Health and Social Care Board

Interface Pharmacist Network Specialist Medicines

Methylphenidate - ADHD Shared Care Guideline

Specialist Details	Patient Identifier
Name: _____	
Location: _____	
Tel: _____	**Date:** _____

Introduction

Methylphenidate is a CNS stimulant medicine used in the treatment of Attention Deficit Hyperactivity Disorder (ADHD). It should only be initiated following assessment and diagnosis by a specialist with expertise in ADHD, as part of a comprehensive treatment plan.

Amber Indications: Treatment of ADHD in adults and children of 6 years and older.

Preparations available

Immediate Release: 5mg, 10mg, 20mg tablets

Modified Release preparations include: Concerta XL® tablets, Delmosart® prolonged-release tablets, Equasym XL® capsules, Matoride XL® tablets, Medikinet XL® capsules, Ritalin XL capsules, Xenidate XL® tablets, Xaggitin XL® and Addepta XL®

Notes:

- Equasym XL®, Medikinet XL®, Ritalin XL® and Addepta XL® capsules may be opened to allow contents to be sprinkled on food
- Concerta XL®, Matoride XL®, Delmosart® prolonged-release, Xaggitin XL® (and Xenidate XL® 18mg) cannot be chewed, divided, or crushed
- Xenidate XL® tablets (27mg, 36mg and 54mg tabs) can be broken in half but must not be chewed or crushed.

Different versions of modified-release preparations may not have the same clinical effect. To avoid confusion between these different formulations of methylphenidate, prescribers should specify the brand to be dispensed.

Methylphenidate is a schedule 2 controlled drug (CD) and is therefore subject to normal CD regulations.

Dosage and administration (BNF, BNFc, NICE ADHD NG87)

Immediate release: Initially 5 mg 1–2 times daily, increased if necessary at weekly intervals by 5–10 mg daily (given in 2 - 3 divided doses).

Modified Release:

- Concerta XL®, Delmosart® prolonged-release, Matoride XL®, Xenidate XL® and Xaggitin XL® should be started at 18mg in the morning – increased if necessary by increments of 9 - 18mg at approximately weekly intervals.
- Equasym XL®, Medikinet XL® and Addepta XL® should be started at a dose of 10mg in the morning – increased if necessary by weekly increments of 10mg.
- Ritalin XL® should be started at a dose of 10-20mg in the morning – increased if necessary by weekly increments of 10mg.

In some cases, patients may require both a modified release and immediate release preparation for adequate control of symptoms.

Maximum Daily Doses.

For children 2.1 mg/kg daily under the direction of a specialist up to a maximum of 90mg daily or equivalent*.

For adults, the dose may be increased to a maximum recommended total daily dose of 100mg or equivalent*

Unlicensed Use: Doses over 60 mg daily or equivalent* not licensed (80mg for adult use of Medikinet XL® and Ritalin XL®). Some use in adults may be off-label as licensed indications may vary by brand.

*** Equivalent Doses:** 18mg of Concerta XL®, Delmosart® prolonged-release, Matoride XL®, Xenidate XL® or Xaggitin XL® is considered equivalent to a total daily dose of 15 mg of standard-release formulation, Equasym XL®, Medikinet XL®, Ritalin XL® and Addepta XL®.

Hospital specialist responsibilities

- Diagnose the condition and assess if the patient is suitable for treatment with methylphenidate (as per the pre-drug assessment in NICE guidance including an assessment of cardiovascular status)
- Baseline height (not applicable to adults), weight, BP and heart rate
- Provide patient/carer with relevant information on use, side effects and need for monitoring of medication
- For patients 6 years and over, arrange shared care with the patient's GP
- Provide the GP with relevant information for each patient, including:
  - Treatment to be undertaken by GP (dose, any dosage titrations etc.)
  - Results of baseline investigations and physical monitoring undertaken
  - System of monitoring and recording of progress and side effects
- Monitoring side effects:
  - Height (not required in adults) and appetite: Measure and record every six months
  - Weight: measure and record as follows
    - In children 10 years and under; every 3 months
    - In children over 10 years and young people; at 3 and 6 months after starting treatment and every 6 months thereafter or more often if concerns arise
    - In adults; every 6 months
  - Heart Rate and Blood pressure: Measure and record every six months and after each dose change
  - Assess for development of de novo or worsening of pre-existing psychiatric disorders (including depression and aggressive behaviour, tics, psychotic symptoms, anxiety), seizures, or cardiac symptoms at least every 6 months and at every visit
  - Patients with additional risk factors for cerebrovascular conditions should be assessed at every visit for neurological signs and symptoms
  - Changes in sleep pattern
- Monitor response to treatment and need to continue therapy. Advise discontinuation of methylphenidate if no improvement in symptoms is seen after 6 weeks at the maximum tolerated dose
- Specialist will continue to review the patient at regular intervals (at least annually) sending a written summary to the GP whenever the patient is reviewed
- Provide any other advice or information for the GP if required including if patient fails to attend review
- Supervise any discontinuation of treatment, or onward referral to adult service if appropriate.

GP responsibilities

- Prescribe methylphenidate (continued prescribing is appropriate for patients attending specialist review)
- Report concerns with adherence, potential misuse/diversion, signs of alcohol/drug dependence or misuse to the specialist
- Report any adverse events to the specialist, and the usual bodies (e.g. MHRA / CHM).

Adverse effects, precautions and contraindications

Contraindications: severe depression, suicidal ideation; anorexia nervosa; acute psychosis; uncontrolled bipolar disorder; hyperthyroidism; phaeochromocytoma; vasculitis; cerebrovascular disorders; glaucoma, current / recent (within 14 days) treatment with MAOIs; Severe cardiovascular disease including uncontrolled hypertension and structural cardiac abnormalities, potentially life threatening arrhythmias and channelopathies, heart failure (may be used with caution in patients with certain cardiovascular conditions following individual assessment by a cardiologist),

Medikinet XL® is also contraindicated in patients with a history of pronounced anacidity of the stomach with a pH value above 5.5 (including therapy with H_2 receptor blockers, proton pump inhibitors or in antacid therapy).

Cautions: Monitor for psychiatric disorders; anxiety or agitation; tics or a family history of Tourette's syndrome; drug or alcohol dependence; epilepsy (discontinue if increased seizure frequency); susceptibility to angle-closure glaucoma. Careful supervision is required during withdrawal as this may unmask depression as well as chronic over-activity. Some patients may require long-term follow up.

Pregnancy: avoid unless potential benefit outweighs risk.

Breastfeeding: excreted in breast milk - avoid.

Adverse Effects: Dizziness, nervousness, drowsiness and headaches are commonly experienced upon initiation of therapy. May affect performance of skilled tasks (e.g. driving). The DVANI must be informed if prescribed medication or any side effects of the medication are likely to impair safe driving. Loss of appetite (some weight loss may occur) and insomnia may also occur. These effects are often mild and transient and may be controlled by a reduction in dose.

Other common adverse effects include: Alopecia; anxiety; arrhythmias; arthralgia; behaviour abnormal; cough; depression; diarrhoea; dry mouth; fever; gastrointestinal discomfort; growth retardation; hypertension; laryngeal pain; mood altered; movement disorders; nasopharyngitis; nausea (can be alleviated with concomitant food intake); palpitations; vomiting.

Common drug interactions

Methylphenidate is contraindicated in combination with:

- current / recent (within 14 days) treatment with non-selective, irreversible MAOIs
- Medikinet XL® brand only: H_2 receptor blockers, proton pump inhibitors or antacid therapy.

Methylphenidate is not recommended in combination with:

- volatile liquid general anaesthetics - omit methylphenidate on the day of surgery
- Alcohol as can exacerbate CNS adverse effects (abstention advised)

Use methylphenidate with caution in association with:

- Anti-hypertensives as may reduce their effectiveness
- Any other drug that can elevate blood pressure.
- Clonidine; as serious adverse events have been reported with concomitant use of clonidine and methylphenidate. The safety of using this combination has not been systematically evaluated.
- Warfarin as can enhance anticoagulant effect
- Some anticonvulsants (phenytoin, primidone, phenobarbitone) and antidepressants as can increase plasma levels of these
- Dopaminergic drugs as a pharmacodynamic interaction is possible
- With other medicines known to cause serotonin syndrome as there may be an increased additive risk of serotonin syndrome

There are no known interactions with antibiotics, simple analgesics and antihistamines commonly prescribed for children.

Communication

For any queries relating to this patient's treatment with methylphenidate, please contact the specialist named at the top of this document.

This information is not inclusive of all prescribing information and potential adverse effects.
Please refer to full prescribing data in the SPC at www.medicines.org.uk or the BNF