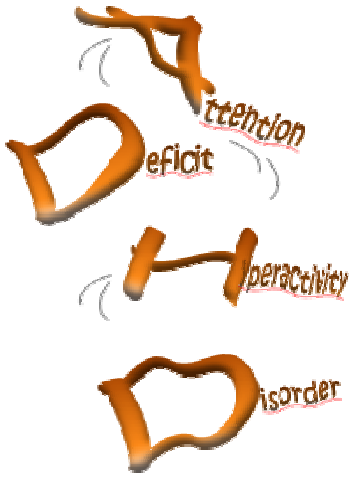
NEWSLETTER



INDICE:

BIBLIOGRAFIA ADHD DICEMBRE 2011

Acad Pediatr. 2012;12:53-61.

IN THEIR OWN WORDS: ADOLESCENT VIEWS ON ADHD AND THEIR EVOLVING ROLE MANAGING MEDICATION.

Brinkman WB, Sherman SN, Zmitrovich AR, et al.

Objective: Up to 90% of adolescents with attention deficit hyperactivity disorder (ADHD) remain functionally impaired, yet less than half continue to take medication. The objective of this study was to gain a detailed understanding of how adolescents with ADHD contribute to medication treatment decisions.

Methods: Forty-four adolescents with ADHD aged 13 to 18 years old participated in 1 of 7 focus groups. An experienced facilitator used a semi-structured focus group guide to prompt discussion which was audio-recorded and transcribed verbatim. We coded transcripts using an inductive approach. Thematic saturation was reached after the seventh focus group.

Results: Adolescents assumed increased responsibility for managing medication as they matured and developed insight into the functional impact of ADHD and medication on their lives. Insights were often formed by contrasting time spent on and off medication. ADHD impacted functioning in the following domains: academics, social interactions and relationships, creativity, and driving skills. Select domains were relevant for some adolescents but not others. Adolescents described different roles that they played in managing medication as well as strategies they used to exert autonomy over medication use. Side effects were common and contributed to negative feelings toward medication. Some adolescents had begun to use medication selectively. Many expressed uncertainty about future use of medication.

Conclusions: Adolescents assume an increasing role in managing medication for ADHD. Well-structured and coordinated trials stopping medication and measuring outcomes relevant to adolescents, parents, teachers, doctors, and/or other stakeholders may help ensure a developmentally appropriate transition from family to self-management of ADHD.

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Allergy Asthma Proc. 2011;32:e41-e46.

PREVALENCE OF ATTENTION DEFICIT/HYPERACTIVITY DISORDER IN PEDIATRIC ALLERGIC RHINITIS: A NATIONWIDE POPULATION-BASED STUDY.

Tsai MC, Lin HK, Lin CH, et al.

Allergic rhinitis (AR) is the most common chronic condition in pediatric populations. Characteristic symptoms in AR may bother daily activities and disturb sleep, leading to daytime inattention, irritability, and hyperactivity, which are also components of attention deficit/hyperactivity disorder (ADHD). Conflicting data exist in the literature regarding the relationship between ADHD and AR. The aim of this nationwide population-based study was to examine the prevalence and risk of ADHD among AR patients in a pediatric group. Data from a total of 226,550 pediatric patients <18 years old were collected from Taiwan's National Health Insurance Research Database from January 1 to December 31, 2005 and analyzed. We calculated the prevalence of allergic diseases based on various demographic variables, as well as in ADHD patients. We also used multivariable logistic regression to analyze the risk factors of ADHD. In 2005, the period prevalence rates of atopy and ADHD in patients <18 years of age were 15.35 and 0.6%, respectively. Pediatric patients with AR had a substantially increased rate of ADHD ($p < 0.001$) in terms of period prevalence and odds ratio. This significance existed across various demographic groups regardless of age, gender, area, or degree of urbanization. Neither comorbidity of atopic dermatitis nor bronchial asthma carried high risk for ADHD in AR patients. The present study revealed an increased rate of ADHD among AR patients. Therefore, evaluation of ADHD is advised for treatment of AR children.

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Per la ricerca degli articoli pubblicati nella letteratura scientifica nel mese in esame sono state consultate le banche dati Medline, Embase, PsycINFO e PsycArticle utilizzando le seguenti parole chiave (o i loro sinonimi): 'Attention deficit disorder', 'Attention deficit hyperactivity disorder', 'Infant', 'Child', 'Adolescent', 'Human'. Sono qui riportate le referenze considerate rilevanti e pertinenti.

Allergy Asthma Proc. 2011;32:e41-e46.

PREVALENCE OF ATTENTION DEFICIT/HYPERACTIVITY DISORDER IN PEDIATRIC ALLERGIC RHINITIS: A NATIONWIDE POPULATION-BASED STUDY.

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Am J Med Genet Part B Neuropsychiatr Genet. 2012;159 B:131-40.

NEUROPSYCHOLOGICAL INTRA-INDIVIDUAL VARIABILITY EXPLAINS UNIQUE GENETIC VARIANCE OF ADHD AND SHOWS SUGGESTIVE LINKAGE TO CHROMOSOMES 12, 13, AND 17.

Frazier-Wood AC, Bralten J, Arias-Vasquez A, et al.

Attention-deficit/hyperactivity disorder (ADHD) is a highly heritable neuropsychiatric disorder that is usually accompanied by neuropsychological impairments. The use of heritable, psychometrically robust traits that show association with the disorder of interest can increase the power of gene-finding studies. Due to the robust association of intra-individual variability with ADHD on a phenotypic and genetic level, intra-individual variability is a prime candidate for such an attempt. We aimed to combine intra-individual variability measures across tasks into one more heritable measure, to examine the relatedness to other cognitive factors, and to explore the genetic underpinnings through quantitative trait linkage analysis. Intra-individual variability measures from seven tasks were available for 238 ADHD families (350 ADHD-affected and 195 non-affected children) and 147 control families (271 children). Intra-individual variability measures from seven different tasks shared common variance and could be used to construct an aggregated measure. This aggregated measure was largely independent from other cognitive factors related to ADHD and showed suggestive linkage to chromosomes 12q24.3 (LOD=2.93), 13q22.2 (LOD=2.36), and 17p13.3 (LOD=2.00). A common intra-individual variability construct can be extracted from very diverse neuropsychological tasks; this construct taps into unique genetic aspects of ADHD and may relate to loci conferring risk for ADHD (12q24.3 and 17p13.3) and possibly autism (12q24.3). Given that joining of data across sites boosts the power for genetic analyses, our findings are promising in showing that intra-individual variability measures are viable candidates for across site analyses where different tasks have been used.

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Biol Psychiatry. 2011.

THE EFFECTS OF STIMULANT MEDICATION ON WORKING MEMORY FUNCTIONAL CONNECTIVITY IN ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

Wong CG, Stevens MC.

Background: Working memory impairments are commonly found in attention-deficit/hyperactivity disorder (ADHD) and often improve with psychostimulant treatment. Little is known about how these medications affect the function of frontoparietal brain regions engaged for working memory. This study used functional

magnetic resonance imaging (fMRI) to examine medication-related changes in brain activation and functional connectivity in ADHD.
Methods: Eighteen ADHD-combined subtype youths (ages 11-17) twice completed a Sternberg working memory fMRI task in a randomized, double-blind, placebo-controlled design. Medications were individualized as patients' standard, clinically effective psychostimulant (e.g., methylphenidate or dextroamphetamine/amphetamine combination) dose. Brain activity and functional connectivity were characterized using group independent component analysis. SPM5 repeated-measures t tests compared ADHD patients' network engagement and regional functional connectivity on and off medication.
Results: Independent component analysis identified six frontoparietal networks/components with hemodynamic responses to encoding/maintenance or retrieval phases of the Sternberg fMRI task. On medication, three of these networks significantly increased activation. Functional connectivity analyses found medication led to recruitment of additional brain regions that were not engaged into the networks when participants were on placebo. Also, medication strengthened connectivity of some frontoparietal regions. Many connectivity changes were directly related to improved working memory reaction time. Overall, there was strong evidence for regional functional connectivity changes following medication in structures previously implicated as abnormal in ADHD, such as anterior cingulate, ventrolateral prefrontal cortex, and precuneus.
Conclusions: Stimulant medication has widespread effects on the functional connectivity of frontoparietal brain networks, which might be a mechanism that underlies their beneficial effects on working memory performance.

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Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement. 2012 Jan;44:59-69.

PRÉDICTEURS DES PRATIQUES PARENTALES: COGNITIONS SOCIALES PARENTALES ET COMPORTEMENT DES ENFANTS TDAH.

Beaulieu MC, Normandeau S.

The purpose of this study was to examine the association between parental social cognitions (parental causal attributions, parental self-efficacy) and the behavioural characteristics of their child (ADHD subtypes, comorbidity, oppositional and anxiety/shy symptoms). Participants were 110 families with a child with ADHD (ADHD-I : n = 31, ADHD-H : n = 11, ADHD-C : n = 68). Multiple regressions show that parental self-efficacy is associated with more use of appropriate discipline, praise and incentives, positive verbal discipline, and less use of harsh and inconsistent discipline and physical punishment. Results also show that parental causal attributions for the child's misbehaviour to their own efforts are a predictor of positive verbal discipline whereas parents' causal attributions for the child's misbehaviour to the child's lack of efforts are a predictor of harsh and inconsistent discipline. Parents' perception of their child's oppositional symptom is a predictor of appropriate discipline and positive verbal discipline. Finally, children's comorbidity is a predictor of harsh and inconsistent discipline. The findings of this study highlight the importance of parental self-efficacy, because from all the variables studied, it shows the strongest association with positive and negative parenting practices. No association between ADHD subtype and parenting practices were observed. Implications of these results are explored in the discussion.

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Child Adolesc Psychiatry Ment Health. 2011;5.

PATIENT CHARACTERISTICS, COMORBIDITIES, AND MEDICATION USE FOR CHILDREN WITH ADHD WITH AND WITHOUT A CO-OCCURRING READING DISORDER: A RETROSPECTIVE COHORT STUDY.

Classi PM, Le TK, Ward S, et al.

Background: Children and adolescents with attention-deficit/hyperactivity disorder (ADHD) often have a co-occurring reading disorder (RD). The purpose of this research was to assess differences between children with ADHD without RD (ADHD-only) and those with ADHD and co-occurring RD (ADHD+RD).
Methods: Using data from the U.S. Thomson Reuter Marketscan (registered trademark) Databases for the years 2005 through 2007, this analysis compared the medical records--including patient demographics, comorbidities, and medication use--of children (age < 18) with ADHD-only to those with ADHD+RD.

Results: Patients with ADHD+RD were significantly younger, more likely to have received a procedure code associated with formal psychological or non-psychological testing, and more likely to have been diagnosed with comorbid bipolar disorder, conduct disorder, or depression. They were no more likely to have received an antidepressant, anti-manic (bipolar), or antipsychotic, and were significantly less likely to have received a prescription for a stimulant medication.
Conclusions: Relying on a claims database, there appear to be differences in the patient characteristics, comorbidities, and medication use when comparing children with ADHD-only to those with ADHD+RD.

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Child Adolesc Psychiatry Ment Health. 2012;2.

A SYSTEMATIC REVIEW OF THE SAFETY INFORMATION CONTAINED WITHIN THE SUMMARIES OF PRODUCT CHARACTERISTICS OF MEDICATIONS LICENSED IN THE UNITED KINGDOM FOR ATTENTION DEFICIT HYPERACTIVITY DISORDER. HOW DOES THE SAFETY PRESCRIBING ADVICE COMPARE WITH NATIONAL GUIDANCE?

Savill N, Bushe CJ.

Background: The safety of paediatric medications is paramount and contraindications provide clear pragmatic advice. Further advice may be accessed through Summaries of Product Characteristics (SPCs) and relevant national guidelines. The SPC can be considered the ultimate independent guideline and is regularly updated. In 2008, the authors undertook a systematic review of the SPC contraindications of medications licensed in the United Kingdom (UK) for the treatment of Attention Deficit Hyperactivity Disorder (ADHD). At that time, there were fewer contraindications reported in the SPC for atomoxetine than methylphenidate and the specific contraindications varied considerably amongst methylphenidate formulations. In 2009, the European Medicines Agency (EMA) mandated harmonisation of methylphenidate SPCs. Between September and November 2011, there were three changes to the atomoxetine SPC that resulted in revised prescribing information. In addition, Clinical Guidance has also been produced by the National Institute for Health and Clinical Excellence (NICE) (2008), the Scottish Intercollegiate Guidelines Network (SIGN) (2009) and the British National Formulary for Children (BNFC).
Methods: An updated systematic review of the Contraindications sections of the SPCs of all medications currently licensed for treatment of ADHD in the UK was undertaken and independent statements regarding contraindications and relevant warnings and precautions were then compared with UK national guidance with the aim of assessing any disparity and potential areas of confusion for prescribers.
Results: As of November 2011, there were seven medications available in the UK for the treatment of ADHD. There are 15 contraindications for most formulations of methylphenidate, 14 for dexamfetamine and 5 for atomoxetine. Significant differences exist between the SPCs and national guidance part due to the ongoing reactive process of amending the former as new information becomes known. In addition, recommendations are made outside UK SPC licensed indications and a significant contraindication for methylphenidate (suicidal behaviours) is missing from both the NICE and SIGN guidelines. Particular disparity exists relating to monitoring for suicidal and psychiatric side effects. The BNFC has not yet been updated in line with the European Union (EU) Directive on methylphenidate; it does not include any contraindications for atomoxetine but describes contraindications for methylphenidate that are no longer in the SPC.
Conclusions: Clinicians seeking prescribing advice from critical independent sources of data, such as SPCs and national guidelines, may be confused by the disparity that exists. There are major differences between guidelines and SPCs and neither should be referred to in isolation. The SPC represents the most relevant source of safety data to aid prescribing of medications for ADHD as they present the most current safety data in line with increased exposure. National guidelines may need more regular updates.

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Early Child Development and Care. 2012 Jan;182:59-69.

THE RELATIONSHIP BETWEEN FATHER RESIDENCY AND A CHILD'S ADHD SYMPTOMS.

Sulak TN, Barnard-Brak L, Frederick K.

Attention deficit hyperactivity disorder (ADHD) is a commonly diagnosed neuropsychological disorder among school-aged children. The purpose of the current study was to examine the relationship between father residency status and children's symptoms of ADHD using a large, nationally representative and

community-based sample. To achieve this purpose, structural equation modelling was used to examine the relationship between ADHD symptoms and father residency. The relationship was examined in the context of a sample of typically developing children and a sample of children diagnosed with ADHD. The association between father residency and symptoms of ADHD among typically developing children was significant, but the same relationship among children diagnosed with ADHD was not significant. Father residency appears to share some relationship with symptoms of ADHD, but when symptoms reach the level for a clinical diagnosis, father residency appears to share little relationship with severity of symptoms of ADHD.

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Emerg Med J. 2011.

PAEDIATRIC TRAUMA PATIENTS AND ATTENTION DEFICIT HYPERACTIVITY DISORDER: CORRELATION AND SIGNIFICANCE.

Ertan C, Ozcan OO, Safa Pepele M.

Introduction: Trauma is one of the leading reasons for emergency department (ED) visits in children. Hyperactivity, inattentiveness and impulsiveness may contribute to injury proneness. The aim of this study was to evaluate the prevalence and role of attention deficit hyperactivity disorder (ADHD) in children with trauma.

Methods: Trauma patients aged 3-17 attending the ED were included in the study group. Parents were informed after medical care had been given to their children, and demographic data and information about the trauma were collected. Later, parents were asked to complete the Conners' Parent Rating Scales-Revised questionnaire for ADHD symptoms. The control group consisted of children of similar age and sociocultural characteristics who attended the hospital for reasons other than trauma. Cases in which the child apparently had no active role in the trauma or where the parents did not complete the Conners' Parent Rating Scales-Revised questionnaire were excluded from the study.

Results: Fifty-five children were included in the study group (mean age 7.49 (range 3-14; SD 3.3); 33 (60%) were male). The control group was statistically similar to the study group. The most common trauma mechanism was falls (n=31, 56.4%). All the subscale scores were significantly higher in the study group, and previous trauma-related ED visits were associated with significantly higher subscale scores.

Conclusion: The data suggest that children who make repeated trauma-related ED visits have a predisposition to ADHD, and they may benefit from screening for this disorder while in the ED.

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Eur J Paediatr Neurol. 2012.

IMPACT OF TIME ON TASK ON ADHD PATIENT'S PERFORMANCES IN A VIRTUAL CLASSROOM.

Bioulac S, Lallemand S, Rizzo A, et al.

Background: Use of virtual reality tool is interesting for the evaluation of Attention Deficit/Hyperactivity Disorder (ADHD) patients. The virtual environment offers the opportunity to administer controlled task like the typical neuropsychological tools, but in an environment much more like standard classroom. Previous studies showed that a virtual classroom was able to distinguish performances of children with and without ADHD, but the evolution of performances over time has not been explored. The aim of this work was to study time on task effects on performances of ADHD children compared to controls in a virtual classroom (VC).

Methods: 36 boys aged from 7 to 10 years completed the virtual classroom task. We compared the performance of the children diagnosed with ADHD with those of the control children. We also compared attentional performances recorded in the virtual classroom with measures of the Continuous Performance Test (CPT II).

Results: Our results showed that patients differ from control subjects in term of time effect on performances. If controls sustained performances over time in the virtual reality task, ADHD patients showed a significant performance decrement over time. Performances at the VC correlated with CPT II measures.

Conclusion: ADHD children are vulnerable to a time on task effect on performances which could explain part of their difficulties. Virtual reality is a reliable method to test ADHD children ability to sustain performances over time.

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Front Integr Neurosci. 2010.

SENSORY OVER-RESPONSIVITY AND ADHD: DIFFERENTIATING USING ELECTRODERMAL RESPONSES, CORTISOL, AND ANXIETY.

Lane SJ, Reynolds S, Thacker L.

Deficits in sensory modulation have been linked clinically with impaired attention, arousal, and impulsivity for years, but a clear understanding of the relationship between sensory modulation disorders and attention deficit hyperactivity disorder (ADHD) has proven elusive. Our preliminary work suggested that patterns of salivary cortisol and electrodermal responsivity to sensation may be linked to different groups of children with ADHD; those with and without sensory overresponsivity (SOR). Additionally, SOR has been linked to anxiety, and anxiety has been linked to ADHD. A clearer understanding of the relationship between anxiety, SOR, and ADHD may support a better understanding of ADHD diagnostic subtypes. We examined neuroendocrine, electrodermal and behavioral characteristics and sought to predict group membership among 6-to 12-year-old children with ADHD and SOR (ADHDs), ADHD and no SOR (ADHDt), and typicals (TYP). Behavioral questionnaires were completed to document SOR and anxiety. Lab testing used a Sensory Challenge Protocol (SCP) with concurrent electrodermal measurement and the collection of cortisol prior to and following the SCP. Results substantiated links between SOR and anxiety, in both TYP and ADHD children. Results suggests that ADHD should be considered in conjunction with anxiety and sensory responsivity; both may be related to bottom-up processing differences, and deficits in prefrontal cortex/hippocampal synaptic gating.

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Gen Hosp Psychiatry. 2012.

COMORBIDITY OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER, TOURETTE'S SYNDROME AND BIPOLAR I DISORDER IN AN ADOLESCENT PATIENT WITH SCHIZENCEPHALY.

Yeh CY, Wang LJ, Huang YC.

There is compelling evidence for an association between structural brain deformities and psychiatric disorders. We report the case of an adolescent boy who was diagnosed with both attention-deficit/hyperactivity disorder and Tourette's syndrome. A full-blown manic episode occurred when he was 13 years old. During his admission to a psychiatric ward, closed-lip schizencephaly in the left frontal lobe and the right parietal lobe was identified through brain imaging. Effective control of his manic symptoms was achieved with quetiapine monotherapy within 3 weeks. This case report implies that the pathophysiology of psychiatric disorders, especially in young patients with multiple comorbid conditions, may be associated with abnormalities in the anatomical and functional development of the brain.

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Int J Integr Biol. 2011;12:11-14.

ASSAY OF SERUM DOPAMINE-SS-HYDROXYLASE ACTIVITY PHOTOMETRICALLY USING BATCH ADSORPTION CHROMATOGRAPHY.

Gharaibeh MY, Khabour OF, Alzoubi K.

Dopamine-ss-Hydroxylase (DBH) is an oxidase enzyme that catalyzes the conversion of dopamine to norepinephrine. Serum DBH level is suggested to be a useful measure of the function of the sympathetic nervous system. The enzymatic activity of DBH is measured by its action upon Tyramine. The product is determined by different techniques including colorimetery, high performance liquid chromatography (HPLC) and radioimmunoassay (RIA). However, these techniques are time consuming especially when dealing with a large number of samples. In the present study, we modified the colorimetric DBH assay by utilizing batch adsorption method instead of ion exchange column chromatography that is used in the classical technique. The results showed that the new method is sensitive, reliable and require less time in assaying DBH

activity. The new method was used to assay enzyme activity in normal children and those suffering from attention deficit and hyperactivity disorder (ADHD). Significant differences were observed in the level of DBH between the two groups, which is typical for ADHD. Thus, the new assay is a valid method for measuring serum DBH activity.

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Int J Law Psychiatry. 2012;35:27-34.

ATTENTION DEFICIT HYPERACTIVITY DISORDER DOES NOT PREDICT CRIMINAL RECIDIVISM IN YOUNG ADULT OFFENDERS: RESULTS FROM A PROSPECTIVE STUDY.

Grieger L, Hosser D.

As the state of research on the relationship between attention deficit hyperactivity disorder (ADHD) and recidivism can be considered controversial, our prospective study investigated whether ADHD predicts recidivism in a sample of 283 male, German, young adult prisoners. Currently existing ADHD symptoms and symptoms that were present in childhood were screened according to the DSM-IV checklist criteria. Information on general and violent recidivism was gathered using government records with a follow-up period of up to five years. The prevalence of adult ADHD was six times greater than in the general population, and the number of participants who retrospectively met the criteria for a diagnosis with ADHD in childhood was ten times greater than found in community samples. Survival analyses did not identify ADHD as a predictor of recidivism. Controlling for conduct disorder, substance dependence, and other relevant variables did not alter results. However, among individuals who were released from prison and then reconvicted for a new crime, offenders diagnosed with ADHD were found to reoffend sooner after release. These findings stress the necessity of differentiating between risk factors for delinquency and risk factors for recidivism.

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Iran J Pediatr. 2011;21:467-72.

PREVALENCE OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER SYMPTOMS IN PRESCHOOL-AGED IRANIAN CHILDREN.

Meysamie A, Fard MD, Mohammadi MR.

Objective: The aim of this study was to determine the prevalence of attention-deficit/hyperactivity disorder (ADHD) symptoms in Iranian preschool children based on evaluations by parents and teachers because a thorough understanding of epidemiologic features of ADHD symptoms in preschool children is important for prevention and management.

Methods: Children between the ages of three and six attending kindergarten participated in this study. For the survey, 37 kindergartens were selected by multistage (stratified cluster random) sampling, consisting of 2213 children with a design effect equal to 1.5. A 19-item observer-rating questionnaire was generated to assess ADHD symptoms in children within the last 6 months. This questionnaire was used by both teachers and parents to assess ADHD behavior in participating children.

Findings: Of 1403 children aged 3-6 years, 362 were classified as having ADHD symptoms according to their parent evaluation [25.8% (23.6-28.1%)] and 239 according to their teachers evaluation [17% (14.1-20.4%)]. Child rank among siblings, mother's education level, and interest in aggressive television programs were all independent explanatory variables according to parents' evaluation. Gender, parent education, child rank, single parent and interest in aggressive television programs were all independent explanatory variables according to teachers' evaluation.

Conclusion: Our findings reveal a large discrepancy in the prevalence of ADHD symptoms in preschool children based on evaluation by parents and teachers. Thus, it seems that the ADHD screening should be performed in multiple settings in order to identify children who need further investigations. (copyright) 2011 by Pediatrics Center of Excellence, Children's Medical Center, Tehran University of Medical Sciences, All rights reserved.

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Iran J Psychiatr Behav Sci. 2011;5:71-75.

COMPARISON OF HEIGHT AND WEIGHT OF 5-6 YEAR-OLD BOYS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) AND NON-ADHD.

Tashakori A, Riahi K, Afkandeh R, et al.

Objective: Attention Deficit Hyperactivity Disorder (ADHD) is one of the most prevalent psychiatric disorders in children. According to concern regarding the growth of these children, this study was carried out to compare height and weight between 5-6-year-old boys with ADHD and those without ADHD in Ahvaz, Iran.

Methods: In this cross-sectional study, 32 5-6-year-old ADHD boys with the Conners' rating scale (CRS) of (greater-than or equal to) 15 were compared to 32 non-ADHD same-age boys with CRS of < 15. Exclusion criteria were some special disease with negative effect on growth and psychostimulant treatment. Centers for Disease Control and Prevention (CDC) curves were used to determine the growth status.

Results: Comparison between ADHD and non-ADHD boys regarding mean height (111.95 (plus or minus) 6.12 vs. 110.77 (plus or minus) 6.22 cm), weight (19.39 (plus or minus) 3.65 vs. 19.19 (plus or minus) 3.75), and body mass index (15.44 (plus or minus) 1.82 vs. 15.54 (plus or minus) 1.67) showed no statistically significant difference (P>0.05).

Conclusion: Our study does not support an association between problems in growth outcomes and ADHD in 5-6 years old boys.

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J Adolesc. 2012;35:225-31.

BRIEF REPORT: THE IMPACT OF ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) SYMPTOMS ON ACADEMIC PERFORMANCE IN AN ADOLESCENT COMMUNITY SAMPLE.

Birchwood J, Daley D.

Less is understood about the relationship between ADHD symptoms and academic performance in adolescents than the relationship in younger children. As such, the aim of the present study was to investigate the prospective relationship between ADHD symptoms and academic performance in a community adolescent sample. Three hundred and twenty-four participants, aged 15 and 16, in their final year of compulsory education, completed measures of ADHD, anxiety, depression, and motivation, and a test of general cognitive ability. Participants were also asked for permission for their academic grades to be viewed on a later occasion (approximately 6 months later). In regression analyses, ADHD symptoms were the most significant independent psychopathological predictor of academic performance, and were almost as significant as motivation and cognitive ability. The results suggest that adolescents with more ADHD symptoms are likely to encounter greater academic difficulties.

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Journal of Attention Disorders. 2011 Nov;15:667-73.

ARE MATERNAL GENITOURINARY INFECTION AND PRE-ECLAMPSIA ASSOCIATED WITH ADHD IN SCHOOL-AGED CHILDREN?

Mann JR, McDermott S.

Objective: To investigate the hypothesis that maternal genitourinary infection (GU) infection is associated with increased risk of ADHD.

Method: The authors obtained linked Medicaid billing data for pregnant women and their children in South Carolina, with births from 1996 through 2002 and follow-up data through 2008. Maternal GU infections and pre-eclampsia were identified on the basis of diagnoses made during pregnancy, and cases of ADHD were identified on the basis of diagnoses made in the child's Medicaid file.

Results: There were 84,721 children in the data set used for analyses. Maternal genitourinary infection was associated with significantly increased odds of ADHD (OR = 1.29, 95% CI = 1.23-1.35). Pre-eclampsia was also associated with increased risk (OR = 1.19, 95% CI = 1.07-1.32). Children whose mothers had both GU infection and pre-eclampsia were 53% more likely to have ADHD, compared to those with neither exposure. When we examined specific infection diagnoses, chlamydia/nongonococcal urethritis, trichomoniasis, urinary tract infection, and candidiasis were associated with increased risk of ADHD, whereas gonorrhea was not.

Discussion: Maternal GU infection appeared to be associated with increased risk of ADHD, and based on the findings it was concluded that further research is needed to describe the mechanism(s) underlying the association.

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Journal of Attention Disorders. 2011 Nov;15:646-55.

EXECUTIVE DYSFUNCTION IN SCHOOL-AGE CHILDREN WITH ADHD.

Lambek R, Tannock R, Dalsgaard S, et al.

Objective: The study examined executive function deficits (EFD) in school-age children (7 to 14 years) with ADHD.

Method: A clinical sample of children diagnosed with ADHD (n = 49) was compared to a population sample (n = 196) on eight executive function (EF) measures. Then, the prevalence of EFD in clinical and non-clinical children was examined at the individual level according to three methods previously applied to define EFD, and a fourth method was included to control for the effect of age on performance.

Results: Children with ADHD were significantly more impaired on measures of EF than children without ADHD at the group level. However, only about 50% of children with ADHD were found to have EFD at the individual level, and results appeared relatively robust across methods applied to define EFD.

Conclusion: As a group, children with ADHD displayed more problems on neuropsychological measures of EF than non-clinical children; at the individual level, there appeared to be heterogeneity in EF impairment.

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Journal of Attention Disorders. 2011 Nov;15:684-89.

EFFICACY OF ATOMOXETINE IN CHILDREN WITH SEVERE AUTISTIC DISORDERS AND SYMPTOMS OF ADHD: AN OPEN-LABEL STUDY.

Charnsil C.

Objective: This study aims to examine the efficacy of atomoxetine in treating symptoms of attention deficit hyperactivity disorder (ADHD) in children with severe autistic disorder.

Method: Children with severe autistic disorder who had symptoms of ADHD were given atomoxetine for 10 weeks. The efficacy of atomoxetine was evaluated by using the Aberrant Behavior Checklist (ABC) to rate ADHD symptoms at baseline, week 6, and week 10. The Clinical Global Impression-Improvement (CGI-I) scale was used as secondary outcome to assess the overall improvement of the children's development at week 10.

Results: A total of 12 children participated in this study. Although CGI-I scores showed improvement at week 10, the ABC hyperactivity subscale did not show a significant improvement of the ADHD symptoms at baseline (M = 33.89) compared to those at week 10 (M = 31.78, p = .62).

Conclusion: Atomoxetine did not benefit children with severe autistic disorder who have ADHD symptoms.

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Journal of Attention Disorders. 2011 Nov;15:628-37.

ASSOCIATION AMONG SNAP-25 GENE DDEI AND MNLI POLYMORPHISMS AND HEMODYNAMIC CHANGES DURING METHYLPHENIDATE USE: A FUNCTIONAL NEAR-INFRARED SPECTROSCOPY STUDY.

Öner Ö, Akin A, Herken H, et al.

Objective: To investigate the interaction of treatment-related hemodynamic changes with genotype status for Synaptosomal associated protein 25 (SNAP-25) gene in participants with attention deficit hyperactivity disorder (ADHD) on and off single dose short-acting methylphenidate treatment with functional near-infrared spectroscopy (fNIRS).

Method: A total of 15 right-handed adults and 16 right-handed children with DSM-IV diagnosis of ADHD were evaluated. Ten milligrams of short-acting methylphenidate was administered in a crossover design.

Results: Participants with SNAP-25 DdeI T/T genotype had decreased right deoxyhemoglobin ([HHb]) with treatment. SNAP-25 MnlI genotype was also associated with right deoxyhemoglobin ([HbO2]) and [HHb] changes as well as left [HHb] change. When the combinations of these genotypes were taken into account,

the participants with [DdeI C/C or T/C and MnlI G/G or T/G] genotype had increased right [HHb] with MPH use whereas the participants with [DdeI T/T and MnlI T/T] or [DdeI T/T and MnlI G/G or T/G] genotypes had decreased right prefrontal [HHb].
Conclusions: These results suggested that SNAP-25 polymorphism might be associated with methylphenidate induced brain hemodynamic changes in ADHD participants.

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Journal of Attention Disorders. 2012 Jan;16:34-43.
EXPLORING LANGUAGE PROFILES FOR CHILDREN WITH ADHD AND CHILDREN WITH ASPERGER SYNDROME.
Helland WA, Biringer E, Helland T, et al.
Objective: The aims of the present study was to investigate communication impairments in a Norwegian sample of children with ADHD and children with Asperger syndrome (AS) and to explore whether children with ADHD can be differentiated from children with AS in terms of their language profiles on the Norwegian adaptation of the Children's Communication Checklist Second Edition (CCC-2).
Method: The CCC-2 was completed by the parents, and altogether, 77 children aged between 6 and 15 years participated in the study.
Results: Communication impairments were as common in a group of children with ADHD as in a group of children with AS. Although a similar pattern appeared on most CCC-2 scales, children with ADHD and children with AS could be distinguished from each other in terms of their language profiles on the subscales assessing stereotyped language and nonverbal communication.
Conclusion: Language abilities should be taken into account when standard assessments of ADHD and AS are performed and before therapies are initiated.

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Journal of Attention Disorders. 2012 Jan;16:23-33.
READING PERFORMANCE AS A FUNCTION OF TREATMENT WITH LISDEXAMFETAMINE DIMESYLATE IN ELEMENTARY SCHOOL CHILDREN DIAGNOSED WITH ADHD.
Wigal SB, Maltas S, Crinella F, et al.
Background: Medication treatment studies of ADHD have typically not assessed effects on reading performance, although reading difficulties frequently co-occur in children with ADHD. The current study characterizes the effects of lisdexamfetamine dimesylate (LDX; Vyvanse[sup]®[/sup], Shire US Inc.), at peak efficacy, on reading performance in children with ADHD.
Method: Children (ages 6-12; N = 26) with ADHD enrolled in a modified laboratory school study with an open-label, dose-optimization phase of LDX (30-70 mg/d). The Gray Oral Reading Test-4 (GORT-4) with measures of rate, accuracy, and comprehension was administered at baseline and 3-4 hr postdose, following 4 to 5 weeks of optimal dose titration.
Results: Treatment reduced ADHD symptoms. Reading rate was improved, especially among children with higher verbal fluid reasoning without additional symptoms of neurodevelopmental delay. No differences were observed for reading accuracy or comprehension.
Conclusion: Endophenotypical profiles may predict drug effects in specific skill areas, such as reading rate.

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Journal of Attention Disorders. 2012 Jan;16:44-59.
A 12-MONTH PROSPECTIVE, OBSERVATIONAL STUDY OF TREATMENT REGIMEN AND QUALITY OF LIFE ASSOCIATED WITH ADHD IN CENTRAL AND EASTERN EUROPE AND EASTERN ASIA.
Goetz M, Yeh CB, Ondrejka I, et al.
Objectives: This prospective, observational, non-randomized study aimed to describe the relationship between treatment regimen prescribed and the quality of life (QoL) of ADHD patients in countries of Central and Eastern Europe (CEE) and Eastern Asia over 12 months.
Methods: 977 Male and female patients aged 6-17 years seeking treatment for symptoms of ADHD were assessed using the Child and Adolescent Symptom Inventory-4 Parent Checklists, and the Clinical Global

Impressions-ADHD-Severity scale. QoL was assessed using the Child Health and Illness Profile-Child Edition parent report form. Patients were grouped according to whether they were prescribed psycho- and/or pharmacotherapy (treatment) or not (no/'other' treatment).
Results: No statistically significant differences were observed between cohorts (treatment vs. no/'other' treatment) in terms of change in QoL, although there was improvement over 12 months, with a greater improvement experienced by patients in the treatment cohort in both study regions (CEE and Eastern Asia). Psychoeducation/counselling and methylphenidate were the predominant ADHD treatments prescribed.
Conclusions: Although both treatment and no/'other' treatment cohorts showed improvements in mean QoL over 12 months, the difference was small and not statistically significant. A major limitation was the higher than anticipated number of patients switching treatments, predominantly from the no/'other' treatment cohort.

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Journal of Attention Disorders. 2012 Jan;16:71-80.

A PHYSICAL ACTIVITY PROGRAM IMPROVES BEHAVIOR AND COGNITIVE FUNCTIONS IN CHILDREN WITH ADHD: AN EXPLORATORY STUDY.

Verret C, Guay MC, Berthiaume C, et al.

Objective: The objective of this study is to explore the effects of a moderate- to high-intensity physical activity program on fitness, cognitive functions, and ADHD-related behavior in children with ADHD.
Method: Fitness level, motor skills, behaviors, and cognitive functions are assessed by standardized tests before and after a 10-week training or control period.
Results: Findings show that participation in a physical activity program improves muscular capacities, motor skills, behavior reports by parents and teachers, and level of information processing.
Conclusion: A structured physical activity program may have clinical relevance in the functional adaptation of children with ADHD. This supports the need for further research in the area of physical activity with this population.

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J Child Adolesc Psychopharmacol. 2011;21:581-88.

DOSE EFFECTS AND COMPARATIVE EFFECTIVENESS OF EXTENDED RELEASE DEXMETHYLPHENIDATE AND MIXED AMPHETAMINE SALTS.

Stein MA, Waldman ID, Charney E, et al.

Objective: To compare the dose effects of long-acting extended-release dexmethylphenidate (ER d-MPH) and ER mixed amphetamine salts (ER MAS) on attention-deficit/hyperactivity disorder (ADHD) symptom dimensions, global and specific impairments, and common adverse events associated with stimulants.
Methods: Fifty-six children and adolescents with ADHD participated in an 8-week, double-blind, crossover study comparing ER d-MPH (10, 20, 25-30 mg) and ER MAS (10, 20, 25-30) with a week of randomized placebo within each drug period. Efficacy was assessed with the ADHD Rating Scale-IV (ADHD-RS-IV), whereas global and specific domains of impairment were assessed with the Clinical Global Impressions Severity and Improvement Scales and the parent-completed Weiss Functional Impairment Scale, respectively. Insomnia and decreased appetite, common stimulant-related adverse events, were measured with the parent-completed Stimulant Side Effects Rating Scale.
Results: Both ER d-MPH and ER MAS were associated with significant reductions in ADHD symptoms. Improvement in Total ADHD and Hyperactivity/Impulsivity symptoms were strongly associated with increasing dose, whereas improvements in Inattentive symptoms were only moderately associated with dose. About 80% demonstrated reliable change on ADHD-RS-IV at the highest dose level of ER MAS compared with 79% when receiving ER d-MPH. Decreased appetite and insomnia were more common at higher dose levels for both stimulants. Approximately 43% of the responders were preferential responders to only one of the stimulant formulations.
Conclusions: Dose level, rather than stimulant class, was strongly related to medication response.

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J Child Adolesc Psychopharmacol. 2011;21:639-42.
FRAGILE X SYNDROME AND ATTENTION-DEFICIT/HYPERACTIVITY DISORDER SYMPTOMS.
Deshpande S, Coffey BJ.

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J Child Adolesc Psychopharmacol. 2011;21:589-95.
THE EFFECT OF METHYLPHENIDATE ON PREFRONTAL COGNITIVE FUNCTIONING, INATTENTION, AND HYPERACTIVITY IN VELOCARDIOFACIAL SYNDROME.
Green T, Weinberger R, Diamond A, et al.
Objective: Methylphenidate (MPH) is commonly used to treat attention-deficit/hyperactivity disorder (ADHD) in all children, including those with velocardiofacial syndrome (VCFS). Yet concerns have been raised regarding its safety and efficacy in VCFS. The goal of this study was to examine the safety and efficacy of MPH in children with VCFS.
Methods: Thirty-four children and adolescents with VCFS and ADHD participated in a randomized, controlled trial with a 2:1 ratio of MPH versus placebo. All subjects underwent a cardiological evaluation before and after MPH administration. The primary outcome measure was prefrontal cognitive performance following a single dose of MPH or placebo. A follow-up assessment was conducted after a 6-month treatment with MPH.
Results: Compared with placebo, single MPH administration was associated with a more robust improvement in prefrontal cognitive performance, including achievements in the Hearts and Flowers executive function task and the visual continuous performance task. After 6 months of treatment, a 40% reduction in severity of ADHD symptoms was reported by parents on the Revised Conners Rating Scale. All subjects treated with MPH reported at least one side effect, but it did not necessitate discontinuation of treatment. MPH induced an increase in heart rate and blood pressure that was usually minor, but was clinically significant in two cases. No differences in response to MPH were observed between catechol-O-methyltransferase Met versus Val carriers.
Conclusion: The use of MPH in children with VCFS appears to be effective and relatively safe. A comprehensive cardiovascular evaluation for children with VCFS before and during stimulant treatment is recommended.

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J Child Adolesc Psychopharmacol. 2011;21:597-603.
PHARMACOTHERAPY AND ACADEMIC ACHIEVEMENT AMONG CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.
Barnard-Brak L, Brak V.
This study examined the association of pharmacological treatments and academic achievement among children with attention-deficit/hyperactivity disorder (ADHD). Results examining the association of pharmacological treatments and academic achievement among children with ADHD are mixed. Our objective was to examine this association using structural equation modeling (SEM) techniques, which may be considered more sophisticated and advanced over traditional regression techniques. To achieve the purpose, we employed a sample of children with ADHD derived from the Early Childhood Longitudinal Study-Kindergarten (ECLS-K) data. The ECLS-K provides a large, community-based, nationally representative sample of children to examine across time with respect to academic achievement outcomes. The present study reveals a statistically nonsignificant association between pharmacological treatment and academic achievement among children with ADHD. These results derived from a large, community-based, nationally representative sample, using SEM techniques, may be considered highly generalizable.

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J Child Adolesc Psychopharmacol. 2011;21:571-79.

PREVALENCE AND CORRELATES OF PSYCHOTROPIC MEDICATION USE IN ADOLESCENTS WITH AN AUTISM SPECTRUM DISORDER WITH AND WITHOUT CAREGIVER-REPORTED ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

Frazier TW, Shattuck PT, Narendorf SC, et al.

Background: Many youths with an autism spectrum disorder (ASD) benefit from psychotropic medication treatment of co-morbid symptom patterns consistent with attention-deficit/hyperactivity disorder (ADHD). The lack of clear indications and algorithms to direct clinical practice has led to a very poor understanding of overall medication use for these youths. The present study examined the prevalence of psychotropic medication use compared across individuals with an ASD without a caregiver-reported ADHD diagnosis (ASD-only), ADHD without ASD (ADHD-only), and an ASD with co-morbid ADHD (ASD+ADHD). Correlates of medication use were also examined.

Methods: Data on psychotropic medication from the first wave of the National Longitudinal Transition Study 2, a nationally representative study of adolescents ages 13-17 in special education, were used to compare the prevalence of medication use across the three groups, overall and by class. Separate logistic regression models were constructed for each group to examine the correlates of psychotropic medication use. Poisson regression models were used to examine correlates of the number of medications.

Results: Youths with ASD+ADHD had the highest rates of use (58.2%), followed by youths with ADHD-only (49.0%) and youths with ASD-only (34.3%). Youths with an ASD, both ASD-only and ASD+ADHD, used medications across a variety of medication classes, whereas stimulants were dominant among youths with ADHD-only. African American youths with ASD-only and with ASD+ADHD were less likely to receive medication than white youths, whereas race was not associated with medication use in the ADHD-only group.

Conclusions: Clearer practice parameters for ADHD have likely contributed to more consistency in treatment, whereas treatment for ASD reflects a trial and error approach based on associated symptom patterns. Additional studies examining the treatment of core and associated ASD symptoms are needed to guide pharmacologic treatment of these youths. Interventions targeting African American youths with ASD and the physicians who serve them are also warranted.

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Journal of Child Psychology and Psychiatry. 2012 Jan;53:73-80.

CHILDHOOD ATTENTION-DEFICIT HYPERACTIVITY DISORDER AS AN EXTREME OF A CONTINUOUS TRAIT: A QUANTITATIVE GENETIC STUDY OF 8,500 TWIN PAIRS.

Larsson H, Anckarsater H, Råstam M, et al .

Background: Although the clinical utility of categorically defined attention-deficit hyperactivity disorder (ADHD) is well established, there is also strong evidence supporting the notion of ADHD as an extreme of a continuous trait. Nevertheless, the question of whether the etiology is the same for different levels of DSM–IV ADHD symptoms remains to be investigated. The aim of this study was to assess genetic links between the extreme and the subthreshold range of ADHD symptoms.

Method: Parents of all Swedish 9- and 12-year-old twins born between 1992 and 2000 were interviewed for DSM–IV ADHD symptoms and associated conditions. Two validated cutoff values were used for screening and assigning research diagnoses. Response rate was 80%. Twin methods were applied to investigate the extent to which ADHD is etiologically distinct from subthreshold variations in ADHD symptoms.

Results: Extremes analyses indicated a strong genetic link between the extreme and the subthreshold variation, with almost identical group heritability estimates around .60 for the diagnostic (prevalence 1.78%) and screening (prevalence 9.75%) criteria of ADHD.

Conclusion: A strong genetic link between the extreme and the subthreshold variation of DSM–IV based assessments of ADHD symptoms was found. The data suggest that ADHD is best viewed as the quantitative extreme of genetic and environmental factors operating dimensionally throughout the distribution of ADHD symptoms, indicating that the same etiologic factors are involved in the full range of symptoms of inattention, hyperactivity and impulsivity.

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J Clin Psychopharmacol. 2012;32:138-40.
SEX SUBGROUP ANALYSIS OF TREATMENT RESPONSE TO LISDEXAMFETAMINE DIMESYLATE IN CHILDREN AGED 6 TO 12 YEARS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.
McGough JJ, Greenbaum M, Adeyi B, et al.

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J Neural Transm. 2012 Jan;119:81-94.
BIOLOGICAL AND PSYCHOSOCIAL ENVIRONMENTAL RISK FACTORS INFLUENCE SYMPTOM SEVERITY AND PSYCHIATRIC COMORBIDITY IN CHILDREN WITH ADHD.
Freitag CM, Hänig S, Schneider A, et al.
Attention-deficit/hyperactivity disorder (ADHD) is a genetically as well as environmentally determined disorder with a high rate of psychiatric comorbidity. In this study, non-genetic biological and psychosocial risk factors for ADHD symptom severity and comorbid disorders were assessed in 275 children with ADHD, aged 5–13 years, mean age 9.7 (SD 1.9). Pre-/perinatal biological and life-time psychosocial risk factors as well as data on parental ADHD were obtained. A different pattern of risk factors emerged for inattentive and hyperactive-impulsive ADHD symptoms. Inattentive symptoms were strongly influenced by psychosocial risk factors, whereas for hyperactive-impulsive symptoms, predominantly biological risk factors emerged. Hyperactive-impulsive symptoms also were a strong risk factor for comorbid oppositional defiant (ODD) and conduct disorder (CD). Smoking during pregnancy was a risk factor for comorbid CD but not ODD and further differential risk factors were observed for ODD and CD. Comorbid anxiety disorder (AnxD) was not related to ADHD symptoms and additional biological and psychosocial risk factors were observed. This study adds to the body of evidence that non-genetic biological and psychosocial risk factors have an impact on ADHD symptom severity and differentially influence comorbid disorders in ADHD. The findings are relevant to the prevention and treatment of ADHD with or without comorbid disorders.

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J Paediatr Child Health. 2011;47:870-74.
STIMULANT MEDICATION IN PRE-SCHOOL CHILDREN IN NEW SOUTH WALES.
Eysbouts Y, Poulton A, Salmelainen P.
Aims: The aims of this study were: (i) to examine the annual treatment rate of children under 4 years from 1997 to 2006; (ii) to compare their treatment rate and attrition with that of children starting treatment at the modal age; (iii) to describe the clinical characteristics of children aged less than 4 years and their response to stimulant medication for the treatment of attention-deficit hyperactivity disorder.
Methods: Retrospective study of electronic prescription and authority records of the New South Wales Department of Health and a review of clinical reports.
Results: The annual treatment initiation rate for children under 4 years showed a progressive decline over the decade. In 2001, 13.6% of the children starting treatment were aged 7 years (modal age); those aged <4 years represented 1.1% of the total. There was no significant difference in attrition rate between these two groups. For those aged <4 years with clinical reports available (n= 235), oppositional behaviour and developmental problems were reported frequently (78 and 43%, respectively). Non-pharmacological interventions were implemented in 77% and non-stimulant medications were prescribed in 50%. For 76% of children, an improvement in behaviour was reported after stimulant therapy.
Conclusions: Children treated with stimulant medication aged <4 years were a small subgroup with a high rate of co-morbidity. The majority were perceived to have a favourable response to stimulant medication. However, there was a disturbingly high rate of prescribing of other psychotropic medications of known toxicity and unproven efficacy.

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J Psychiatr Res. 2012.

THE EFFECTS OF LISDEXAMFETAMINE DIMESYLATE ON THE DRIVING PERFORMANCE OF YOUNG ADULTS WITH ADHD: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY USING A VALIDATED DRIVING SIMULATOR PARADIGM.

Biederman J, Fried R, Hammerness P, et al.

Young adults with Attention Deficit Hyperactivity Disorder (ADHD) have been shown to be at increased risk for impairment in driving behaviors. While stimulant medications have proven efficacy in reducing ADHD symptomatology, there is limited knowledge as to their effects on driving impairment. The main aim of this study was to assess the impact of lisdexamfetamine dimesylate (LDX) on driving performance in young adults with ADHD using a validated driving simulation paradigm. This was a randomized, double-blind, 6-week, placebo-controlled, parallel-design study of LDX vs. a placebo on driving performance in a validated driving simulation paradigm. Subjects were sixty-one outpatients of both sexes, 18-26 years of age, who met DSM-IV criteria for ADHD. Subjects were randomized to receive LDX or placebo after a baseline driving simulation and completed a second driving simulation six weeks after beginning drug or placebo. Examination of reaction time across five surprise events at post-treatment showed a significant positive effect of medication status. LDX treatment was also associated with significantly fewer accidents vs. placebo. LDX treatment was associated with significantly faster reaction times and a lower rate of simulated driving collisions than placebo. These results suggest that LDX may reduce driving risks in young adults with ADHD.

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J Psychopathol Behav Assess. 2011 Dec;33:409-19.

THE EFFECTS OF STIMULANT MEDICATION ON FREE RECALL OF STORY EVENTS AMONG CHILDREN WITH ADHD.

Bailey UL, Derefinko KJ, Milich R, et al.

This study investigated group differences in the recalls of stories by children with attention-deficit/hyperactivity disorder (ADHD) and comparison peers, and whether stimulant medication improved the story recall of those children with ADHD relative to a placebo condition. Children (N = 42) were asked to recall both televised and audio taped stories. Children's free recall scripts were assessed whether information recalled was coherent, part of the causal chain, and important to the story. Relative to comparison peers, children with ADHD showed less sensitivity to events central to the stories and causal chain status of story events in recall, and produced less coherent recall of the audio taped stories. Upon establishing group differences in performance, additional analyses were performed for children with ADHD. Among those children with ADHD, stimulant medication had only limited beneficial effects on the story recall. Although stimulant medication was associated with increases in the percent of events recalled, it did not increase these children's recall of events central to the stories, and had no effect on the coherence of recalls. Implications of these results for guiding future academic interventions are discussed.

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J Psychosom Res. 2011;70:614.

A NEW TOOL FOR DETECTING DEPRESSION IN CHILDREN AND ADOLESCENTS.

Shahid A, Zalai D, Hossain N, et al.

Background: To discuss a new tool that we have found very helpful in educating parents, families, teachers and allied health professionals in detecting depression in children and adolescents. Approximately 1/20 of children suffer from depression. This is the same percentage as ADHD. Most teachers in a classroomsetting will be able to recognize a child with ADHD but only few teachers will be aware of a child having depression. Aim: To detect, recognize and treat depression in children and adolescents.

Method: We developed a booklet called nullDetecting Depression in Children andAdolescentsnull. It comprises 40 pages and it is easy to read. It is highly illustrated with figures, diagrams and vignettes that make it very user-friendly. The causes of depression, its course and treatment are discussed along with pharmacological and non pharmacological treatments. We also talk about the sensitive issue of black box warning with antidepressants.

Results: It helped health care professionals and families in particular to accept the diagnosis and initiate treatment specifically after reading this booklet.

Conclusion: This educational tool also helped in the early recognition, detection and assessment of depression in children and teenagers at the sleep clinic.

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Journal of the American Academy of Child & Adolescent Psychiatry. 2011 Dec;50:1247-54.

EVIDENCE FOR A CAUSAL ASSOCIATION OF LOW BIRTH WEIGHT AND ATTENTION PROBLEMS.

Groen-Blokhuis MM, Middeldorp CM, van Beijsterveldt CEM, et al.

Objective: Low birth weight (LBW) is associated with attention problems (AP) and attention-deficit/hyperactivity disorder (ADHD). The etiology of this association is unclear. We investigate whether there is a causal influence of birth weight (BW) on AP and whether the BW effect is mediated by catch-up growth (CUG) in low-BW children.

Method: Longitudinal data from >29,000 twins registered with the Netherlands Twin Register with BW =1,500 g and gestational age (GA) =32 weeks were analyzed with the cotwin control method. Hyperactivity and AP were assessed at ages 3, 7, 10, and 12 years; weight was assessed at birth and age 2 years.

Results: Children in the lowest BW category of 1,500 to 2,000 g scored 0.18 to 0.37 standard deviations (SD) higher on AP than children in the reference category of 3,000 to 3,500 g. This effect was present in term-born and preterm-born children. Importantly, in BW discordant monozygotic (MZ), dizygotic (DZ), and unrelated (UR) pairs, the child with the lower BW scored higher on hyperactivity and AP than the child with the higher BW and within-pair differences were similar for MZ, DZ, and UR pairs. This pattern is consistent with a causal effect of BW on AP. MZ and DZ twin pairs concordant for LBW but discordant for CUG showed similar AP scores, thus ruling out any effect of CUG on AP.

Conclusions: These results strongly indicate that the association of birth weight and AP represents a causal relationship. The effects of BW are not explained by CUG in LBW children.

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Journal of the American Academy of Child & Adolescent Psychiatry. 2011 Dec;50:1236-46.

PARENTAL ATTENTION-DEFICIT/HYPERACTIVITY DISORDER PREDICTS CHILD AND PARENT OUTCOMES OF PARENTAL FRIENDSHIP COACHING TREATMENT.

Griggs MS, Mikami AY.

Objective: This study investigated the impact of parental attention-deficit/hyperactivity disorder (ADHD) symptoms on the peer relationships and parent–child interaction outcomes of children with ADHD among families completing a randomized controlled trial of parental friendship coaching (PFC) relative to control families.

Method: Participants were 62 children with ADHD (42 boys and 20 girls, 6 through 10 years old) and their parents. Approximately half of the families received PFC (a 3-month parent training intervention targeting the peer relationships of children with ADHD), and the remainder represented a no-treatment control group.

Results: Parental inattention predicted equivalent declines in children's peer acceptance in both treatment and control families. However, treatment amplified differences between parents with high versus low ADHD symptoms for some outcomes: Control families declined in functioning regardless of parents' symptom levels. However, high parental inattention predicted increased child peer rejection and high parental inattention and impulsivity predicted decreased parental facilitation among treated families (indicating reduced treatment response). Low parental symptoms among treated families were associated with improved functioning in these areas. For other outcomes, treatment attenuated differences between parents with high versus low ADHD symptoms: Among control parents, high parental impulsivity was associated with increasing criticism over time, whereas all treated parents showed reduced criticism regardless of symptom levels. Follow-up analyses indicated that the parents experiencing poor treatment response are likely those with clinical levels of ADHD symptoms.

Conclusions: Results underscore the need to consider parental ADHD in parent training treatments for children with ADHD.

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Journal of the American Academy of Child & Adolescent Psychiatry. 2012 Jan;51:18-27.

DECREASED REGIONAL CORTICAL THICKNESS AND THINNING RATE ARE ASSOCIATED WITH INATTENTION SYMPTOMS IN HEALTHY CHILDREN.

Ducharme S, Hudziak JJ, Botteron KN, et al.

Objective: Children with attention-deficit/hyperactivity disorder (ADHD) have delayed cortical maturation, evidenced by regionally specific slower cortical thinning. However, the relationship between cortical maturation and attention capacities in typically developing children is unknown. This study examines cortical thickness correlates of inattention symptoms in a large sample of healthy children.

Method: Data from 357 healthy subjects (6.0–18.4 years of age) were obtained from the NIH MRI Study of Normal Brain Development. In cross-sectional analysis (first visit, n = 257), Child Behavior Checklist Attention Problems (AP) scores were linearly regressed against cortical thickness, controlling for age, gender, total brain volume, and site. For longitudinal data (up to three visits, n = 357/672 scans), similar analyses were performed using mixed-effects linear regressions. Interactions of AP with age and gender were tested.

Results: A cross-sectional "AP by age" interaction was found in bilateral orbito-frontal cortex, right inferior frontal cortex, bilateral ventromedial prefrontal cortex, bilateral dorsolateral prefrontal cortex, and several additional attention network regions. The interaction was due to negative associations between AP and thickness in younger subjects (6–10 years of age) that gradually disappeared over time secondary to slower cortical thinning. Similar trends were present in longitudinal analyses.

Conclusions: Higher AP scores were associated with thinner cortex at baseline and slower cortical thinning with aging in multiple areas involved in attention processes. Similar patterns have been identified in ADHD, suggesting a dimensional component to the link between attention and cortical maturation. The identified association between cortical maturation and attention in healthy development will help to inform studies of neuroimaging biomarkers of ADHD.

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Journal of the American Academy of Child & Adolescent Psychiatry. 2012 Jan;51:74-85.

A CONTROLLED TRIAL OF EXTENDED-RELEASE GUANFACINE AND PSYCHOSTIMULANTS FOR ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

Wilens TE, Bukstein O, Brams M, et al.

Objective: To examine efficacy, tolerability, and safety of guanfacine extended release (GXR; =4 mg/d) adjunctive to a long-acting psychostimulant for the treatment of attention-deficit/hyperactivity disorder (ADHD) in children and adolescents 6 to 17 years of age with suboptimal, but partial, response to psychostimulant alone.

Method: In this multicenter, 9-week, double-blind, placebo-controlled, dose-optimization study, subjects (N = 461) continued their stable dose of psychostimulant given in the morning and were randomized to receive GXR in the morning (GXR AM), GXR in the evening (GXR PM), or placebo. Efficacy measures included ADHD Rating Scale IV (ADHD-RS-IV) and Clinical Global Impressions of Severity of Illness (CGI-S) and Improvement (CGI-I) scales. Safety measures included adverse events (AEs), vital signs, electrocardiograms, and laboratory evaluations.

Results: At endpoint, GXR treatment groups showed significantly greater improvement from baseline ADHD-RS-IV total scores compared with placebo plus psychostimulant (GXR AM, p = .002; GXR PM, p <.001). Significant benefits of GXR treatment versus placebo plus psychostimulant were observed on the CGI-S (GXR AM, p = .013; GXR PM, p < .001) and CGI-I (GXR AM, p = .024; GXR PM, p = .003). At endpoint, small mean decreases in pulse, systolic, and diastolic blood pressure were observed in GXR treatment groups versus placebo plus psychostimulant. No new safety signals emerged following administration of GXR with psychostimulants versus psychostimulants alone. Most AEs were mild to moderate in severity.

Conclusions: Morning or evening GXR administered adjunctively to a psychostimulant showed significantly greater improvement over placebo plus psychostimulant in ADHD symptoms and generated no new safety signals.

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J Am Acad Child Adolesc Psychiatry. 2012;51:147-56.

STIMULANTS AND CARDIOVASCULAR EVENTS IN YOUTH WITH ATTENTION-DEFICIT/ HYPERACTIVITY DISORDER.

Olfson M, Huang C, Gerhard T, et al.

Objective: This study examined associations between stimulant use and risk of cardiovascular events and symptoms in youth with attention-deficit/ hyperactivity disorder and compared the risks associated with methylphenidate and amphetamines.

Method: Claims were reviewed of privately insured young people 6 to 21 years old without known cardiovascular risk factors (n = 171,126). A day-level cohort analysis evaluated the risk of cardiovascular events after a diagnosis of attention-deficit/hyperactivity disorder in relation to stimulant exposures. Based on filled stimulant prescriptions, follow-up days were classified as current, past, and no stimulant use. Endpoints included an emergency department or inpatient diagnosis of angina pectoris, cardiac dysrhythmia, or transient cerebral ischemia (cardiac events) or tachycardia, palpitations, or syncope (cardiac symptoms).

Results: There were 0.92 new cardiac events and 3.08 new cardiac symptoms per 1,000,000 days of current stimulant use. Compared with no stimulant use (reference group), the adjusted odds ratios of cardiac events were 0.69 (95% confidence interval 0.421.12) during current stimulant use and 1.18 (95% CI 0.831.66) during past stimulant use. The corresponding adjusted odds ratios for cardiac symptoms were 1.18 (95% CI 0.891.59) for current and 0.93 (95% CI 0.711.21) for past stimulant use. No significant differences were observed in risks of cardiovascular events (2.14, 95% CI 0.825.63) or symptoms (1.08, 95% CI 0.661.79) for current methylphenidate use compared with amphetamine use (reference group).

Conclusions: Clinical diagnoses of cardiovascular events and symptoms were rare and not associated with stimulant use. The results help to allay concerns over the cardiovascular safety of stimulant treatment for attention-deficit/hyperactivity disorder in young people without known pre-existing risk factors.

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J Urol. 2012;187:656-61.

CORRELATION BETWEEN SYMPTOMS OF VOIDING DYSFUNCTION AND ATTENTION DEFICIT DISORDER WITH HYPERACTIVITY IN CHILDREN WITH LOWER URINARY TRACT SYMPTOMS.

Yang TK, Guo YJ, Chen SC, et al.

We clarified correlations between symptoms of attention deficit disorder with hyperactivity and voiding dysfunction in children. The study sample consisted of 92 boys and 38 girls 4 to 14 years old who presented at pediatric urology clinics with untreated lower urinary tract symptoms. Parents completed the Swanson, Nolan and Pelham-IV scale. Each subject with a combined score in the first 2 subscales (inattention, hyperactivity/impulsivity) at or above the 90th percentile was classified as having symptoms of attention deficit disorder with hyperactivity. All other cases were classified as nonattention deficit disorder. Voiding dysfunction symptoms were assessed by the Dysfunctional Voiding Symptom Scale. Sleep quality was assessed by the Pediatric Sleep Questionnaire. We then analyzed correlations between Dysfunctional Voiding Symptom Scale and symptoms of attention deficit disorder with hyperactivity. The group with symptoms of attention deficit disorder with hyperactivity had significantly higher scores on the Dysfunctional Voiding Symptom Scale overall and in the "cannot wait" subscale compared to the group without attention deficit disorder, as well as poorer sleep quality and lower voiding volumes. Overall Dysfunctional Voiding Symptom Scale scores were significantly correlated with overall Swanson, Nolan and Pelham-IV scale scores and also significantly correlated with each of the 3 Swanson, Nolan and Pelham-IV subscales (inattention, hyperactivity/impulsivity and oppositional defiant). Overall Dysfunctional Voiding Symptom Scale scores and scores on the "cannot wait" and "hurt when pee" subscales were significantly higher for males than for females. Boys with higher scores of attention deficit disorder with hyperactivity symptoms tend to have higher Dysfunctional Voiding Symptom Scale scores. Lower urinary tract symptoms were significantly correlated with overall Swanson, Nolan and Pelham-IV scores and significantly correlated with each of the 3 subscales. Evaluation of concomitant symptoms of attention deficit disorder with hyperactivity in children with lower urinary tract symptoms is an important clinical concern.

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Nature Genetics 2012;44:78-84.

GENOME-WIDE COPY NUMBER VARIATION STUDY ASSOCIATES METABOTROPIC GLUTAMATE RECEPTOR GENE NETWORKS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER.

Elia J, Glessner JT, Wang K, et al.

Attention deficit hyperactivity disorder (ADHD) is a common, heritable neuropsychiatric disorder of unknown etiology. We performed a whole-genome copy number variation (CNV) study on 1,013 cases with ADHD and 4,105 healthy children of European ancestry using 550,000 SNPs. We evaluated statistically significant findings in multiple independent cohorts, with a total of 2,493 cases with ADHD and 9,222 controls of European ancestry, using matched platforms. CNVs affecting metabotropic glutamate receptor genes were enriched across all cohorts (P = 2.1 null 10-9). We saw GRM5 (encoding glutamate receptor, metabotropic 5) deletions in ten cases and one control (P = 1.36 null 10 -6). We saw GRM7 deletions in six cases, and we saw GRM8 deletions in eight cases and no controls. GRM1 was duplicated in eight cases. We experimentally validated the observed variants using quantitative RT-PCR. A gene network analysis showed that genes interacting with the genes in the GRM family are enriched for CNVs in ~10% of the cases (P = 4.38 null 10 -10) after correction for occurrence in the controls. We identified rare recurrent CNVs affecting glutamatergic neurotransmission genes that were overrepresented in multiple ADHD cohorts.

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Ned Tijdschr Geneeskd. 2011;155:2284-88.

MOTOR PROBLEMS IN CHILDREN WITH ADHD: UNDEREXPOSED IN CLINICAL PRACTICE.

Fliers EA, Franke B, Buitelaar JK.

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Neuropsychiatr Enfance Adolesc. 2012.

PSYCHOSTIMULANTS FOR TREATMENT OF ADHD IN CHILDREN AND ADOLESCENTS.

Reneric JP.

Attention deficit hyperactivity disorder (ADHD) is frequent and impairing. Pharmacological treatments have demonstrated efficacy in decreasing symptoms of hyperactivity, inattention, and impulsivity. In France, methylphenidate (MPH) is the sole psychostimulant available in officines. Many forms of MPH exist, varying for their duration of action. Also, amphetamines may be delivered under particular circonstances and temporary legal authorisation for prescription. Tolerance to psychostimulants is rather good, the most frequent side effect being appetite loss and decreased weight. Once a year, psychostimulants should be interrupted for a few weeks, in order to assess whether ADHD is still impairing and justifies pharmacological treatment.

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NeuroReport. 2012;23:55-60.

REDUCED PREFRONTAL HEMODYNAMIC RESPONSE IN CHILDREN WITH ADHD DURING THE GO/NOGO TASK: A NIRS STUDY.

Inoue Y, Sakihara K, Gunji A, et al.

The current study examined the hemodynamic response during the Go/NoGo task in children with/without attention deficit/hyperactivity disorder (ADHD). Using near-infrared spectroscopy, oxy-Hb and deoxy-Hb concentration changes in the frontal areas were compared during the conditions with/without inhibitory demand. Compared with typically developing children, children with ADHD showed significantly reduced activation during the conditions with inhibitory demand (NoGo-condition) in the frontal areas. However, no significant differences in activation during the conditions without inhibitory demand (Go-condition) were found between the two groups. The current findings revealed that children with ADHD exhibit an altered hemodynamic response specifically during response inhibition, but not during response execution, and suggested the clinical usefulness of near-infrared spectroscopy for the evaluation of response inhibition deficits in children with ADHD.

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Neurosci Lett. 2011;500:e5.

NEUROFEEDBACK TREATMENT IN A PATIENT WITH ADHD AND ODD.

Winklemolen D.

An 11 year old girl diagnosed with ADHD and ODD presented for neurofeedback. The diagnostic interview demonstrated she met criteria for ADHD (combined type) and criteria for ODD. Before neurofeedback treatment, she was assessed on a QEEG which demonstrated a low voltage QEEG, with very little alpha activity and excess relative theta in the 6-8 Hz range. Due to the problems with concentration and impulsivity, we focused the training on theta-beta neurofeedback; 5-8 Hz down and 15-24 Hz up, at Fz. The neurofeedback treatment focused specifically on treating the ADHD, and maybe it had also an effect on the ODD. In addition during sessions psychotherapy/coaching was performed. After 31 neurofeedback sessions, treatment was finished. On the ADHD questionnaire, the scores were decreased and she did not met the criteria for ADHD anymore. The behavior of the girl was totally changed. The teachers on school told her parents and her that she worked really hard and her concentration was much improved. She could work very well on her assignments. Her parents noted that she was much calmer in her behavior and she could be quiet. She was no longer hyperactive and tense and the impulsivity was much less. At outtake the girl did not met the criteria for ODD anymore, according to our diagnostic interview. Whether this improvement is due to the neurofeedback treatment or the coaching, or to the combination of these two is not known at present and will be discussed in more detail during the presentation. The psychotherapy did not take place every session and were usually more coaching than intensive therapy. So, maybe neurofeedback treatment could mean something for children with ODD? This was a single case where we had a good result on both ADHD and ODD. Further controlled research is necessary to investigate the effects of neurofeedback treatment in ODD. Pre- and post QEEG and neuropsychology data will also be presented.

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Pharmacopsychiatry. 2012;45:13-19.

ARIPIPRAZOLE IN CHILDREN AND ADOLESCENTS WITH CONDUCT DISORDER: A SINGLE-CENTER, OPEN-LABEL STUDY.

Ercan ES, Uysal T, Ercan E, et al .

Objective: The aim of this study was to determine the effectiveness and safety of aripiprazole in children and adolescents with both attention-deficit/hyperactivity disorder (ADHD) and conduct disorder (CD).

Methods: 20 children and adolescents, ranging in age from 6-16 years, participated in a single-center, open-label study (19 to completion). We began treating patients with 2.5mg of aripiprazole in an open-label fashion for 8 weeks. Outcome measures included the Turgay DSM-IV-based child and adolescent behavior disorders screening and rating scale (T-DSM-IV), the clinical global impressions-severity and improvement scales (CGI-S and CGI-I), the child behavior checklist (CBCL), the teachers report form (TRF) and the extrapyramidal symptom rating scale (ESRS), along with laboratory assessments.

Results: The mean daily dosage of aripiprazole at the end of 8 weeks was 8.55mg (SD=1.73), with a maximum dosage of 10mg. Based on the global improvement subscale of the CGI, we classified 12 of 19 patients (63.1%) as responders (very much or much improved). We observed significant improvements after aripiprazole treatment with regard to inattention, hyperactivity/impulsivity, ODD, and CD subscales of the T-DSM-IV (parent, teacher and clinician forms). We also observed significant improvements on many of the CBCL and TRF subscales (e.g., attention problems as well as delinquent and aggressive behavior). The participants tolerated aripiprazole, and no patient was excluded from the study because of adverse drug events.

Conclusion: Aripiprazole is an effective and well-tolerated treatment for ADHD and CD symptoms; however, additional studies (specifically, placebo-controlled and double-blind studies) are needed to better define the clinical use of aripiprazole in children and adolescents with ADHD-CD.

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Prog Neuro-Psychopharmacol Biol Psychiatry. 2012.

DIFFERENTIAL EFFECTS OF METHYLPHENIDATE AND ATOMOXETINE ON ATTENTIONAL PROCESSES IN CHILDREN WITH ADHD: AN EVENT-RELATED POTENTIAL STUDY USING THE ATTENTION NETWORK TEST.

Kratz O, Studer P, Baack J, et al.

Methylphenidate (MPH) and atomoxetine (ATX) are effective medications in the treatment of attention deficit/hyperactivity disorder (ADHD). The aim of this study was to investigate differential effects of MPH and ATX on attentional functions at the performance and the neuronal level in children with ADHD. Using the Attention Network Test (ANT), differential effects of both medications on the noradrenergic alerting network and the dopaminergic executive attention network were considered. Nineteen children with ADHD performed the ANT three times while event-related potentials (ERPs) were recorded. The baseline testing was conducted without medication. In two medication blocks of 8 weeks each, medication was individually titrated for each child (cross-over design, balanced order). At the end of the medication blocks the testing was repeated. While both medications comparably reduced ADHD symptomatology, MPH had some advantages over ATX with regard to performance measures on the ANT and the underlying neuronal mechanisms. Compared with ATX, MPH led to a larger reduction in reaction time variability, which was accompanied by an MPH-related increase in the contingent negative variation (CNV) compared to the baseline testing. Contrary to our expectations, specific alerting network effects were not observed with ATX. Due to the chosen study design, it remains unresolved to what extent e.g. shortened reaction times and smaller conflict scores that were observed with both medications reflect practice or medication effects. The differential pattern of MPH vs. ATX effects on attentional functions in children with ADHD may be explained by the dopaminergic effects of MPH within the cortico-striato-thalamo-cortical circuit.

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Psychiatr Genet. 2012;22:42-45.

ASSOCIATIONS OF MAOA-VNTR OR 5HTT-LPR ALLELES WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER SYMPTOMS ARE MODERATED BY PLATELET MONOAMINE OXIDASE B ACTIVITY.

Wargelius HL, Malmberg K, Larsson JO, et al.

The monoamine systems have been suggested to play a role in the biological basis of attention-deficit hyperactivity disorder (ADHD) symptoms. Thus, polymorphisms, for example, in the monoamine oxidase A (MAOA) and the serotonin transporter (5HTT) genes have been associated with ADHD-like phenotypes. Furthermore, platelet monoamine oxidase B (MAOB) activity has frequently been linked to impulsiveness-related traits. In this study, we have studied ADHD symptoms with regard to the combination of platelet MAOB activity and MAOA-variable number of tandem repeats (VNTR) or 5HTT-LPR genotype. The study group consisted of 156 adolescent twin pairs, that is, 312 individuals, who participated in a previous study. ADHD symptoms were scored with a structured clinical interview of both the twins and a parent using Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version. The presence of a short 5HTT-LPR or short MAOA-VNTR allele, in combination with high levels of platelet MAOB enzyme activity was associated with higher scores of ADHD-like problems ($P<0.001$ and 0.01, respectively). This re-examination of ADHD scores in a nonclinical sample suggests that effects of MAOA-VNTR and 5HTT-LPR are moderated by platelet MAOB activity.

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Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences. 2011 Dec;41:2593-602.

COOL AND HOT EXECUTIVE FUNCTIONS IN MEDICATION-NAIVE ATTENTION DEFICIT HYPERACTIVITY DISORDER CHILDREN.

Yang BR, Chan RCK, Gracia N, et al.

Background: This study aimed to compare 'cool' [working memory (WM) and response inhibition] and 'hot' (delay aversion) executive functions (EFs) in children with and without attention deficit hyperactivity disorder (ADHD). Method: A total of 100 ADHD children (45 with family history of ADHD and 55 with no family history) and 100 healthy controls, all medication free, were tested on tasks related to the 'hot' (i.e. two choice-delay tasks) and 'cool' domains of EF (i.e. Digits backward, Corsi Block Task backward, Go/No-Go Task, Stop-Signal Task, and the Stroop).

Results: Compared with the controls, children with ADHD were found to perform significantly worse on one or more measures of response inhibition, WM, and delay aversion after controlling for co-morbidities and estimated IQ. In addition, comparisons between ADHD children with family history of ADHD and those with no family history found significant differences on measures of response inhibition and WM but not delay aversion. These results are largely supported by results of two logistic regressions.
Conclusions: ADHD was found to be associated with deficits on both cool and hot EFs. There is also evidence to suggest that cool EFs impairment is related to a family history of ADHD. Findings of this study have helped to elucidate the nature and extent of EF deficits in children with ADHD.

Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences. 2011 Dec;41:2615-23.

PROSPECTIVE RELATIONSHIPS OF ADHD SYMPTOMS WITH DEVELOPING SUBSTANCE USE IN A POPULATION-DERIVED SAMPLE.

Sihvola E, Rose RJ, Dick DM, et al.

Background: Clinically ascertained reports suggest that boys and girls with attention deficit hyperactivity disorder (ADHD) may differ from each other in their vulnerability to substance use problems.
Method: A total of 1545 Finnish adolescents were assessed for DSM-IV-based ADHD symptoms by their parents and classroom teachers using standardized rating scales at age 11-12 years. At age 14, substance use disorders and psychiatric co-morbidity were assessed with the Semi-Structured Assessment for the Genetics of Alcoholism, providing DSM-III-R/DSM-IV diagnoses for Axis I disorders. At age 17.5, substance use was assessed by multi-item questionnaire.
Results: Although baseline ADHD symptoms were less common among females, they were more predictive of adverse substance use outcomes once conduct disorder and previous substance use were controlled for. Only in females were baseline ADHD symptoms significant predictors of alcohol abuse and dependence and illicit drug use at age 14. At the age of 17.5, parents' reports of inattentiveness and hyperactivity were significant predictors for frequent alcohol use in both sexes, but they were more predictive of frequent alcohol and illicit drug use in girls. Impulsivity in teachers' ratings predicted frequent alcohol use and illicit drug use in boys. Parental reports of inattentiveness in their 11-/12-year-old daughters were a consistent predictor for illicit drug use across adolescence.
Conclusions: Inattentiveness and hyperactivity may be more predictive of alcohol use disorders and maladaptive patterns of alcohol and illicit drug use among girls than boys. The importance of these behavioural symptoms should be assessed further in the community, as they could jeopardize adolescents' successful transitioning into adult roles.

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Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences. 2011 Dec;41:2603-14.

VISUAL MEMORY AS A POTENTIAL COGNITIVE ENDOPHENOTYPE OF ATTENTION DEFICIT HYPERACTIVITY DISORDER.

Shang CY, Gau SS.

Background: Executive functions have been proposed as endophenotypes for attention deficit hyperactivity disorder (ADHD); however, data regarding visual memory are lacking. We therefore assessed visual memory in adolescents with ADHD and their unaffected siblings compared with controls.
Method: The participants included 279 adolescents with ADHD, 108 unaffected siblings, and 173 unaffected school controls. They were assessed by using the visual memory tasks of the Cambridge Neuropsychological Test Automated Battery (CANTAB): Delayed Matching to Sample (DMS), Spatial Recognition Memory (SRM), Paired Associates Learning (PAL), and Pattern Recognition Memory (PRM).
Results: Compared with the controls, probands with ADHD had a significantly lower number of correct responses, a higher probability of an error following a correct response and following an error response in the DMS, and a lower percentage of correct responses in the SRM. Their unaffected siblings occupied an intermediate position between ADHD probands and controls in the probability of an error following a correct response and following an error response in the DMS, and in the percentage of correct responses in the SRM. In general, lower IQ and current use of and duration of treatment with methylphenidate were associated with more severe visual memory deficits.

Conclusions: The present results suggest that ADHD is associated with poorer visual memory function. Visual memory assessed by the DMS and SRM tasks in the CANTAB may be a useful endophenotype for ADHD.

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Res Dev Disabil. 2012;33:467-76.

CONCURRENT MEDICAL CONDITIONS AND HEALTH CARE USE AND NEEDS AMONG CHILDREN WITH LEARNING AND BEHAVIORAL DEVELOPMENTAL DISABILITIES, NATIONAL HEALTH INTERVIEW SURVEY, 2006-2010.

Schieve LA, Gonzalez V, Boulet SL, et al.

Studies document various associated health risks for children with developmental disabilities (DDs). Further study is needed by disability type. Using the 2006-2010 National Health Interview Surveys, we assessed the prevalence of numerous medical conditions (e.g. asthma, frequent diarrhea/colitis, seizures), health care use measures (e.g. seeing a medical specialist and >9 office visits in past year), health impact measures (e.g. needing help with personal care), and selected indicators of unmet health needs (e.g. unable to afford needed prescription medications) among a nationally representative sample of children ages 3-17 years, with and without DDs. Children in four mutually exclusive developmental disability groups: autism (N= 375), intellectual disability (ID) without autism (N= 238); attention-deficit/hyperactivity disorder (ADHD) without autism or ID (N 2901); and learning disability (LD) or other developmental delay without ADHD, autism, or ID (N= 1955); were compared to children without DDs (N= 35,775) on each condition or health care measure of interest. Adjusted odds ratios (aORs) were calculated from weighted logistic regression models that accounted for the complex sample design. Prevalence estimates for most medical conditions examined were moderately to markedly higher for children in all four DD groups than children without DDs. Most differences were statistically significant after adjustment for child sex, age, race/ethnicity, and maternal education. Children in all DD groups also had significantly higher estimates for health care use, impact, and unmet needs measures than children without DDs. This study provides empirical evidence that children with DDs require increased pediatric and specialist services, both for their core functional deficits and concurrent medical conditions.

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Res Dev Disabil. 2012;33:594-99.

BONE MINERAL DENSITY CHANGES AFTER PHYSICAL TRAINING AND CALCIUM INTAKE IN STUDENTS WITH ATTENTION DEFICIT AND HYPER ACTIVITY DISORDERS.

Arab ameri E, Dehkhoda MR, Hemayattalab R.

In this study we investigate the effects of weight bearing exercise and calcium intake on bone mineral density (BMD) of students with attention deficit and hyper activity (ADHD) disorder. For this reason 54 male students with ADHD (age 8-12 years old) were assigned to four groups with no differences in age, BMD, calcium intake, and physical activity: exercise groups with or without calcium supplementation (Ex+Ca+ and Ex+Ca-) and non-exercise groups with or without calcium supplementation (Ex-Ca+ and Ex-Ca-). The intervention involved 50. min of weight bearing exercise performed 3 sessions a week and/or the addition of dietary calcium rich food using enriched cow milk with vitamin D containing 250. mg calcium per serving, over 9 months. Paired-samples . t-test, one way ANOVA analysis, and Tukey tests were used to determine the main and combined effects of training and calcium on BMD. All groups showed greater femoral neck BMD after 9 months. The increase in femoral neck BMD was significantly different between all groups ($p< 0.05$). Ex+Ca+ group has greater increase in BMD than other groups. Apparently, the effect of training was greater than calcium intake ($p< 0.05$). These results help to provide more evidence for public health organizations to deal with both exercise and nutrition issues in children with ADHD disorder for the achievement of peak BMD.

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Res Dev Disabil. 2012;33:804-18.

ATTENTION DEFICIT HYPERACTIVITY DISORDER AND SENSORY MODULATION DISORDER: A COMPARISON OF BEHAVIOR AND PHYSIOLOGY.

Miller LJ, Nielsen DM, Schoen SA.

Children with attention deficit hyperactivity disorder (ADHD) are impulsive, inattentive and hyperactive, while children with sensory modulation disorder (SMD), one subtype of Sensory Processing Disorder, have difficulty responding adaptively to daily sensory experiences. ADHD and SMD are often difficult to distinguish. To differentiate these disorders in children, clinical ADHD, SMD, and dual diagnoses were assessed. All groups had significantly more sensory, attention, activity, impulsivity, and emotional difficulties than typical children, but with distinct profiles. Inattention was greater in ADHD compared to SMD. Dual diagnoses had more sensory-related behaviors than ADHD and more attentional difficulties than SMD. SMD had more sensory issues, somatic complaints, anxiety/depression, and difficulty adapting than ADHD. SMD had greater physiological/electrodermal reactivity to sensory stimuli than ADHD and typical controls. Parent-report measures identifying sensory, attentional, hyperactive, and impulsive difficulties varied in agreement with clinician's diagnoses. Evidence suggests ADHD and SMD are distinct diagnoses.

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Res Dev Disabil. 2012;33:858-65.

EXECUTIVE DYSFUNCTIONS AMONG BOYS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD): PERFORMANCE-BASED TEST AND PARENTS REPORT.

Shimoni M, Engel-Yeger B, Tirosh E.

Difficulty in executive functions (EF) is a core symptom of ADHD. Yet, the EF assessments are still in controversy. It is still unclear whether the everyday implementation of EF can be assessed under laboratory conditions. Therefore, the purposes of the present study are: (a) to examine EF among boys with ADHD both in everyday behavior (as reported by parents) and in a performance-based test. (b) To examine correlations between the two tests. Both the Behavior Assessment of Dysexecutive Functions for Children (BADS-C) and the Behavior Rating Inventory of Executive Functions (BRIEF) were independently applied to 25 boys aged 8-11 years with ADHD and 25 age-matched typical boys. Results of the two assessments were compared between the two groups to indicate differences in EF. Correlations between the two assessments for all participants were evaluated. Overall, significant differences in EF were found between the two groups on both assessments. Significant correlations were found between BADS-C and BRIEF, specifically in metacognition but not in behavioral regulation. Findings indicate that poor EF manifests itself in everyday behavior. These difficulties are found in metacognitive and behavioral regulation components. Nevertheless, applying a valid ecological assessment of behavior regulation merits future research.

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Rev Neurol. 2012;54:10-16.

ATTENTION DEFICIT HYPERACTIVITY DISORDER: VALIDATION OF THE EDAH SCALE IN A PRIMARY SCHOOL POPULATION IN THE CANARY ISLANDS.

Sanchez CR, Ramos C, Simon M.

Aim. To validate the rating (assessment) scale for attention-deficit/hyperactivity disorder (EDAH) in Canarian population of primary education.

Subjects and methods. From a sample of 2,500 children, you get a subsample with those participants who have a higher scores at 75 percentile in each of the factors that make up the test (n = 614), of which 222 are girls (36.2 %) and 392 boys (63.8 %). With regard to the age, the rank ranges between 6 and 12 years.

Results and conclusions. Factorial analysis with Varimax rotation obtained as the main factor resulting in the emergence of social interaction problems such as in the validation performed for teens population, keeping the three factors of the original test, although with some differences in their composition. It also had a high internal consistency by Cronbach alpha coefficient (0.86) which confirms the reliability of the scale. In terms of demographics variables analyzed, the variable number of failures significantly explains the variance of all factors that make up the scale, being the only significant variable in the factor of attention

deficit and problems with social interaction. The sex variable is significant in the factor behavior problems and hyperactivity whereas age is only in the hyperactivity factor.

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World J Biol Psychiatry. 2012;13:60-64.

DOES EXPOSURE TO MATERNAL SMOKING DURING PREGNANCY AFFECT THE CLINICAL FEATURES OF ADHD? RESULTS FROM A CONTROLLED STUDY.

Biederman J, Petty CR, Bhide PG, et al.

Objectives. Exposure to maternal smoking during pregnancy may be a significant risk factor for attention-deficit/hyperactivity disorder (ADHD) independently of family history of ADHD. The main aim of this study was to examine whether the clinical profile of ADHD differs between children with and without exposure to maternal smoking during pregnancy.

Methods. This was a casecontrol study of boys and girls with and without ADHD ascertained from psychiatric and paediatric sources. Maternal smoking during pregnancy was defined by interviews with subjects' mothers. Main outcome measures were ADHD symptoms and associated clinical features in children with and without exposure to maternal smoking during pregnancy.

Results. No significant differences were found between ADHD children with and without exposure to maternal smoking during pregnancy on clinical characteristics. When these analyses were repeated in the subgroup of subjects without parental history of ADHD, there were also no statistically significant differences found.

Conclusions. Despite adequate statistical power, no significant differences were found between ADHD children with and without exposure in the clinical features of ADHD and associated disorders. Results provide support for the notion that ADHD cases resulting from exposure to maternal smoking during pregnancy have similar clinical profiles as other ADHD cases.

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Z Psych Psychol Psychother. 2012;60:15-26.

COMORBID BURDEN IN ADOLESCENTS AND YOUNG ADULTS WITH ADHD.

Schmidt S, Brahler E, Petermann F, et al.

ADHD is a life-span-disorder which leads to significant impairments in every-day-life and is often accompanied by comorbid disorders. The symptom-severity varies age-group-specifically and in particular the transition from adolescence to adulthood can be seen as a sensitive phase. To examine the impact of comorbid burden in ADHD, a sample of N = 327 adolescents and young adults was chosen from a population-based-study and assigned to three different age-groups (14-17 years; 18-21 years; 22-25 years). Using two-factor analysis of (co-) variance the influence of age-group and ADHD-severity on comorbid burden was investigated. There was a significant main effect for ADHD but not for age-group or the interaction between both factors. Regarding sub-scale differences there was strong evidence for a negative influence of ADHD on psychological state in all age groups and an interaction between age-group and ADHD-severity regarding social support and satisfaction with life. The results show stable impairments through ADHD symptom severity. Although social support and satisfaction with life converge in group comparisons, ADHD-affected persons show much more severe psychological impairments than the non-affected-group. This has an impact on therapeutic intervention and - in addition to symptomatological treatment - also highlights the need to focus on other age-specific impairments.

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RELATORI

Claudio Bissoli - Psicologo, Psicoterapeuta
UONPIA - Fondazione IRCCS Cà Granda –
Ospedale Maggiore Policlinico, Milano

Antonella Costantino
Neuropsichiatra infantile, Direttore UONPIA
Fondazione IRCCS Cà Granda –
Ospedale Maggiore Policlinico, Milano

Isabella Cropanese - Psicologa, Psicoterapeuta
UONPIA - Fondazione IRCCS Cà Granda –
Ospedale Maggiore Policlinico, Milano

Anna Didoni
Ricercatrice, Laboratorio per la Salute Materno – Infantile, Dip. di Salute Pubblica, IRF Mario Negri

Astrid Gollner
Referente AIFA (Associazione Italiana Famiglie ADHD) Lombardia

Valeria Mannino - Neuropsichiatra Infantile
UONPIA - Fondazione IRCCS Cà Granda –
Ospedale Maggiore Policlinico, Milano

CHI SIAMO?

L'Unità Operativa di Neuropsichiatria dell'Infanzia e dell'Adolescenza (UONPIA) è un servizio specialistico che svolge attività di prevenzione, diagnosi, cura e riabilitazione in ambito neurologico, psichiatrico e psicologico nella fascia d'età 0-18 anni. Il Polo Ospedaliero dispone di un servizio ambulatoriale ed effettua consulenze presso i reparti ed il Pronto Soccorso della Clinica Pediatrica De Marchi, per la gestione clinica di patologie neurologiche e psichiatriche. E' questo il luogo presso cui si trova il Centro di Riferimento per il trattamento dell'ADHD

DOVE SI TERRA'

AULA MAGNA MANGIAGALLI

via Commenda, 12 - MILANO

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Autobus 73 – 60 – 94 - //
Tram 24 – 16 – 12 – 27 23

Il corso è organizzato dal
Centro di Riferimento Regionale per il trattamento dell'ADHD
UONPIA - Fondazione IRCCS Cà Granda
Ospedale Maggiore Policlinico, Milano
Polo Ospedaliero UONPIA
Via Manfredo Fanti 6
Padiglione Regina Elena – 2° piano
tel. 02-55038501

FONDAZIONE IRCCS CA' GRANDA
OSPEDALE MAGGIORE POLICLINICO

Il bambino con ADHD: famiglia, scuola e strategie di intervento

10 febbraio 2012
ore 13.30 - 18.30

AULA MAGNA MANGIAGALLI
via Commenda, 12
Fondazione IRCCS , Cà Granda
Ospedale Maggiore Policlinico
Milano

PARTECIPAZIONE GRATUITA

PROGRAMMA

Ore 13.30 - 13.45
Registrazione dei partecipanti

Ore 13.45 14.00
Apertura dei lavori
M.A. Costantino – A. Gollner

Ore 14.00 -14.45
Il bambino con ADHD: impariamo a conoscerlo
V. Mannino

Ore 14.45 - 15.15
Quali strategie possibili di intervento?
C. Bissoli

Ore 15.15 – 15.45
Il bambino con ADHD in famiglia
C. Bissoli

Pausa

Ore 16.00 – 17.00
Il bambino con ADHD a scuola: Teacher training
I. Cropanese

Ore 17.00 – 17.30
Il percorso del bambino con ADHD
A. Didoni

Ore 17.30 – 18.15
Confronto/dibattito
V. Mannino

Ore 18.15 – 18.30
Valutazione dell'apprendimento ECM

OBIETTIVO DEL CORSO

Obiettivo della giornata è sensibilizzare le famiglie, gli insegnanti e gli operatori sanitari del settore, sul Disturbo da Deficit di Attenzione con Iperattività, per facilitare la diagnosi precoce e fornire strategie di aiuto per la gestione quotidiana dei bambini – ragazzi, con particolare attenzione all'ambito scolastico, nonché implementare il lavoro di rete e la collaborazione tra servizi.

CHE COSA E' L'ADHD

Alcuni bambini e ragazzi si distraggono con nulla, fanno fatica a concentrarsi, a portare a termine un'attività dall'inizio alla fine, a programmare ed a gestire il proprio tempo, ad aspettare il proprio turno nella conversazione e nel gioco, faticano a controllarsi ed a stringere amicizie.
Tutti i bambini ed i ragazzi possono mostrare, a volte, questi comportamenti, in particolare quando sono piccoli, ma il bambino-ragazzo con ADHD li manifesta più frequentemente e più intensamente degli altri, in un'età in cui in genere i coetanei li hanno superati. Quando l'intensità con cui sono presenti i sintomi è tale da ripercuotersi in maniera negativa sulla qualità della vita dei ragazzi nei diversi contesti (casa, scuola, amici) e diventare un ostacolo per la crescita e l'apprendimento, si parla di ADHD, Attention deficit hyperactivity disorder (Disturbo da Deficit di Attenzione ed Iperattività). Non si tratta di cattiva educazione, né di cattivi ragazzi, non è colpa né della famiglia, né dei ragazzi stessi, ma è necessario capire che tipo di difficoltà ci sono ed attivare una serie di interventi, tra cui prima di tutto degli adattamenti specifici dell'ambiente, che evitino il rischio di peggiorare le cose.

Segreteria Scientifica
Dott.ssa Antonella Costantino
Direttore Unità Operativa di Neuropsichiatria dell'infanzia e dell'Adolescenza (UONPIA)
Fondazione IRCCS Cà Granda –
Ospedale Maggiore Policlinico, Milano

Segreteria Organizzativa
Ufficio Formazione e Aggiornamento
Fondazione IRCCS Cà Granda –
Ospedale Maggiore Policlinico
Milano -Tel. 0255038327
formazione@policlinico.mi.it

La frequenza al corso è gratuita ed è aperta a genitori, insegnanti ed operatori sanitari.

E' stato richiesto l'accreditamento ECM per le seguenti figure professionali: medici, psicologi, educatori, assistenti sanitari, logopedisti, terapisti della neuro psicomotricità, fisioterapisti, infermieri, infermieri pediatrici

Per l'**ISCRIZIONE** al corso accedere al sito
www.policlinico.mi.it
(cliccare poi su FORMAZIONE e su CORSI).
Se si è già registrati al portale e si è in possesso di un nome utente e password, procedere con l'iscrizione evidenziando il corso specifico.
Altrimenti è obbligatorio procedere prima con la REGISTRAZIONE
(cliccare su ACCESSO UTENTE e REGISTRAZIONE) e poi effettuare l'ISCRIZIONE al corso specifico.

Per ogni difficoltà di registrazione o iscrizione contattare la segreteria organizzativa
Ufficio Formazione e Aggiornamento
Tel. 02 – 55038327.

Le iscrizioni al corso saranno aperte fino ad esaurimento posti.
Sono previsti 190 posti complessivi.

Considerando il recente avvio del Registro regionale Lombardo per l'ADHD, il programmato avvio di altri registri regionali e di una nuova forma ridotta di registro Nazionale, la possibile autorizzazione all'immissione al commercio per alcune formulazioni a lento rilascio per il prossimo anno, e l'interesse suscitato dalle scorse edizioni, è in preparazione il

4° Workshop sull'ADHD

che si terrà a

Cagliari dall'8 al 10 Marzo 2012.

Quest'anno parteciperanno allo workshop anche alcuni colleghi europei che stimoleranno la discussione su argomenti controversi (p. es., comorbidità con Disturbi pervasivi dello sviluppo e/o ritardo mentale, neuro feedback come pratica terapeutica, efficacia degli interventi non farmacologici).

Come lo scorso anno lo workshop sarà articolato in Letture, Simposi, Dibattiti e Poster, cui si aggiungeranno i Seminari. I Seminari si svolgeranno in piccoli gruppi (25-30 partecipanti) e avranno due animatori (un italiano e uno straniero). I risultati di ciascun Seminario saranno riportati nella sessione plenaria per la discussione collettiva.

Alcuni dei temi saranno ulteriormente discussi nell'ambito della EUNETHYDIS *2nd International ADHD Conference* che si terrà a Barcellona il 23-25 Maggio.

Per maggiori informazioni: http://eunethydisconference.com/index.html

Alessandro Zuddas, Maurizio Bonati, Antonella Costantino, Gabriele Masi, Pietro Panei

Per ricevere la newsletter iscriversi al seguente indirizzo:
http://crc.marionegri.it/bonati/adhdnews/subscribe.html

Iniziativa nell'ambito del Progetto di Neuropsichiatria dell'Infanzia e dell'Adolescenza
Il Progetto è realizzato con il contributo, parziale, della Regione Lombardia
(in attuazione della D.G. sanità n. 3250 del 11/04/2011)
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
Via Giuseppe La Masa, 19 - 20156 Milano MI - Italia - www.marionegri.it
tel +39 02 39014.511 - fax +39 02 3550924 - mother_child@marionegri.i