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Fig. S1: Ultra-low frequency coupling strength between default mode network nodes. The cartoons (left) show each default mode network pathway as a circle with the weakest pathway, as derived from the PLVs, to the left and increasingly stronger pathways to the right. Data from the control group are shown below that of the unmedicated adults with attention-deficit/hyperactivity disorder (ADHD). The links between circles indicate that these 2 pathways differ significantly in regards to coupling strength. Briefly, in adults with ADHD, the PCC–LIPL node pair had significantly greater coupling than all other node pairs except the LIPL–RIPL node pair. The LIPL–RIPL and PCC–RIPL node pairs had significantly stronger functional connectivity than did the PCC–MPFC and MPFC–LIPL node pairs. Coupling between the MPFC–LIPL node pair was also stronger than that between the PCC–MPFC nodes. In controls, functional connectivity between the PCC–RIPL node pair and the PCC–LIPL node pair did not statistically differ, but was significantly stronger than that between all other node pairs. LIPL = left mediolateral inferior parietal cortex; MPFC = medial prefrontal cortex; PCC = posterior cingulate/precuneus cortices; RIPL = right mediolateral inferior parietal cortex.

Fig. S2: Strength of Δ frequency coupling between default mode network nodes. Cartoon organization is identical to supplementary Figure 1, only the data differ. In unmedicated patients, the PCC–LIPL node pair had significantly greater coupling than did all other node pairs except the LIPL–RIPL. The LIPL–RIPL node pair had significantly stronger coupling relative to the MPFC–LIPL and PCC–MPFC node pairs. Stronger connectivity between the PCC–RIPL node pair relative to the MPFC–LIPL and PCC–MPFC was also found in adults with attention-deficit/hyperactivity disorder. In controls, coupling in the PCC–RIPL and PCC–LIPL nodes pairs did not differ, but was significantly stronger than all other node pairs. In addition, the LIPL–RIPL node pair exhibited stronger functional connectivity than did the MPFC–PCC and MPFC–RIPL node pairs. LIPL = left mediolateral inferior parietal cortex; MPFC = medial prefrontal cortex; PCC = posterior cingulate/precuneus cortices; RIPL = right mediolateral inferior parietal cortex.

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Fig. S3: θ frequency coupling between default mode network nodes. Cartoon organization is identical to previous supplementary figures, only the data reflect phase-locking data in the θ frequency range. In unmedicated adults with attention-deficit/hyperactivity disorder, coupling between the LIPL–RIPL regions was significantly greater than that between the PCC–RIPL, PCC–MPFC and MPFC–LIPL. Functional connectivity between PCC–LIPL regions was also significantly stronger than that between the PCC–MPFC nodes. In controls, functional connectivity between the PCC–RIPL and PCC–LIPL node pairs did not statistically differ, but was significantly stronger than that between all other node pairs. LIPL = left mediolateral inferior parietal cortex; MPFC = medial prefrontal cortex; PCC = posterior cingulate/precuneus cortices; RIPL = right mediolateral inferior parietal cortex.

Fig. S4: Strength of α frequency coupling between default mode network nodes. Cartoon organization is identical to previous supplementary figures, only the α band data is shown. In unmedicated patients, coupling between the LIPL–RIPL areas was significantly stronger than that between the PCC–MPFC, MPFC–LIPL and MPFC–RIPL node pairs. The PCC–RIPL regions exhibited significantly greater coupling than did the PCC–MPFC and MPFC–LIPL node pairs. Patients also showed stronger functional connectivity between the PCC–LIPL regions compared to the PCC–MPFC areas. Adults without attention-deficit/hyperactivity disorder showed significantly weaker coupling between the PCC–MPFC areas compared with that of PCC–LIPL, PCC–RIPL, and LIPL–RIPL node pairs. Coupling was stronger between the PCC–LIPL pair compared to the MPFC–LIPL, and phase-locking along the LIPL–RIPL pathway was stronger than that for the MPFC–RIPL node pair. LIPL = left mediolateral inferior parietal cortex; MPFC = medial prefrontal cortex; PCC = posterior cingulate/precuneus cortices; RIPL = right mediolateral inferior parietal cortex.