Dexamfetamine

Traffic light classification - AMBER 2
Information sheet for Primary Care Prescribers

Licensed Indications[1]
Narcolepsy

Therapeutic Summary
Dexamfetamine is a CNS stimulant. It is an established treatment for narcolepsy and if effective and tolerated treatment is envisaged to be lifelong. Locally it is used third-line if modafinil and methylphenidate are ineffective or unsuitable.

Medicines Initiation
Dexamfetamine will be initiated by a Sleep Specialist and any decision to use it will be a joint decision made in the Neuro-respiratory Sleep Clinic at NUH.

Products available[2]
Dexamfetamine is available generically as 5mg tablets.
28 x 5mg tablets cost £24.73.

Dexamfetamine is a Schedule 2 Controlled Drug (CD). As such, prescriptions must conform to specific prescription writing criteria and each prescription should be for no longer than 30 days treatment.

Dosages and route of administration
Dexamfetamine will be given initially in a dose of 5 mg od, increasing by 5mg weekly up to a usual maintenance dose of 10-20mg per day taken in 2-4 divided doses. Occasionally, doses of up to 60mg a day may be required, but only on advice of the joint Neurology-Respiratory Narcolepsy clinic.

Duration of treatment
Following an adequate treatment response, treatment with medication for narcolepsy should be continued for as long as it remains clinically effective.

Monitoring Requirements and Responsibilities
Pre-treatment/baseline assessments will be performed by the specialist and will include:
Medical history, measurements of height and weight (for BMI) and of heart rate and blood pressure (for cardiovascular status) and assessment for mental health illness.

Ongoing monitoring

Ongoing monitoring[1]	Frequency[1]
Heart Rate and Blood Pressure	Baseline then every 6 months. Also before and after each dose change. Refer to NICE guidelines for hypertension in adults[4]
Weight	Baseline then every 6 months. Consider BMI monitoring if weight has been affected
Mental health	Baseline then every 6 months. Also before and after each dose change.

Medication related side-effects*	At each visit.
Risk of diversion, misuse / abuse	At each visit.
ECG	Not recommended unless there is a clinical indication (e.g. family history of cardiomyopathy or cardiac illness or hypertension or concomitant treatment with a medication that may pose an increased cardiac risk).
Routine blood tests	Not recommended unless there is a clinical indication.

Explicit criteria for review and discontinuation of the medicine

Sustained resting tachycardia (>120bpm)	Withhold/reduce dose and discuss with specialist team. Timely cardiology input.
Arrhythmia	Withhold/reduce dose and discuss with specialist team. Timely cardiology input.
Systolic blood pressure greater than the 95th percentile (or a clinically significant increase) measured on two occasions	Withhold/reduce dose and discuss with specialist team. Timely cardiology input.
Patient fails to attend for physical monitoring	Arrange a further appointment in a timely manner. If follow up appointments are not attended, do not provide further prescriptions and inform specialist team.
Insomnia	May respond to dose reduction or timing adjustment. Discuss with specialist team.
Reduced appetite and / or clinically significant weight change	May respond to dose reduction. Discuss with specialist team.
Development or worsening of psychiatric disorders (anxiety, depression, psychotic symptoms, mania, behavioural changes)	Withhold and discuss with specialist team in a timely manner.
Seizures with no previous history	Withhold and discuss with specialist team immediately.
Clear, sustained increase in seizure activity in patients with previous history of seizures	Withhold and discuss with specialist team immediately.
Suspected drug misuse / diversion	Discuss with specialist team in a timely manner.

IF YOU ARE IN ANY DOUBT ABOUT ANY POTENTIAL ADVERSE REACTION, PLEASE CONTACT THE SPECIALIST TEAM.

Contraindications[1,3]

1. Cardiac - advanced atherosclerosis, uncontrolled moderate or severe hypertension, symptomatic cardiovascular disease, known serious structural cardiac abnormalities, cardiomyopathy, life threatening arrhythmias, heart failure, angina, myocardial infarction, cerebrovascular disorders
2. Endocrine - hyperthyroidism or thyrotoxicosis, phaeochromocytoma,
3. Psychiatric - anorexia, agitated states, psychosis, uncontrolled bipolar disorder, schizophrenia, suicidal tendencies, glaucoma, existing addiction, alcohol or drug abuse (illicit or prescribed)
4. Hypersensitivity to sympathomimetic amines or any excipients as listed in the SPC, concomitant use of MAOIs or within 14 days of MAOI treatment.
5. Social - inability / residence / situation, where appropriate storage of dexamfetamine cannot take place.

Precautions[1,3]

Particular caution is needed in the treatment of patients whose underlying medical conditions might be compromised by increases in blood pressure or heart rate.
History of epilepsy, mild hypertension, susceptibility to angle-closure glaucoma, tics, Tourette's syndrome and a history of drug or alcohol dependency where there is felt to be some risk of misuse.

There is no experience with the use of dexamfetamine in renal or hepatic insufficiency. In those patients peak plasma levels could be higher and elimination could be prolonged.

Pregnancy and Breastfeeding[3]

Dexamfetamine is contraindicated during pregnancy, because there is insufficient evidence to know if it is safe to use. If appropriate, female patients should be advised to use effective contraception during treatment with dexamfetamine. In the event of a female patient becoming pregnant whilst taking dexamfetamine, or wishing to start a family she should be advised to contact the specialist as soon as possible.
Amfetamines are excreted in breast milk and should not be used in those who are breastfeeding.

Driving[3,5]

Patients must tell the DVLA of their narcolepsy diagnosis. Please refer to government advice on driving and narcolepsy.[6] Patients should be warned about the potential of dexamfetamine to affect their ability to drive as it is an offence to drive if impaired whilst taking it. When driving, patients should be advised, to carry suitable evidence that the medicine was prescribed to treat a medical problem, and that it was taken according to the instructions given by the prescriber, or information provided with the medicine (e.g. a repeat prescription form or the medicine's patient information leaflet).

Clinically relevant medicine interactions and their management[1,3]

- Monoamine oxidase inhibitor (MAOIs): Amfetamines should not be administered during or within 14 days following the administration of monoamine oxidase inhibitors (MAOI) because it can increase the release of norepiniephrine and other monoamines, causing severe headaches and other signs of hypertensive crisis.
- The concurrent use of tricyclic antidepressants may increase the risk of cardiovascular side effects.
- Amfetamines may delay the absorption of ethosuximide, phenobarbital and phenytoin.
- Agents that may reduce the effects of dexamfetamine: chlorpromazine, haloperidol and lithium carbonate.
- Gastrointestinal acidifying agents (eg ascorbic acid, fruit juices) lower absorption of dexamfetamine. Agents that acidify urine (ammonium chloride, sodium acid phosphate, etc) increase urine excretion. Both decrease the half-life of amphetamine.
- Gastrointestinal alkalizing agents (sodium bicarbonate, etc) increase the absorption of amfetamines. Urinary alkalizing agents (acetazolamide, some thiazides) decrease urinary excretion. Both groups of agents increase blood levels and efficacy of amfetamines.
- Amfetamines may decrease the effectiveness of guanethidine or other antihypertensives.
- Serotonin syndrome has rarely occurred in association with the use of amphetamines when given in conjunction with serotonergic medications, eg SSRIs, triptans.
- Avoid concomitant use with linezolid – risk of serotonin syndrome.
- Alcohol may exacerbate the CNS adverse reactions of psychoactive medicines, including dexamfetamine. It is therefore advisable for patients to abstain from alcohol during treatment.

For a full list of contraindications, precautions and drug interactions refer to the BNF/ product SPC.

Information Given to Patient

- The specialist will provide, where relevant, written information to people with narcolepsy and their families and carers about diagnosis, assessment, support groups, self-help, psychological treatment, medicine treatment and possible side-effects.
- The patient must be warned to report any suspected adverse reactions to the GP for assessment and to report to their GP or specialist any heart palpitations, psychiatric symptoms or onset or increase in seizures.
- Female patients of childbearing potential must be warned to inform the GP or specialist of any pregnancy or planned pregnancy.
- Female patients of childbearing potential must be advised to use effective and reliable contraception or to discuss this with their GP or specialist.
- The patient must be informed about the potential for dexamfetamine to affect their ability to drive and it being an offence to drive if impaired whilst taking it.
- The patient should be advised to not stop medication suddenly, but discuss withdrawal with their specialist first.
- The patient should be advised about storing this medication securely at home and, if applicable, at work.

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ACCESS AND CONTACT POINTS

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References

1. Dexamfetamine 5mg tablets – Brown & Burk UK Ltd. Summary of product characteristics [05/2020] available at https://www.medicines.org.uk/emc/product/11004/smpc [accessed 06/07/2020].
2. The Electronic Drug Tariff. Available from http://www.ppa.org.uk/ppa/edt_intro.htm [accessed 29/07/2020]
3. BNF, Available from https://www.medicinescomplete.com, accessed [29/07/2020]
4. Hypertension in adults: diagnosis and management. NICE Clinical Guideline 136 (August 2019). Available: https://www.nice.org.uk/guidance/ng136
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Version Control- Dexamfetamine in Narcolepsy Amber 2 Information Sheet			
Version	Author(s)	Date	Changes
1.1	Dr Sumeet Singhal, Consultant Neurologist, Nottingham University Hospitals, Professor Jill Baker, Respiratory Consultant, Nottingham University Hospitals, Lynne Kennell, Interface and Formulary Pharmacist, Nottinghamshire APC		