



*Meta-analysis of fMRI studies identified brain systems affected by ADHD (Cortese et al., p. 1038)*

## Systems Neuroscience of ADHD

Abnormalities in brain systems, as well as specific regions, are verified by a meta-analysis of functional magnetic resonance imaging (fMRI) studies of children and adults with attention deficit hyperactivity disorder (ADHD). The 55 studies identified by Cortese et al. (CME, p. 1038) indicate that both children and adults with ADHD have an underresponsive frontoparietal network (figure), which is involved in goal-directed executive functions. Both groups also display hyperactivation of the network underlying self-referential, or default, cognitive processes. Children in addition have abnormalities in attention-related networks, and their hyperactive somatomotor and visual systems suggest compensation for dysfunction in executive processes and in integration of external information. These compensatory systems may be an appropriate focus for therapeutic remediation efforts.

## Clinical Guidance: Upward Weight Trend in Bulimia Nervosa

Standard treatments for bulimia nervosa are for patients with normal weight, but Bulik et al. (CME, p. 1031) report that a growing proportion of patients are substantially overweight or obese. Weight-related medical problems require coordination with primary care and expanded treatment goals. Cognitive-behavioral therapy (CBT), the gold standard for bulimia nervosa, is fairly ineffective in reducing weight. Compatible strategies tested for binge-eating disorder include appetite awareness training, behavioral weight loss, and appetite-focused CBT. A combined approach may be essential to treatment adherence, as patients are seeking weight loss. Nonetheless, goals of therapy include setting realistic expectations and shifting the focus from weight to health. Therapy groups specifically for overweight bulimia nervosa patients help avoid negative body comparisons.

## Clinical Guidance: NSAIDs, Illness, and Antidepressant Resistance

Coexisting general medical illness accounts for much of the previously reported association between use of nonsteroidal anti-inflammatory drugs (NSAIDs) and nonremission of treated depression. Gallagher et al. (CME, p. 1065) found that a modest but smaller relationship for NSAIDs remained when analyses included the comorbidity of patients in a large health care system and in the STAR\*D study of antidepressant effectiveness. Resistance to antidepressant treatment is related to long-term NSAID use but not to intermittent use or to use of cyclo-oxygenase-2 (COX-2) inhibitors and salicylates. Shelton in an editorial (p. 1012) suggests that the remaining association between NSAIDs and antidepressant nonresponse is likely due to residual confounding from imperfect measurement of medical conditions or incomplete adjustment for them in analyses.

## DSM-5 Autism Spectrum Disorder

Applying the latest proposed DSM-5 criteria for autism spectrum disorder (ASD) to parent-reported symptoms yielded an ASD diagnosis for 91% of 4,453 children previously given DSM-IV clinical diagnoses of pervasive developmental disorders (PDDs)—autistic disorder, Asperger's disorder, or PDD not otherwise specified. This rate reported by Huerta et al. (p. 1056) is substantially higher than the rate in the DSM-5 field trial, which used the first draft of the criteria. The higher sensitivity of the current draft criteria extended to children with higher cognitive functioning, girls, and children younger than 4. As noted by editorialist Tsai (p. 1009), the ability to exclude children with non-ASD conditions, e.g., language disorders or ADHD, is only slightly better with DSM-5 than with DSM-IV.

## Biological Correlate of Disinhibition in OCD Patients and Siblings

Both patients with obsessive-compulsive disorder (OCD) and their siblings, while performing a task requiring response inhibition, showed hyperactivity of a brain region involved in suppressing motor responses. The presupplementary motor area is key to rapidly resolving conflicting action plans, and de Wit et al. (p. 1100) propose this familial dysfunction as a link between genetic predisposition and OCD behavior. A reliable biological OCD trait might point toward mechanisms of the disorder and increase the homogeneity of patient groups for research.