicit drug use). Results revealed a 3-class model of ADHD trajectories, with 1 class exhibiting no or minimal symptoms throughout childhood and adolescence, another class showing a convex shape (an increase, then a decrease in symptoms) across time, and a third class showing a concave shape (a decrease, then a slight increase in symptoms) over time. The concave-trajectory class demonstrated significantly earlier onset of illicit drug use than the minimal-problem class, with the convex-trajectory class falling between (but not significantly different from

either of the other two classes). These results did not change when the authors added CP to the model as a covariate. Implications of findings for theory and practice are discussed.

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The Clinical Neuropsychologist. 2010 Oct;24:1204-37.

EFFECTIVENESS OF SYMPTOM VALIDITY MEASURES IN IDENTIFYING COGNITIVE AND BEHAVIORAL SYMPTOM EXAGGERATION IN ADULT ATTENTION DEFICIT HYPERACTIVITY DISORDER.

## Marshall P, Schroeder R, O'Brien J, et al.

This study examines the effectiveness of symptom validity measures to detect suspect effort in cognitive testing and invalid completion of ADHD behavior rating scales in 268 adults referred for ADHD assessment. Patients were diagnosed with ADHD based on cognitive testing, behavior rating scales, and clinical interview. Suspect effort was diagnosed by at least two of the following: failure on embedded and free-standing SVT measures, a score > 2 SD below the ADD population average on tests, failure on an ADHD behavior rating scale validity scale, or a major discrepancy between reported and observed ADHD behaviors. A total of 22% of patients engaged in symptom exaggeration. The Word Memory test immediate recall and consistency score (both 64%), TOVA omission errors (63%) and reaction time variability (54%), CAT-A infrequency scale (58%), and b Test (47%) had good sensitivity as well as at least 90% specificity. Clearly, such measures should be used to help avoid making false positive diagnoses of ADHD.

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Revista Brasileira de Psiguiatria. 2010;32:132-38.

FOOD INTAKE AND SERUM LEVELS OF IRON IN CHILDREN AND ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

# Menegassi M, De Mello ED, Guimaraes LR, et al.

**Objective**: To investigate hematologic variables related to iron deficiency and food intake in attention-deficit/hyperactivity disorder.

**Method**: The sample comprised 62 children and adolescents (6-15 years old) divided into three groups: Group 1: 19 (30.6%) patients with attention-deficit/hyperactivity disorder using methylphenidate for 3 months; Group 2: 22 (35.5%) patients with attention-deficit/hyperactivity disorder who were methylphenidate naive and Group 3: 21 (33.9%) patients without attention-deficit/hyperactivity disorder. Serum iron, ferritin, transferrin, hemoglobin, mean corpuscular volume, red cell distribution width, mean corpuscular hemoglobin concentration, nutritional diagnostic parameters - Body Mass Index Coefficient, food surveys were evaluated among the groups.

**Results**: The attention-deficit/hyperactivity disorder group drug naive for methylphenidate presented the highest red cell distribution width among the three groups (p = 0.03). For all other hematologic and food survey variables, no significant differences were found among the groups. No significant correlation between dimensional measures of attention-deficit/ hyperactivity disorder symptoms and ferritin levels was found in any of the three groups.

**Conclusion**: Peripheral markers of iron status and food intake of iron do not seem to be modified in children with attention-deficit/hyperactivity disorder, but further studies assessing brain iron levels are needed to fully understand the role of iron in attention-deficit/hyperactivity disorder pathophysiology.

Journal of the American Academy of Child & Adolescent Psychiatry. 2010 Sep;49:898-905.

FAMILY-BASED GENOME-WIDE ASSOCIATION SCAN OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

Mick E, Todorov A, Smalley S, et al.

**Objective**: Genes likely play a substantial role in the etiology of attention-deficit/hyperactivity disorder (ADHD). However, the genetic architecture of the disorder is unknown, and prior genome-wide association

studies (GWAS) have not identified a genome-wide significant association. We have conducted a third, independent, multisite GWAS of DSM-IV-TR ADHD.

**Method**: Families were ascertained at Massachusetts General Hospital (MGH; N = 309 trios), Washington University at St. Louis (WASH-U; N = 272 trios), and University of California at Los Angeles (UCLA; N = 156 trios). Genotyping was conducted with the Illumina HumanlM or HumanlM-Duo BeadChip platforms. After applying quality control filters, association with ADHD was tested with 835,136 SNPs in 735 DSM-IV ADHD trios from 732 families.

**Results**: Our smallest p value (6.7E-07) did not reach the threshold for genome-wide statistical significance (5.0E-08), but one of the 20 most significant associations was located in a candidate gene of interest for ADHD (SLC9A9, rs9810857, p = 6.4E-6). We also conducted gene-based tests of candidate genes identified in the literature and found additional evidence of association with SLC9A9.

**Conclusions**: We and our colleagues in the Psychiatric GWAS Consortium are working to pool together GWAS samples to establish the large data sets needed to follow-up on these results and to identify genes for ADHD and other disorders

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Clinical Linguistics & Phonetics. 2010 Sep;24:706-21.

LEXICAL AND GRAMMATICAL DEVELOPMENT IN A CHILD WITH COCHLEAR IMPLANT AND ATTENTION DEFICIT: A CASE STUDY.

## Moreno-Torres I, Torres S, Santana R.

This is the first study to explore lexical and grammatical development in a deaf child diagnosed with Attention Deficit Hyperactivity Disorder, Inattentive sub-type (ADHD/I). The child, whose family language was Spanish, was fitted with a cochlear implant (CI) when she was 18 months old. ADHD/I, for which she was prescribed medication, was diagnosed 3;6 years later. Speech samples were videotaped over the first 4 years of CI use and during a follow-up session 1 year later. Samples were transcribed according to CHAT conventions and several measures of expressive language were obtained. Receptive language was evaluated with standardized tests. Results show that while some aspects of her development seemed relatively positive (e.g., acquisition of verbal morphemes at the same auditory age as typical children), other characteristics were atypical for a CI user: (1) preference for paralexical expressions in early lexicon; (2) lexical errors in colours and other abstract words; and (3) low MLU and varied grammatical errors including disorganized discourse. Medication had a positive effect on all these characteristics, providing evidence of a link with ADHD/I. This study concludes that ADHD/I had a direct impact on the lexical and grammatical development in this child, as well as an indirect influence over her communicative style. More studies are needed to explore language characteristics of children with CI and ADHD.

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European Child & Adolescent Psychiatry. 2010 Oct;19:755-64.

SEVERE PSYCHOSOCIAL STRESS AND HEAVY CIGARETTE SMOKING DURING PREGNANCY: AN EXAMINATION OF THE PRE- AND PERINATAL RISK FACTORS ASSOCIATED WITH ADHD AND TOURETTE SYNDROME.

# Motlagh MG, Katsovich L, Thompson N, et al.

Attention-deficit/hyperactivity disorder (ADHD) is frequently diagnosed in children with Tourette syndrome (TS). The basis for this co-occurrence is uncertain. This study aimed to determine if specific pre- and perinatal risk factors, including heavy maternal smoking and severe psychosocial stress during pregnancy, were associated with one or both disorders, or neither. We compared maternal report data on pre- and perinatal risk factors on 222 children between the ages of 7 and 18 years including 45 individuals with TS alone, 52 individuals with ADHD alone, 60 individuals with condition of comorbid TS + ADHD, and 65 unaffected control children. Pre- and perinatal histories as well as psychiatric assessments were performed using standardized questionnaires and semi-structured interviews with the mothers and children. Logistic regression was used to determine the odds ratio for each variable of interest. Compared to the mothers of unaffected control children, the mothers of children with ADHD alone reported higher rates of heavy smoking (>10 cigarettes per day) during pregnancy and higher levels of severe psychosocial stress during

pregnancy (OR = 13.5, p < 0.01 and OR = 6.8, p < 0.002, respectively). The TS + ADHD and the TS alone patients also had higher rates heavy maternal smoking and high levels of psychosocial stress compared to the control children, but these differences failed to reach statistical significance (heavy smoking: OR = 8.5, p < 0.052, OR = 4.6, p < 0.19, respectively; severe psychosocial stress: OR = 3.1, p < 0.07, OR = 2.6, p < 0.11, respectively). Heavy maternal smoking and severe levels psychosocial stress during pregnancy were independently associated with a diagnosis of ADHD. TS patients also had higher rates of these risk factors, but the ORs failed to reach statistical significance. Efforts are needed to reduce the frequency of these risk factors in high-risk populations. Future studies, using genetically sensitive designs, are also needed to sort out the causal pathways.

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Dev Psychopathol. 2010 Nov;22:785-802.

DEVELOPMENTAL PROCESSES IN PEER PROBLEMS OF CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN THE MULTIMODAL TREATMENT STUDY OF CHILDREN WITH ADHD: DEVELOPMENTAL CASCADES AND VICIOUS CYCLES.

# Murray-Close D, Hoza B, Hinshaw SP, et al.

We examined the developmental processes involved in peer problems among children (M age = 10.41 years) previously diagnosed with attention-deficit/hyperactivity disorder (ADHD) at study entry (N = 536) and a comparison group (N = 284). Participants were followed over a 6-year period ranging from middle childhood to adolescence. At four assessment periods, measures of aggression, social skills, positive illusory biases (in the social and behavioral domains), and peer rejection were assessed. Results indicated that children from the ADHD group exhibited difficulties in each of these areas at the first assessment. Moreover, there were vicious cycles among problems over time. For example, peer rejection was related to impaired social skills, which in turn predicted later peer rejection. Problems also tended to spill over into other areas, which in turn compromised functioning in additional areas across development, leading to cascading effects over time. The findings held even when controlling for age and were similar for males and females, the ADHD and comparison groups, and among ADHD treatment groups. The results suggest that the peer problems among children with and without ADHD may reflect similar processes; however, children with ADHD exhibit greater difficulties negotiating important developmental tasks. Implications for interventions are discussed.

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Curr Psychiatry Rep. 2010;12:374-81.

TREATMENT OF PRESCHOOLERS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

## Murray DW.

This article reviews the current treatment literature for attention-deficit/hyperactivity disorder (ADHD) in preschoolers. Parent training studies show consistent behavioral improvements reported by teachers and observers as well as parents, with evidence of clinically significant improvement in ADHD symptoms for up to 2 years. Few other behavioral interventions have been evaluated, although data from a large psychosocial, multimodal intervention are forthcoming. There is evidence to support the benefit of immediate-release stimulant medication for up to 1 year; however, effects do not seem to be as large, and some of the side effects may be greater than for school-age children. With regard to nonstimulants such as atomoxetine, there are literally no controlled outcome data for children with ADHD who are younger than 5 years of age. Overall, a great deal remains to be learned about the safety and efficacy of pharmacotherapy in this age group. Fortunately, results of several large intervention studies will be available soon to better inform clinical practice.

Journal of the American Academy of Child & Adolescent Psychiatry. 2010 Sep;49:884-97.

META-ANALYSIS OF GENOME-WIDE ASSOCIATION STUDIES OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

Neale BM, Medland SE, Ripke S, et al.

**Objective**: Although twin and family studies have shown attention-deficit/hyperactivity disorder (ADHD) to be highly heritable, genetic variants influencing the trait at a genome-wide significant level have yet to be identified. As prior genome-wide association studies (GWAS) have not yielded significant results, we conducted a meta-analysis of existing studies to boost statistical power.

**Method**: We used data from four projects: a) the Children's Hospital of Philadelphia (CHOP); b) phase I of the International Multicenter ADHD Genetics project (IMAGE); c) phase II of IMAGE (IMAGE II); and d) the Pfizer-funded study from the University of California, Los Angeles, Washington University, and Massachusetts General Hospital (PUWMa). The final sample size consisted of 2,064 trios, 896 cases, and 2,455 controls. For each study, we imputed HapMap single nucleotide polymorphisms, computed association test statistics and transformed them to z-scores, and then combined weighted z-scores in a meta-analysis.

**Results**: No genome-wide significant associations were found, although an analysis of candidate genes suggests that they may be involved in the disorder.

**Conclusions**: Given that ADHD is a highly heritable disorder, our negative results suggest that the effects of common ADHD risk variants must, individually, be very small or that other types of variants, e.g., rare ones, account for much of the disorder's heritability.

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Journal of Learning Disabilities. 2010 Nov;43:553-62.

Elements of working memory as predictors of goal-setting skills in children with attention-deficit/hyperactivity disorder.

# Nyman A, Taskinen T, Grönroos M, et al.

The aim of the study was to examine how goal-setting skills of children with attention-deficit/hyperactivity disorder (ADHD) can be predicted with elements of working memory. The study involved 30 children with an ADHD diagnosis and 30 healthy volunteers. The IQ of the participants was assessed, and ADHD symptoms were evaluated by parents. Each of the elements of working memory was assessed with two measures as well as goal-setting skills. In the tests of the central executive and in one of the tests of the visuospatial sketch pad, children with ADHD performed more poorly than did controls but not in the tests of the phonological loop. Children with ADHD performed more poorly than controls did on the mastery scores of the goal-setting measures but not on the Strategy scores. According to regression analysis, central executive functions are critical for the variance in goal-setting skills in children with ADHD.

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J Am Acad Child Adolesc Psychiatry. 2010;49:1134-44.

SYMPTOMS OF CONDUCT DISORDER, OPPOSITIONAL DEFIANT DISORDER, ATTENTION-DEFICIT/HYPERACTIVITY DISORDER, AND CALLOUS-UNEMOTIONAL TRAITS AS UNIQUE PREDICTORS OF PSYCHOSOCIAL MALADJUSTMENT IN BOYS: ADVANCING AN EVIDENCE BASE FOR DSM-V.

# Pardini DA, Fite PJ.

**Objective** The incremental utility of symptoms of conduct disorder (CD), oppositional defiant disorder (ODD), attention-deficit/hyperactivity disorder (ADHD), and callous-unemotional (CU) traits for predicting psychosocial outcomes across multiple domains was examined in a community sample of 1,517 boys.

**Method** Several outcomes were assessed semiannually across a 2-year follow-up, including antisocial behavior, internalizing problems, peer conflict, and academic difficulties. Official criminal charges were also examined across adolescence.

**Results** CD symptoms emerged as the most robust predictor of future antisocial outcomes. However, ODD symptoms predicted later criminal charges and conduct problems, and CU traits were robustly associated with serious and persistent criminal behavior in boys. Attention-deficit/hyperactivity disorder symptoms predicted increases in oppositional defiant behavior and conduct problems over time and were uniquely

related to future academic difficulties. Both ADHD and ODD symptoms predicted social and internalizing problems in boys, whereas CU traits were associated with decreased internalizing problems over time. **Conclusions** The current findings have implications for revisions being considered as part of the DSM-V. Specifically, incorporating CU traits into the diagnostic criteria for Disruptive Behavior Disorders (DBD) may help to further delineate boys at risk for severe and persistent delinquency. Although currently prohibited, allowing a diagnosis of ODD when CD is present may provide unique prognostic information about boys who are at risk for future criminal behavior, social problems, and internalizing problems.

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J Chin Med. 2010;9-17.

## **ACUPUNCTURE AND TUINA FOR HYPERACTIVE CHILDREN.**

#### Rossi E.

This article discusses the Chinese medical treatment of 'hyperactive', 'hyperkinetic' or 'inattentive' children, who may have been diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD). The pathogenesis, main patterns and treatment of the condition are explained, and illustrated with case studies taken from an ongoing pilot study at the Xiaoxiao children's centre in Milan, Italy.

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Neuropsychologia. 2010;48:3793-801.

ATTENTIONAL ENGAGEMENT DEFICITS IN DYSLEXIC CHILDREN.

## Ruffino M, Trussardi AN, Gori S, et al.

Reading acquisition requires, in addition to appropriate phonological abilities, accurate and rapid selection of sublexical orthographic units by attentional letter string parsing. Spatio-temporal distribution of attentional engagement onto 3-pseudoletter strings was studied in 28 dyslexic and 55 normally reading children by measuring attentional masking (AM). AM refers to an impaired identification of the first of two sequentially presented masked objects (O1 and O2). In the present study, O1 was always centrally displayed, whereas the location of O2 (central or lateral) and the O1-O2 interval were manipulated. Dyslexic children showed a larger AM at the shortest O1-O2 interval and a sluggish AM recovery at the longest O1-O2 interval, as well as an abnormal lateral AM. More importantly, these spatio-temporal deficits of attentional engagement were selectively present in dyslexics with poor phonological decoding skills. Our results suggest that an inefficient spatio-temporal distribution of attentional engagement - probably linked to a parietal lobule dysfunction - might selectively impair the letter string parsing mechanism during phonological decoding.

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J Isfahan Med Sch. 2010;28:484-94.

DETERMINATION OF PSYCHOMETRICS INDICES OF SNAP-IV RATING SCALE IN TEACHERS EXECUTION.

# Sadrossadat L, Hooshyari Z, Sadrossadat SJ, et al.

**Background**: SNAP-IV rating scale developed by Swanson, Nolan and Pelham to diagnose Attention Deficit Hyperactivity Disorder (ADHD). The aim of this study was determination of psychometrics specifications of this scale.

**Methods**: This was a methodological, applied and validity assessment study. One thousand students at 7 to 12 years of age in primary school in Tehran city were selected by cluster sampling. Then the students' teachers were asked to complete rating scale to consider behavior of their student. Thirty staff members of sample group were retested with SNAP-IV and was interviewed with DSM-IV. Data were analyzed by factor analysis, Pearson correlation coefficient, Kolmogrov-Smirnov and Behrens-Fisher t tests.

**Findings**: Criterion validity was 55%. Factor analysis was detected 2 factors that explain 71% of the total variance. Reliability coefficient by test-retest was 88%, internal consistency coefficient was 95%, and Splithalf coefficient was 73%. Cut-off point in scale and subscale was 2.08, 2.10, and 2.37 respectively.

Conclusion:	The SNAP-IV	rating scales	have fit	psychometrics	characters.	Therefore,	it is	useable	in
screen study	and therapeutic	conditioning.							

Psychology in the Schools. 2010 Nov;47:960-73.

DESCRIPTIONS OF PERSONAL EXPERIENCES: EFFECTS ON STUDENTS' LEARNING AND BEHAVIORAL INTENTIONS TOWARD PEERS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

## Saecker LB, Skinner AL, Skinner CH, et al.

High-school students were shown an educational video designed to dispel 12 common myths regarding Attention-Deficit/Hyperactivity Disorder (ADHD) by describing each myth and then presenting accurate information. The experimental group viewed a video that was supplemented by the speaker acknowledging that he had ADHD and providing descriptions of personal experiences (DPE) designed to highlight the injury caused by 6 of the 12 common myths. Findings suggest that including the DPE may have enhanced learning of the information that was highlighted by these descriptions, but interfered with learning the other six facts. Providing DPE did not alter behavioral intentions, and this analysis did not appear to be confounded by differential learning. Our discussion focuses on personalizing disability information, seductive details effects, and the role that correcting myths with accurate information may have on students with respect to their interactions with classmates with disabilities.

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Curr Med Res Opin. 2010;26:2565-74.

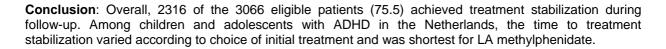
TREATMENT STABILIZATION IN CHILDREN AND ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: DATA FROM THE NETHERLANDS.

## Sasane R, Hodgkins P, Meijer W.

**Objective**: To evaluate the number of patients reaching stable treatment with a stimulant (methylphenidate or dexamphetamine) or non-stimulant (atomoxetine) attention-deficit/hyperactivity disorder (ADHD) medication approved for use in the Netherlands, and the time to treatment stabilization among children and adolescents aged 617 years.

**Research design and methods**: Prescription data from the PHARMO medical record linkage system from 48 geo-demographic areas in the Netherlands (20032006) were analyzed from newly treated patients with ADHD aged 617 years. Only patients with 5 dispensings for any ADHD drug during follow-up (at least 12 months) and no missing information on type of drug, strength, and number of pills per day were included.

Main outcome measures: Attainment of a stable dosing regimen was defined as no change in type of drug (including a switch from an immediate release (IR) to a long-acting (LA) formulation), strength, and number of pills per day for five consecutive dispensings. Time to stable dosing regimen was defined as the number of days between the first dispensing for an ADHD drug and the first of five unchanged dispensings. Results: Of 4909 children or adolescents initiating treatment, 3099 met selection criteria. More patients starting therapy with LA methylphenidate (82.4) achieved treatment stabilization during follow-up than with IR methylphenidate (74.8; p<0.01) or atomoxetine (69.8; p<0.05). More patients initiated on LA methylphenidate patients (43.9) achieved treatment stabilization without changing their index medication or dose compared to those initiated on IR methylphenidate (25.3) or atomoxetine (8.1; p<0.0001 for both comparisons). Among patients achieving treatment stabilization, those initiating treatment with LA methylphenidate had a significantly shorter time to treatment stabilization (14 days) than patients initially treated with IR methylphenidate (56 days; p<0.001) or atomoxetine (31 days; p<0.05). Mean number of pills per day varied between 1.0 and 1.8 at initial treatment and 1.1 and 1.9 at treatment stabilization. Potential limitations of the study include the use of ADHD-medication dispensing as a proxy for an ADHD diagnosis and the impact of different titration schedules for the various ADHD medications.



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European Journal of Criminology. 2010 Nov;7:442-59.

ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) AND CRIMINAL BEHAVIOUR: THE ROLE OF ADOLESCENT MARGINALIZATION.

## Savolainen J, Hurtig TM, Ebeling HE, et al.

Prior research has established a strong link between attention deficit hyperactivity disorder (ADHD) and criminal behaviour. Drawing on two key theories of life-course criminology—Moffitt's (1993) dual taxonomy and Sampson and Laub's (1993) age-graded theory of informal social control—the purpose of the present study was to examine the aetiology of this association. Consistent with Moffitt's theory, we found the effect of ADHD on crime to be substantial and moderated by cognitive deficits (low verbal ability). Adolescent social bonds—variables derived from Sampson and Laub's theory—did not mediate the interaction effect. However, in support of age-graded theory, we found that adolescent social marginalization contributes significantly to criminal behaviour independently of early childhood measures of criminal propensity.

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Journal of Clinical Child and Adolescent Psychology. 2010 Nov;39:741-48.

## DO HYPERACTIVE SYMPTOMS MATTER IN ADHD-I RESTRICTED PHENOTYPE?

# Schmitz M, Ludwig H, Rohde LA.

The objective of the current study was to evaluate a proposed restrictive inattentive type of Attention Deficit Hyperactivity Disorder (ADHD) by comparing clinical correlates among youths with ADHD inattentive type (ADHD-I) as a function of the number of hyperactivity symptoms presented (none vs. 3 or less) and controls (individuals without ADHD). The sample for this community-based study was comprised of youths aged 6 to 18 years from 12 public schools in Porto Alegre, Brazil. ADHD-I groups had lower levels of adaptive functioning (p < .001) and a higher occurrence of familial ADHD (p < .001) when compared with the controls. There was no significant difference between the two ADHD-I groups. Also, both ADHD-I groups had higher rates of oppositional defiant disorder than controls (p < .001) without significant difference between them. For generalized anxiety disorder and social phobia, only the ADHD-I without HI group showed significant differences compared to controls.

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Journal of Attention Disorders. 2010 Nov;14:256-66.

CORPUS CALLOSUM ANATOMY IN CHRONICALLY TREATED AND STIMULANT NAÏVE ADHD.

## Schnoebelen S, Semrud-Clikeman M, Pliszka SR.

**Objective**: To determine the effect of chronic stimulant treatment on corpus callosum (CC) size in children with ADHD using volumetric and area measurements. Previously published research indicated possible medication effects on specific areas of the CC.

**Method**: Measurements of the CC from anatomical MRIs were obtained from children aged 9-16 in three diagnostic groups (a) chronically treated ADHD, (b) stimulant-naïve ADHD, and (c) typically developing children.

**Results**: The three groups did not differ in overall CC volume. Additional analyses found differences in the area of the splenium, with the treatment-naïve group exhibiting the smallest area.

**Conclusions**: Previously reported reductions of CC size in ADHD samples do not appear to be a result of chronic stimulant treatment. The current study suggested a trend toward normalization of splenium size for participants treated with stimulant medication.

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Deutsches Ärzteblatt International. 2010 Sep;107:615-21.

THE CHANGING PREVALENCE OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND METHYLPHENIDATE PRESCRIPTIONS.

## Schubert I, Köster I, Lehmkuhl G.

**Background**: The goal of this study is to assess changes in the prevalence of attention-deficit/hyperactivity disorder (ADHD) and methylphenidate prescriptions over the period 2000 to 2007 on the basis of data from a German statutory health insurance carrier.

**Methods**: In a cross-sectional study, we analyzed data from a random sample of insurees of the AOK health insurance company in the German state of Hesse for the years 2000 to 2007. Per calender year, 50 000 to 63 000 children and adolescents were retrospectively observed with respect to the documentation of ADHD diagnosis (ICD-10 diagnosis F90) and the prescribing of methylphenidate (ATC: N06BA04).

**Results**: In 2007, the overall prevalence of ADHD in all age groups (0–18 years) was 2.21% (95% CI: 2.09–2.34). This figure was 45% greater than the corresponding figure for the year 2000. The prevalence increased by a larger amount among girls aged 6 to 18 years than among boys in the same age group (+69% vs. +53%). In 2007, 1.06% (95% CI: 0.98–1.16) of the children/adolescents received at least one prescription for methylphenidate; this was a 96% increase over the prescription rate for 2000. A comparison of the two years 2000 and 2007 reveals a clear prevalence shift towards the older age groups, as well as an 82% increase in the average number of daily doses per recipient. Outpatient departments of child and adolescent psychiatry initiated more treatments in 2007 than in 2000.

**Conclusion**: The 1% prevalence of methylphenidate use among children and adolescents that was found in this study is the same as that reported in other European countries, such as Switzerland, the Netherlands, and Norway. A drawback of our study is its limitation to a single insurance carrier in a single region. Nonetheless, data of this type are useful for monitoring. The findings suggest further issues worth studying, e.g., off-label use or the indications for treatment in older age groups.

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J Child Adolesc Psychopharmacol. 2010;20:377-85.

A DOUBLE-BLIND, RANDOMIZED, PLACEBO/ACTIVE CONTROLLED CROSSOVER EVALUATION OF THE EFFICACY AND SAFETY OF RITALIN(REGISTERED TRADEMARK) LA IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN A LABORATORY CLASSROOM SETTING.

# Schulz E, Fleischhaker C, Hennighausen K, et al.

**Objectives**: The primary objective of this study was to demonstrate efficacy of Ritalin (registered trademark) LA 20mg by showing superiority to placebo and noninferiority to Medikinet (registered trademark) Retard in a laboratory classroom setting. Secondary objectives included safety/tolerability and further efficacy parameters.

**Methods**: A total of 147 children with attention-deficit/hyperactivity disorder (ADHD) diagnosed by the Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS) and aged 6-14 (81% males) and known to be methylphenidate (MPH) responders were enrolled in this multicenter, double-blind, randomized, placebo/active- controlled, three-period (7 days each) crossover study. The Swanson, Kotlin, Agler, M-Flynn, and Pelham (SKAMP) scale was used for efficacy ratings. The mean of SKAMP Combined ratings performed at 10:30 a.m., at 12:00 a.m., and at 1:30 p.m. was defined as the primary parameter.

**Results**: In all, 146 patients completed all treatment periods. Intensity and frequency of adverse events were comparable between the two formulations. Ritalin (registered trademark) LA demonstrated superiority compared to placebo (p<0.0001). The observed difference in the SKAMP scores between Ritalin(registered trademark) LA and Medikinet (registered trademark) Retard between the hours 1.5 until 4.5 did not exceed

the noninferiority margin (p=0.0003); therefore, the difference is regarded as not clinically relevant. Similar results were obtained for the secondary efficacy variables.

**Conclusion**: Ritalin(registered trademark) LA is an efficacious, well-tolerated treatment option for children aged 6-14 with ADHD.

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Child Adolesc Ment Health. 2010;15:186-92.

YOUNG PEOPLE'S EXPERIENCE OF ADHD AND STIMULANT MEDICATION: A QUALITATIVE STUDY FOR THE NICE GUIDELINE.

Singh I, Kendall T, Taylor C, et al.

**Background**: The NICE ADHD Guideline Group found a lack of research evidence on young people's experiences with stimulant medications. The present study was commissioned to help fill this gap in the evidence base and to inform the Guideline.

Method: Focus groups and 1:1 interviews with 16 UK young people with ADHD.

**Results**: Young people were positive about taking medication, feeling that it reduced their disruptive behaviour and improved their peer relationships. Young people experienced stigma but this was related more to their symptomatic behaviours than to stimulant drug medication.

**Conclusions**: The study's findings helped to inform the NICE guideline on ADHD by providing evidence that young people's experiences of medication were in general more positive than negative. All NICE Guidelines involving recommendations for the treatment of young people should draw on research evidence of young people's experiences of treatments.

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J Am Acad Child Adolesc Psychiatry. 2010;49:1155-64.

NEUROPSYCHOLOGICAL FUNCTIONING IN CHILDREN WITH TOURETTE SYNDROME WITH AND WITHOUT ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

## Sukhodolsky DG, Landeros-Weisenberger A, Scahill L, et al.

Objective Neuropsychological functioning in children with Tourette syndrome (TS) has been characterized by subtle deficits in response inhibition, visualmotor integration, and fine-motor coordination. The association of these deficits with the tics of the TS versus co-occurring attention-deficit/ hyperactivity disorder (ADHD) has not been well understood because of small sample sizes and lack of adequate control conditions. We examined neuropsychological functioning in relatively large and well-characterized samples of children categorized as TS, TS-plus-ADHD, ADHD, and unaffected controls. Method A total of 56 children with TS-only, 45 with TS-plus-ADHD, 64 with ADHD, and 71 healthy community control subjects were assessed on a battery of neuropsychological measures including the Connors' Continuous Performance Test (CPT), the Stroop Color-Word Interference Test (Stroop), the Beery Visual-Motor Integration Test (VMI), and the Purdue Pegboard Test. Results There were no differences between children with TS-only and unaffected controls on the measures of response inhibition and visualmotor integration. Boys with TS-only but not girls with TS-only were impaired in the dominant hand Purdue performance. Children with ADHD were impaired on all study measures. Children with TS-plus-ADHD revealed no deficits on the Stroop, VMI, and Purdue tests but were impaired on the sustained attention portion of the CPT. Conclusions These results indicate that co-occurring ADHD may be responsible for the neuropsychological deficits, or at least those assessed in the present study, in children with TS. Explanations in terms of neurobiological mechanisms of co-occurring TS and ADHD, as well as possible compensatory mechanisms in children with TS, are discussed.

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J Dev Behav Pediatr. 2010 Oct;31:668-74.

ASSOCIATIONS BETWEEN SLEEP AND INATTENTIVE/HYPERACTIVE PROBLEM BEHAVIOR AMONG FOSTER AND COMMUNITY CHILDREN.

## Tininenko JR, Fisher PA, Bruce J, et al.

**Objective**: Sleep disruption has been linked to numerous neural regulatory problems and problems with social emotional and behavioral functioning, and researchers have shown that sleep disruption is prominent in children with symptoms of attention-deficit hyperactivity disorder. These issues are germane to foster children, who have numerous disparities in areas of self-regulation and psychopathology but for whom there has been very little examination of sleep quality or the associations between poor sleep quality and physiological/behavioral dysregulation.

**Method**: Actigraphy measures were used to examine associations between sleep duration/quality and inattentive/hyperactive problem behavior in a sample of 79 children (aged 5–7 years): 32 foster children and 47 nonmaltreated community children.

**Results**: Of the sleep variables examined, only sleep duration was significantly associated with inattentive/hyperactive problem behavior. These associations were more significant in foster children compared to community children and in boys compared to girls.

Conclusion: The results have several implications for prevention and intervention research.

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Journal of Attention Disorders. 2010 Nov;14:232-46.

THE IMPACT OF POLYUNSATURATED FATTY ACIDS IN REDUCING CHILD ATTENTION DEFICIT AND HYPERACTIVITY DISORDERS.

## Transler C, Eilander A, Mitchell S, et al.

**Objectives**: To review the impact of polyunsaturated fatty acids (PUFA) in reducing ADHD symptoms in children.

**Methods**: Peer-reviewed experimental literature published from 1980 to Mai 2009 is consulted (Psychinfo, Medline, and resulting reference lists).

**Results**: Placebo-controlled studies with ADHD or hyperactive children show no effects on behaviors or cognition when only n-6 (omega-6) PUFA, only docosahexaenoic acid (DHA), or n-6 and n-3 (omega-3) short-chain PUFA are supplemented. Yet three out of four studies suggest that a combination of long-chain n-3 and n-6 fatty acids (DHA, eicosapentaenoic acid [EPA], and gamma-linolenic acid [GLA]) supplemented daily for 3 to 4 months could lead to a reduction in ADHD symptomatology. Results on cognitive outcomes are inconsistent.

**Conclusions**: Evidence is too limited to reach definitive conclusions but suggests that research on the impact of long-chain PUFA (n-3 and n-6) should continue with special focus on individual differences (genetic and fatty acid markers), mechanisms (brain imaging), and new enhanced methods of systematic observations of behaviors.

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Journal of Clinical Child and Adolescent Psychology. 2010 Nov;39:749-60.

DIAGNOSTIC INSTABILITY OF DSM-IV ADHD SUBTYPES: EFFECTS OF INFORMANT SOURCE, INSTRUMENTATION, AND METHODS FOR COMBINING SYMPTOM REPORTS.

## Valo S, Tannock R.

Using data from 123 children (aged 6-12 years) referred consecutively to a pediatric neuropsychiatry clinic by community physicians for assessment of Attention-Deficit/Hyperactivity Disorder (ADHD) and related problems, we investigated the effects of informant (parent, teacher), tool (interview, rating scale), and method for combining symptom reports ("and," "or" algorithms), on the diagnosis of ADHD and its subtypes. Results indicated that as many as 50% of cases were reclassified from one subtype to another, depending on whether information was derived from one or two informants, a semistructured clinical interview and/or rating scale, and the algorithm used to combine informant reports. We conclude that the diagnosis of DSM-

IV ADHD subtypes is capricious in that it is influenced by clinicians' decisions regarding informants, instrumentation, and method for aggregating information across informants and instruments.
Journal of Abnormal Child Psychology: An official publication of the International Society for Research in Child and Adolescent Psychopathology. 2010 Oct;38:961-69.  NEUROCOGNITIVE PERFORMANCE IN CHILDREN WITH ADHD AND OCD.  Vioet TD, Marx I, Kahraman-Lanzerath B, et al.  Attention-deficit/hyperactivity Disorder (ADHD) and obsessive—compulsive disorder (OCD) have both been linked to dysfunction in the cortico-striato-thalamo-cortical circuitry (CSTCC). However, the exact nature of neurocognitive deficits remains to be investigated in both disorders. We applied two neuropsychological tasks that tap into different functions associated with the CSTCC, namely a serial reaction time (SRT) task, developed to assess implicit sequence learning, and a delay aversion (DA) task in order to assess abnormal motivational processes. The performance data of boys with ADHD (n = 20), OCD (n = 20) and healthy controls (n = 25), all aged 10–18 years, were compared. Subjects with ADHD less frequently chose the larger, more delayed reward compared to those with OCD and controls, while subjects with OCD showed impaired implicit learning. In contrast, the ADHD group was unimpaired in their implicit learning behavior and the OCD group was not characterized by a DA style. Within the OCD-group, severity of obsessions was associated with implicit learning deficits and impulsive symptoms with DA in the ADHD-group. This double dissociation highlights the distinct cognitive dysfunctions associated with ADHD and OCD and might possibly point to different neural abnormalities in both disorders.
Cortov, 2040;46:4245-64
Cortex. 2010;46:1345-61.  ETIOLOGY AND NEUROPSYCHOLOGY OF COMORBIDITY BETWEEN RD AND ADHD: THE CASE FOR MULTIPLE-DEFICIT MODELS.
Willcutt EG, Betjemann RS, McGrath LM, et al. Introduction: Attention-deficit/hyperactivity disorder (ADHD) and reading disability (RD) are complex childhood disorders that frequently co-occur, but the etiology of this comorbidity remains unknown.  Method: Participants were 457 twin pairs from the Colorado Learning Disabilities Research Center (CLDRC) twin study, an ongoing study of the etiology of RD, ADHD, and related disorders. Phenotypic analyses compared groups with and without RD and ADHD on composite measures of six cognitive domains. Twin analyses were then used to test the etiology of the relations between the disorders and any cognitive weaknesses.
<b>Results</b> : Phenotypic analyses supported the hypothesis that both RD and ADHD arise from multiple cognitive deficits rather than a single primary cognitive deficit. RD was associated independently with weaknesses on measures of phoneme awareness, verbal reasoning, and working memory, whereas ADHD was independently associated with a heritable weakness in inhibitory control. RD and ADHD share a common cognitive deficit in processing speed, and twin analyses indicated that this shared weakness is primarily due to common genetic influences that increase susceptibility to both disorders. <b>Conclusions</b> : Individual differences in processing speed are influenced by genes that also increase risk for RD, ADHD, and their comorbidity. These results suggest that processing speed measures may be useful for future molecular genetic studies of the etiology of comorbidity between RD and ADHD.

Lancet. 2010;376:1401-08.

RARE CHROMOSOMAL DELETIONS AND DUPLICATIONS IN ATTENTION-DEFICIT HYPERACTIVITY DISORDER: A GENOME-WIDE ANALYSIS.

# Williams NM, Zaharieva I, Martin A, et al.

Background Large, rare chromosomal deletions and duplications known as copy number variants (CNVs) have been implicated in neurodevelopmental disorders similar to attention-deficit hyperactivity disorder (ADHD). We aimed to establish whether burden of CNVs was increased in ADHD, and to investigate whether identified CNVs were enriched for loci previously identified in autism and schizophrenia. Methods We undertook a genome-wide analysis of CNVs in 410 children with ADHD and 1156 unrelated ethnically matched controls from the 1958 British Birth Cohort. Children of white UK origin, aged 5-17 years, who met diagnostic criteria for ADHD or hyperkinetic disorder, but not schizophrenia and autism, were recruited from community child psychiatry and paediatric outpatient clinics. Single nucleotide polymorphisms (SNPs) were genotyped in the ADHD and control groups with two arrays; CNV analysis was limited to SNPs common to both arrays and included only samples with high-quality data. CNVs in the ADHD group were validated with comparative genomic hybridisation. We assessed the genome-wide burden of large (>500 kb), rare (<1 population frequency) CNVs according to the average number of CNVs per sample, with significance assessed via permutation. Locus-specific tests of association were undertaken for test regions defined for all identified CNVs and for 20 loci implicated in autism or schizophrenia. Findings were replicated in 825 Icelandic patients with ADHD and 35 243 Icelandic controls. Findings Data for full analyses were available for 366 children with ADHD and 1047 controls. 57 large, rare CNVs were identified in children with ADHD and 78 in controls, showing a significantly increased rate of CNVs in ADHD (0(middle dot)156 vs 0(middle dot)075; p=8(middle dot)9null10-5). This increased rate of CNVs was particularly high in those with intellectual disability (0(middle dot)424; p=2(middle dot)0null10-6), although there was also a significant excess in cases with no such disability (0(middle dot)125, p=0(middle dot)0077). An excess of chromosome 16p13.11 duplications was noted in the ADHD group (p=0(middle dot)0008 after correction for multiple testing), a finding that was replicated in the Icelandic sample (p=0(middle dot)031). CNVs identified in our ADHD cohort were significantly enriched for loci previously reported in both autism (p=0(middle dot)0095) and schizophrenia (p=0(middle dot)010). Interpretation Our findings provide genetic evidence of an increased rate of large CNVs in individuals with ADHD and suggest that ADHD is not purely a social construct. Funding Action Research; Baily Thomas Charitable Trust; Wellcome Trust; UK Medical Research Council; European Union.

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1st JOINT INTERNATIONAL CONFERENCE ADHD-Europe/AIFA Onlus — 5th NATIONAL CONVENTION AIFA Onlus



# LETHE MOLTEMANY FACCEFACES DELL'OF ADHD

# 26 FEB 2011 ROMA

SALESIANUM Congress Center Via della Pisana 1111

8:00 Registrazione, consegna cuffie e materiale Registration, headphones and conference map

9:00 Benvenuto e saluti delle Autorità Welome Address AIFA Onlus Patrizia STACCONI ADHD-Europe D.ssa Myriam MENTER

#### 9:15

Greolari Ministeriali del MIUR sull'ADHD Communications from the Italian Ministry of Education

Cott. Antonio CUTOLO

#### 9:25

Bilancio di tre anni di attività del Registro Italiano dell'ADHD Review of the pasi three years of the Italian ADHD Registry Cott. Pietro PANEI

## 0:45

Cos'è l'ADHD? Introduzione e definizione dell'ADHD What is ADHD? Introduction and definition of ADHD

Cott. Eric W. DICKHAUS

## 10:30

Diagnosi differenziale dell'ADHD Differential Diagnosis of ADHD Cott. Amaia HERVAS ZUNIGO

11:15 intervallo coffee break

## 11:45

Le Comorbilit à dell'ADHD con particolare attenzione al disturbo della condotta The Comorbidities of ADHD with special attention to Conduct Disorder

Cott. Georgios DERMATIS

## 12:30

Le terapie farmacologiche dell'ADHD ADHD Pharmacological
Therapies

Prof. Alessandro ZUDDAS

13:00 pranzo lunch

#### 14:30

Le Terapie comportamentali terapie di gruppo, linee guida NICE, Parent Training, Childs Training, Teacher Training Behavioral Therapies- Group Therapies, MCE guidelines, Parent and Teacher Training for Children & Adolescents Dott. Geir ØGRIM

#### 15:30

ADHD negli adulti - Depressione, Disturbo Bipolare, Relazioni e Intimità, Terapie, Coaching... - difficoltàdi mantenere un posto di lavoro... ADHD in adults - Depression, Bipolar-Disorder, Relationships, Intimacy, Therapies, Coaching... - difficulties staying employed...

Dott.ssa Johanna KRAUSE

## 16:30

ADHD nelle ragazze e donne - come identificare gli estremi di arsia e emozione, il tipo disattento, come risolvere i problemi di vita quotidiana ADHD is Girls and Women - indicators to watch out for: anxiety and extreme emotions, the inattentive subtype, how to resolve the problems of life

Dott.ssa Sandra KOOU

17:30 fine end

# 18:00 / 19.30

Proiezione straordinaria del documentario "La sindiome dei monelli" del regista Alberto Coletta

Traduzione simultanea disponibile Simultaneous translation available

Moderatore Dott.Renato DONFRANCESCO Conference Chair Dott.ssa Myriam MENTER

ELATORI

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Dssa Myriam MENTER Presidente ADHD-Europe President ADHD-Europe

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Dott.ssa Johanna KRAUSE Neurologa ePsichiatra, Germania Neurologist and Psychiatrist, Germany

Dott.ssa Sandra KOOIJ Psichiatra, Olanda Psychiatrist, Holland

A nome dell'ADHD-Europe aisbl, sono felice di invitarvia partedpare alla rostra prima conferenza internazionale "Le molte faccedell'ADHD – The Mary Faces of ADHD" che stamo organizzando con l'assodazione nazionale AFA Onlus a Roma il 26 febbraio 2011.

questo convegno vuole promuevere la comprensione dell'ADHD come un disturbo mutidimensionale dello sviluppo mentale che attraverso tutta la vita. I temi presentati includono gli aspetti chiave dell'ADHD nell'Infantia, nell'adolescenza e nell'atà adulta, così come le diffarenze presenti nei due sessi e le comorbilità nelle diverse età. A partire dall'introduzione, la definizione dell'ADHD, la spiegazione della diagnosi e del trattamento multimordale e, in partirolare, le varie strategie per la vita quoticitara, l'obiett voi dei relatori che sono rinomati specia listi provenienti da tutta l'Europa – Dr. Dickhaus e Prof. Zuddas dall'ittala, Dr. Hervas Zuniga dalla Spagna, Dr. Dermatis dalla Grecia. Dr. Ogrim dalla Norvegia. Dr.Krause dalla Germania e Dr. Koti dall'Olanda – equelo di incrementare la consapevolezza e la comprensione di questo complesso disturbo.

On behalf of ADHD-Europe aisbi. I am happy to invite you to our 1st international Conference, Le molte facce dell'adhd - The Many Faces of ADHD, which we are organizing with the National self-support organization AIFA Onlus in Rome, Italy on February 26, 2011.

This conference aims to promote our understanding of ADHD as a multidimensional developmental disorder across the life:pan. The topics of the Conference Indude the key aspects of ADHD in childhood, adolescence and adulthood, as well as gender differences and age co-morbidity. Starting with the introduction and definition of ADHD, explanation of diagnosts and multimodal treatment options, especially providing strategies for daily life, the goal of our peakers who are renowned specialists from across Europe-Dr. Dickhous from Italy, Dr. Her ras Zuniga, Childrand Adolescent Psychiatrist from Space, Prof. Zuddas, Child Psychiatrist from Haly, Dr.Ogrim, Neuropsychologist from Norway, Dr. Youse, Neurologist and Psychiatrist from Germany and Dr. Koolj, Pschylatrist from Holland-is to raise awareness and understanding for this compiler disorder.

I look forward to welcoming you to Rome in 2011.

Dr. Myriam Menter, President ADHD-Europe AISBL

Per la prima volta l'ADHD viene affrontato in Italia in modo condiviso con lorganizzazione europea ADHD-Europe, che unisce sotto di se 27 associazioni cone la nostra di 19 paesi. Vengono trattati temi di grande interesse per le famiglie con un bambino/adolescente, adulto affetto da ADHD da professionisti esperti che fanno parte del comitato scientifico dell'ADHD-Europe.

For the first time in Italy. ADHD is presented in a joint conference with the Europeanumbrella organization, ADHD-Europe, which comprises 27 parent organizations from 19 countries. The topics are very interesting for the families who have children and/or adolescents with ADHD, as well as for adults with this condition. The speakers from the Scientific Advisory Board are professionals with a great amount of experience in their respective areas of expertise.

Patrizia Stacconi Presidente AIFA Onlus

Astrid Gollner referente di AIFA Onlus nell'ADHD-Europe



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Organizzazione AIFA onlus Associazione Italiana Famiglie ADHD (Attention Deficit Hyperactivity Disorder)
Disturbo da Deficit di Attenzione e Iperattività

La partecipazione è gratuita, l'iscrizione obbligatoria free entrance — registration required Informazioni e iscrizioni:

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www.aifa.it • www.adhdeurope.eu



# Interrogazioni parlamentari

15 ottobre 2010

E-8366/2010

Interrogazione con richiesta di risposta scritta alla Commissione Articolo 117 del regolamento Cristiana Muscardini (PPE)

# Oggetto: Centri ADHD e consenso dei familiari



Esistono in Italia e in Europa i Centri A.D.H.D. (Attention Deficit Hyperactivity Disorder), che curano i bambini affetti da questa sindrome. La terapia comprende anche l'uso di psicofarmaci, che richiedono livelli di sicurezza ben definiti nell'uso di queste molecole, tanto discusse per i possibili effetti collaterali. Se questa sicurezza viene richiesta per gli adulti, a maggior ragione essa deve valere anche e più per i bambini. In genere i protocolli sanitari vietano l'utilizzo di queste molecole psicoattive senza il consenso informato dei genitori, ai quali occorre comunicare obbligatoriamente, e con la massima chiarezza, tutti gli effetti collaterali potenziali. Succede invece che talvolta i protocolli non vengono applicati con il necessario e doveroso rigore. Si fa firmare un modulo, magari in bianco, in mezzo a molti altri, senza spiegare nulla, senza parlare dei possibili effetti collaterali e senza sottoporre alla famiglia i possibili percorsi terapeutici alternativi. Senza alcun dubbio queste trascuratezze sono da condannare ed i Centri devono essere rigorosamente controllati dalle autorità sanitarie nazionali, per verificare il rispetto dei protocolli relativi all'obbligo dell'informazione per i genitori ed alla conoscenza delle terapie non farmacologiche erogate.

Pur considerando la non competenza dell'Unione per le politiche sanitarie, la Commissione può far sapere se:

- negli Stati membri, ed eventualmente in quali, i protocolli sanitari obbligano i centro ADHD ad informare i genitori sull'uso terapeutico eventuale degli psicofarmaci per i loro bambini infermi e sulle possibili conseguenze collaterali?
- 2. non ritenga che la sicurezza sanitaria debba essere un obiettivo primario nell'uso dei farmaci, soprattutto se si tratta di bambini?
- 3. rientri nei compiti dell'EMEA controllare la sicurezza dei prodotti farmaceutici e le procedure per il loro uso?
- 4. quest'agenzia abbia anche compiti ispettivi nei confronti dei centri sanitari degli Stati membri?

Ultimo aggiornamento: 27 ottobre 2010

Avviso legale

E-8366/10IT Risposta di John Dalli a nome della Commissione (12.11.2010)

Come prevede l'articolo 168 del trattato sul funzionamento dell'Unione europea, gli Stati membri sono responsabili della definizione della loro politica sanitaria e dell'organizzazione e fornitura dei servizi sanitari e dell'assistenza medica. I protocolli utilizzati per i centri A.D.H.D (attention deficit hyperactivity disorder) rientrano nella responsabilità e nella competenza delle autorità nazionali. La Commissione non raccoglie informazioni sui vari protocolli utilizzati da tali centri nell'UE.

La sicurezza del prodotti medicinali costituisce parte del processo di valutazione per l'autorizzazione alla commercializzazione nell'UE e viene anche monitorata nel periodo post-autorizzazione. Il monitoraggio e la valutazione della comparsa di eventi sfavorevoli nel caso di farmaci utilizzati per la malattia in questione, sugli adulti e sui bambini, sono sottoposti alla legislazione UE sulla farmacovigilanza, compresa la registrazione e la segnalazione di eventi avversi da parte dell'industria, degli operatori sanitari e delle autorità degli Stati membri. Tale stima include una valutazione del verificarsi di tale eventi in relazione al numero di prodotti prescritti e/o assunti.

La legislazione farmaceutica UE è stata rivista di recente. Le nuove norme saranno pubblicate alla fine del 2010 e forniranno un sistema rafforzato di farmacovigilanza nell'UE.

L'agenzia europea per i medicinali (EMA) è responsabile della valutazione scientifica dei prodotti medicinali prima dell'autorizzazione ad una loro commercializzazione e del follow-up di farmacovigilanza dopo l'immissione sul mercato dei farmaci autorizzati dalla Commissione. I prodotti medici possono anche essere autorizzati a livello nazionale dalle autorità competenti che sono quindi responsabili della raccolta dei dati successivi all'immissione sul mercato relativi alla farmacovigilanza.

La base dati Eudravigilance gestita dall'EMA raccoglie dati sulle reazioni negative di tutti i medicinali autorizzati a livello di UE o nazionale. Se necessario si può avviare un'azione in seno all'UE, anche per i prodotti autorizzati su scala nazionale, per rivalutare l'equilibrio beneficio/rischio dei farmaci quando emergono preoccupazioni in materia di sicurezza e si possono adottare le misure necessarie riguardo all'autorizzazione alla commercializzazione.

L'agenzia europea per i medicinali non è responsabile dell'ispezione dei centri sanitari degli Stati membri. Anche questa spetta alle autorità nazionali competenti.

Per ricevere la newsletter iscriversi al seguente indirizzo: <a href="http://crc.marionegri.it/bonati/adhdnews/subscribe.html">http://crc.marionegri.it/bonati/adhdnews/subscribe.html</a>

Iniziativa nell'ambito del Progetto di Neuropsichiatria dell'Infanzia e dell'adolescenza II Progetto è realizzato con il contributo, parziale, della Regione Lombardia (in attuazione della D.G.R. n. 10804 del 16/12/2009)

Capofila Progetto: UONPIA Azienda Ospedaliera "Spedali Civili di Brescia" "Condivisione dei percorsi diagnostico-terapeutici per l'ADHD in Lombardia".

# ISTITUTO DI RICERCHE FARMACOLOGICHE MARIO NEGRI DIPARTIMENTO DI SALUTE PUBBLICA Laboratorio per la Salute Materno Infantile

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