Attention deficit hyperactivity disorder (ADHD) is a serious psychiatric disorder that impairs psychological functioning and strongly relies on neurobiological dysfunction. A multimodal treatment approach of psychopharmacological and psychotherapeutic treatment is recommended. There is evidence, that the pharmacological effects can be augmented when combined with individual or group cognitive behavioral therapy (CBT). In CBT, cognitive and behavioral interventions are employed to bring about change in problematic cognitive and behavioral patterns. Given the strong neurobiological basis of ADHD we think that it is important to consider neuropsychotherapeutic treatment approaches that target both the underlying neurobiological mechanisms and the cognitive behavioral difficulties of patients with ADHD. Mindfulness-based cognitive therapy (MBCT) could be considered as a neuro-psychotherapeutic treatment approach. MBCT combines mindfulness meditation with conventional cognitive behavioral interventions. Evidence from our own research and from previous studies suggest that mindfulness meditation can alter brain mechanisms associated with impaired neuropsychological capacities in ADHD.