Psychostimulant drugs have for decades been considered the cornerstone of ADHD treatment. Non-stimulant drugs have also been reported successful. However, many controlled studies exclude patients with comorbidities typical for patients seen in clinical setting. Many patients are also considered non-responders to medication. Current knowledge might not be directly useful to clinicians. The present article reviews the literature on pharmacological and psychotherapeutic treatment in adult ADHD emphasizing comorbidity and other clinically important factors, as well as ADHD specific outcomes. Thirty-three relevant studies of pharmacotherapy and three studies of psychotherapy were included. Most subjects had little current comorbidity, but some studies included subjects with substance use disorder. Significant effect of treatment on ADHD symptoms was found in most studies using pharmacotherapy and all studies of psychotherapy. Both positive and negative effects on comorbid anxiety and depression measures were reported. Pharmacotherapy did not seem to have effect on substance use disorder. Few pharmacotherapy studies conducted any long-term follow-up; two studies that did, found that most subjects had discontinued medication. A clear-cut dose-response relationship was not substantiated. In conclusion, clinicians have good support for both pharmacological and psychotherapeutic treatment of ADHD in adults, but should take additional measures to deal with comorbidities as well as treatment adherence.