



ADHD

ATTENTION DEFICIT HYPERACTIVITY DISORDER


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Curr Med Res Opin. 2008;24:449-60.

Effects of atomoxetine on attention-deficit/hyperactivity disorder in clinical pediatric treatment settings: A naturalistic study.

Bakken RJ, Paczkowski M, Kramer HP, et al.

Background: Observational studies involving atomoxetine hydrochloride in the treatment of attention-deficit/hyperactivity disorder (ADHD) complement randomized controlled trials by assessing treatment effects in a usual-care setting and including a more heterogeneous patient population. Objective: To provide data on the effectiveness of atomoxetine in a naturalistic treatment setting according to both physician and parent ratings. Design and methods: A prospective, observational (non-interventional), longitudinal, open-label study of patients (N = 627; mean age = 11 years) with ADHD (from 60 physicians' offices in the United States and Puerto Rico) whose physicians had decided to prescribe atomoxetine either as initial treatment or after trying another ADHD treatment (e.g., stimulants, antidepressants). Patients with a baseline visit and one post-baseline visit for up to 1 year were eligible. Atomoxetine administration, dosing, and timing of follow-up visits were at each physician's discretion. Physicians evaluated the effectiveness of atomoxetine using a single-item rating scale: the Physician Global Impression: ADHD Severity (PGI-ADHD-S) scale. Results: The average reported duration of treatment was 21.2 (range 0-89) weeks. Over this period, treatment significantly lowered ADHD severity compared with baseline, with a mean change of -0.91 (95% confidence interval: -1.00 to -0.82; $p < 0.001$) on the PGI-ADHD-S scale. Physician-rated improvement was more marked in patients with more severe ADHD at baseline ($p < 0.001$). Most patients (59-69%) experienced consistent symptom control at all times of the day. ADHD severity was improved similarly in patients across comorbid conditions (e.g., anxiety, depression, learning disorders), chief complaints (e.g., school problems, emotional problems), and prior treatment with stimulants or other medications. By parent reports, 49% of patients had improved grades following atomoxetine therapy while 35% stayed the same, and improvement in behavior (according to parents' ratings) occurred in 49% of patients following atomoxetine therapy, whereas 31% stayed the same. Conclusion: Data captured in this study support the conclusion that atomoxetine was effective in reducing symptom severity, and improving progress toward treatment goals, in children and adolescents with ADHD treated in a naturalistic treatment setting. However, given the open-label, observational (non-interventional) design of this study, certain biases cannot be excluded. (copyright) 2008 Librapharm Limited All rights reserved.

J Abnorm Child Psychol. 2008;36:67-79.

Examining alternative explanations of the covariation of ADHD and anxiety symptoms in children: A community study.

Baldwin JS, Dadds MR.

Attention-deficit hyperactivity disorder (ADHD) is comorbid with a range of other disorders, including anxiety disorders. The aim was to examine different explanations for the covariation of these symptom domains in children according to the framework provided by (Lilienfeld, S. O. Comorbidity between and within childhood externalizing and internalizing disorders: Reflections and directions. Journal of Abnormal Child Psychology, 2003). The covariation of ADHD symptoms and anxiety symptoms were examined over a 12-month period in a community sample of 499 children aged 8-13; 91% were retained at 12-month follow-up. Dimensional assessments were conducted using questionnaires given to children, parents and teachers, with results

Per la ricerca degli articoli pubblicati nella letteratura scientifica nel mese in esame sono state consultate le banche dati Medline, Embase e PsycINFO 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.

analyzed via structural equation modeling. Positive associations between ADHD and anxiety symptoms were linked with inattention symptoms, were particularly pronounced for girls, and were linked via temperament and behavioral problems. No support for the hypothesis that ADHD symptoms predicted the development of anxiety symptoms over time or vice versa. ADHD symptoms (particularly inattention) and anxiety symptoms are covarying phenomena that are linked with an irritable temperament and disruptive behavior. (copyright) 2007 Springer Science+Business Media, LLC.

Neuropsychiatr Dis Treat. 2008;4:203-07.

Risperidone treatment for ADHD in children and adolescents with bipolar disorder.

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

Objective: Children and adolescents with bipolar disorder are also at high risk of having comorbid attention-deficit hyperactivity disorder (ADHD). The objective of this study was to estimate improvement in ADHD symptoms in children with bipolar disorder. Methods: This was an open-label, study of risperidone monotherapy for the treatment of pediatric bipolar disorder. Thirty-one children and adolescents 4-15 years of age (7.2 (plus or minus) 2.8 years) of both sexes (71%, N = 22 male) with pediatric bipolar disorder (YMRS score = 32.9 (plus or minus) 8.8) and ADHD (ADHD-RS score = 37.9 (plus or minus) 8.9) were included in these analyses. Results: Improvement in ADHD symptoms was contingent on improvement in manic symptoms. Although both hyperactive/impulsive (-7.5 (plus or minus) 5.5.6, $p < 0.05$) and inattentive (-6.8 (plus or minus) 5.0, $p < 0.05$) ADHD symptoms were significantly improved with risperidone, improvement was modest, and only 29% of subjects (N = 6) showed a 30% reduction in ADHD rating scale scores and had a CGI-I (less-than or equal to) 2. Conclusions: These results suggest that that treatment with risperidone is associated with tangible but generally modest improvement of symptoms of ADHD in children with bipolar disorder. (copyright) 2008 Biederman et al, publisher and licensee Dove Medical Press Ltd.

J Am Acad Child Adolesc Psychiatry. 2008;47:426-34.

New insights into the comorbidity between ADHD and major depression in adolescent and young adult females.

Biederman J, Ball SW, Monuteaux MC, et al.

OBJECTIVE: The main aim of this study was to evaluate the association between attention-deficit/hyperactivity disorder (ADHD) and major depression (MD) in adolescent and young adult females. METHOD: Subjects were females with (n = 140) and without (n = 122) ADHD ascertained from pediatric and psychiatric settings. Subjects were followed prospectively for 5 years into adolescence and young adulthood and reassessed in multiple nonoverlapping domains including psychiatric, cognitive, interpersonal, family, and educational functioning. RESULTS: Females with ADHD had a 2.5 times higher risk for MD at adolescent follow-up compared with control females, adjusting for psychiatric comorbidity. MD in females with ADHD was associated with an earlier age at onset, greater than twice the duration, more severe depression-associated impairment, a higher rate of suicidality, and a greater likelihood of requiring psychiatric hospitalization than MD in control girls. Parental MD and proband mania were significant predictors of MD among females with ADHD, independently of other predictors. CONCLUSIONS: MD emerging in the context of ADHD in females is an impairing and severe comorbidity worthy of further clinical and scientific considerations. Copyright 2008 (copyright) American Academy of Child and Adolescent Psychiatry.

Eur Neurol. 2008;59:336-37.

Straw Peter Syndrome - a literary mistake?

Bilgin O, Remi J, Noachtar S.

Arch Pediatr Adolesc Med. 2008 Apr;162:385-89.

Sleep difficulties and behavioral outcomes in children.

Cao M, Guilleminault C.

J Pediatr Psychol. 2008;33:368-79.

Acute impact of immediate release methylphenidate administered three times a day on sleep in children with attention-deficit/hyperactivity disorder.

Corkum P, Panton R, Ironside S, et al.

Objective: To determine the impact of immediate release Ritalin, given three times a day, on sleep quality and quantity in medication-naive, newly diagnosed children with attention-deficit/hyperactivity disorder (ADHD). Methods: Children (aged 6-12) rigorously diagnosed with ADHD (n = 21) underwent multiple measurement assessments (i.e., actigraphy, sleep diary, and questionnaires) during a 1-week baseline and then during a 3-week blinded randomized medication trial. Results: Although the medication was effective in reducing ADHD symptoms, analyses of actigraphy and sleep diary data found statistically and clinically significant changes in the children's total sleep time and sleep onset latency in the medication compared to the no medication conditions. No effects on sleep were found based on the sleep questionnaire. Conclusions: Physicians and parents are encouraged to closely monitor children's sleep when treating ADHD with stimulant medication. (copyright) The Author 2007. Published by Oxford University Press on behalf of the Society of Pediatric Psychology. All rights reserved.

J Am Acad Child Adolesc Psychiatry. 2008;47:455-63.

Reduced eye gaze explains "fear blindness" in childhood psychopathic traits.

Dadds MR, El Masry Y, Wimalaweera S, et al.

OBJECTIVE: Damage to the amygdala produces deficits in the ability to recognize fear due to attentional neglect of other people's eyes. Interestingly, children with high psychopathic traits also show problems recognizing fear; however, the reasons for this are not known. This study tested whether psychopathic traits are associated with reduced attention to the eye region of other people's faces. METHOD: Adolescent males (N = 100; age mean 12.4 years, SD 2.2) were stratified by psychopathic traits and assessed using a Tobii eye tracker to measure primacy, number, and duration of fixations to the eye and mouth regions of emotional faces presented via the UNSW Facial Emotion Task. RESULTS: High psychopathic traits predicted poor fear recognition (1.21 versus 1.35; $p < .05$) and lower number (1.85 versus 2.51; $p < .001$) and duration (375 versus 620 ms; $p < .001$) of eye fixations, and fewer first foci to the eye region (1.01 versus 2.01; $p < .001$). There were no differences in gaze indices to the mouth region. All indices of gaze to the eye region correlated positively with accurate recognition of fear for the high psychopathy group, especially the number of times that subjects looked at the eyes first ($r = .50$; $p < .01$). CONCLUSIONS: Attention to other people's eyes is reduced in young people with high psychopathic traits, thus accounting for their problems with fear recognition, and is consistent with amygdala dysfunction failing to promote attention to emotional salience in the environment. Copyright 2008 (copyright) American Academy of Child and Adolescent Psychiatry.

Drug Alcohol Depend. 2008;95:90-96.

Cannabis use and adult ADHD symptoms.

Fergusson DM, Boden JM.

Background: The present study examined the associations between cannabis use in adolescence and young adulthood and self-reported adult attention deficit/hyperactivity disorder (ADHD) symptoms in adulthood. Methods: A 25-year prospective longitudinal study of the health, development, and adjustment of a birth cohort of 1265 New Zealand children. Measures included assessments of adolescent and young adult cannabis use and ADHD symptoms at age 25, measures of childhood socioeconomic disadvantage, family adversity, childhood and early adolescent behavioural adjustment and cognitive ability, and adolescent and young adult other drug use. Results: Cannabis use by age 25 was significantly ($p < .0001$) associated with increasing self-reported adult ADHD symptoms at age 25. Adjustment of the association for potentially confounding factors from childhood and early adolescence reduced the magnitude of the association, but it remained statistically significant ($p < .0001$). However, control for the mediating effects of other drug use in adolescence and early adulthood reduced the association between cannabis use and adult ADHD symptoms to statistical non-significance ($p > .20$). Conclusions: The current study suggested that the association between cannabis use and adult ADHD symptoms was mediated by other substance use that was associated with cannabis use. The results suggest that cannabis use leads to other drug use, which in turn leads to increased ADHD symptoms. However, it should be noted that the potential influence of such factors as genetic predispositions may still be unaccounted for. (copyright) 2007 Elsevier Ireland Ltd. All rights reserved.

Dev Med Child Neurol. 2008;50:294-99.

Effects of methylphenidate on quality of life in children with both developmental coordination disorder and ADHD.

Flapper BCT, Schoemaker MM.

Measurement of health-related quality of life (HRQOL) in attention-deficit-hyperactivity disorder (ADHD) gives a more complete picture of day-to-day functioning and treatment effects than behavioural rating alone. The aim of this pilot study was to investigate the impact of the combined diagnoses of developmental coordination disorder (DCD) and ADHD on HRQOL, and the effectiveness of methylphenidate (MPH) on HRQOL. HRQOL was established using the Dutch-Child-AZL-TNO-Quality-of-Life (DUX-25) and the TNO-AZL-Child-Quality-of-Life (TACQOL) questionnaires, completed by children and parents. HRQOL of these children was compared with that of 23 age- and sex-matched healthy controls. Twenty-three children (21 males, two females; mean age 8y 6mo, [SD 3mo] range 7y-10y 8mo) with ADHD/DCD entered a 4-week, open-label MPH study, after MPH-sensitivity was established, in a double-blind, placebo-controlled trial. In these children's self- and proxy reports, impact of both DCD and ADHD was reflected in lower general well-being (self and proxy report $p=0.001$) due to lower functioning in motor (self $p=0.026$; proxy 0.001), autonomic (self $p<0.001$; proxy $p=0.047$), cognitive (self $p=0.001$; proxy $p=0.01$), and social (self and proxy $p<0.001$) domains. HRQOL scores improved in 18 children receiving MPH ($p=0.001$) versus controls. The ADHD/DCD group also demonstrated a significant improvement in ADHD symptoms ($p<0.001$) and motor functioning ($p<0.001$). Additional motor therapy will still be needed in about half of the children with ADHD/DCD receiving MPH, within multimodal treatment including educational and psychosocial assistance. (copyright) 2008 Blackwell Publishing Ltd.

Child and Adolescent Psychiatric Clinics of North America. 2008 Apr;17:325-46.

Frontiers between attention deficit hyperactivity disorder and bipolar disorder.

Galanter CA, Leibenluft E.

The co-occurrence of attention deficit hyperactivity disorder (ADHD) and bipolar disorder has received much recent attention in the literature. The authors review the literature examining associations between ADHD and bipolar disorder in children, and data concerning severe irritability in youth with ADHD. This article focuses on (1) population-based studies examining ADHD and bipolar disorder or ADHD and co-occurring irritability, (2) the co-occurrence and prospective relationships of ADHD and bipolar disorder in clinical samples, (3) phenomenology and assessment of bipolar disorder and ADHD, (4) treatment of comorbid ADHD and bipolar disorder, (5) family and genetic studies of ADHD and bipolar disorder, and (6) pathophysiologic comparisons between children with ADHD and irritability and bipolar disorder. We draw on the research to make clinical recommendations and highlight important directions for future research. (PsychINFO Database Record (c) 2008 APA, all rights reserved) (from the journal abstract).

Suicide Life-Threat Behav. 2008;38:46-59.

ADHD and aggression as correlates of suicidal behavior in assaultive prepubertal psychiatric inpatients.

Goodman G, Gerstadt C, Pfeffer CR, et al.

Forty-three psychiatrically hospitalized prepubertal children were assessed regarding their assaultive and suicidal behaviors. These children were subsequently classified into two groups, assaultive/suicidal (AS) and assaultive-only (AO). AS children had higher aggression and suicidal-scale scores, but not higher depression scores, and were more likely to be diagnosed with ADHD. ADHD, child's aggression, and maternal depression and state anger accounted for 33% of the variance in suicidal-scale scores. Aggression mediated the relation between ADHD and suicidal behavior. Differences in symptom pattern between these two subtypes of assaultive inpatient children are interpreted as a basis for distinctive screening procedures. (copyright) 2008 The American Association of Suicidology.

Int Rev Psychiatry. 2008;20:189-93.

Do all obsessive-compulsive disorder subtypes respond to medication?

Grados M, Riddle MA.

Obsessive-compulsive disorder (OCD) in children is strikingly similar in clinical presentation and treatment responsiveness to OCD in adults. While treatment is commonly effective for OCD not all subtypes of OCD are similarly responsive to treatment. Numerous studies describe the differential responsiveness of OCD

subtypes to pharmacological treatment in adults, yet few such studies exist in pediatric OCD. This manuscript reviews the extant literature that addresses differential response of OCD subtypes to medication intervention. Specific OCD subtypes can be derived utilizing the following strategies: symptom factor analysis, comorbidity latent class analysis, concurrent internalizing disorders, concurrent externalizing disorders, tic-related subtype and early-onset subtype are reviewed in relation to data on differential pharmacotherapy response. Only externalizing disorders moderate treatment response in pediatric OCD. Specifically, attention-deficit hyperactivity disorder, oppositional defiant disorder and conduct disorder are associated with poorer response to medication treatment. Hoarding appears to be associated with a poor response to medication in adults, but data are sparse in children. The presence of tic disorders may also predict poorer response to pharmacotherapy in pediatric OCD. Strategies for treatment of the tic-related subtype of OCD, while strongly supporting the use of antipsychotic-augmentation for enhanced response in adults, are lacking controlled data in pediatric OCD. (copyright) 2008 Informa UK Ltd.

Child and Adolescent Psychiatric Clinics of North America. 2008 Apr;17:347-66.

Attention deficit hyperactivity disorder in preschool children.

Greenhill LL, Posner K, Vaughan BS, et al.

Attention deficit hyperactivity disorder (ADHD) is a common neurodevelopmental disorder with a childhood onset of symptoms and impairment. Although it is most frequently identified during elementary school years, epidemiologic data suggest that the onset of ADHD frequently occurs earlier, with presentation as young as 3 years of age. Early identification, however, allows consideration of appropriate interventions. Many data are available on safe and efficacious treatment options for school-aged children who have ADHD; however, little is known about the use of these modalities in preschoolers and, ultimately, the long-term effects of early treatment. Recognition of the preschool presentation of ADHD, appropriate differential diagnosis, and identification of comorbid conditions, and a developmental perspective on the course and potential outcomes of the disorder may guide treatment planning. Newly available data on the safety and efficacy of pharmacotherapy and psychosocial intervention for preschoolers who have ADHD may help clinicians make treatment decisions for these young children and their families. (PsycINFO Database Record (c) 2008 APA, all rights reserved) (from the journal abstract).

Biol Psychiatry. 2008;63:784-92.

Event-Related Potentials in Adolescents with Schizophrenia and Their Siblings: A Comparison with Attention-Deficit/Hyperactivity Disorder.

Groom MJ, Bates AT, Jackson GM, et al.

Background: Identifying trait markers specific to schizophrenia might uncover mechanisms underlying illness susceptibility. Previous research shows the N2 and P3 event-related potentials are abnormal in schizophrenia; specificity of these potential trait markers has not been well established. Methods: Electroencephalogram data were recorded from four adolescent groups: early-onset schizophrenia patients (SZ; n = 30); non-psychotic siblings of schizophrenia patients (SZ-SIB; n = 36); healthy control subjects (HC; n = 36); a neurodevelopmental attention-deficit/hyperactivity disorder (ADHD) comparison group (n = 27), during auditory oddball and visual go/no-go tasks. The P3 was measured to targets in the oddball task. The N2 and P3 were measured to go and no-go stimuli in the go/no-go task. Results: Compared with the HC group, the SZ and SZ-SIB groups showed significantly reduced auditory oddball P3 amplitude. Visual P3 amplitude was significantly reduced in the SZ group for no-go stimuli and the SZ-SIB group for go and no-go stimuli. The P3 amplitude in the ADHD group was not significantly reduced for either paradigm. The SZ and ADHD groups showed significantly reduced N2 amplitude in the go/no-go task; the SZ-SIB group was not significantly different from the HC group. Conclusions: Results revealed reduced P3 amplitude in schizophrenia patients and adolescent non-psychotic siblings in an auditory oddball and a visual go/no-go task. The SZ-SIB and ADHD groups showed a different ERP profile when each was compared with the HC group: siblings showed reduced P3 amplitude in both tasks and normal N2 in the go/no-go task; the opposite pattern was observed in the ADHD group. (copyright) 2008 Society of Biological Psychiatry.

Pediatrics. 2008 Apr;121:e967-e974.

Growth in stimulant-naive children with attention-deficit/hyperactivity disorder using cross-sectional and longitudinal approaches.

Hanc T, Cieslik J.

OBJECTIVE: The objective of this study was to investigate the growth of stimulant-naive children with attention-deficit/hyperactivity disorder in 3 aspects of development: level, trend, and structure of the process. **PATIENTS AND METHOD:** The study sample included 53 individuals between the ages of 6 and 17 years (mean: 11.90). The average level of growth (z scores) in prepubertal, pubertal, and postpubertal stage of development and trend of the process were estimated on the basis of a comparison with growth charts. The prediction of adolescent growth spurt was conducted using the mathematical structural growth model of Jolicoeur, Pontier, and Abidi. **RESULTS:** Difference between boys with attention-deficit/hyperactivity and the norm was statistically significant in the prepubertal stage and for the average level of growth between the ages of 2 and 17 years. Distinct suppression of growth was found between the ages of 9 and 14. Analysis of development structure revealed an earlier onset of the adolescent growth spurt among boys (difference: 5 months) and a higher velocity of growth at this moment (difference: 0.33 cm/year) than expected values. **CONCLUSIONS:** The application of both cross-sectional and longitudinal analyses clearly illustrated the higher level of growth of boys with attention-deficit/hyperactivity in the prepubertal stage, the suppression of growth on the turn of prepubertal and pubertal periods, and earlier occurrence of the spurt onset. Observed differences in the level and trend of growth as well as in the parameters of adolescent growth spurt are linked with disorder-related factors.

J Abnorm Child Psychol. 2008;36:323-33.

Hot and cool forms of inhibitory control and externalizing behavior in children of mothers who smoked during pregnancy: An exploratory study.

Huijbregts SCJ, Warren AJ, De Sonnevile LMJ, et al.

This study examined whether children exposed to prenatal smoking show deficits in "hot" and/or "cool" executive functioning (EF). Hot EF is involved in regulation of affect and motivation, whereas cool EF is involved in handling abstract, decontextualized problems. Forty 7 to 9-year-old children (15 exposed to prenatal smoking, 25 non-exposed) performed two computerized tasks. The Sustained Attention Dots (SA-Dots) Task (as a measure of "cool" inhibitory control) requires 400 non-dominant hand and 200 dominant hand responses. Inhibitory control of the prepotent response is required for dominant hand responses. The Delay Frustration Task (DeFT) (as a measure of "hot" inhibitory control) consists of 55 simple maths exercises. On a number of trials delays are introduced before the next question appears on the screen. The extent of response-button pressing during delays indicates frustration-induced inhibitory control. Prenatally exposed children showed poorer inhibitory control in the DeFT than non-exposed children. A dose-response relationship was also observed. In addition, prenatally exposed children had significantly higher (dose-dependent) conduct problem- and hyperactivity-inattention scores. There were no significant group differences in inhibitory control scores from the SA-Dots. These results indicate that children exposed to prenatal smoking are at higher risk of hot but not cool executive function deficits. (copyright) 2007 Springer Science+Business Media, LLC.

Arch Pediatr Adolesc Med. 2008 Apr;162:323-29.

Actigraphic and parental reports of sleep difficulties in children with attention-deficit/hyperactivity disorder.

Hvolby A, Jorgensen J, Bilenberg N.

OBJECTIVES: To describe actigraphically detected and parent-reported sleep problems in nonmedicated children with attention-deficit/hyperactivity disorder (ADHD); to clarify whether or not comorbid oppositional defiant disorder contributes to sleep difficulties; and to compare objectively measured sleep with the parents' observations of sleep. **DESIGN:** Case-control study. **SETTING:** A child and adolescent psychiatric department of a teaching hospital. **PARTICIPANTS:** Two hundred six children aged 5 to 11 years, including 45 with a diagnosis of ADHD, 64 with a diagnosis of other psychiatric diagnoses (psychiatric control group), and 97 healthy control subjects (reference group). Intervention Sleep was monitored by parent-completed sleep diaries and 5 nights of actigraphy. We used a semistructured interview to diagnose psychiatric disorders according to Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition) criteria. **MAIN OUTCOME MEASURES:** Actigraphically measured sleep variables and parent-estimated sleep by diary.

RESULTS: We found that children with ADHD have significantly longer sleep onset latency and a more irregular sleep pattern than the psychiatric control or healthy reference subjects. Average sleep onset latencies were 26.3 minutes in the ADHD group, 18.6 minutes in the psychiatric control group, and 13.5 minutes in the healthy reference group. There was no apparent relationship between sleep problems and comorbid oppositional defiant disorder. We found discrepancies between the objectively measured sleep variables and those reported by parents, who overestimated sleep onset latency. **CONCLUSIONS:** The results of this study allow us to conclude that some children with ADHD have impaired sleep that cannot be referred to comorbid oppositional defiant disorder. However, it is important to make an in-depth review of the sleep complaints, as the problem may be a product of the parents' perception rather than the child's actual experience.

Clin Psychopharmacol Neurosci. 2008;6:24-30.

Differences in the clinical characteristics of remission and non-remission groups with once-daily OROS-methylphenidate treatment of attention-deficit/ hyperactivity disorder.

Hyun JH, Hong N, Hyung JY, et al.

Objective : Attention-deficit/hyperactivity disorder (ADHD) is a common, life-long condition associated with major functional impairment, and remission is the primary goal of treatment. The purpose of this study was to identify differences in the clinical characteristics of remission and non-remission groups composed of Korean children and adolescents with ADHD. **Methods :** Fifty-nine children and adolescents, 6-15 years old, diagnosed with ADHD according to the Diagnostic and Statistical Manual-IV (DSM-IV) criteria were included in the study. The study design was an 8-week, open-label trial of OROS-methylphenidate (OROS-MPH) monotherapy. The subjects were assessed using the Korean ADHD Rating Scale (K-ARS), Clinical Global Impression of Severity (CGI-S), Clinical Global Impression of Improvement (CGI-I), and Barkley Side Effect Rating Scale at baseline and 1, 2, 4, and 8 weeks after starting OROS-MPH treatment. Remission was defined as both a score of (less-than or equal to)2 on the CGI-S and a score of (less-than or equal to)18 on the K-ARS at the eighth week of the trial, when we examined the differences in the clinical characteristics between the remission and non-remission groups. **Results :** The remission rate at the eighth week was 47.5% (n = 28). No differences were observed in the age, sex, weight, severity of symptoms reported by the parent, comorbidities at baseline, or doses of OROS-MPH at each evaluation point between the remission and non-remission groups. However, the non-remission group had higher scores in the CGI-S at baseline than the remission group. A difference in symptom improvement between the two groups began at the first week of the trial, and the remission group was less likely to have side effects at the eighth week. **Conclusion :** The results suggest that individual biological diversity may mediate different treatment responses to OROS-MPH. Interventions other than medication are needed to achieve remission and to restore proper functioning of patients with ADHD in the nonremission group. Copyright (copyright) 2008, Korean College of Neuropsychopharmacology.

Child Care Health Dev. 2008;34:380-90.

Efficacy of the incredible years programme as an early intervention for children with conduct problems and ADHD: Long-term follow-up.

Jones K, Daley D, Hutchings J, et al.

Background: This study examined the long-term efficacy of the Incredible Years (IY) BASIC Parenting Programme delivered as a preventive intervention with parents of pre-school children who display signs of attention deficit hyperactivity disorder (ADHD) and conduct problems. Families were followed up after the completion of a controlled trial with 11 Sure Start areas in North and Mid-Wales and North West England. **Methods:** Participants in the study were 50 pre-school children whose parents had received the intervention. Child ADHD symptoms were assessed at baseline, at follow-up one (6months after baseline); at follow-up two (12months after baseline); and at follow-up three (18 months after baseline). Families in the original waiting-list control group were not assessed after follow-up one as they had subsequently received the same intervention. **Results:** The significant post-intervention improvements in child ADHD symptoms evident at follow-up one were maintained over time, as demonstrated by statistical and clinical stability of measures. No significant differences were found for ADHD symptoms across each follow-up, indicating that the gains made post intervention were maintained for at least 12 months, with 57% of the sample maintaining scores below the clinical cut-off on the Conners. Eighty-six, 58, and 30 per cent respectively had maintained at least a

modest, large, or very large improvement in ADHD symptoms at follow-up three. Conclusions: Findings from this study suggest that the IY psychosocial treatment programme is a valuable intervention in the longer term for many pre-school children displaying early signs of ADHD. (copyright) 2008 The Authors Journal compilation (copyright) 2008 Blackwell Publishing Ltd.

J Clin Exp Neuropsychol. 2008 Apr;30:261-71.

A novel task for examining strategic planning: Evidence for impairment in children with ADHD.

Kofman O, Larson JG, Mostofsky SH.

Children with attention deficit hyperactivity disorder (ADHD) often show poor performance on tasks that require strategic planning. To assess this ability, we developed a paper and pencil task that required consistent use of a simple test-taking strategy to maximize the number of points. The visual discrimination task with minimal cognitive demands required children to maximize their gains by responding only to outlined high-point problems and to skip the low-point problems. The task was administered twice, the second time with explicit instructions on how to implement the strategy. Few of the children in the ADHD or control group, ages 8-13 years, were able to discover the strategy on their own, but after explicit instruction 90% of the children in the control group but only 57.5% of children with ADHD used the strategy to maximize points ($p < .005$). The ADHD group used the strategy less efficiently, despite the fact that they did not differ on the total number of problems completed. The findings suggest that children with ADHD have impaired ability to implement strategic approaches for tasks similar to school assignments. The task can potentially be developed as a diagnostic aid and as a basis for further research assessing strategic planning in ADHD. (PsycINFO Database Record (c) 2008 APA, all rights reserved) (from the journal abstract).

J Abnorm Child Psychol. 2008;36:373-83.

Few preschool boys and girls with ADHD are well-adjusted during adolescence.

Lee SS, Lahey BB, Owens EB, et al.

To estimate the prevalence of being well-adjusted in adolescence, boys and girls with ($n=96$) and without ($n=126$) attention-deficit/hyperactivity disorder (ADHD) were assessed seven times in eight years starting when they were 4-6 years of age. Symptoms of ADHD, ODD/CD, and depression/anxiety in addition to social skills and social preference were gathered using multiple methods and informants. Being well-adjusted was defined by surpassing thresholds in at least four of the five domains. At the 7- and 8-year follow-up, when youth were 11-14 years old, probands were significantly less likely to be well-adjusted relative to age- and ethnicity-matched control children. Only a minority of children with ADHD was well-adjusted in adolescence when emotional, behavioral, and social domains were considered simultaneously. Even when their ADHD symptoms improved over time, most probands exhibited significant impairment 7-8 years after their initial assessment. (copyright) 2007 Springer Science+Business Media, LLC.

J Abnorm Child Psychol. 2008;36:445-56.

Modulation of response timing in adhd, effects of reinforcement valence and magnitude.

Luman M, Oosterlaan J, Sergeant JA.

The present study investigated the impact of reinforcement valence and magnitude on response timing in children with ADHD. Children were required to estimate a 1-s interval, and both the median response time (response tendency) and the intrasubject-variability (response stability) were investigated. In addition, heart rate and skin conductance were measured to examine the autonomic responses to reinforcement. Feedback-only trials were compared to low response cost trials (response cost for incorrect responses), low reward trials (reward for correct responses), high response cost and high reward trials. In feedback-only trials, children with ADHD underestimated more severely the interval and responded more variably than controls. Children with ADHD, unlike controls, were unaffected by the reinforcement conditions in terms of time underestimations. The variability of responding, on the other hand, decreased under conditions of reinforcement to a larger extent in children with ADHD than controls. There were no indications that children with ADHD were abnormally affected by the valence or magnitude of reinforcement. Furthermore, skin conductance responses increased when feedback was coupled with reinforcement, an effect which was larger in children with ADHD than controls. This could be interpreted as demonstrating that children with ADHD suffer from a diminished awareness of the significance of feedback in the feedback-only condition. The current study suggests that children with ADHD suffer from motivation problems when reinforcement

was not available, at least when variability in responding was measured. Underestimations of time may reflect more stable deficits in ADHD. (copyright) 2007 Springer Science+Business Media, LLC.

J Abnorm Child Psychol. 2008;36:399-410.

Academic achievement over 8 years among children who met modified criteria for attention-deficit/hyperactivity disorder at 4-6 years of age.

Masseti GM, Lahey BB, Pelham WE, et al.

The predictive validity of symptom criteria for different subtypes of ADHD among children who were impaired in at least one setting in early childhood was examined. Academic achievement was assessed seven times over 8 years in 125 children who met symptom criteria for ADHD at 4-6 years of age and in 130 demographically-matched non-referred comparison children. When intelligence and other confounds were controlled, children who met modified criteria for the predominantly inattentive subtype of ADHD in wave 1 had lower reading, spelling, and mathematics scores over time than both comparison children and children who met modified criteria for the other subtypes of ADHD. In some analyses, children who met modified criteria for the combined type had somewhat lower mathematics scores than comparison children. The robust academic deficits relative to intelligence in the inattentive group in this age range suggest either that inattention results in academic underachievement or that some children in the inattentive group have learning disabilities that cause secondary symptoms of inattention. Unexpectedly, wave 1 internalizing (anxiety and depression) symptoms independently predicted deficits in academic achievement controlling ADHD, intelligence, and other predictors. (copyright) 2007 Springer Science+Business Media, LLC.

Int J Neuropsychopharmacol. 2008;11:351-63.

Association between a common haplotype in the COMT gene region and psychiatric disorders in individuals with 22q11.2DS.

Michaelovsky E, Gothelf D, Korostishevsky M, et al.

The 22q11.2 deletion syndrome (22q11.2DS) is the most common hemizygous deletion syndrome in humans. In addition to a wide range of physical abnormalities 22q11.2DS subjects show high prevalence of several psychiatric disorders. In our previous study we showed that the low-activity allele (158Met) of the COMT gene is a risk factor for attention deficit hyperactivity disorder (ADHD) and obsessive-compulsive disorder (OCD) in 22q11.2DS individuals. In the present study we have genotyped fifty-five 22q11.2DS individuals and 95 of their parents for eight SNPs in and around the COMT gene. A haplotype composed of three SNPs [rs2097603; rs4680 (158Val/Met); rs165599] representing the major linkage disequilibrium blocks in COMT and previously implicated in functional variation, was found to be associated with ADHD and OCD in 22q11.2DS individuals. A common risk haplotype (G-A-A) was significantly associated with both ADHD (OR 3.13, $(\chi)^2=4.38$, $p=0.036$) and OCD (OR 4.00, $(\chi)^2=6.41$, $p=0.011$) in 22q11.2DS individuals. Interestingly, the same haplotype was recently found to be associated with efficient prefrontal performance in the general population. The risk haplotype was not found to be associated with IQ scores in our 22q11.2DS sample. Parental origin of the deletion did not affect the susceptibility to ADHD and OCD in the 22q11.2DS subjects. This study demonstrated the association of a particular COMT haplotype with susceptibility to both ADHD and OCD in 22q11.2DS and supports the hypothesis that COMT gene variations contribute to genetic predisposition to psychiatric disorders in the general population. (copyright) 2008 Collegium Internationale Neuropsychopharmacologicum.

Tidsskr Nor Laegeforen. 2008 Apr;128:944-45.

[Boys with ADHD don't get enough help].

Midtlyng E.

J Pediatr Neurol. 2008;6:5-10.

Efficacy and tolerability of ADHD medications in a clinical practice.

Miller-Horn JW, Kaleyias J, Valencia I, et al.

Randomized controlled trials have shown that stimulants reduce symptoms of impulsivity and hyperactivity in children with attention deficit/hyperactivity disorder (ADHD); however, these rigid protocols show no advantage of one medication over another. Our study examined the question of differential efficacy and

tolerability of five medications used for ADHD, in the open-label setting of our outpatient child neurology clinic. This retrospective study identified 137 children and adolescents (109 boys and 28 girls), with a mean age of 10 years (range 4 to 19 years) treated for ADHD. Treatment options were amphetamine/dextroamphetamine extended release (adderall XR) in 19.0%, amphetamine/dextroamphetamine (adderall), osmotic controlled-released (OROS) formulation of methylphenidate (OROS-MPH, concerta) in 29.2%, atomoxetine (strattera) in 21.9% and methylphenidate standard release (MPH) in 16.8%. Global effectiveness was assessed for each medication. Overall, 78% of patients improved with medication, with no significant statistical difference in efficacy among the five medications. Side effects included decreased appetite (14.6%), insomnia (10.2%), headaches (7.3%), and tics (3.7%). The only difference in side effects was with atomoxetine showing a significantly lower incidence of headaches than amphetamine/dextroamphetamine XR, amphetamine/dextroamphetamine or OROS-MPH. In conclusion, our results in the open-label setting were comparable to those found in randomized controlled trials; the medications we examined were equally effective with minimal differences in side effect profiles. (copyright) 2008 IOS Press. All rights reserved.

Child and Adolescent Psychiatric Clinics of North America. 2008 Apr;17:245-60.

Epidemiologic considerations in attention deficit hyperactivity disorder: A review and update.

Polanczyk G, Jensen P.

Epidemiologic data on attention deficit hyperactivity disorder (ADHD) are essential for planning health services and implementing strategies of detection and early intervention, with possible substantial benefits on public health. This article addresses methodological aspects of prevalence studies, recent findings on the prevalence of ADHD in childhood and adolescence based on a systematic review, current findings on the persistence of the disorder over time and prevalence in adulthood, and factors associated with ADHD. Evidence from the reviewed literature indicates the importance of methodological aspects in the understanding of epidemiologic findings and the necessity of large-scale cross-national studies. Moreover, governments clearly must direct attention to childhood mental disorders to guarantee a healthy future for their countries. (PsycINFO Database Record (c) 2008 APA, all rights reserved) (from the journal abstract).

J Child Neurol. 2008;23:399-406.

Handwriting performance in children with attention deficit hyperactivity disorder (ADHD).

Racine BM, Majnemer A, Shevell M, et al.

Attention deficit hyperactivity disorder (ADHD) is the most common neurobehavioral condition of childhood. Consequences are multifaceted and include activity limitations in daily-living skills, academic challenges, diminished socialization skills, and motor difficulties. Poor handwriting performance is an example of an affected life skill that has been anecdotally observed by educators and clinicians for this population and can negatively impact academic performance and self-esteem. To guide health and educational service delivery needs, the authors reviewed the evidence in the literature on handwriting difficulties in children with ADHD. Existing evidence would suggest that children with ADHD have impaired handwriting performance, characterized by illegible written material and/or inappropriate speed of execution compared to children without ADHD. Studies with larger sample sizes using standardized measures of handwriting performance are needed to evaluate the prevalence of the problem and to better understand the nature of handwriting difficulties and their impact in this population. (copyright) 2008 Sage Publications.

J Abnorm Child Psychol. 2008;36:29-40.

Test of alternative hypotheses explaining the comorbidity between attention-deficit/hyperactivity disorder and conduct disorder.

Rhee SH, Willcutt EG, Hartman CA, et al.

There is significant comorbidity between attention-deficit/hyperactivity disorder (ADHD) and conduct disorder (CD). The conclusions of studies that examined the causes of comorbidity between ADHD and CD conflict, with some researchers finding support for the three independent disorders model and others finding support for the correlated risk factors model. We tested these models and eleven alternative hypotheses using the same analytical approach. The participants were 110 monozygotic twin pairs and 181 dizygotic twin pairs recruited from the Colorado Learning Disabilities Research Center Twin Study. The three independent disorders model did not fit the data, whereas the correlated risk factors model fit the data well. Several other comorbidity models fit the data as well as or better than the correlated risk factors model. The results

suggest that correlated risk factors are a better explanation for the comorbidity between ADHD and CD than a third, independent ADHD+CD subtype. (copyright) 2007 Springer Science+Business Media, LLC.

Int J Obes. 2008;32:550-57.

Maternal adiposity prior to pregnancy is associated with ADHD symptoms in offspring: Evidence from three prospective pregnancy cohorts.

Rodriguez A, Miettunen J, Henriksen TB, et al.

Objectives: We examine whether pregnancy weight (pre-pregnancy body mass index (BMI) and/or weight gain) is related to core symptoms of attention deficit hyperactivity disorder (ADHD) in school-age offspring. Design: Follow-up of prospective pregnancy cohorts from Sweden, Denmark and Finland within the Nordic Network on ADHD. Methods: Maternal pregnancy and delivery data were collected prospectively. Teachers rated inattention and hyperactivity symptoms in offspring. High scores were defined as at least one core symptom rated as 'severe' and two as 'present' (approximately 10% of children scored in this range). Logistic regression and latent class analyses were used to examine maternal pregnancy weight in relation to children's ADHD core symptoms. Results: Teacher rated 12 556 school-aged children. Gestational weight gain outside of the Institute of Medicine guidelines was not related to ADHD symptoms (below recommendations: odds ratio (OR): 0.96; 95% confidence interval (CI): 0.81, 1.14; above recommendations: OR: 0.98; 95% CI: 0.82, 1.16). To examine various patterns of pre-pregnancy BMI and weight gain, we used latent class analysis and found significant associations between classes that included pre-pregnancy overweight or obesity and a high ADHD symptom score in offspring, ORs ranged between 1.37 (95% CI: 1.07, 1.75) and 1.89 (95% CI: 1.13, 3.15) adjusted for gestational age, birth weight, weight gain, pregnancy smoking, maternal age, maternal education, child gender, family structure and cohort country of origin. Children of women who were both overweight and gained a large amount of weight during gestation had a 2-fold risk of ADHD symptoms (OR: 2.10, 95% CI: 1.19, 3.72) compared to normal-weight women. Conclusions: We show for the first time that pre-pregnancy BMI is associated with ADHD symptoms in children. Our results are of public health significance if the associations are causal and will then add ADHD symptoms in offspring to the list of deleterious outcomes related to overweight and obesity in the prenatal period. (copyright) 2008 Nature Publishing Group All rights reserved.

Child and Adolescent Psychiatric Clinics of North America. 2008 Apr;17:xvii-xxix.

Preface.

Rohde LA, Faraone SV.

When the former editor of Child and Adolescent Psychiatric Clinics of North America, Andr s Martin, contacted us to serve as guest editors for an issue on attention deficit hyperactivity disorder (ADHD), our first reaction was a mix of honor and apprehension. We felt honor, because this is a key disorder for all of us who devote our lives to work with children and adolescents suffering with mental health problems. We decided that this issue should have a double mission: presenting to our readers the most updated research findings, and discussing the most relevant clinical dilemmas that we face when taking care of children and adolescents who have ADHD. To achieve this mission, the first group of articles addresses basic aspects of the disorder. In the second group of articles, hot clinical topics are discussed extensively. The last set of articles addresses advances in the treatment of the disorder. This issue will be valuable for all mental health professionals who work with children and adolescents and who face the enormous clinical challenges and dilemmas faced when caring for youths with ADHD. (PsycINFO Database Record (c) 2008 APA, all rights reserved)

Behav Brain Funct. 2008;4.

Relationship between endophenotype and phenotype in ADHD.

Rommelse NNJ, Altink ME, Martin NC, et al.

Background: It has been hypothesized that genetic and environmental factors relate to psychiatric disorders through the effect of intermedating, vulnerability traits called endophenotypes. The study had a threefold aim: to examine the predictive validity of an endophenotypic construct for the ADHD diagnosis, to test whether the magnitude of group differences at the endophenotypic and phenotypic level is comparable, and to investigate whether four factors (gender, age, IQ, rater bias) have an effect (moderation or mediation) on the relation between endophenotype and phenotype. Methods: Ten neurocognitive tasks were administered to 143 children with ADHD, 68 non-affected siblings, and 120 control children (first-borns) and 132 children

with ADHD, 78 non-affected siblings, and 113 controls (second-borns) (5 - 19 years). The task measures have been investigated previously for their endophenotypic viability and were combined to one component which was labeled 'the endophenotypic construct': one measure representative of endophenotypic functioning across several domains of functioning. Results: The endophenotypic construct classified children with moderate accuracy (about 50% for each of the three groups). Non-affected children differed as much from controls at the endophenotypic as at the phenotypic level, but affected children displayed a more severe phenotype than endophenotype. Although a potentially moderating effect (age) and several mediating effects (gender, age, IQ) were found affecting the relation between endophenotypic construct and phenotype, none of the effects studied could account for the finding that affected children had a more severe phenotype than endophenotype. Conclusion: Endophenotypic functioning is moderately predictive of the ADHD diagnosis, though findings suggest substantial overlap exists between endophenotypic functioning in the groups of affected children, non-affected siblings, and controls. Results suggest other factors may be crucial and aggravate the ADHD symptoms in affected children. (copyright) 2008 Rommelse et al; licensee BioMed Central Ltd.

Z Kinder- Jugendpsychiatr Psychother. 2008;36:117-25.

Diagnostic of personality disorders in adolescence according to SCID-II.

Salbach-Andrae H, Burger A, Klinkowski N, et al.

Objectives: The aim of the present study was to ascertain whether the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II) is applicable for use with adolescents. Furthermore, the diagnostic concordance between SCID-II and the clinicians' estimations of personality disorders (PD) is assessed. In addition, we identified predicting factors for personality disorders in adolescent psychiatric inpatients. Methods: 110 adolescent psychiatric inpatients aged 14-18 years were assessed by means of SCID-II and a personality and disorder inventory (PSSI). Results: 32.7% of the inpatients met the criteria for PD according to SCID-II. While agreement between the presence of any PD based on SCID-II and that found according to clinicians' estimations was low, moderate and very good agreement between SCID-II and clinicians' estimations was found with regard to borderline PD and histrionic PD. Logistic regression analyses identified "anorexia nervosa (binge-purging)", "attention-deficit/hyperactivity disorder/conduct disorder (ADHD/CD)" and "socioeconomic status" as good predictors for PD. Conclusions: The SCID-II - which was primarily developed for use with adults - is suitable for use among adolescents. Anorexia nervosa (binge-purging type) and ADHD/CD are closely associated with the development of PD in adolescents. (copyright) 2008 by Verlag Hans Huber, Hogrefe AG.

Dev Neuropsychol. 2008;33:137-59.

Do motivational incentives reduce the inhibition deficit in ADHD?

Shanahan MA, Pennington BF, Willcutt EW.

The primary goal of this study was to test three competing theories of ADHD: the inhibition theory, the motivational theory, and a dual deficit theory. Previous studies have produced conflicting findings about the effects of incentives on executive processes in ADHD. In the present study of 25 children with ADHD and 30 typically developing controls, motivation was manipulated within the Stop Task. Stop signal reaction time was examined, as well as reaction time, its variability, and the number of errors in the primary choice reaction time task. Overall, the pattern of results supported the inhibition theory over the motivational or dual deficit hypotheses, as main effects of group were found for most key variables (ADHD group was worse), whereas the group by reward interaction predicted by the motivational and dual deficit accounts was not found. Hence, as predicted by the inhibition theory, children with ADHD performed worse than controls irrespective of incentives. Copyright (copyright) 2008 Taylor & Francis Group, LLC.

Pediatrics. 2008 Apr;121:e759-e767.

Inattention, hyperactivity, and school performance in a population of school-age children with complex congenital heart disease.

Shillingford AJ, Glanzman MM, Ittenbach RF, et al.

INTRODUCTION: There is a growing interest in characterizing the neurodevelopmental outcomes of school-age survivors of cardiac surgery. The purpose of this study was to examine a population of 5- to 10-year-old children who underwent newborn cardiac surgery for complex congenital heart disease to characterize and assess risk factors for problems with inattention and hyperactivity, as well as the use of remedial school

services. PATIENTS AND METHODS: This study was a cross-sectional analysis of patients who underwent newborn cardiac surgery and were enrolled in a neuroprotection trial conducted at our institution between 1992 and 1997. Parents and teachers completed questionnaires for the school-age child to elicit information pertaining to the child's general health and academic performance. The severity of hyperactivity and inattention were assessed by using 2 standardized questionnaires (Attention-Deficit/Hyperactivity Disorder Rating Scale-IV and Behavior Assessment System for Children). In addition to calculating descriptive estimates of their occurrence, single-covariate logistic regression models were specified and tested by using 3 different outcomes (inattention, hyperactivity, and use of remedial school services) and 14 different covariates representing preoperative, intraoperative, and postoperative factors. RESULTS: Data were obtained from parents and/or teachers for 109 children. Fifty-three (49%) were receiving some form of remedial academic services, and 15% were assigned to a special-education classroom. The number of children receiving clinically significant scores for inattention and hyperactivity on the Behavior Assessment System for Children was 3 to 4 times higher than observed in the general population. On the Attention-Deficit/Hyperactivity Disorder Rating Scale-IV, 30% of the parents reported high-risk scores for inattention and 29% reported high-risk scores for hyperactivity. No perioperative factors were statistically associated with adverse outcomes. CONCLUSION: In this cohort of children with complex congenital heart disease, a significant proportion of the children were at risk for inattention and hyperactivity, and nearly half were using remedial school services. We did not identify any perioperative risk factors, which correlated with high-risk scores or the use of remedial school services. Ongoing neurodevelopmental follow-up and screening are recommended in this vulnerable population.

Lakartidningen. 2008 Feb;105:354-55.

[Food additives can increase hyperactivity in children. Results from a British study confirm the connection].

Silfverdal SA, Hernell O.

J Abnorm Child Psychol. 2008;36:385-98.

Inattention/overactivity following early severe institutional deprivation: Presentation and associations in early adolescence.

Stevens SE, Sonuga-Barke EJS, Kreppner JM, et al.

The current study examined the persistence and phenotypic presentation of inattention/overactivity (I/O) into early adolescence, in a sample of institution reared (IR) children adopted from Romania before the age of 43 months. Total sample comprised 144 IR and 21 non-IR Romanian adoptees, and a comparison group of 52 within-UK adoptees, assessed at ages 6 and 11 years. I/O was rated using Rutter Scales completed by parents and teachers. I/O continued to be strongly associated with institutional deprivation, with continuities between ages 6 and 11 outcomes. There were higher rates of deprivation-related I/O in boys than girls, and I/O was strongly associated with conduct problems, disinhibited attachment and executive function but not IQ more generally, independently of gender. Deprivation-related I/O shares many common features with ADHD, despite its different etiology and putative developmental mechanisms. I/O is a persistent domain of impairment following early institutional deprivation of 6 months or more, suggesting there may be a possible pathway to impairment through some form of neuro-developmental programming during critical periods of early development. (copyright) 2007 Springer Science+Business Media, LLC.

J Abnorm Child Psychol. 2008;36:411-19.

Predicting nonresponse bias from teacher ratings of mental health problems in primary school children.

Stormark KM, Heiervang E, Heimann M, et al.

The impact of nonresponse on estimates of mental health problems was examined in a prospective teacher screen in a community survey of 9,155 7-9 year olds. For 6,611 of the children, parents consented to participation in the actual study (Responders), while for 2,544 children parental consent was not obtained (Nonresponders). The teacher screen involved assessment of a broad set of symptoms of mental health problems and functional impairment. Calculations of non-response coefficients, a function of effect sizes and non-response proportion, revealed only ignorable nonresponse bias for both mean scores and correlations. However, the results from binary logistic regressions revealed that children ascribed signs of mental health problems by their teachers were less likely to participate. This was most frequent among children with only

moderate symptoms. However, it also involved children with high symptom scores related to inattention, hyperactivity, emotions and peer relationship problems. These findings suggest that measures based on effect size can underestimate the magnitude of non-response bias and that a logistic regression approach may be more appropriate for studies geared at estimating prevalence of mental health problems in children. (copyright) 2007 Springer Science+Business Media, LLC.

Arch Pediatr Adolesc Med. 2008 Apr;162:336-42.

Sleep problems in children with attention-deficit/hyperactivity disorder: prevalence and the effect on the child and family.

Sung V, Hiscock H, Sciberras E, et al.

OBJECTIVES: To determine the prevalence of sleep problems in children with attention-deficit/hyperactivity disorder (ADHD) and their associations with child quality of life (QOL), daily functioning, and school attendance; caregiver mental health and work attendance; and family functioning. **DESIGN:** Cross-sectional survey. **SETTING:** Pediatric hospital outpatient clinic, private pediatricians' offices, and ADHD support groups in Victoria, Australia. **PARTICIPANTS:** Schoolchildren with ADHD. **Main Exposure** Attention-deficit/hyperactivity disorder. **OUTCOME MEASURES:** Primary measure was caregivers' reports of their children's sleep problems (none, mild, or moderate or severe). Secondary outcomes were (1) child QOL (Pediatric Quality of Life Inventory), daily functioning (Daily Parent Rating of Evening and Morning Behavior scale), and school attendance, (2) caregiver mental health (Depression Anxiety Stress Scale) and work attendance, and (3) family functioning (Child Health Questionnaire subscales). Caregivers also reported on how their pediatrician treated their children's sleep problems. **RESULTS:** Two hundred thirty-nine of 330 (74%) eligible families completed the survey. Child sleep problems were common (mild, 28.5%; moderate or severe, 44.8%). Moderate or severe sleep problems were associated with poorer child psychosocial QOL, child daily functioning, caregiver mental health, and family functioning. After adjusting for confounders, all associations held except for family impacts. Compared with children without sleep problems, those with sleep problems were more likely to miss or be late for school, and their caregivers were more likely to be late to work. Forty-five percent of caregivers reported that their pediatricians had asked about their children's sleep and, of these, 60% reported receiving treatment advice. **CONCLUSIONS:** Sleep problems in children with ADHD are common and associated with poorer child, caregiver, and family outcomes. Future research needs to determine whether management of sleep problems can reduce adverse outcomes.

NeuroImage. 2008;40:1195-201.

Methylphenidate DAT binding in adolescents with Attention-Deficit/ Hyperactivity Disorder comorbid with Substance Use Disorder - a single Photon Emission Computed Tomography with [Tc99m]TRODAT-1 study.

Szobot CM, Shih MC, Schaefer T, et al.

Background: Attention-Deficit/Hyperactivity Disorder (ADHD) is highly prevalent among adolescents with Substance Use Disorders (SUD). Effects of methylphenidate (MPH) on ADHD are attributed to its properties of blocking the dopamine transporter (DAT) in the striatum. However, it has been demonstrated that drug addiction is associated with dopaminergic system changes that may affect MPH brain effects, emphasizing the need to better understand MPH actions in subjects with ADHD+SUD. **Objectives:** To evaluate the effect of an extended release formulation of MPH (MPH-SODAS) on DAT availability in 17 stimulant-naive ADHD adolescents with comorbid SUD (cannabis and cocaine). **Methods:** Subjects underwent two single photon emission computed tomography (SPECT) scans with [Tc99m]TRODAT-1, at baseline and after 3 weeks on MPH-SODAS. Clinical assessment for ADHD relied on the Swanson, Nolan and Pelham Scale - version IV (SNAP-IV). Caudate and putamen DAT binding potential (BP) was calculated. **Results:** After 3 weeks on MPH-SODAS, there was a significant reduction of SNAP-IV total scores ($p < 0.001$), and ~ 52% reductions of DAT BP at the left and right caudate. Similar decreases were found at the left and right putamen ($p < 0.001$ for all analyses). **Discussion:** This study shows that the magnitude of DAT blockade induced by MPH in this population is similar to what is found in ADHD patients without SUD comorbidity, providing neurobiological support for trials with stimulants in adolescents with ADHD+SUD, an important population excluded from studies. (copyright) 2008 Elsevier Inc. All rights reserved.

Child and Adolescent Psychiatric Clinics of North America. 2008 Apr;17:309-23.

Attention deficit hyperactivity disorder and substance use disorders.

Szobot CM, Bukstein O.

Attention deficit hyperactivity disorder (ADHD) is highly prevalent among adolescents who have substance use disorder (SUD). Several lines of evidence, although not conclusive, suggest that ADHD might have an independent effect on SUD liability. It is still to be determined, however, whether this association is mediated by conduct disorder. This article reviews ADHD and SUD. (PsycINFO Database Record (c) 2008 APA, all rights reserved) (from the journal abstract).

Computers & Education. 2008 Apr;50:725-41.

Effects of computer collaborative group work on peer acceptance of a junior pupil with attention deficit hyperactivity disorder (ADHD).

Tan TS, Cheung WS.

The study investigated the effects of computer collaborative group work, facilitated by an adult, on peer acceptance of a junior boy with Attention Deficit Hyperactivity Disorder (ADHD). It aimed to ascertain whether collaborative group work on a computer, with the facilitation of an adult, could help to raise his peer acceptance among his classmates. Data were gathered before and after computer group work sessions. Interviews and questionnaires were conducted on parents and teachers to help establish the history background data and their concerns on the boy's peer acceptance. Sociometrics testing of classmates was used to determine peer acceptance among the boy's immediate peer group. During the adult-facilitated computer sessions, the facilitator reinforced positive social behaviour and interactions. After the computer sessions, interviews and questionnaires were conducted again on parents, teachers and facilitator in an attempt to capture information on the child's behaviour and attitudes during the computer sessions. Sociometrics testing was also conducted again to determine if the peer acceptance among the boy's immediate peer group has changed. The results indicated encouraging improvements in the raise of his peer acceptance among his classmates in general. Although this was a discrete setting, the finding is promising and this strategy may be replicated in school to support mainstream inclusion for children with ADHD. (PsycINFO Database Record (c) 2008 APA, all rights reserved) (from the journal abstract).

Brain Dev. 2008;30:342-48.

Enhanced resting-state brain activities in ADHD patients: A fMRI study.

Tian L, Jiang T, Liang M, et al.

Resting-state functional MRI (fMRI) could be an advantageous choice for clinical applications by virtue of its clinical convenience and non-invasiveness. Without explicit stimulus, resting-state brain activity patterns cannot be obtained using any model-driven method. In this study, we advanced a measure named resting-state activity index (RSAI) to evaluate the resting-state brain activities. Using RSAI, we first investigated the resting-state brain activity patterns in normal adolescents to test the validity of this RSAI measure. Then we compared the resting-state brain activity patterns of Attention deficit hyperactivity disorder (ADHD) patients to those of their matched controls. According to the resultant brain activity patterns, we suggest that RSAI could be an applicable measure to evaluate resting-state brain activities. As compared to the controls, the ADHD patients exhibited more significant resting-state activities in basic sensory and sensory-related cortices. This finding was in accordance with ADHD symptoms of inattention. (copyright) 2007 Elsevier B.V. All rights reserved.

Am J Med Genet Part A. 2008;146:803-12.

A double-blind, parallel, multicenter comparison of L-acetylcarnitine with placebo on the attention deficit hyperactivity disorder in fragile X syndrome boys.

Torrioli MG, Vernacotola S, Peruzzi L, et al.

Attention deficit hyperactivity disorder (ADHD) is a frequent behavioral problem in young boys with fragile X syndrome (FXS), and its treatment is critical for improving social ability. The short-term efficacy of stimulant medications like methylphenidate (MPH) is well established in children with ADHD. FXS boys treated with MPH have improved attention span and socialization skills; however their mood becomes unstable at higher doses. Therefore, alternative pharmacological treatment of ADHD symptoms is desirable. A recent study showed that carnitine has a beneficial effect on the hyperactive-impulsive behavior in boys with ADHD without side effects. Our previous placebo-controlled trial indicated that L-acetylcarnitine (LAC) reduces

hyperactivity in FXS boys. The objective of this study was to determine the efficacy of LAC in a larger sample of FXS boys with ADHD. The study design was randomized, double blind placebo controlled, parallel, and multicenter (with eight centers involved in Italy, France, and Spain). Sixty-three FXS males with ADHD (aged 6-13 years) were enrolled; 7 patients dropped out, 56 completed the one-year treatment, and 51 were included in the statistical analysis. Both groups improved their behavior, showing that psychosocial intervention has a significant therapeutic effect. However, we observed a stronger reduction of hyperactivity and improvement of social behavior in patients treated with LAC, compared with the placebo group, as determined by the Conners' Global Index Parents and the Vineland Adaptive Behavior Scale. Our results show that LAC (20-50 mg/kg/day) represents a safe alternative to the use of stimulant drugs for the treatment of ADHD in FXS children. (copyright) 2008 Wiley-Liss, Inc.

Int Rev Psychiatry. 2008;20:143-49.

Beyond the 'typical' patient: Treating attention-deficit/hyperactivity disorder in preschoolers and adults.

Vaughan BS, Wetzel MW, Kratochvil CJ.

Attention-deficit/hyperactivity disorder (ADHD), typically affects school-aged children, but can present during the preschool years and persist into adulthood. Accurate diagnosis for preschoolers and adults requires adaptation of the current diagnostic criteria to account for differences in symptomatology across the age span. The differential diagnosis of ADHD and the pattern of psychiatric comorbidity vary with each age group and complicate diagnosis and management. To maximize outcomes clinicians must be able to accurately identify ADHD across the lifespan, and develop comprehensive, collaborative treatment plans. The Preschool ADHD Treatment Study (PATS) demonstrated the potential utility of methylphenidate for treating ADHD in preschoolers, and trials of psychostimulants and atomoxetine have shown some benefits for adults. Behavioural interventions likely have an adjunctive role in ADHD treatment for both groups. More research, however, is needed to determine the safest and most effective pharmacotherapies and psychosocial interventions for these non-typical patients. (copyright) 2008 Informa UK Ltd.

Dev Neuropsychol. 2008;33:160-78.

ADHD symptoms and executive function impairment: Early predictors of later behavioral problems.

Wahlstedt C, Thorell LB, Bohlin G.

This longitudinal study investigated ADHD symptoms and EF impairments in terms of continuity and cross-domain associations, as well as their predictive relations to a range of socioemotional problem behaviors. We applied a factorial ANOVA design to study additive and interactive effects in a sample of non-clinical preschool children (N = 87) and complemented these analyses with group contrasts. The results showed that early ADHD symptoms and EF impairments acted as predictors of continuing problems within each domain. However, it was only ADHD symptoms that predicted other aspects of socioemotional functioning such as dysfunctional emotional regulation and lower levels of social competence. There was no indication of interactive effects on any measure. In conclusion, our results showed that both ADHD symptoms and impaired EF act as early predictors of problem behaviors, although it is clear that predictions based on ADHD symptoms encompass a wider range of problems in early school age children. Copyright (copyright) 2008 Taylor & Francis Group, LLC.

Progress in Neuro-Psychopharmacology & Biological Psychiatry. 2008 Apr;32:662-67.

Potential effects of zinc on information processing in boys with attention deficit hyperactivity disorder.

Yorbik O, Ozdag MF, Olgun A, et al.

Purpose: The aims of the present study were to investigate the relationship between plasma zinc levels and amplitudes and latencies of P1, N2, and P3 in parietal and frontal areas in children with ADHD, and to compare these zinc levels and event-related potentials (ERPs) indices with controls. Methods: 28 boys with ADHD were divided into two groups according to plasma zinc levels: low zinc group (N=13, zinc level <80 µg/dL) and zinc non-deficient group (N=15, zinc level ≥80 µg/dL). ERP indices from parietal and frontal brain regions were recorded in children with ADHD and in 24 normal boys by using an auditory oddball paradigm. Plasma zinc levels were measured by an atomic absorption spectrophotometer. Results: The plasma zinc levels were significantly lower in both ADHD groups (means are 65.8 µg/dL in low zinc group and 89.5 µg/dL in zinc non-deficient group) than controls (mean: 107.8 µg/dL; both p values <0.017). In

ADHD compared to controls, the amplitudes of P3 in frontal and parietal regions were significantly lower, and the latency of P3 in parietal region was significantly longer (all p values <0.017). In low zinc ADHD group compared to zinc non-deficient ADHD group, the latencies of N2 in frontal and parietal region were significantly shorter (all p values <0.017). In addition, there was a medium but significant positive correlation between plasma zinc levels and amplitude and latency of frontal N2 wave in ADHD. Conclusions: These results can suggest that plasma zinc levels might have an effect on information processing in ADHD children, and lower zinc levels seem to affect N2 wave. Since N2 wave changes may reflect a different inhibition process, further studies are warranted to investigate the effect of zinc on inhibitory process in children with ADHD, and in low zinc and non-deficient ADHD groups. (PsycINFO Database Record (c) 2008 APA, all rights reserved) (from the journal abstract).

Pharmacopsychiatry. 2008;41:60-65.

Diminished serotonergic functioning in hostile children with ADHD: Tryptophan depletion increases behavioural inhibition.

Zepf FD, Holtmann M, Stadler C, et al.

Introduction: Serotonergic (5-HT) functioning has been shown to account for a variety of behavioural characteristics, in particular aggressive and impulsive behaviour. This study explored the effects of rapid tryptophan depletion (RTD) and the ensuing reduction of brain 5-HT synthesis on behavioural inhibition in passive avoidance learning assessed in a computerized go/no-go task. Methods: 22 male patients with an ICD-10 diagnosis of ADHD were administered RTD within an amino acid drink lacking tryptophan, the natural precursor of 5-HT, thus lowering the central nervous 5-HT synthesis rate in a placebo-controlled double-blind within-subject cross-over-design. 4 hours after RTD/placebo intake the patients were subjected to a go/no-go task for assessment of behavioural inhibition. Results: Highly hostile aggressive patients showed increased inhibition errors under RTD compared to placebo. Low hostile aggressive patients showed lower rates of inhibition errors and thus better performance under RTD compared to placebo. Discussion: The data suggest that in ADHD levels of trait-aggressive characteristics influence the susceptibility to changed behavioural inhibition after an acute 5-HT dysfunction. The detected influence of 5-HT could also be relevant as regards behavioural inhibition being subject to a developmental change in 5-HT functioning. (copyright) Georg Thieme Verlag KG Stuttgart.

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