

# Methotrexate

ESCA: For the treatment of inflammatory arthritis

## AREAS OF RESPONSIBILITY FOR THE SHARING OF CARE

This shared care agreement outlines suggested ways in which the responsibilities for managing the prescribing of methotrexate for inflammatory arthritis can be shared between the specialist and general practitioner (GP). You are **invited** to participate however, if you do not feel competent to undertake this role, then you are under no obligation to do so. In such an event, the total clinical responsibility for the patient for the diagnosed condition remains with the specialist.

Sharing of care assumes communication between the specialist, GP and patient. The intention to share care will be explained to the patient by the specialist initiating treatment. It is important that patients are consulted about treatment and are in agreement with it. Patients with rheumatoid arthritis or psoriatic arthritis are usually under regular specialist follow-up, which provides an opportunity to discuss drug therapy.

**The doctor who prescribes the medication legally assumes clinical responsibility for the drug and the consequences of its use.**

### RESPONSIBILITIES and ROLES

Specialist responsibilities
1. Confirm the diagnosis of inflammatory arthritis
2. Discuss the potential benefits, treatment side effects, and possible drug interactions with the patient
3. Ask the GP whether he or she is willing to participate in shared care before initiating therapy so that appropriate follow on prescribing arrangements can be made
4. Do baseline monitoring prior to initiation of methotrexate
5. Initiate treatment and stabilise dose of methotrexate <b>using 2.5 mg increments tablets and only as a once weekly dose</b> and issue a methotrexate monitoring booklet as per NPSA alert. <b>Please note: Oral methotrexate 10 mg tablets are not recommended for use in the BSSE health economy.</b> <b>Please note: Parenteral methotrexate – ensure that the patient</b> <ul style="list-style-type: none"> <li>• has had the appropriate training to self-administer methotrexate</li> <li>• has been advised about safe disposal using a purple lidded sharps bin</li> <li>• has been advised about steps to take to in an event of a spillage (leaflet or the provision of a spillage kit)</li> </ul>
6. Review the patient's condition and monitor response to treatment regularly
7. A written summary to be sent promptly to the GP i.e. within 10 working days of a hospital outpatient review or inpatient stay
8. Report serious adverse events to the MHRA
9. Ensure clear backup arrangements exist for GPs, for advice and support (Please complete details below)

General Practitioner responsibilities												
1. Reply to the request for shared care as soon as practicable i.e. within 10 working days												
2. Prescribe methotrexate at the dose recommended <b>using 2.5 mg increments and only as a once weekly dose.</b> <b>Please note: Oral methotrexate 10 mg tablets are not recommended for use in the BSSE health economy.</b> <b>Please note: Parenteral methotrexate – ensure that the patient</b> <ul style="list-style-type: none"> <li>• has had the appropriate training to self-administer methotrexate</li> <li>• has been advised about safe disposal using a purple lidded sharps bin. Prescribe a Sharpsafe purple lidded sharps bin or a Sharpsguard purple lidded sharps bin or follow locally agreed process</li> <li>• has been advised about steps to take to in an event of a spillage (leaflet or the provision of a spillage kit) or follow locally agreed process</li> </ul>												
3. Adjust the dose as advised by the specialist and document in the patients methotrexate monitoring booklet												
4. In the patient's notes, using the appropriate Read Code listed below, denote that the patient is receiving treatment under a shared care agreement												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">GP Prescribing System</th> <th style="width: 15%;">Read Code</th> <th style="width: 25%;">Description</th> <th style="width: 25%;">GP Prescribing System</th> <th style="width: 10%;">Read Code</th> <th style="width: 10%;">Description</th> </tr> </thead> <tbody> <tr> <td>EMIS and Vision</td> <td>8BM5.00</td> <td>Shared care prescribing</td> <td>SystemOne</td> <td>XaB58</td> <td>Shared care</td> </tr> </tbody> </table>	GP Prescribing System	Read Code	Description	GP Prescribing System	Read Code	Description	EMIS and Vision	8BM5.00	Shared care prescribing	SystemOne	XaB58	Shared care
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5. Monitor patient's response to treatment; make dosage adjustments if agreed with specialist												
6. Report to and seek advice from the specialist or clinical nurse specialist on any aspect of patient care that is of concern to the GP, patient or carer and may affect treatment												
7. Refer back to specialist if condition deteriorates												
8. Report serious adverse events to specialist and MHRA												
9. Stop treatment on advice of specialist												

Patient's role
1. Report to the specialist, clinical nurse specialist or GP if he or she does not have a clear understanding of the treatment
2. Share any concerns in relation to treatment with methotrexate with the specialist, clinical nurse specialist or GP
3. Keep and present your methotrexate monitoring booklet at each appointment
4. Report any adverse effects to the specialist or GP whilst taking methotrexate
5. Attend regular outpatient appointments with the specialist

### BACK-UP ADVICE AND SUPPORT

Trust	Contact details	Telephone No.	Email address:
	Consultant:-		
	Specialist Nurse		

**SUPPORTING INFORMATION**

<b>Indication</b>	Methotrexate is used in the treatment of adults with severe, active, classical or definite rheumatoid arthritis who are unresponsive or intolerant to conventional therapy and psoriatic arthritis (unlicensed)		
<b>Dosage and Administration</b>	Supply <b>only</b> 2.5 mg strength tablets, as it reduces the risk of accidental overdose (see <a href="#">Specialist Pharmacy Service website</a> ). Issue the methotrexate monitoring booklet to all patients. Update with any dose changes <b>Please note: Oral methotrexate 10 mg strength is not recommended for use in the BSSE health economy.</b>		
	<b>BSR recommendation</b>	Typical dose: 7.5–25 mg ONCE weekly; starting dose may vary depending on the severity of the condition and patient characteristics such as age, renal function and other comorbid conditions.	
		The initial dose may be 5–10 mg once weekly, increasing by 2.5–5 mg every 2–6 weeks until disease stabilised.	
		The maximum licensed dose in RA is 25 mg/week. Rarely, the maximum dose can be 30 mg/week.	
		Lower doses should be considered for frail elderly patients who often have poor renal function. If maximum oral dose is not effective or causes intolerance, consider i.m. or subcutaneous route of administration before discontinuation of the drug.	
		<u>Suggested regimen</u>	
		Starting dose	7.5 mg – 10 mg per week for two weeks
Titration	Dependent on tolerability and blood picture: <ul style="list-style-type: none"> <li>• 10 mg per week for four weeks</li> <li>• Then 12.5 mg per week for four weeks</li> </ul> Subsequent dosing in increments 2.5 mg every two to four weeks depending on response		
Range	2.5 mg to 20 mg as a single dose taken on the same day once a week. Spreading the dose over 24 hours helps reduce the risk of nausea NB: Dose can be increased to a maximum of 25 mg per week under specialist guidance (unlicensed)		
Folic acid	5 mg once a week taken 24 hours after dose of MTX can help reduce some minor side effects		
By injection	Subcutaneous self injection by patient or carer may be used - hospital protocol applies		
<b>Renal Impairment</b>	Methotrexate is contraindicated in the presence of severe/significant renal or significant hepatic impairment.		
<b>Hepatic impairment</b>			
<b>Contra-indications / Special precautions</b>	<p><b>Contraindications</b></p> <ul style="list-style-type: none"> <li>• Patients with a known allergic hypersensitivity to methotrexate should not receive methotrexate.</li> <li>• severe/significant renal renal impairment.</li> <li>• significant hepatic impairment. Liver disease including fibrosis, cirrhosis, recent or active hepatitis; active infectious disease; and overt or laboratory evidence of immunodeficiency syndrome(s)</li> <li>• Serious cases of anaemia, leucopenia or thrombocytopenia.</li> <li>• Concomitant administration of folate antagonists such as trimethoprim, co-trimoxazole and nitrous oxide should be avoided. Hepatotoxic and nephrotoxic drugs should be avoided. Methotrexate is teratogenic and should not be given to women intending to conceive, during pregnancy or to mothers who are breast feeding.</li> </ul> <p><b>Cautions</b></p> <ul style="list-style-type: none"> <li>• Methotrexate should be used with extreme caution in patients with haematological depression, renal impairment, diarrhoea, and ulcerative disorders of the GI tract and psychiatric disorders</li> <li>• Hepatic toxicity has been observed, usually associated with chronic hepatic disease. The administration of low doses of methotrexate for prolonged periods may give rise, in particular, to hepatic toxicity. Liver function should be closely monitored</li> <li>• Renal lesions may develop if the urinary flow is impeded and urinary pH is low, especially if large doses have been administered. Renal function should be closely monitored before, during and after treatment. Reduce dose of methotrexate in patients with renal impairment</li> </ul>		

	<ul style="list-style-type: none"> <li>• Particular care and possible cessation of treatment are indicated if stomatitis or GI toxicity occurs as haemorrhagic enteritis and intestinal perforation may result.</li> <li>• Haematopoietic suppression caused by methotrexate may occur abruptly and with apparently safe dosages. Full blood counts should be closely monitored before, during and after treatment.</li> <li>• Malignant lymphomas may occur in patients receiving low dose methotrexate, in which case therapy must be discontinued</li> <li>• Methotrexate has some immunosuppressive activity and therefore the immunological response to concurrent vaccination may be decreased. In addition, concomitant use of a live vaccine could cause severe antigenic reaction</li> <li>• Patients with pleural effusions and ascites should be drained prior to initiation of methotrexate therapy or treatment should be withdrawn</li> <li>• In patients with pre-existing pleuropulmonary disease, as may occur as a manifestation of rheumatoid arthritis and other autoimmune connective tissue disorders, physicians should be alert to the potential for methotrexate induced adverse effects on the pulmonary system. Patients should be advised to contact their physicians immediately should they develop a cough or dyspnoea.</li> <li>• Methotrexate is extensively protein bound and may displace, or be displaced by, other acidic drugs. The concurrent administration of agents such as p-aminobenzoic acid, chloramphenicol, penicillines, ciprofloxacin, diphenylhydantoin, phenytoin, acidic anti-inflammatory agents, salicylates, sulphonamides, tetracyclines, thiazide diuretics, probenecid or sulfapyrazone or oral hypoglycaemics will decrease the methotrexate transport function of renal tubules, thereby reducing excretion and almost certainly increasing methotrexate toxicity</li> <li>• Methotrexate dosage should be monitored if concomitant treatment with aspirin, ibuprofen or indometacin (NSAID's) is commenced, as concomitant use of NSAID's has been associated with fatal methotrexate toxicity</li> <li>• Vitamin preparations containing folic acid or its derivatives may alter response to methotrexate.</li> <li>• Following administration to a man or woman conception should be avoided by using an effective contraceptive method for at least 3 months after using methotrexate</li> </ul>	
<b>Side Effects</b>	Common	Nausea (spreading the dose over 24 hours helps), mouth ulcers, diarrhoea, hair loss
	Less Common	<ul style="list-style-type: none"> <li>• Leucopenia</li> <li>• Thrombocytopenia</li> <li>• Pneumonitis</li> <li>• Increased nodule formation</li> <li>• Malaise</li> <li>• Abnormal LFTs</li> <li>• Modest rise in MCV is common - check B12 and folate</li> <li>• Watch for adverse effects if changing NSAIDs or consider reducing methotrexate dose temporarily</li> </ul>
<b>Monitoring</b>  <b>British Society Rheumatology (BSR) recommendations</b>	Pretreatment Assessment	FBC, U&E, LFT and CXR (unless CXR done within the last 6 months). Pulmonary function tests should be considered in selected patients
	After commencing treatment	FBC, U&E, LFT every 2 weeks until dose of methotrexate and monitoring stable for 6 weeks; thereafter monthly until the dose and disease is stable for 1 yr. Thereafter the monitoring may be reduced in frequency, based on clinical judgement with due consideration for risk factors including age, comorbidity, renal impairment, etc. when monthly monitoring is to continue.
	Disease monitoring	Monthly FBC, creatinine/calculated GFR, ALT and/or AST and albumin for 3 months; thereafter, FBC, creatinine/calculated GFR, ALT and/or AST and albumin at least every 12 weeks. More frequent monitoring is appropriate in patients at higher risk of toxicity.  Occasional ESR/CRP helps assessment
	<b>Actions to be taken:</b>	
	WBC < 3.5x10 <sup>9</sup> /l	Withhold until discussed with specialist team.
	Neutrophils < 1.6x10 <sup>9</sup> /l	Withhold until discussed with specialist team

	Platelets <140x10 <sup>9</sup> /l	Withhold until discussed with specialist team
	AST, ALT > twice upper limit reference range	Withhold until discussed with specialist team
	Albumin-unexplained fall (in absence of active disease)	Withhold until discussed with specialist team
	Rash or oral ulceration, nausea and vomiting, diarrhoea	Withhold until discussed with specialist team
	New or increasing dyspnoea or dry cough	Withhold until discussed with specialist team
	MCV>105 fl	Withhold and check serum B12, Folate and TFT and discuss with specialist team if necessary.
	Mild to moderate renal impairment	Withhold until discussed with specialist team
	Severe sore throat, abnormal bruising	Withhold until discussed with specialist team Immediate FBC and withhold until the result is available
	Dose reduction	Side effects, e.g.: <ul style="list-style-type: none"> <li>• mouth ulcers</li> <li>• rash</li> <li>• nausea</li> <li>• diarrhoea</li> </ul> <p>Depending on the severity of these a small dose reduction e.g. 2.5 mg per week may be sufficient. Alternatively temporary cessation and restarting at a lower dose or increasing the dose of folic acid (e.g. 5 mg six days per week except the day of methotrexate) may be effective.</p>
	Important notes	<ul style="list-style-type: none"> <li>• Live vaccines should <b>not</b> be administered unless discussed with specialist team</li> <li>• Influenza and pneumovax vaccines are recommended</li> <li>• Contraception during treatment is recommended</li> </ul>
<b>Drug interactions</b>	Refer to product SPC	

## References

- [British Society for Rheumatology guideline for the prescription and monitoring of non-biologic disease modifying anti-rheumatic drugs 2017](#)
- [Archived Patient \(Medication\) Safety Alerts from the NPSA and SPS resources to support their implementation Specialist Pharmacy Service website](#)
- [Maxtrex Tablets SPC](#)
- Methotrexate BNF

I agree to participate in this shared care agreement for the treatment of the below named patient with methotrexate for rheumatoid arthritis or psoriatic arthritis

*General Practitioner*

Name (please print) \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

*Hospital Specialist/Consultant*

Name (please print) \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Patient's name	Date of birth	Sex	Home Address	Hospital Number
				NHS Number

Please keep a copy of this agreement for your own records and forward the original to the above named Consultant at: