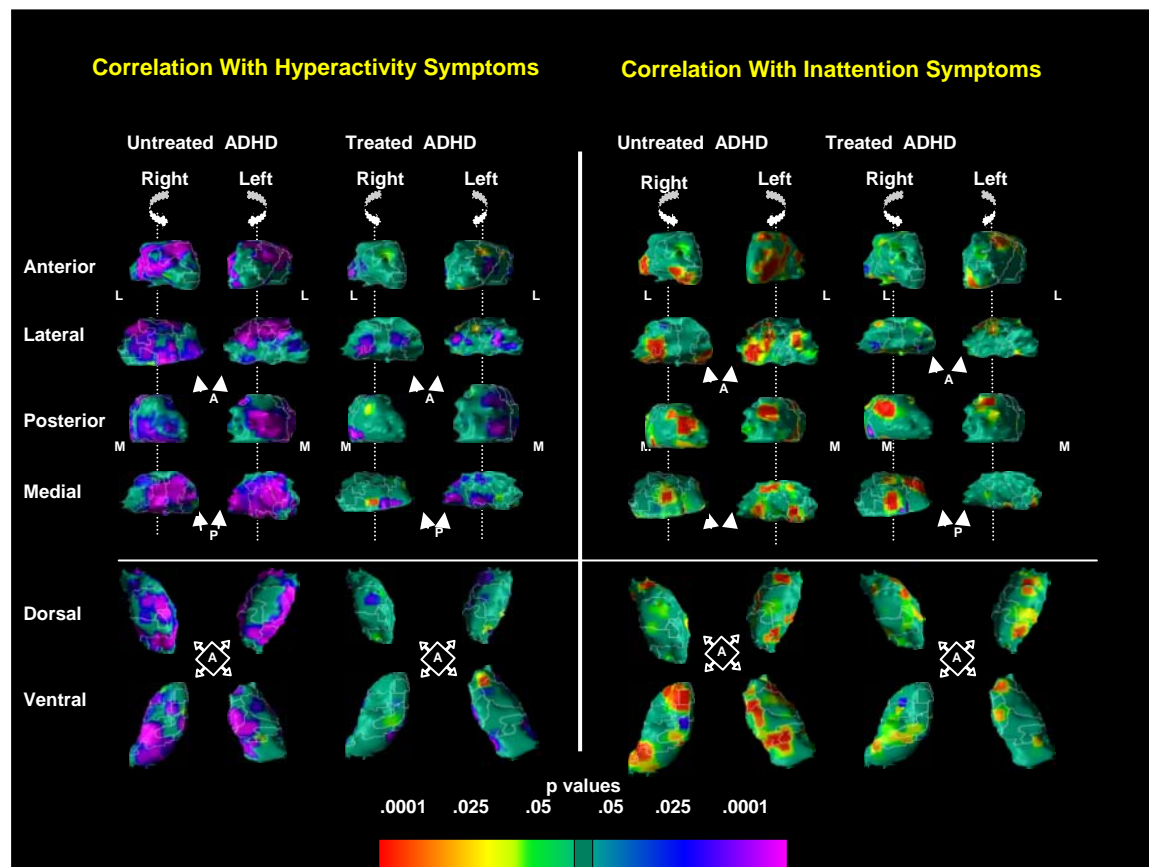
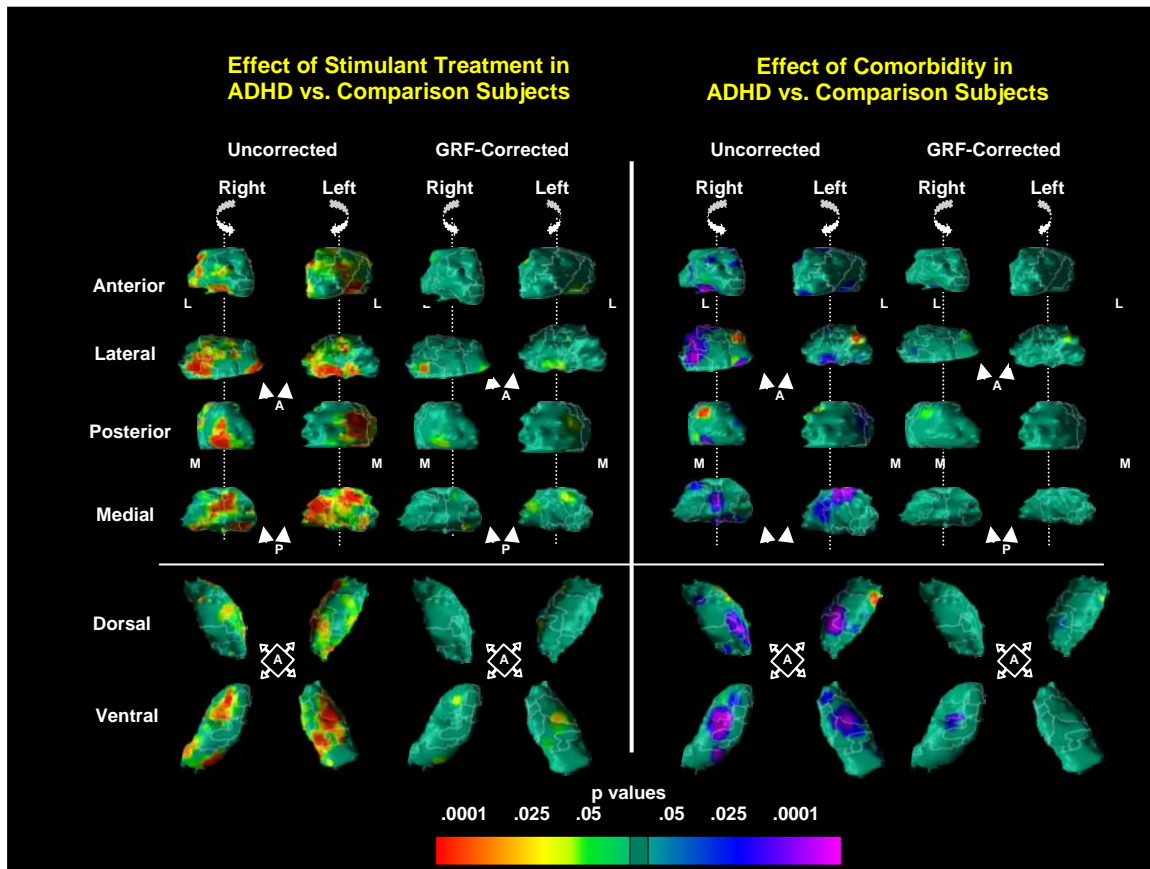


FIGURE S1. The Effects of Stimulant Treatment Contrasted With the Effects of Comorbid Oppositional-Defiant, Depressive, and Anxiety Disorders on the Morphological Features of the Thalamus in Youths With ADHD



Panel A, effects of naturalistic stimulant treatment in youths with ADHD vs. comparison subjects. Panel B, effects of comorbid oppositional-defiant, depressive, and anxiety disorders in youths with ADHD vs. comparison subjects. These comparisons demonstrate that the main findings of this report—that regional thalamic volumes overlying the pulvinar nucleus are smaller in ADHD patients relative to comparison subjects (Figure 1 in the primary text)—are not influenced appreciably by either stimulant treatment or the presence of comorbid oppositional-defiant, depressive, or anxiety disorders. The comparisons also demonstrate that the effects of stimulant medications were not driven by the presence of comorbid disorders in the treated youths with ADHD. The color bar indicates the color coding for p values associated with the main effect of stimulant treatment at the time of the scan and the main effect for comorbid oppositional-defiant, depressive, and anxiety disorders, ranging from $p < 0.001$ in red (increased regional volume) to $p < 0.001$ in purple (reduced regional volume). A=anterior; L=lateral; M=medial; P=posterior.

FIGURE S2. Correlation of Local Morphological Features of the Thalamus With the Severity of ADHD Symptoms and the Effects of Stimulant Treatment



Shown here for ADHD youths are the correlations of local morphological features of the thalamus with, in panel A, the severity of hyperactivity symptoms in those not receiving stimulant treatment at the time of the scan and the severity of hyperactivity symptoms in those receiving stimulant treatment at the time of the scan; and in panel B, the severity of inattentive symptoms in those not receiving stimulant treatment at the time of the scan and the severity of inattentive symptoms in those receiving stimulant treatment at the time of the scan. These correlation maps suggest that reduced regional volumes of thalamic nuclei accompanied more severe hyperactivity symptoms and that these correlations were present in larger areas in those ADHD youths who were not treated with stimulant medications compared with those who were treated with stimulant medications. Conversely, the maps also suggest that increased regional volumes of thalamic nuclei accompanied more severe symptoms of inattention and that these correlations were present in larger areas in those ADHD youths who were not treated with stimulant medications compared with those who were treated with stimulant medications. Stimulants therefore seem to “normalize” the regional thalamic surfaces so that thalamic morphology in treated ADHD youths resemble more closely the morphology of the comparison group, compared with maps from the untreated ADHD youths. The color bar depicts the statistical significance of the correlation coefficients, ranging from $p < 0.001$ in red (positive correlations) to $p < 0.001$ in purple (inverse correlations). A=anterior; L=lateral; M=medial; P=posterior.