# 10 - Attention deficit hyperactivity disorder (ADH

# Attention deficit hyperactivity disorder (ADHD) in adults

798 The Maudsley® Prescribing Guidelines in Psychiatry CHAPTER 9 Attention deficit hyperactivity disorder (ADHD) in adults While globally ADHD may still be under-recognised and under-treated, rates of ADHD diagnoses and psychostimulant use have been rapidly rising over the past two decades in many countries, including the UK.1–3 Increased awareness about this often life-long and disabling condition has also fuelled societal debates on ‘pathologising’ a condition that many interpret as indissoluble from their identity, with relevant implications on the appropriateness of potentially life-long pharmacological treatment. A first-time diagnosis of ADHD in an adult is compatible with both ICD-11 and DSM-5 and should only be made after a comprehensive assessment by a healthcare professional with training and expertise in diagnosing and managing ADHD. Whenever possible, this should include information from other informants and from adults who knew the patient as a child. It is recommended to establish the symptoms and impairments of ADHD using a validated diagnostic interview assessment such as the Diagnostic Interview for ADHD in Adults (DIVA-5), based on the DSM-5 adult ADHD criteria.4 Evaluation of innovative technology in addition to routine clinical assessment to diagnose ADHD and evaluate different treatments is underway.5 People with untreated ADHD might have poorer long-term outcomes in several life domains compared with people without ADHD and people with treated ADHD.6 However, assumptions of efficacy, tolerability or better functional outcomes from long- term ADHD medication use are currently unsubstantiated due to the scarcity of data from randomised placebo-controlled trials of ADHD treatment lasting more than 52 weeks. Short-term trials have consistently found that ADHD medications improved inattentiveness and restlessness more than quality-of-life measures. There is inadequate direct comparative evidence to guide clinical practice on choice of ADHD medications or augmentation regimens. Moreover, the strength of the evidence for efficacy of the most frequently used pharmacological treatments for ADHD in adults is ‘low’ or ‘very low’.7–-9 To some extent, adult ADHD clinical guidelines and consensus documents do not reflect this

uncertainty and recommend medications as first-line treatment in adults with ADHD whose symptom severity cannot be sufficiently reduced by environmental modifications. Daily intake of ADHD medication is usually advised, although ad hoc trial periods of stopping medication, medication off-days or reducing the dose should be considered to minimise any possible adverse outcomes. Doubts remain about the long-term cardiovascular effects of stimulant drugs. A 2022 meta- analysis suggested no adverse effect, but a 2024 population study found increased (and dose- related) risk of cardiovascular disease.10,11 Clinicians should regularly and consistently monitor cardiovascular signs and symptoms throughout the course of treatment. A healthcare professional with training and expertise in managing ADHD should review ADHD medication at least once a year and discuss with the person (and their family and carers as appropriate) whether medication should be continued.12 Additional considerations in adults (as opposed to children) include a diagnosis of bipolar or psychosis (ADHD medication may worsen these conditions13) and the need to reduce the opportunity for diversion or misuse (prescribe modified-release [MR] preparations or non-stimulants). Medications for the treatment of adult ADHD belong to two broad categories:

1. Psychostimulants (i.e. methylphenidate, dexamfetamine, lisdexamfetamine [Controlled Drugs in most countries]).
2. Non-stimulants14 (i.e. atomoxetine or other non-controlled drugs).

Drug treatment of other psychiatric conditions CHAPTER 9 The enhancement of dopaminergic and noradrenergic neurotransmission in the prefrontal cortex is the probable mechanism of ADHD drugs.15 Evidence largely supports amfetamines in adults as the preferred first-choice medication for the short-term treatment of ADHD, followed by methylphenidate preparations.16 Lisdexamfetamine or methylphenidate is considered first-line choice of medication in adults.12 Lisdexamfetamine is associated with improved outcomes in persons with ADHD and co-occurring amfetamine or methamfetamine use disorders.17 Atomoxetine might be an appropriate alternative for patients who did not tolerate or have contraindications to stimulants, or in cases of concern of medication misuse or diversion. Stimulant medication response may lessen over longer durations of treatment in a significant percentage of patients.18 MR stimulant preparations are generally preferred to immediate-release (IR) tablets because of the higher liability to tolerance, misuse and diversion (for recreational use, cognitive enhancement or appetite suppression) of IR stimulant preparations, and the convenience of a once-daily intake (compared with twice or three times daily). It is possible that several formulations will need to be tried before one is found that suits an individual. While all long-acting methylphenidate preparations include an IR component as well as an MR component, the biphasic release profiles of these products are not equivalent and contain different IR/MR proportions. The different time–action profiles provided by long-acting formulations facilitate individualisation of ADHD treatment. Transferring to another formulation can result in changes in symptom management at key time periods during the day. Patient preference should guide clinicians’ decisions on any medication change, which, during worldwide ADHD medication supply disruptions at the time of writing, is frequently the only alternative to discontinuation. For adults with ADHD and drug or alcohol addiction disorders, there should be close liaison between the professional considering prescribing ADHD medication and an addiction specialist. As with any prescription of controlled substances, the clinician must weigh the risk of misuse/diversion against the stimulant’s potential therapeutic benefit.19 In the UK, atomoxetine, lisdexamfetamine and two MR capsule formulations of methylphenidate (Medikinet XL, Ritalin XL) are licensed for first-time

use in adults with ADHD, while most MR tablet formulations of methylphenidate are licensed for children and for continued treatment when initiated before the age of 18 years. In some cases, starting drug-naïve adults with ADHD on formulations prescribed off-licence might be appropriate. Guanfacine is also effective and well tolerated in adults. A 2023 meta-analysis of 12 studies showed a response rate of around 60% (placebo 30%).20 Viloxazine also appears to be effective21 as is bupropion22 but data are limited compared with guanfacine. Prescribers should be familiar with the national and international requirements of Controlled Drug legislation governing the prescription and supply of stimulants.23,24 Generally, for Controlled Drugs or medicines that are liable to abuse, overuse or misuse or when there is a risk of addiction and monitoring is important, prescribing should be considered only when it is possible to access relevant information from the patient's medical records.25 Box 9.2 summarises UK NICE guidelines and Table 9.1 lists the advantages and disadvantages of different medications for the treatment of ADHD in adults. See Chapter 5 for details of products available in the UK (see also local and national prescribing information).

800 The Maudsley® Prescribing Guidelines in Psychiatry CHAPTER 9 Box 9.2 Summary of NICE guidance for the treatment of ADHD in adults12 ■ ■Drug treatment should only be initiated by a specialist and only after comprehensive assessment of mental and physical health and social influences ■ ■Medication for ADHD should be offered to adults if their ADHD symptoms are still causing a significant impairment in at least one domain after environmental modifications have been implemented and reviewed ■ ■Non-pharmacological options (supportive therapy, cognitive behavioural therapy, regular reviews) can be considered depending on choice, difficulties with adherence or intolerable adverse effects. Combination of medication with non-pharmacological options can also be considered in partial response to medication treatment ■ ■Methylphenidate or lisdexamfetamine is recommended for use in adults with ADHD as first-line treatment. Switching between the two could be considered after a 6-week trial of an adequate dose with suboptimal response ■ ■Atomoxetine could be offered to adults if: ■ ■they cannot tolerate lisdexamfetamine or methylphenidate, or ■ ■their symptoms have not responded to separate 6-week trials of lisdexamfetamine and methylphenidate, having considered alternative preparations and adequate doses ■ ■Monitoring should include measurement of weight, blood pressure and heart rate ■ ■For atomoxetine, monitoring for symptoms of liver dysfunction and suicidal thinking is advised ■ ■An ECG is not needed before starting stimulants, atomoxetine or guanfacine if cardiovascular history and examination are normal and the person is not on medicine that poses an increased cardiovascular risk Table 9.1 The advantages and disadvantages of medications indicated for treating ADHD in adults. Drug group Drug Advantages Disadvantages ADHD stimulants Immediate release: ■ ■Methylphenidate ■ ■Dexamfetamine Quick onset of effect  Allows for flexible dosing regimens, or during initial titration to determine correct dosing levels May be associated with euphoric effects, misuse/diversion and adverse effects Higher effect size compared with non-stimulants  Generally well tolerated and safe short term Modified or prolonged release: ■ ■Lisdexamfetamine ■ ■Methylphenidate Convenient once-daily regimen  Less risk of misuse and diversion compared with IR stimulants Less flexible dose titration and regimen compared with IR stimulants  In the UK some preparations are not licensed for initiation in adults.  Caution when switching between apparently bioequivalent preparations owing to differences in dosing frequency, requirements for administration with food, differences in the MR component and overall clinical effect  Tablet and capsule preparations might be difficult to swallow.

Revision #1
Created 2026-01-04 20:17:27 UTC by Omar Ayman
Updated 2026-01-04 20:17:27 UTC by Omar Ayman