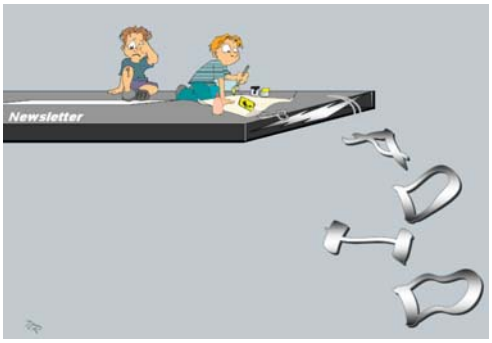

ADHD
ATTENTION DEFICIT HYPERACTIVITY DISORDER

Laboratorio per la Salute Materno Infantile

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International Journal of Behavioral Development. 2010 Jan;34:10-23.
Shifting gears: Coping flexibility in children with and without ADHD.
Babb KA, Levine LJ, Arseneault JM.
This study examined developmental differences in, and cognitive bases of, coping flexibility in children with and without ADHD. Younger (age 7 to 8) and older (age 10 to 11) children with and without ADHD (N = 80) responded to hypothetical vignettes about problematic interactions with peers that shifted from controllable to uncontrollable over time. We assessed children's coping strategies, perceptions of controllability, coping repertoire size, and executive function. Coping flexibility was defined as reporting more strategies directed toward adjusting to, rather than changing, situations as they became uncontrollable. Older children without ADHD demonstrated greater coping flexibility than did younger children without ADHD or either age group with ADHD. The age difference in coping flexibility was mediated by older children's greater accuracy in perceiving decreases in controllability. Children with ADHD (both younger and older) reported more anti social strategies than did children without ADHD, a difference that was accounted for by their smaller repertoire of coping strategies. Programs directed toward enhancing coping flexibility may need to target different cognitive skills for children with and without ADHD.

Child Development. 2009 Nov;80:1842-55.
Developmental changes in attention and comprehension among children with attention deficit hyperactivity disorder.
Bailey UL, Lorch EP, Milich R, et al.
Changes in visual attention and story comprehension for children (N=132) with attention deficit hyperactivity disorder (ADHD) and comparison peers were examined. Between the ages of 7 and 9 (Phase 1) and approximately 21 months later (Phase 2), children viewed 2 televised stories: 1 in the presence of toys and 1 in their absence. Both groups of children showed developmental increases in visual attention and stable group differences over time. Deficits in comprehension among children with ADHD, however, increased over time. Whereas comparison children's recall of factual and causal information increased over time in both viewing conditions, children with ADHD showed no developmental improvement in recall of factual information in the toys-present condition and no improvement in recall of causal relations in either viewing condition.

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.

J Clin Psychiatry. 2009;70:1467-72.

Age and sex analyses of somatic complaints and symptom presentation of childhood depression in a Hungarian clinical sample.

Baji I, Lopez-Duran NL, Kovacs M, et al.

Objective: To determine whether the symptom presentation of major depressive disorder (MDD) in a large clinical sample of youngsters is influenced by age, sex, and the interaction of age and sex.

Method: The sample included 559 children (mean age = 11.69 years; range, 7-14 years; 247 girls) with MDD recruited from 23 mental health facilities across Hungary. Psychiatric evaluations were conducted via the semistructured Interview Schedule for Children and Adolescents-Diagnostic Version (ISCA-D). Final DSM-IV diagnoses were rendered via the best-estimate diagnostic procedure. Evaluations were conducted between April 2000 and May 2005.

Results: Six depression symptoms increased with age: depressed mood (odds ratio [OR] =1.10, P < .05), hypersomnia (OR = 1.17, P < .05), psychomotor retardation (OR = 1.11, P < .05), fatigue (OR = 1.13, P<.01), thoughts of death (OR = 1.11, P < .05), and suicidal ideation (OR =1.18, P < .01), while psychomotor agitation decreased with age (OR = 0.91, P < .05). Boys were less likely to evidence anhedonia (OR = 0.67, P < .05), insomnia (OR = 0.68, P < .05), and hypersomnia (OR = 0.56, P < .05) but more likely to have psychomotor agitation (OR = 1.59, P < .05).

Conclusions: The symptom presentation of MDD becomes somewhat more neurovegetative as children get older. However, girls display more affective and atypical symptoms across all age groups. Somatic complaints were common regardless of age and should be considered an associated feature of depression in children and adolescents.

Epilepsia. 2009;50:132.

Functional networks of working memory in children with epilepsy and combined ADHD in comparison to children with developmental ADHD.

Bechtel N, Kobel M, Weber P, et al.

Purpose: Children with epilepsy have a significant risk for attention deficit/hyperactivity disorder (ADHD) and in consequence often show deficits in working memory performance. However, it is not yet clear whether there are specific differences in the underlying mechanisms of working memory capacity between children with epilepsy and ADHD, and children with developmental ADHD.

Method: 7 boys with diagnosed epilepsy and ADHD, 13 boys with ADHD only and 12 healthy controls were investigated using fMRI. For fMRI three different N-back tasks with increasing difficulty were applied. Participants had to respond to visually projected numbers by button-press according to the instructions. Functional images were recorded on a 3T human head scanner.

Results: In the easiest 0-back task all boys performed on a high level. In the more demanding 2- and 3-back tasks healthy controls performed on a significantly higher level than boys with epilepsy and/or ADHD. Between the patient samples, no behavioral difference could be detected. On a functional level, all boys showed the expected frontal and parietal activations, which were more pronounced in the 2- and 3-back tasks. Only healthy controls showed additional activation in the cerebellum.

Conclusion: These preliminary data indicate that working memory capacity of children with combined epilepsy and ADHD is as deficient as in children with developmental ADHD. These behavioral results are also reflected by functional data indicating similar activation patterns in both patient groups. It can be assumed that the neural dysfunctions of working memory performance are comparable in children with epilepsy and/or ADHD.

Psychiatry Res. 2009;170:177-82.

Are cognitive deficits in attention deficit/hyperactivity disorder related to the course of the disorder? A prospective controlled follow-up study of grown up boys with persistent and remitting course.

Biederman J, Petty CR, Ball SW, et al.

To investigate the longitudinal course of cognitive functions in boys with persistent and remittent attention deficit/hyperactivity disorder (ADHD) from childhood into young adult years. Males (n=217) 15-31 years with and without ADHD were assessed at 3 time points over 10 years into young adulthood. Subjects were stratified into Remittent ADHD, and Persistent ADHD based on the course of ADHD. Cognitive domains included: 1) overall IQ (overall IQ, block design IQ, vocabulary IQ); 2) achievement scores in reading and math and measures of executive function (Wechsler arithmetic, digit span, digit symbol, Rey-Osterrieth,

Wisconsin Card Sorting Test, and the Stroop Test). Cognitive outcomes were modeled as a function of group (Controls, Remittent ADHD, and Persistent ADHD), age, group by age interaction, and any demographic confounders using linear growth-curve models. There were no significant interaction effects of group by time. Main group effects indicated that persistent and remittent ADHD groups both had significantly lower scores on all cognitive outcomes compared with controls, and these did not differ between the ADHD subgroups Psychometrically defined cognitive deficits are relatively stable into young adult years and appear to be independent of the course of ADHD. More work is needed to help define the implications of these deficits in individuals with a remitting course of ADHD.

J Child Psychol Psychiatry Allied Discip. 2009;50:352-58.

Familial risk analysis of the association between attention-deficit/ hyperactivity disorder and psychoactive substance use disorder in female adolescents: A controlled study.

Biederman J, Petty CR, Monuteaux MC, et al.

Background: A robust and bi-directional comorbidity between attention-deficit/hyperactivity disorder (ADHD) and psychoactive substance use disorder (PSUD, alcohol or drug abuse, or dependence) has been consistently reported in the literature. However, this literature has been based almost exclusively on male only samples and, therefore, the findings may not generalize to females.

Methods: First-degree relatives from a large sample of pediatrically and psychiatrically referred girls with (123 probands, 403 relatives) and without ADHD (112 probands, 359 relatives) were comprehensively assessed by blind raters with structured diagnostic interviews. Familial risk analysis examined the risks in first-degree relatives for ADHD and PSUD (alcohol or drug abuse or dependence) after stratifying probands by the presence and absence of these disorders.

Results: ADHD in the proband significantly increased the risk for ADHD in relatives independently of the comorbidity with PSUD. PSUD in the proband was associated with a significantly increased risk for PSUD in relatives regardless of ADHD status. There was no evidence of co-segregation or nonrandom mating in the families of probands with ADHD and PSUD.

Conclusions: Patterns of familial risk analysis suggest that the association between ADHD and PSUD in adolescent females is most consistent with the hypothesis that these disorders are independently transmitted, although the hypothesis of variable expressivity could not be ruled out. These findings are consistent with previously reported patterns of familial associations between ADHD and PSUD found in adolescent males. Longer follow-up periods are needed to more fully clarify the relationship between ADHD and PSUD, as well as provide adequate power for separate analyses of alcohol and drug use. Am J

Psychiatry. 2009;166:1392-401.

Adjunctive divalproex versus placebo for children with ADHD and aggression refractory to stimulant monotherapy.

Blader JC, Schooler NR, Jensen PS, et al.

Objective: The purpose of the present study was to evaluate the efficacy of divalproex for reducing aggressive behavior among children 6 to 13 years old with attention deficit hyperactivity disorder (ADHD) and a disruptive disorder whose chronic aggression was underresponsive to a prospective psychostimulant trial.

Method: Children received open stimulant treatment during a lead-in phase that averaged 5 weeks. Agent and dose were assessed weekly and modified to optimize response. Children whose aggressive behavior persisted at the conclusion of the lead-in phase were randomly assigned to receive double-blind, flexibly dosed divalproex or a placebo adjunctive to stimulant for 8 weeks. Families received weekly behavioral therapy throughout the trial. The primary outcome measure was the proportion of children whose aggressive behavior remitted, defined by post-trial ratings of negligible or absent aggression.

Result: A significantly higher proportion of children randomly assigned to divalproex met remission criteria (eight out of 14 [57%]) than those randomly assigned to placebo (two out of 13 [15%]). Divalproex was generally well tolerated.

Conclusions: Among children with ADHD whose chronic aggressive behavior is refractory to optimized stimulant treatment, the addition of divalproex increases the likelihood that aggression will remit. A larger trial is necessary to specify with greater precision the magnitude of benefit for adjuvant divalproex.

Emot Behav Difficulties. 2009;14:325-36.
ADHD and problem-solving in play.
Borg S.
This paper reports a small-scale study to determine whether there is a difference in problem-solving abilities, from a play perspective, between individuals who are diagnosed as ADHD and are on medication and those not on medication. Ten children, five of whom where on medication and five not, diagnosed as ADHD predominantly inattentive type, were observed in school playgrounds in Malta during recess to verify any differences in the ways real-life problem-solving situations are tackled. Results indicated that children on medication tend to avoid group situations and discussion more often than their non-medicated peers. Additionally, non-medicated individuals tend to jump more quickly from one emotional state to the other and resort to physical aggression more often compared with medicated individuals. Such findings suggest that medication has a negative effect on social interaction processes, while it helps to maintain self-control, at least from a physical stand point.

J Child Psychol Psychiatry Allied Discip. 2009;50:335-42.
Comparison of symptomatic versus functional changes in children and adolescents with ADHD during randomized, double-blind treatment with psychostimulants, atomoxetine, or placebo.
Buitelaar JK, Wilens TE, Zhang S, et al.
Background: This meta-analysis was designed to determine the relationship between reduction of attention-deficit/hyperactivity disorder (ADHD) symptoms and improvement in functioning by examining short-term changes in functional and symptomatic scores in children and adolescents with ADHD.
Methods: Search of atomoxetine's clinical trial database identified four studies involving a symptomatic measure, the ADHD Rating Scale-IV-Parent Version:Investigator- administered and -scored (ADHDRS-IV-Parent:Inv), and a functional measure, the Life Participation Scale for ADHD (LPS).
Results: Correlation analysis revealed a moderate-to-strong association between changes in the LPS total versus ADHDRS-IV-Parent:Inv total (r. -.68). The LPS Self-control subscale showed higher correlations than the Happy/Social subscale with the symptomatic measures. Regression analysis also showed high sensitivity for functional measures to changes in symptom severity. Stratified analysis of mean changes in ADHDRS-IV-Parent:Inv scores corresponding to standardized changes in LPS functional scores indicated that a threshold reduction of 16-18 points on the ADHDRS-IV-Parent:Inv total score was needed for functional improvements to become evident.
Conclusions: Subjects' symptomatic improvements appear to be reflected in improvements in their social and behavioral function as measured by the LPS. These initial findings warrant verification by replication with other outcome measures.

Brain Res. 2009;1303:195-206.
Abnormal resting-state functional connectivity patterns of the putamen in medication-naive children with attention deficit hyperactivity disorder.
Cao X, Cao Q, Long X, et al.
Structural and functional alterations of the putamen have been reported in patients with attention deficit hyperactivity disorder (ADHD), but the functional relationships between this area and other brain regions are seldom explored. In the present study, seed-based correlation analyses were performed in the resting-state functional magnetic resonance imaging (fMRI) data to examine the differences in functional connectivity of the putamen between medication-naive children with ADHD and normal children. Positive functional connectivity with the putamen-ROIs was seen in bilateral sensorimotor area, prefrontal cortex, insula, superior temporal gyrus and subcortical regions and negative functional connectivity was located in bilateral parietal and occipital cortex as well as clusters in the frontal, middle temporal cortex and cerebellum. Group comparison showed that decreases in functional connectivity with the putamen-ROIs were observed in ADHD relative to the controls, except for the right globus pallidus/thalamus, which showed increased positive connectivity with left putamen-ROI. For children with ADHD, areas exhibiting decreased positive functional connectivity with left putamen-ROI were seen in right frontal and limbic regions, and regions showing decreased negative connectivity with the putamen-ROIs were observed in areas belonging to the default mode network (for left putamen-ROI, including right cerebellum and right temporal lobe; for right putamen-ROI, including left cerebellum and right precuneus). The above results suggest that abnormal functional

relationships between the putamen and the cortical-striatal-thalamic circuits as well as the default mode network may underlie the pathological basis of ADHD.

Journal of the American Academy of Child & Adolescent Psychiatry. 2009 Nov;48:1094-101.
Genetic overlap between measures of hyperactivity/inattention and mood in children and adolescents.
Cole J, Ball HA, Martin NC, et al.
Objective: Evidence suggests that there is substantial comorbidity between attention-deficit/hyperactivity disorder (ADHD) and major depressive disorder in childhood and adolescence. This study aims to investigate the degree to which etiological factors are shared between the symptoms of these significantly heritable disorders.
Method: A twin study design was used to determine to what extent the covariation between the traits of ADHD and depression is genetically or environmentally mediated, based on parental reports. A general community sample of 645 twin pairs aged 5 to 17 years from the Cardiff Study of All Wales and North England Twins project took part in the study. Parent-rated measures of hyperactivity/inattention (Abbreviated Conners Hyperactivity subscale) and depression (Short Mood and Feelings Questionnaire).
Results: Phenotypes derived from the scales were significantly correlated in both boys and girls. Bivariate structural equation modeling revealed a large overlap in underlying genetic factors (boys, r[sub]A[/sub] = 0.77; girls, r[sub]A[/sub] = 0.67) along with a smaller influence of nonshared environment.
Conclusions: These findings suggest that there are common genes conferring liability to both hyperactive/inattentive and depressive traits in children and adolescents. This has implications for future molecular genetic research into ADHD and major depressive disorder. Additionally, it indicates that the comorbid clinical presentation of these disorders may reflect a common genetic pathway.

Int J Rehabil Res. 2009;32:331-36.
Interactive Metronome training in children with attention deficit and developmental coordination disorders.
Cosper SM, Lee GP, Peters SB, et al.
The objective of this study was to examine the efficacy of Interactive Metronome (Interactive Metronome, Sunrise, Florida, USA) training in a group of children with mixed attentional and motor coordination disorders to further explore which subcomponents of attentional control and motor functioning the training influences. Twelve children who had been diagnosed with attention deficit hyperactivity disorder, in conjunction with either developmental coordination disorder (n=10) or pervasive developmental disorder (n=2), underwent 15 1-h sessions of Interactive Metronome training over a 15-week period. Each child was assessed before and after the treatment using measures of attention, coordination, and motor control to determine the efficacy of training on these cognitive and behavioral realms. As a group, the children made significant improvements in complex visual choice reaction time and visuomotor control after the training. There were, however, no significant changes in sustained attention or inhibitory control over inappropriate motor responses after treatment. These results suggest Interactive Metronome training may address deficits in visuomotor control and speed, but appears to have little effect on sustained attention or motor inhibition.

J Epilepsy Clin Neurophysiol. 2009;15:77-82.
Clinical and neuropsychological evaluation of attention in children and adolescents with epilepsy: A systematic review.
Da Costa CRCM, Maia Filho HDS, Gomes MDM.
Introduction: Psychiatric comorbidities in epilepsy, such as Attention Deficit and Hyperactivity Disorder (ADHD) may compromise one child academic achievement and social functioning, increasing psychic suffering and reducing quality of life, in spite of adequate seizure control.
Objective: To analyze epidemiological and diagnostic aspects of ADHD and attention problems in children and adolescents with epilepsy (literature review).
Methodology: Systematic literature review (MEDLINE and LILACS).

Results: Studies demonstrate the epidemiological relevance of ADHD in the pediatric epilepsy population as it's more prevalent than among normal children and adolescents. Attention problems can occur in spite of an ADHD diagnosis. There is no homogeneity among the studied samples, what turns difficult the evaluation of the real nature of the attention deficits in children with epilepsy, which are multicausal, as its real prevalence.
Conclusions: It's important to pay attention to ADHD diagnosis in children and adolescents with epilepsy.

Journal of Abnormal Child Psychology: An official publication of the International Society for Research in Child and Adolescent Psychopathology. 2009 Oct;37:1007-17.
How distinctive are ADHD and RD? Results of a double dissociation study.
de Jong CGW, Van De Voorde SÃ, Roeyers H, et al.
The nature of the comorbidity between Attention- Deficit/Hyperactivity Disorder (ADHD) and Reading Disability (RD) was examined using a double dissociation design. Children were between 8 and 12 years of age and entered into four groups: ADHD only (n=24), ADHD +RD (n=29), RD only (n=41) and normal controls (n= 26). In total, 120 children participated in the study; 38 girls and 82 boys. Both ADHD and RD were associated with impairments in inhibition and lexical decision, although inhibition and lexical decision were more severely impaired in RD than in ADHD. Visuospatial working memory deficits were specific to children with only ADHD. It is concluded that there was overlap on lexical decision and to a lesser extent on inhibition between ADHD and RD. In ADHD, impairments were dependent on IQ, which suggest that the overlap in lexical decision and inhibition is different in origin for ADHD and RD. The ADHD only group was specifically characterized by deficits in visuospatial working memory. Hence, no double dissociation between ADHD and RD was found on executive functioning and lexical decision.

Journal of Child Psychology and Psychiatry. 2010 Jan;51:23-30.
Oppositional defiant behavior toward adults and oppositional defiant behavior toward other children: Evidence for two separate constructs with mothers' and fathers' ratings of Brazilian children.
de Moura MA, Burns GL.
Background: Confirmatory factor analysis (CFA) was used to determine if oppositional defiant behavior (ODB) toward adults and oppositional defiant behavior toward other children were constructs distinct from each other as well as from attention-deficit hyperactivity disorder hyperactivity impulsivity (ADHD-HI), attention-deficit hyperactivity disorder inattention (ADHD-IN), and academic competence.
Methods: Mothers and fathers rated the occurrence of the DSM-IV oppositional defiant disorder (ODD) symptoms where the target was an adult (e.g., argues with adults) and the ODD symptoms where the target was another child (brothers, sisters, or peers) (e.g., argues with other children) along with ADHD-IN, ADHD-HI, and academic competence in a sample of 894 Brazilian children on the Portuguese version of the Child and Adolescent Disruptive Behavior Inventory (CADBI).
Results: The ODB-Adults and ODB-Children's factors showed invariance (i.e., equality of like item loadings, intercepts, residuals; as well as like factor variances, covariances, and means), convergent validity, and discriminant validity from each other as well as from ADHD-IN, ADHD-HI, and academic competence between mothers and fathers ratings.
Conclusions: With the Portuguese parent version of the CADBI, the evidence indicated that ODB-Adults and ODB-Children represent two constructs rather than one. The distinction between ODB-Adults and ODB-Children allows for a more specific study of the development of ODB in children.

Psychiatry Res. 2009;170:192-98.
ADHD latent class clusters: DSM-IV subtypes and comorbidity.
Elia J, Arcos-Burgos M, Bolton KL, et al.
ADHD (Attention Deficit Hyperactivity Disorder) has a complex, heterogeneous phenotype only partially captured by Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria. In this report, latent class analyses (LCA) are used to identify ADHD phenotypes using K-SADS-IVR (Schedule for Affective Disorders & Schizophrenia for School Age Children-IV-Revised) symptoms and symptom severity data from a clinical sample of 500 ADHD subjects, ages 6-18, participating in an ADHD genetic study. Results show that LCA identified six separate ADHD clusters, some corresponding to specific DSM-IV subtypes while

others included several subtypes. DSM-IV comorbid anxiety and mood disorders were generally similar across all clusters, and subjects without comorbidity did not aggregate within any one cluster. Age and gender composition also varied. These results support findings from population-based LCA studies. The six clusters provide additional homogenous groups that can be used to define ADHD phenotypes in genetic association studies. The limited age ranges aggregating in the different clusters may prove to be a particular advantage in genetic studies where candidate gene expression may vary during developmental phases. DSM-IV comorbid mood and anxiety disorders also do not appear to increase cluster heterogeneity; however, longitudinal studies that cover period of risk are needed to support this finding.

Family Court Review. 2009 Oct;47:650-64.
Attention deficit hyperactivity disorder and the family court.
Eme R.
A major focus of the Youth at Risk Initiative is the provision of appropriate community based mental health services to help prevent unnecessary residential placement of troubled youth and thereby reduce the risk of troubled youth becoming criminal offenders. Yet, inexplicably, one of the major factors contributing to the risk of criminal offending has received scant attention. That factor is Attention Deficit Hyperactivity Disorder (ADHD). This article established the widespread prevalence of ADHD among troubled youth and hence, the critical importance of identifying and treating ADHD as an essential component for any best practices model for the Family Court. It also examined the major mechanisms whereby ADHD increases the risk for criminal offending.

Journal of Abnormal Child Psychology: An official publication of the International Society for Research in Child and Adolescent Psychopathology. 2009 Oct;37:995-1006.
Priming sentence production in adolescents and adults with attention-deficit/hyper-activity disorder.
Engelhardt PE, Ferreira F, Nigg JT.
Theoretical accounts of attention-deficit/hyperactivity disorder (ADHD) posit a prominent role for problems in response inhibition (Nigg 2006). A key avenue for impulsivity in children with ADHD is inappropriate language expression. In this study, we sought to determine whether poor inhibitory control affects language production in adolescents and adults with ADHD. One hundred and ninety-five participants (13â€“35 years old; 65% male) were presented with two pictures and a verb, and their task was to form a sentence. If deficits in response inhibition affect language production, then participants with ADHD should be more likely than non-ADHD controls to begin speaking before having formulated a plan that will allow a grammatical continuation. The results showed that the ADHD-combined subtype, in particular, was more likely to produce an ungrammatical sequence. Effects were not moderated by age or gender. These data suggest that response suppression deficits in ADHD adversely affect the basic processes of sentence formation.

Neuropsychologia. 2010;48:38-42.
Attention and material-specific memory in children with lateralized epilepsy.
Engle JA, Smith ML.
Epilepsy is frequently associated with attention and memory problems. In adults, lateralization of seizure focus impacts the type of memory affected (left-sided lesions primarily impact verbal memory, while right-sided lesions primarily impact visual memory), but the relationship between seizure focus and the nature of the memory impairment is less clear in children. The current study examines the correlation between parent-reported attention problems and material-specific memory (verbal or visual-spatial) in 65 children (ages 6-16) with medically intractable lateralized epilepsy. There were no significant differences in attention and memory between those with left-lateralized epilepsy (n=25) and those with right-lateralized epilepsy (n = 40). However, in the left-lateralized group attention problems were significantly negatively correlated only with delayed visual memory ($r=-.450$, $p < .05$), while the right-lateralized group demonstrated the opposite pattern (attention problems significantly negatively correlated with delayed verbal memory; $r=-.331$, $p < .05$). These findings suggest that lateralization of seizure focus may in fact impact children's memory in a material-specific manner, while problems with attention may impact memory more globally. Therefore, interventions designed to improve attention in children with epilepsy may have utility in improving certain aspects of

memory, but further suggest that in children with lateralized epilepsy, material-specific memory deficits may not resolve with such interventions.

J Am Acad Child Adolesc Psychiatry. 2010;49:24-32.
Effects of Lisdexamfetamine Dimesylate Treatment for ADHD on Growth.
Faraone SV, Spencer TJ, Kollins SH, et al.
Objective: To complete an exploratory uncontrolled study of the effects of lisdexamfetamine dimesylate (LDX) on growth of children treated for attention-deficit/hyperactivity disorder (ADHD).
Method: Height, weight, and body mass index (BMI) from 281 children ages 6 to 13 years from longitudinal assessments up to 15 months were compared to norms from the Centers for Disease Control.
Results: At study entry, children were taller and heavier than average. Growth delays were largest for weight and BMI, and there was a 13 percentile point decrease in height. Children continued to grow in terms of height while treated with LDX; we found no increase in raw weight or BMI during the study period. LDX treatment was significantly associated with diminished gains in height, weight, and BMI compared to levels that would be expected based on age-appropriate standards from the Centers for Disease Control. Growth delays were greatest for the heaviest and tallest children, for those who had not previously received stimulant therapy, and for those with a greater cumulative exposure to LDX. More work is needed to determine effects on ultimate adult height.
Conclusions: Consistent with prior studies of stimulants, treatment with LDX leads to statistically significant reductions in expected height, weight, and BMI. Growth of patients with ADHD treated with LDX should be closely monitored and corrective action taken should growth delays be observed. Clinical trial registry information-Phase 3 Randomized Double-Blind Placebo-Controlled Study of NRP104 in Children Aged 6-12 With ADHD, URL: http://www.clinicaltrials.gov, unique identifier: NCT00556296; NRP104, Adderall XR or Placebo in Children Aged 6-12 Years with ADHD; URL: http://www.clinicaltrials.gov, unique identifier: NCT00557011.

Acta Paediatr Int J Paediatr. 2010;99:5.
Chronic fatigue could be a marker of ADHD in children and adolescents.
Fernell E, Landgren M.

Pediatrics. 2009;124:e1054-e1063.
Association of tobacco and lead exposures with attention-deficit/ hyperactivity disorder.
Froehlich TE, Lanphear BP, Auinger P, et al.
OBJECTIVE: The study objective was to determine the independent and joint associations of prenatal tobacco and childhood lead exposures with attention-deficit/hyperactivity disorder (ADHD), as defined by current diagnostic criteria, in a national sample of US children.
METHODS: Data are from the 2001-2004 National Health and Nutrition Examination Survey, a cross-sectional, nationally representative sample of the US population. Participants were 8 to 15 years of age (N=2588). Prenatal tobacco exposure was measured by report of maternal cigarette use during pregnancy. Lead exposure was assessed by using current blood lead levels. The Diagnostic Interview Schedule for Children was used to ascertain the presence of ADHD in the past year, on the basis of Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, criteria.
RESULTS: A total of 8.7% (95% confidence interval [CI]:7.3%-10.1%) of children met criteria for ADHD. Prenatal tobacco exposure (adjusted odds ratio [aOR]: 2.4 [95% CI:1.5-3.7]) and higher current blood lead concentrations (aOR for third versus first tertile: 2.3 [95% CI: 1.5-3.8]) were independently associated with ADHD. Compared with children with neither exposure, children with both exposures (prenatal tobacco exposure and third-tertile lead levels) had an even greater risk of ADHD (aOR: 8.1 [95% CI:3.5-18.7]) than would be expected if the independent risks were multiplied (tobacco-lead exposure interaction term, P<.001).

CONCLUSIONS: Prenatal tobacco and childhood lead exposures are associated with ADHD in US children, especially among those with both exposures. Reduction of these common toxicant exposures may be an important avenue for ADHD prevention.

Culture, Medicine and Psychiatry. 2009 Dec;33:559-607.

"A massive long way": interconnecting histories, a "special child," ADHD, and everyday family life.

Garro LC, Yarris KE.

Focusing on one family from a study of dual-earner middle-class families carried out in Los Angeles, California, this article draws on interview and video-recorded data of everyday interactions to explore illness and healing as embedded in the microcultural context of the Morris family. For this family, an important aspect of what is at stake for them in their daily lives is best understood by focusing on 9-year-old Mark, who has been diagnosed with attention-deficit/hyperactivity disorder (ADHD). In this article, we grapple with the complexity of conveying some sense of how Mark's condition is experienced and relationally enacted in everyday contexts. Through illuminating connections between lives as lived and lives as told, we explore the narrative structuring of healing in relation to Mark's local moral world with the family at its center. We examine how his parents understand the moral consequences of the child's past for his present and future, and work to encourage others to give due weight to his troubled beginnings before this child joined the Morris family. At the same time, we see how the Morris parents act to structure Mark's moral experience and orient to a desired future in which Mark's "success" includes an appreciation of how he is accountable to others for his actions. Through our analyses, we also seek to contribute to discussions on what is at stake in everyday life contexts for children with ADHD and their families, through illuminating aspects of the cultural, moral and relational terrain that U.S. families navigate in contending with a child's diagnosis of ADHD. Further, given that ADHD is often construed as a "disorder of volition," we seek to advance anthropological theorizing about the will in situations where volitional control over behavior is seen to be disordered.

Iran J Med Sci. 2009;34:259-64.

Disclosure of attention deficit hyperactivity disorder and its effect on rejection of students by teachers.

Ghanizadeh A, Fallahi M, Akhondzadeh S.

Background: The common psychiatric disorder of attention deficit hyperactivity disorder (ADHD) and the knowledge of teachers about it are well discussed in literature. While teachers can play an important role for the management of ADHD, it is not clear whether informing of teachers about children with ADHD affects their behavior and attitude toward the children. In the present study, we studied whether the disclosure of children with ADHD is associated with social rejection and negative attitude of their teachers. In addition, we studied the perception of teachers for treatment and its benefits.

Methods: A total of 558 primary school teachers of students in grade I in Shiraz, south of Iran, participated in this study. They completed the questionnaires after studying one of the randomly selected four vignettes. One of the vignettes with inattentive type and one of the vignettes with hyperactive-impulsive type symptoms were not labeled as ADHD children.

Results: The teachers did not show any difference in their attitude on various types of disclosed and undisclosed ADHD vignettes. The four groups of teachers were not different regarding their belief for treatment and its benefits.

Conclusion: Parents of the children with ADHD could be assured that informing of teachers about the disorder does not cause the social rejection or negative attitude towards the affected children. Lack of difference among the teacher groups for the necessity of the treatment and its benefits shows that their knowledge about ADHD is not enough. Improving the knowledge of teachers about ADHD is a preceding step for disclosing the children's disorder.

Fiziol Cheloveka. 2009 Nov;35:43-48.
[The level of cerebral DC potentials in children with attention deficit-hyperactivity disorder].
Gribanov AV, Pankov MN, Podoplekin AN.

Journal of Child Psychology and Psychiatry. 2010 Jan;51:66-76.
Electrophysiological indices of abnormal error-processing in adolescents with attention deficit hyperactivity disorder (ADHD).
Groom MJ, Cahill JD, Bates AT, et al.
Background: Impaired cognitive control has been frequently observed in children and young people with attention deficit hyperactivity disorder (ADHD) and might underlie the excessive hyperactivity and impulsivity in this population. We investigated behavioural and electrophysiological indices relevant to one domain of cognitive control; namely error processing.
Methods: Adolescents aged 14 to 17 with ADHD (n = 23) and a typically developing control group (HC; n = 19) performed a visual go no-go task. Electro-encephalography (EEG) data were collected simultaneously and response-locked error trials were averaged to derive two event-related potentials, the error-related negativity (ERN) and error positivity (Pe). Evoked theta power and inter-trial phase coherence (ITC) were measured in two time windows ('early' and 'late') equivalent to those used for detection of the ERN and Pe.
Results: Analysis revealed normal ERN amplitude and a statistical trend for smaller Pe amplitude at a fronto-central electrode site in the ADHD group. The group also showed significant reductions in late evoked theta power and early and late theta ITC. Relationships between behavioural measures and ITC were different between groups, particularly for post-error slowing, a measure of strategic response adjustment on trials immediately following an error.
Conclusions: The results reveal abnormalities in behavioural and electrophysiological indices of error processing in adolescents with ADHD and suggest that ITC is more sensitive than traditional ERP measures to error-processing abnormalities.

J Neural Transm. 2009;116:1675-80.
Further evidence for the association between attention deficit/ hyperactivity disorder and the serotonin receptor 1B gene.
Guimaraes AP, Schmitz M, Polanczyk GV, et al.
Several evidences suggested that the serotonin 5-HT1B receptor gene (HRT1B) might be involved in the susceptibility to attention deficit/hyperactivity disorder (ADHD). Prior studies reported excess transmissions of the HRT1B gene 861G allele to affected ADHD children and of a haplotype block containing this variant and two functional promoter SNPs to probands with ADHD-inattentive subtype. However, some investigations did not replicate these findings. Therefore, we tested for biased transmissions of haplotypes derived from the 861G > C, -161A > T, and -261T > G SNPs from parents to 343 families with ADHD children. We also sought to replicate findings from the literature that the association between HTR1B is preferentially with ADHD-Inattentive subtype. Using a transmission disequilibrium test we found evidence for an excess transmission of haplotype. -261G/-161T/861G (P = 0.014) for affected children in the total sample. When the analysis was repeated with 143 families with ADHD-Inattentive subtype no significant associations were observed. Our results provide additional evidence that HRT1B gene may be an important risk factor for the development of ADHD, but this effect seems not to be attributable to inattentive cases. (copyright) 2009 Springer-Verlag.

School Psychology International. 2009 Oct;30:491-506.
Intensity of ADHD symptoms and subjective feelings of competence in school age children.
Hanć Tomasz, Brzezińska Anna Isabela
The aim of this investigation was to assess how different levels of intensity of ADHD symptoms influence the development of the subjective feeling of competence in school age children. The sample was comprised of 62 children age 11 to 13. For the purpose of estimation of the subjective feeling of competence, The Feeling of Competence Questionnaire was created. Level of ADHD symptoms intensity was estimated with the use of The Symptoms of ADHD Questionnaire, created on the basis of diagnostic criteria for ADHD included in

DSMIV and ICD-10. Cluster analysis distinguished two groups of children: a group with a lower level of ADHD symptoms intensity (Group 1) and a group with a higher level of ADHD symptoms intensity (Group 2). Group 2 revealed a significantly lower level of global feelings of competence and lower scores on the subscales: adaptive properties, knowledge and skills, acknowledgement, emotional factor and belief in success. There was no significant difference in the level of the feeling of co-operation skills and social adjustment. The results suggest that children with symptoms of ADHD are likely to have a low level of feelings of competence, which may well be a risk factor leading to later social disorders.

Acta Paediatr Int J Paediatr. 2010;99:112-20.

Routine developmental screening at 5.5 and 7 years of age is not an efficient predictor of attention-deficit/hyperactivity disorder at age 10.

Holmberg K, Sundelin C, Hjern A.

Aim: The aim of this study was to assess the efficiency of developmental screening for deficits in attention, motor control and perception or attention-deficit/hyperactivity disorder (DAMP/ADHD) at 5.5 and 7 years of age for diagnosing ADHD in grade 4.

Method: The study population consisted of 442 children from a cohort study of ADHD in 10-year olds in one municipality in Stockholm County. Sensitivity, specificity and positive predictive value of a developmental screening at 5.5 and at 7 years of age for being diagnosed with ADHD at 10 years of age was calculated.

Results: The sensitivity was 44%, the specificity 85% and the positive predictive value for having a diagnosis of pervasive ADHD in 4th grade was 15%, when at least two deviations in nine items was used as the cut-off point in 5.5-year screening at Child Health Centres (CHCs). With a cut-off score of at least two deviations in four items rated by parents or and teachers in 1st grade, these estimates were 58%, 81% and 15% respectively.

Conclusion: This study demonstrates that developmental screening for DAMP/ADHD at 5.5 and 7 years of age does not identify children who are diagnosed with ADHD in grade 4 with a high degree of selectivity.

Nord J Psychiatry. 2009;63:508-16.

Central stimulants in the treatment of attention-deficit hyperactivity disorder (ADHD) in children and adolescents. A naturalistic study of the prescription in Sweden, 1977-2007.

Janols LO, Liliemark J, Klintberg K, et al.

Background: An increased prescription of central stimulants (CS) for treatment of attention-deficit hyperactivity disorder (ADHD) in children and adolescents has been reported in Sweden.

Aims: To follow-up the treatment with CS as concerns total as well as regional differences in prescription rate. Efficacy and side-effects reported and gender differences in prescription over time also have been summarized.

Methods: Data from the Swedish Medical Products Agency (MPA) of individual licences, annual reports about patients on individual or clinic licences from the MPA and sales statistics from the National Pharmacy (Apoteket AB) have been used.

Results: The number of new licences and prescriptions increased dramatically from 1992 to 2007 and a change of preparations was seen. Great differences (fivefold) between the 21 counties of Sweden were noticed. In the follow-up reports to the MPA, a good/moderate treatment effect was reported in 92% and adverse effects were reported in 4% leading to discontinuation of medication in 46% of them. Abuse/misuse of the preparation was suspected in 0.2% of the reports. A tendency of a reduction of the proportion of boys to girls treated through individual licences has been seen.

Conclusions: The study, although observational, supports good efficacy, limited adverse effects and a low degree of misuse in clinical use of CS for children and adolescents with ADHD.

Am J Psychiatry. 2010 Jan;167:14-16.
The age at onset of attention deficit hyperactivity disorder.
Kieling C, Kieling RR, Rohde LA, et al.

Prog Neuro-Psychopharmacol Biol Psychiatry. 2010;34:219-24.
Effect of (alpha)2A-adrenoceptor C-1291G genotype and maltreatment on hyperactivity and inattention in adolescents.
Kiive E, Kurrikoff T, Maestu J, et al.
The C-1291G polymorphism (rs1800544) in the promoter region of the (alpha)2A-adrenoceptor gene (ADRA2A) has been associated with attention deficit and hyperactivity in clinical samples. We have examined the effect of ADRA2A C-1291G on inattentive, hyperactive and aggressive behaviour in a population representative cohort of healthy schoolchildren, and possible interaction of genotype with family relations. Ratings on aggressiveness, motor restlessness and concentration difficulties were obtained from the class teachers by using the Hyperactivity Scale of af Klinteberg, and the teacher-report version of SNAP-IV. The relations in the family were reported by children. Symptom scores, self-reports and genotype data of 429 15-years old children (196 boys, 233 girls) were available for analysis. There was a significant interaction effect of maltreatment and the ADRA2A genotype on behavioural functioning in 15 years old boys. Boys with CC genotype and higher score of maltreatment demonstrated more overactive behaviour and concentration difficulties than boys with CC genotype and low maltreatment score. They also had more inattentive symptoms measured by SNAP-IV. Among boys with low maltreatment score, subjects with CC genotype demonstrated less overactivity than G allele carriers. In girls, the G allele carriers did not differ from the CC genotype, but in maltreated girls with GG genotype aggression and inattention symptoms were reduced, and the score of aggressive behaviour was also lower compared to maltreated girls with CC genotype. Our data suggest that family environmental factors may act together with the (alpha)2A-adrenoceptor genotype to increase the expression of hyperactive and inattentive symptoms in adolescents.

J Cancer Educ. 2009;24:S692.
The effect of adverse family relations and ADRA2A genotype on attention deficit and level of education in young adults.
Kiive E, Kurrikoff T, Maestu J, et al.
Several studies have implicated noradrenaline in human inattentive behaviour. Previous investigations have demonstrated that the C-1291G polymorphism of the a2A -adrenoceptor gene (ADRA2A) is associated with severity of ADHD inattentive symptoms in clinical samples [1] but the relationship between attention problems and central noradrenergic mechanism in general population is less studied. The purpose of the present study was to examine the effect of the ADRA2A C-1291G polymorphism and emotional/physical maltreatment on attention deficit symptoms in a population-based sample of young adults, and its possible associations with educational achievements. This study is based on both cohorts (original n=1176) of the longitudinal Estonian Children Personality Behaviour and Health Study [2]. Data in analysis were collected during the follow-ups in 2001 and 2008 for the older cohort, at age 18 and 25, respectively, and for the younger cohort in 2004 at age 15. Altogether we could recruit 968 subjects of the original sample, 424 males and 544 females. Ratings on inattention were obtained at age 15 and 18 by using the teacher report version of SNAP-IV, and at age 25 by using WHO Adult ADHD Self-Report Scale (ASRS-v1.1). Maltreatment in the family was reported by child (Tartu Family Relationships Scale) at age 15 and 18 in younger and older cohort, respectively. Data about education were also self-reported at age 25. Genomic DNA was isolated from the whole blood by a salting procedure, and genotyping was conducted as previously described [3]. The C-1291G polymorphism of ADRA2A had no main effect on teacher rated inattention problems in 15 and 18 years old boys and girls. However, there was a significant interaction between maltreatment and ADRA2A genotype on attention deficit in 15 and 18 years old boys: maltreated boys with CC genotype had significantly more inattentive symptoms than G allele carriers with similar Maltreatment score (p= 0.01). In girls, an interaction effect between hostile family environment and ADRA2A genotype was also apparent at age 15, showing that GG girls with low Maltreatment score demonstrated significantly more inattentive behaviour than maltreated girls with the same genotype (p = 0.007). No interaction effect of ADRA2A genotype and adverse family relations at age 18 on self-reported attention deficit problems at age 25 was found. However, there was a significant main effect of C-1291G polymorphism of ADRA2A on self-reported inattention symptoms in 25 years old females (p= 0.05), indicating higher score of Inattention among the

subjects with GG genotype. An association between education levels and ADRA2A genotype was detected: among the GG subjects the number of 25 years old persons studying in the university, but not yet reached the academic degree was significantly higher and the number of persons who had already attained academic degree was significantly smaller compared to respective numbers among the subjects with CC or CG genotypes (p= 0.04). In conclusion, our data suggest that hostile family environment may lead to inattentive behaviour as measured at population level, and this is dependent on ADRA2A genotype. The function of a2A- adrenoceptors thus appears to modulate attention in young adults, and this has an impact on their attainments in education.

Journal of Child Psychology and Psychiatry. 2009 Dec;50:1468-76.
Parent child hostility and child ADHD symptoms: A genetically sensitive and longitudinal analysis.
Lifford KJ, Harold GT, Thapar A.
Background: Families of children with attention-deficit/hyperactivity disorder (ADHD) report higher rates of conflict within the family and more negative parent-child relationships. This study aimed to test whether negative parent-child relationships have a risk effect on ADHD symptoms using two complementary designs.
Method: The first sample included 886 twin pairs, aged 11-17 years, derived from a population-based twin study. The second sample was derived from a longitudinal community study and included 282 parents and their children, aged 11-14 years. Questionnaires were used to assess ADHD symptoms and hostility in the mother-child and father-child relationship. Bivariate genetic analysis was used to test the contribution of genetic and environmental factors to the association between parent-child hostility and ADHD symptoms in the twin sample. Cross-lagged and reciprocal effects models were used to test for a bidirectional relationship between parent-child hostility and ADHD symptoms over time in the longitudinal study.
Results: For boys, both genetic and environmental factors contributed to the link between mother-son hostility and ADHD symptoms, but genetic factors alone explained the association between father-son hostility and ADHD symptoms. For girls, the association between ADHD symptoms and mother-daughter hostility as well as father-child hostility was attributed to genetic factors alone. The longitudinal study provided evidence of boys' ADHD symptoms impacting upon mother-son hostility both within and across time. There were no effects in the opposite direction.
Conclusions: A causal hypothesis of family relations influencing ADHD symptoms was not supported. Boys' ADHD symptoms appear to have an environmentally mediated impact upon mother-son hostility.

Journal of the American Academy of Child & Adolescent Psychiatry. 2009 Nov;48:1085-93.
Maternal ratings of attention problems in ADHD: Evidence for the existence of a continuum.
Lubke GH, Hudziak JJ, Derks EM, et al.
Objective: To investigate whether items assessing attention problems provide evidence of quantitative differences or categorically distinct subtypes of attention problems (APs) and to investigate the relation of empirically derived latent classes to DSM-IV diagnoses of subtypes of attention-deficit/hyperactivity disorder (ADHD), for example, combined subtype, predominantly inattentive type, and predominantly hyperactive/impulsive type.
Method: Data on attention problems were obtained from maternal ratings on the Child Behavior Check List (CBCL). Latent class models, which assume categorically different subtypes, and factor mixture models, which permit severity differences, are fitted to data obtained from Dutch boys at age 7 (N= 8,079), 10 (N = 5,278), and 12 years (N= 3,139). The fit of the different models to the data is compared to decide which model, and hence, which corresponding interpretation of AP, is most appropriate. Next, ADHD diagnoses are regressed on latent class membership in a subsample of children.
Results: At all the three ages, models that distinguish between three mainly quantitatively different classes (e.g., mild, moderate, and severe attention problems) provide the best fit to the data. Within each class, the CBCL items measure three correlated continuous factors that can be interpreted in terms of hyperactivity/impulsivity, inattentiveness/dreaminess, and nervous behavior. The AP severe class contains all of the subjects diagnosed with ADHD-combined subtype. Some subjects diagnosed with ADHD-predominantly inattentive type are in the moderate AP class.
Conclusions: Factor mixture analyses provide evidence that the CBCL AP syndrome varies along a severity continuum of mild to moderate to severe attention problems. Children affected with ADHD are at the extreme

of the continuum. These data are important for clinicians, research scholars, and the framers of the DSM-V as they provide evidence that ADHD diagnoses exist on a continuum rather than as discrete categories.

Am J Cardiol. 2009;104:1296-99.

Electrocardiographic Screening in Children With Attention-Deficit Hyperactivity Disorder.

Mahle WT, Hebson C, Strieper MJ.

Some investigators have suggested that children receiving stimulant medications to manage attention-deficit hyperactivity disorder should undergo screening electrocardiography to identify asymptomatic cardiac disease. However, no study to date has examined the efficacy and costs of this strategy. In the present study we sought to determine the utility of electrocardiographic screening in children with attention-deficit hyperactivity disorder. We reviewed the clinical experience of electrocardiographic screening of subjects with attention-deficit hyperactivity disorder <21 years of age from April to September 2008. Additional cardiac care and testing that resulted from an abnormal initial electrocardiogram were recorded. Screening electrocardiograms were obtained in 1,470 children with attention-deficit hyperactivity disorder and were interpreted as abnormal in 119 subjects (8.1%). Further evaluation of these 119 subjects included 63 transthoracic echocardiograms, 5 stress tests, and 9 Holter monitor studies. Cardiac disease was identified in 5 subjects (0.3% of entire cohort), yielding a positive predictive value of 4.2%. Cardiac diagnoses included ventricular pre-excitation syndrome (n = 2), bicuspid aortic valve (n = 2), and moderate secundum atrial septal defect (n = 1). The mean cost of electrocardiographic screening including further testing for subjects with abnormal initial screen results was $58 per child. The mean cost to identify a true-positive result was $17,162. In conclusion, electrocardiographic screening for children with attention-deficit hyperactivity disorder can successfully identify cardiac disease in otherwise asymptomatic subjects, although the positive predictive value is low. Ongoing studies are needed to know what role electrocardiographic screening should play in the management of children with attention-deficit hyperactivity disorder.

Curr Med Res Opin. 2009;25:3001-10.

HRQL and medication satisfaction in children with ADHD treated with the methylphenidate transdermal system.

Manos M, Frazier TW, Landgraf JM, et al.

Objective: To evaluate the impact of methylphenidate transdermal system (MTS) on health-related quality of life (HRQL) and medication satisfaction in children with attention-deficit/hyperactivity disorder (ADHD) as well as to identify potential moderators of HRQL and medication satisfaction.

Research design and methods: Children aged 6-12 years diagnosed with ADHD were enrolled (N = 128) and 115 children completed the study. MTS dose was optimized over 5 weeks using 10-, 15-, 20-, or 30-mg patches worn for 9 hours. The efficacy of 4- and 6-hour wear times was then assessed in an analog classroom setting in a randomized, placebo-controlled, double-blind, three-way crossover design study.

Main outcome measures: The ADHD Impact Module-Children (AIM-C), a validated HRQL instrument, was used to assess the impact of ADHD symptoms on children and their families. Satisfaction with MTS use was assessed via a Medication Satisfaction Survey (MSS). A parent or legally appointed representative (LAR) completed the measures. Tolerability was monitored by spontaneous adverse event reporting.

Results: Mean scores on AIM-C child and family HRQL scales improved from baseline to endpoint across all MTS doses and the magnitude of improvement increased with time from baseline. Improvement was noted for behavior, missed doses, worry, and economic impact AIM-C scores. Overall, parents/LARs indicated a high level of satisfaction with their child's use of MTS (Visit 7 [92.1%]; Visit 10 [89.1%]). Most treatment-emergent adverse events (TEAEs) were mild to moderate. The most frequent TEAEs included decreased appetite (28%), headache (21%), insomnia (20%), and abdominal pain (12%).

Conclusions: At study endpoint, MTS treatment of ADHD was associated with robust improvement in child and family HRQL, key economic impact items, and overall medication satisfaction with the effectiveness and ease of use of MTS as an ADHD treatment. Also, the majority of MTS TEAEs were mild to moderate in severity. Limitations of this study included the potential for a significant halo effect when measuring HRQL and medication satisfaction as well as the uncertainty regarding whether the improvements seen over this relatively short study duration would be sustainable long term. Clinical trial registration: #NCT00151970.

Curr Med Res Opin. 2009;25:2745-54.
Evaluation of atomoxetine for first-line treatment of newly diagnosed, treatment-naive children and adolescents with attention deficit/hyperactivity disorder.
Montoya A, Hervas A, Cardo E, et al.
Objective: To test the hypothesis that first-line treatment with atomoxetine provides superior efficacy than placebo for up to 12 weeks in improving the symptoms of Attention Deficit/Hyperactivity Disorder (ADHD).
Research design and methods: This double-blind, randomized, placebo-controlled, parallel clinical trial included 151 treatment-naive children (n=113) and adolescents (n=38) with newly diagnosed ((less-than or equal to)3 months) ADHD. Atomoxetine dose was uptitrated from 0.5 to 1.2 mg/kg/day after two weeks. Outcome assessments included the ADHD Rating Scale-IV-Parent-reported Investigator-rated (ADHDRS-IV-Parent:Inv), the Clinical Global Impression of Severity of ADHD (CGI-ADHD-S), and the incidence of adverse events. Mixed-model repeated measures analysis was used to compare scale score changes between groups.
Clinical trial registration: Trial registered at www.clinicaltrials.gov (study internal code: B4Z-XM-LYDM, identifier: NCT00191945).
Results: Most patients were male (79.2%), of caucasian origin (96.0%) and severely ill (72.5%). Their mean age was 10.3 years. Atomoxetine-treated patients showed greater reductions from baseline to week 12 of total ADHDRS-IV-Parent:Inv score than placebo-treated patients (least square mean difference: -7.9 [95% CI: -11.0 to -4.8], corresponding to a large effect size of 0.8). Between-group mean differences increased progressively with treatment exposure from week 6 to 12 (-2.7 [-4.9 to -0.6] for total and -1.6 [-2.9 to -0.3] for inattention scores). At the end of the study, 50% of atomoxetine-treated patients (14% with placebo) showed a reduction (greater-than or equal to)40% in total ADHDRS-IV-Parent:Inv score, and only 29% (46% with placebo) were severely ill (by CGI-ADHD-S). Treatment-related adverse events were significantly more frequent with atomoxetine (65.0%) than with placebo (37.3%), the most frequent being decreased appetite and somnolence. Only one case of decreased appetite was rated as severe. No patient discontinued treatment because of adverse events.
Conclusions: A continued improvement of symptoms is expectable until 12 weeks in treatment-naive ADHD patients treated with atomoxetine as first-line medication. Chief limitations are the small, national sample size and the absence of data beyond the 12-week time-point.

Neuropsychologia. 2010;48:51-59.
The scope of social attention deficits in autism: Prioritized orienting to people and animals in static natural scenes.
New JJ, Schultz RT, Wolf J, et al.
A central feature of autism spectrum disorder (ASD) is an impairment in 'social attention'-the prioritized processing of socially relevant information, e.g. the eyes and face. Socially relevant stimuli are also preferentially attended in a broader categorical sense, however: observers orient preferentially to people and animals (compared to inanimate objects) in complex natural scenes. To measure the scope of social attention deficits in autism, observers viewed alternating versions of a natural scene on each trial, and had to 'spot the difference' between them-where the difference involved either an animate or inanimate object. Change detection performance was measured as an index of attentional prioritization. Individuals with ASD showed the same prioritized social attention for animate categories as did control participants. This could not be explained by lower level visual factors, since the effects disappeared when using blurred or inverted images. These results suggest that social attention - and its impairment in autism - may not be a unitary phenomenon: impairments in visual processing of specific social cues may occur despite intact categorical prioritization of social agents.

Z Phytother. 2009;30:176-77.
Hop's (Humulus lupulus) apparent improvement of symptoms of attention-deficit hyperactivity disorder (ADHD).
Niederhofer H.
Background: Psychostimulants and clonidine as well as nordrenaline reuptake inhibitors (second-line treatment) and selective serotonin reuptake inhibitors (SSRI) are effective in the treatment of ADHD.

Nonetheless, herbal drugs such as camomile, hops and valerian or even ginkgo appear to be effective in the treatment of these disorders. Therefore this study examines the effect of hop on improvement of ADHD.
Method: A 14 year male ADHD patient diagnosed according to the ICD-10 criteria was evaluated 4 weeks after administering hops based on Conners' Rating Scale.
Results: The mean score improved significantly as well as the factors overactivity, lack of attention and impulsivity.
Conclusion: Although generalisations based on one single case observation are not possible, our results reveal at least the supportive effect of hops in treating ADHD.

Brain Dev. 2010;32:10-16.
Attention deficit hyperactivity disorder in children with epilepsy.
Parisi P, Moavero R, Verrotti A, et al.
Attention deficit hyperactivity disorder (ADHD) is more frequent in children with epilepsy than in general pediatric population. Several factors may contribute to this comorbidity, including the underlying brain pathology, the chronic effects of seizures and of the epileptiform EEG discharges, and the effects of antiepileptic drugs. Symptoms of ADHD are more common in some specific types of epilepsies, such as frontal lobe epilepsy, childhood absence epilepsy and Rolandic epilepsy, and may antedate seizure onset in a significant proportion of cases. In epileptic children with symptoms of ADHD, treatment might become a challenge for child neurologists, who are forced to prescribe drugs combinations, to improve the long-term cognitive and behavioral prognosis. Treatment with psychotropic drugs can be initiated safely in most children with epilepsy and ADHD symptoms.

J Dev Behav Pediatr. 2009 Oct;30:413-19.
Tourette syndrome associated psychopathology: Roles of comorbid attention-deficit hyperactivity disorder and obsessive-compulsive disorder.
Pollak Y, Benarroch F, Kanengisser L, et al.
Objective: Individuals with Tourette syndrome (TS) often display comorbid symptoms of attention-deficit hyperactivity disorder (ADHD) and obsessive-compulsive disorder (OCD), as well as externalizing and internalizing behaviors. This study was aimed to examine the impacts of tic severity, ADHD symptoms, and OCD on internalizing (e.g., anxiety) and externalizing (e.g., aggression) psychopathology.
Methods: Using linear regressions, we examined how tics, ADHD, and OCD symptoms predicted the externalization and internalization behaviors measured by the Child Behavior Checklist in a clinical sample of children and adolescents with TS. In addition, Child Behavior Checklist scales were compared among children with TS without ADHD, TS and ADHD, ADHD without TS, and unaffected control group.
Results: In the TS group, externalizing behaviors were predicted by tic severity, inattention, and hyperactivity/impulsivity but not by OCD symptoms, whereas internalizing behaviors were predicted by inattention and OCD symptoms but not by tic severity or hyperactivity/impulsivity. Comparison among different clinical groups revealed main effects of TS and ADHD on both externalizing and internalizing behaviors.
Conclusion: These findings suggest that tics, ADHD, and OCD symptoms differentially explain the variance in externalizing and internalizing behavioral problems in individuals with TS. In addition, the data support the notion that TS is itself a risk factor for behavioral problems, mandating that children with TS even without ADHD and OCD still need to be assessed and treated for psychopathology.

Health Serv Res. 2009;44:2060-78.
Impact of family structure on stimulant use among children with attention-deficithyperactivity disorder.
Rabbani A, Alexander GC.
Objective. To examine the impact of family structure on pharmacologic stimulant use among children with attention-deficithyperactivity disorder (ADHD).

Data Source. Nationally representative, population-based sample of the National Health Interview Survey from 1997 to 2003 linked with drug event files from the Medical Expenditure Panel Survey from 1998 to 2005.
Study Design. Stepwise multivariate logistic regression was used to examine the likelihood of stimulant use for each individual during 2 years of observation after adjustment for sociodemographic, health, and family characteristics. Stratified analyses were also conducted to examine whether family characteristics had different impacts within single-mother and dual-parent households.
Principal Findings. Stimulant use varied based on children's sociodemographic and health characteristics. In multivariate analyses, associations between children's household structure, parental education, and stimulant use appeared to be mediated by children's access to care and health status. However, in full multivariate models, there remained a robust positive association between family size and stimulant use.
Conclusions. These findings highlight the influence that nonclinical factors such as family size may have in mediating the use of pharmacologic therapies for children.

Z Kinder- Jugendpsychiatr Psychother. 2009;37:541-50.
Early prevention program for delinquent children - Home-based interventions for children with ADHD and CD and their families.
Ristow G, Hermens A, Schmidt MH, et al.
Objective: This pilot study carried out in cooperation with the Mannheim police department investigates the effectiveness of a home-based prevention program for first-time delinquent children with ADHD and CD and their families.
Methods: 24 children aged 8-13 years and their parents participated over a four-month period in the prevention program, which included 18 sessions of home treatment based on a cognitive behavioural concept. Core symptoms of ADHD and CD were assessed by means of the DISYPS-KJ scales before and after treatment.
Results: The training program significantly reduced both hyperactive and aggressive-dissocial behaviour on the parent rating scales. 88% of the parents reported an improvement of primary problems of their children.
Conclusions: This first evaluation suggests that the described home-based family prevention program is well effective in reducing problem behaviour in children with ADHD and CD.

Methods Enzymol. 2009;467:357-80.
Bayesian Probability Approach to ADHD Appraisal.
Robeva R, Penberthy JK.
Accurate diagnosis of attentional disorders such as attention-deficit hyperactivity disorder (ADHD) is imperative because there are multiple negative psychosocial sequelae related to undiagnosed and untreated ADHD. Early and accurate detection can lead to effective intervention and prevention of negative sequelae. Unfortunately, diagnosing ADHD presents a challenge to traditional assessment paradigms because there is no single test that definitively establishes its presence. Even though ADHD is a physiologically based disorder with a multifactorial etiology, the diagnosis has been traditionally based on a subjective history of symptoms. In this chapter we outline a stochastic method that utilizes a Bayesian interface for quantifying and assessing ADHD. It can be used to combine of a variety of psychometric tests and physiological markers into a single standardized instrument that, on each step, refines a probability for ADHD for each individual based on information provided by the individual assessments. The method is illustrated with data from a small study of six college female students with ADHD and six matched controls in which the method achieves correct classification for all participants, where none of the individual assessments was capable of achieving perfect classification. Further, we provide a framework for applying this Bayesian method for performing meta-analysis of data obtained from disparate studies and using disparate tests for ADHD based on calibration of the data into a unified probability scale. We use this method to combine data from five studies that examine the diagnostic abilities of different behavioral rating scales and EEG assessments of ADHD, enrolling a total of 56 ADHD and 55 control subjects of different age groups and gender.

J Pediatr. 2009;155:721-27.

An 8-Year Follow-up Study of Profiles and Predictors of Methylphenidate Use in a Nationwide Sample of Boys.

Romano E, Thornhill S, Lacourse E.

Objectives: To identify methylphenidate profiles over several years in a national sample of boys and examine behavioral and sociodemographic predictors of use.

Study design: Five cycles of a Canadian survey were used, resulting in 1447 boys followed from 2 to 3 years to 10 to 11 years. Mother reports of boys' methylphenidate use from 4 to 5 years to 10 to 11 years were used to identify profiles over time. Mother-reported sociodemographic and child behavior data at 2 to 3 years were then used to predict methylphenidate profiles.

Results: Three methylphenidate profiles were identified: no use (87.2%); slow-rising, intermittent (11.2%); and fast-rising, stable (1.6%). Sociodemographic variables were not significant predictors. Boys with greater hyperactivity-impulsivity, greater inattention, and less disruptive behavior were more likely to belong to the fast-rising, stable methylphenidate profile. Although 13% of boys were using methylphenidate over time, there were 2 heterogeneous profiles. In the first profile, there were very few initial users followed by a steady increase in the number of boys using methylphenidate over time. Among these boys, however, use was inconsistent over time. In the second profile, there was a sharp onset of methylphenidate use on school entry, followed by consistent use thereafter.

Conclusions: These findings have implications for the treatment effectiveness of attention deficit-hyperactivity disorder symptoms. It is important to continue examining the role of disruptive behavior because its co-occurrence with attention deficit-hyperactivity disorder symptoms and methylphenidate use is complex.

Int J Rehabil Res. 2009;32:356-59.

Perceptions of middle-class mothers of their children with special needs participating in motor and sport programs.

Roth D, Rimmerman A.

This exploratory research studied middle-class mother's primary reason for registering their young children, mean age 6.9 years, in adapted motor and sports programs and their perceptions of their children upon entering the program and upon completion. Analyses also examined the possible relationship between mothers' age, education or children's age with their perceived favorable changes in the children's development. Fifty-one mothers participated in the study. The mothers completed a survey examining their perceptions of their children's developmental function along seven domains: understanding direction, communication,general physical functioning, fine motor skills, activities of daily living, vigilance and attention, and social behavior. The children were categorized by primary reason of referral to three categories: attention deficit hyperactivity disorder, motor difficulties, and social/behavioral difficulties. Findings suggest that middle-class mothers showed awareness and understanding of their children's needs by identifying the general physical function as the desirable domain to be addressed by the motor group, vigilance and attention as associated with attention deficit hyperactivity disorder, and understanding directions and communication as the desirable domain by the social/behavioral group. The findings are discussed in terms of the complexity of mother's perception of their children participating in sports and motor programs as relating to the different domains as well as to their perceived needs of their children.

Psychiatry Res. 2009;170:183-91.

Cognitive and electroencephalographic disturbances in children with attention-deficit/hyperactivity disorder and sleep problems: New insights.

Sawyer ACP, Clark CR, Keage HAD, et al.

There is overlap between the behavioural symptoms and disturbances associated with Attention-Deficit/Hyperactivity Disorder (AD/HD) and sleep problems. The aim of this study was to examine the extent of overlap in cognitive and electrophysiological disturbances identified in children experiencing sleep problems and children with AD/HD or both. Four groups (aged 7-18) were compared: children with combined AD/HD and sleep problems (n = 32), children with AD/HD (n = 52) or sleep problems (n = 36) only, and children with neither disorder (n = 119). Electrophysiological and cognitive function measures included: absolute EEG power during eyes open and eyes closed, event-related potential (ERP) components indexing attention and working memory processes (P3), and a number of standard neuropsychological tests. Children

with symptoms of both AD/HD and sleep problems had a different profile from those of children with either AD/HD or sleep problems only. These findings suggest it is unlikely that disturbances in brain and cognitive functioning associated with sleep problems also give rise to AD/HD symptomatology and consequent diagnosis. Furthermore, findings suggest that children with symptoms of both AD/HD and sleep problems may have a different underlying aetiology than children with AD/HD-only or sleep problems-only, perhaps requiring unique treatment interventions.

Exp Clin Psychopharmacol. 2009 Oct;17:291-301.

Effects of methylphenidate on discounting of delayed rewards in attention deficit/hyperactivity disorder.

Shiels K, Hawk LWJ, Reynolds B, et al.

Impulsivity is a central component of attention deficit/hyperactivity disorder (ADHD). Delay discounting, or a preference for smaller, immediate rewards over larger, delayed rewards, is considered an important aspect of impulsivity, and delay-related impulsivity has been emphasized in etiological models of ADHD. In this study, we examined whether stimulant medication, an effective treatment for ADHD, reduced discounting of delayed experiential and hypothetical rewards among 49 children (ages 9â€“12 years) with ADHD. After a practice day, participants completed a 3-day double-blind placebo-controlled acute medication assessment. Active doses were long-acting methylphenidate (Concerta), with the nearest equivalents of 0.3 and 0.6 mg/kg TID immediate-release methylphenidate. On each testing day, participants completed experiential (real-world money in real time) and hypothetical discounting tasks. Relative to placebo, methylphenidate reduced discounting of delayed experiential rewards but not hypothetical rewards. Broadly consistent with etiological models that emphasize delay-related impulsivity among children with ADHD, these findings provide initial evidence that stimulant medication reduces delay discounting among those with the disorder. The results also draw attention to task parameters that may influence the sensitivity of various delay discounting measures to medication effects.

J Dev Behav Pediatr. 2009 Oct;30:403-12.

Impact of medications prescribed for treatment of attention-deficit hyperactivity disorder on physical growth in children and adolescents with HIV.

Sirois PA, Montepiedra G, Kapetanovic S, et al.

Objective: To examine the relationships between physical growth and medications prescribed for symptoms of attention-deficit hyperactivity disorder in children with HIV.

Methods: Analysis of data from children with perinatally acquired HIV (N = 2251; age 3-19 years), with and without prescriptions for stimulant and nonstimulant medications used to treat attention-deficit hyperactivity disorder, in a long-term observational study. Height and weight measurements were transformed to z scores and compared across medication groups. Changes in z scores during a 2-year interval were compared using multiple linear regression models adjusting for selected covariates.

Results: Participants with (n = 215) and without (n = 2036) prescriptions were shorter than expected based on US age and gender norms ($p < .001$). Children without prescriptions weighed less at baseline than children in the general population ($p < .001$) but gained height and weight at a faster rate ($p < .001$). Children prescribed stimulants were similar to population norms in baseline weight; their height and weight growth velocities were comparable with the general population and children without prescriptions (for weight, $p = .511$ and .100, respectively). Children prescribed nonstimulants had the lowest baseline height but were similar to population norms in baseline weight. Their height and weight growth velocities were comparable with the general population but significantly slower than children without prescriptions ($p = .01$ and .02, respectively).

Conclusion: The use of stimulants to treat symptoms of attention-deficit hyperactivity disorder does not significantly exacerbate the potential for growth delay in children with HIV and may afford opportunities for interventions that promote physical growth. Prospective studies are needed to confirm these findings.

Biol Psychiatry. 2009 Oct;66:722-27.

Prenatal smoking might not cause attention-deficit/hyperactivity disorder: Evidence from a novel design.

Thapar A, Rice F, Hay D, et al.

Background: It is widely considered that exposure to maternal cigarette smoking in pregnancy has risk effects on offspring attention-deficit/hyperactivity disorder (ADHD). This view is supported by consistent observations of association. It is, however, impossible to be certain of adequate control for confounding factors with observational designs. We use a novel natural experiment design that separates prenatal environmental from alternative inherited effects.

Methods: The design is based on offspring conceived with Assisted Reproductive Technologies recruited from 20 fertility clinics in the United Kingdom and United States who were: 1) genetically unrelated, and 2) related to the woman who underwent the pregnancy. If maternal smoking in pregnancy has true risk effects, association will be observed with ADHD regardless of whether mother and offspring are related or unrelated. Data were obtained from 815 families of children ages 4 years' 11 years with parent questionnaires and antenatal records. Birth weight was used as a comparison outcome. The key outcome considered was child ADHD symptoms.

Results: Association between smoking in pregnancy and lower birth weight was found in unrelated and related mother-offspring pairs, consistent with a true risk effect. However, for ADHD symptoms, the magnitude of association was significantly higher in the related pairs (Î² = .102, p < .02) than in the unrelated pairs (Î²= â^'.052, p > .10), suggesting inherited effects.

Conclusions: Our findings highlight the need to test causal hypotheses with genetically sensitive designs. Inherited confounds are not necessarily removed by statistical controls. The previously observed association between maternal smoking in pregnancy and ADHD might represent an inherited effect.

European Child & Adolescent Psychiatry. 2009 Oct;18:605-16.

A small-scale randomized controlled trial of the revised new forest parenting programme for preschoolers with attention deficit hyperactivity disorder.

Thompson MJJ, Laver-Bradbury C, Ayres M, et al.

The revised new forest parenting programme (NFPP) is an 8-week psychological intervention designed to treat ADHD in preschool children by targeting, amongst other things, both underlying impairments in self-regulation and the quality of motherâ€"child interactions. Forty-one children were randomized to either the revised NFPP or treatment as usual conditions. Outcomes were ADHD and ODD symptoms measured using questionnaires and direct observation, mothersâ€™ mental health and the quality of motherâ€"child interactions. Effects of the revised NFPP on ADHD symptoms were large (effect size >1) and significant and effects persisted for 9 weeks post-intervention. Effects on ODD symptoms were less marked. There were no improvements in maternal mental health or parenting behavior during motherâ€"child interaction although there was a drop in mothersâ€™ negative and an increase in their positive comments during a 5-min speech sample. The small-scale trial, although limited in power and generalizability, provides support for the efficacy of the revised NFPP. The findings need to be replicated in a larger more diverse sample.

Arch Clin Neuropsychol. 2009;24:769-82.

Intellectual deficits in children with ADHD beyond central executive and non-executive functions.

Tillman CM, Bohlin G, Sorensen L, et al.

This study aimed to specify the deficit in intellectual ability in children with attention deficit hyperactivity disorder (ADHD), by studying the mediating role of impairments in central executive function (EF)-related components (working memory, inhibition, sustained attention) and non-EFs (short-term memory and processing speed). Two hundred and thirty children aged 8-11 years from a population-based sample were assigned to either the ADHD group, the clinical comparison group, or the normal comparison group. The results showed that children with ADHD had poorer fluid and crystallized intelligence, relative to both comparison groups. Further, regarding fluid intelligence, these deficits were not fully mediated by, but rather went beyond, poorer functioning on the studied EF-related components and non-EFs. We tentatively interpret these fluid deficits in children with ADHD as representing deficiencies in a general intellectual

resource reflecting executive attentional processes. Concerning crystallized ability, in contrast, the deficit signified impairment in the studied cognitive functions, as indicated by the significant full mediation effect.

Neuropsychologia. 2009 Oct;47:2389-96.

Increased intra-individual reaction time variability in attention-deficit/hyperactivity disorder across response inhibition tasks with different cognitive demands.

Vaurio RG, Simmonds DJ, Mostofsky SH.

One of the most consistent findings in children with ADHD is increased moment-to-moment variability in reaction time (RT). The source of increased RT variability can be examined using ex-Gaussian analyses that divide variability into normal and exponential components and Fast Fourier transform (FFT) that allow for detailed examination of the frequency of responses in the exponential distribution. Prior studies of ADHD using these methods have produced variable results, potentially related to differences in task demand. The present study sought to examine the profile of RT variability in ADHD using two Go/No-go tasks with differing levels of cognitive demand. A total of 140 children (57 with ADHD and 83 typically developing controls), ages 8-13 years, completed both a simple Go/No-go task and a more complex Go/No-go task with increased working memory load. Repeated measures ANOVA of ex-Gaussian functions revealed for both tasks children with ADHD demonstrated increased variability in both the normal/Gaussian (significantly elevated sigma) and the exponential (significantly elevated tau) components. In contrast, FFT analysis of the exponential component revealed a significant task diagnosis interaction, such that infrequent slow responses in ADHD differed depending on task demand (i.e., for the simple task, increased power in the 0.027 0.074 Hz frequency band; for the complex task, decreased power in the 0.074 0.202 Hz band). The ex-Gaussian findings revealing increased variability in both the normal (sigma) and exponential (tau) components for the ADHD group, suggest that both impaired response preparation and infrequent lapses in attention contribute to increased variability in ADHD. FFT analyses reveal that the periodicity of intermittent lapses of attention in ADHD varies with task demand. The findings provide further support for intra-individual variability as a candidate intermediate endophenotype of ADHD.

Child Neuropsychol. 2009;15:262-79.

Neuropsychological deficits in relation to symptoms of adhd: Independent contributions and interactions.

Wahlstedt C.

The aim of the present study was to investigate possible independent and combined effects of inhibitory control, delay aversion, and RT variability in relation to symptoms of hyperactivity/impulsivity and inattention. A community-based sample of school children (N = 111) completed neuropsychological tasks designed to measure inhibitory control, delay aversion, and RT variability. Behavioral symptoms were measured through parental and teacher ratings of the DSM-IV criteria for ADHD and ODD. The results showed that inhibitory control and RT variability were primarily related to symptoms of inattention rather than hyperactivity/impulsivity. Further, out of the three neuropsychological factors studied, only inhibitory control contributed uniquely to the variance of ADHD symptoms. However, significant interaction effects of delay aversion and RT variability on symptoms of both hyperactivity/impulsivity and inattention were found. This study shows the importance of searching for possible combined effects of neuropsychological factors to learn more about the different pathways that lead to ADHD symptoms in children.

J Pediatr Psychol. 2009 Oct;34:940-53.

ADHD and anger contexts: Electronic diary mood reports from mothers and children.

Whalen CK, Henker B, Ishikawa SS, et al.

Objective: Using electronic diaries (eDiaries), this study examined temporal links between child and maternal anger, as well as positive mood and perceived stress, in children with attention deficit/hyperactivity disorder (ADHD) versus comparison peers.

Methods: Across 7 days, half-hourly eDiaries were completed independently by mothers and their 8-12-year-old children (51 receiving medication for ADHD and 58 comparison peers).

Results: Cross-informant analyses revealed systematic patterns of negative maternal moods in relation to child anger in both groups along with evidence of slower recovery in the ADHD group. Analogously, for both groups, children's anger reports increased and good-mood reports decreased in relation to maternal anger, whereas elevated stress in relation to maternal anger was restricted to children with ADHD.
Conclusions: The findings indicate that a negative affective climate is more likely to persist in ADHD than in comparison families. They also affirm the utility of child as well as parent eDiary reports and suggest that children may be willing to report low positive mood when reluctant to report negative mood. The promise of incorporating real-time data on mood patterning into tailored treatments for children with ADHD and their families is discussed.

Child Psychiatry Hum Dev. 2009 Dec;40:543-59.
Attention deficit hyperactivity disorder: A rasch analysis of the SWAN rating scale.
Young DJ, Levy F, Martin NC, et al.
The prevalence of attention-deficit/hyperactivity disorder (ADHD) has been estimated at 3-7% in the population. Children with this disorder are often characterized by symptoms of inattention and/or impulsivity and hyperactivity, which can significantly impact on many aspects of their behaviour and performance. This study investigated the characteristics of the SWANRatingScale and its discrimination of ADHD subtypes. This instrument was developed by Swanson and his colleagues and measures attentiveness and hyperactivity on a continuum, from attention problems to positive attention skills, using a seven-point scale of behaviour: far below average to far above average. The Australian Twin Attention-Deficit/Hyperactivity Disorder Study consists of questionnaire data collected from families in 1990/2007. The Rasch model was used to measure the characteristics of items from the SWANRatingScale; how well these items discriminated between those with and without ADHD. The prevalence of each subtype was found to be 5.3% for inattentive ADHD, 4.3% for hyperactive ADHD and 4.6% for combined ADHD. A total of 14.2% of the cohort appeared to have ADHD. While the inattentive items appeared to be consistent with each other in their measurement behaviour and response patterns, the hyperactive items were less consistent. Further, the combined subtype appeared to be an entirely different type, with unique features unlike the other two subtypes. Further work is needed to distinguish the diagnostic features of each subtype of ADHD.

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