

National shared care protocol adapted for local use:

Rheumatological Conditions: Leflunomide for patients within adult services

Version 1

The content of this shared care protocol was correct as of November 2023. As well as these protocols, please ensure that [summaries of product characteristics](#) (SPCs), [British national formulary](#) (BNF) or the [Medicines and Healthcare products Regulatory Agency](#) (MHRA) or [NICE](#) websites are reviewed for up-to-date information on any medicine.

Specialist responsibilities

- Assess the patient and provide a diagnosis; ensure that this diagnosis is within the scope of this shared care protocol ([section 2](#)) and communicated to primary care.
- Use a shared decision-making approach; discuss the benefits and risks of the treatment with the patient and/or their carer and provide the appropriate counselling (see [section 11](#)) to enable the patient to reach an informed decision. Obtain and document patient consent. Provide an appropriate patient information leaflet.
- Assess for contraindications, cautions (see [section 4](#)) and interactions (see [section 7](#)).
- Conduct required baseline investigations and initial monitoring (see [section 8](#)).
- Initiate and optimise treatment as outlined in [section 5](#). Once the patient is known to be tolerating the medicine, transfer to shared care would normally take place. Before transfer to shared care, the patient is expected to have had at least one specialist review and be stable (no increase in medication dose for at least 6 weeks alongside satisfactory investigation results). On transferring shared care, the specialist will provide at least 4 weeks of medication to enable the practice to receive and process the shared care agreement and set up prescribing and ongoing monitoring. Any bloods required within the 4 weeks should be requested/organised and followed up by the specialist.
- If shared care is considered appropriate, and once treatment is optimised, write to the GP practice and request shared care, detailing the diagnosis, current and ongoing dose, any relevant test results and when the next monitoring is required, details of monitoring arrangements, details of current contraception if relevant, and other relevant treatments being received by the patient. Include the specialist service contact information ([section 13](#)).
- The specialist should also provide the details of the treatment to be undertaken by the GP. Including the reasons for the choice of treatment, medicine combination, frequency of treatment, and the next review date by the specialist.

- Prescribe the maintenance treatment until optimised, which will usually be after around 3 months. Prescribe sufficient medication to enable transfer to primary care. Further prescriptions will be issued, where there are unforeseen delays to the transfer of care. The patient should not be put in a position where they are unsure where to obtain supplies of their medication. The specialist team will be responsible for monitoring and prescribing the medicine during this initial period.
- Conduct the scheduled reviews and monitoring in [section 8](#) and communicate the results in writing to primary care within 14 days, where possible. After each review, provide primary care with a written summary within 14 days, advising whether treatment should be continued, confirming the ongoing dose, and whether the ongoing monitoring outlined in [section 9](#) remains appropriate.
- Review treatment and resume prescribing responsibility if a patient becomes or wishes to become pregnant.
- Provide advice to primary care on the management of adverse effects if required.
- Review patients annually. Review once every two years for patients under a [Patient Initiated Follow-ups \(PIFU\) pathway](#).
- Contact details for primary care prescribers will be made available.
- Details for fast-track referrals will be supplied.

Primary care responsibilities

- If shared care is not accepted, inform the specialist of the decision in writing within 14 days with reasons why shared care cannot be entered into.
- If shared care is accepted, ensure knowledge and understanding of the therapeutic issues relating to the patient's clinical condition. Undergo any additional training necessary to carry out the prescribing and monitoring requirements.
- Agreeing that, in their opinion, the patient should receive shared care for the diagnosed condition unless good reasons exist for the management to remain within the secondary care.
- If accepted, prescribe ongoing treatment as detailed in the specialist's request and as per [section 5](#), taking into account potential drug interactions in [section 7](#).
- Adjust the dose of leflunomide prescribed as advised by the specialist and communicate any changes made to the patient.
- Conduct the required monitoring as outlined in [section 9](#). Communicate any abnormal results to the specialist. Discuss with the referring specialist team if there are any amendments to the suggested monitoring schedule.
- Ensure that the patient is given the appropriate appointments for follow-up and monitoring.
- If a patient fails to attend, contact the patient in a timely manner to arrange an alternative appointment. It is the GP's responsibility to decide whether to continue treatment in a patient who does not attend follow-up and monitoring appointments. If the patient regularly fails to

attend the monitoring appointment, the GP may withhold the prescription and inform the consultant responsible for the patient's care.

- The primary care clinician conducting the investigations is responsible for completing the patient's monitoring record with the necessary information and up-to-date results of investigations.
- Manage adverse effects as detailed in [section 10](#) and discuss with the specialist team when required. Refer the patient back to the specialist team if further investigation is required.
- Stop leflunomide and discuss urgently with the specialist if the patient develops signs of serious infection, liver or respiratory disease, unexplained bleeding or bruising, are exposed to chickenpox or shingles, or becomes pregnant.
- Female patients must not become pregnant whilst taking this medication. Discuss with the specialist if the patient plans to become pregnant. Female patients must be advised to use effective contraception throughout the course of the leflunomide therapy.
- Stop treatment as advised by the specialist.
- Offer patients vaccination in line with the current Joint Committee on Vaccination and Immunisation advice ([Immunisation against infectious disease](#)).

Patient and/or carer responsibilities

- Take leflunomide as prescribed and avoid withdrawal unless advised by the primary care prescriber or specialist.
- Attend regularly for monitoring and review appointments with primary care and specialist, and keep contact details up to date with both prescribers. Be aware that medicines may be stopped if they do not attend. If they are unable to attend any appointments, they should inform the relevant practitioner as soon as possible and arrange an alternative appointment. Be aware that medicines may be stopped if they do not attend appointments.
- Report adverse effects to their primary care prescriber. Seek immediate medical attention if they develop any symptoms, as detailed in section 11.
- Report the use of any over-the-counter (OTC) medications to their primary care prescriber and be aware that they should discuss the use of leflunomide and any current medication with their pharmacist before purchasing any OTC medicines.
- Moderate their alcohol intake to no more than 4 units per week.
- Not to drive or operate heavy machinery if leflunomide affects their ability to do so safely.
- Patients of childbearing potential should use effective contraception during and for up to 2 years after treatment and take a pregnancy test if they think they could be pregnant. Inform the specialist or GP immediately if they become pregnant or wish to become pregnant.
- Store their medication securely away from children.
- Read the information supplied by their GP, specialist and pharmacist, and contact the relevant practitioner if they do not understand any of the information given.
- Community pharmacist roles and responsibilities

- The community pharmacist will professionally check prescriptions to ensure they are safe for the patient and contact the GP if necessary.
- Fulfil the legal prescriptions for medication for the patient unless they are considered unsafe.
- Counsel the patient.
- Be aware of patients who attend with symptoms, as detailed in section 11. Refer them back to the prescriber for further investigation. It is a good practice to maintain a record of any over-the-counter items supplied to the patient.

1. Background

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Leflunomide is a conventional disease-modifying anti-rheumatic agent (DMARD). It exhibits anti-inflammatory and antiproliferative effects through the inhibition of pyrimidine synthesis via dihydroorotate dehydrogenase. It can be used to reduce disease activity in patients with rheumatological disease.

It may be used as monotherapy or in combination with other DMARDs including methotrexate and sulfasalazine. NSAIDs and simple analgesics may need to be continued.

The therapeutic effect usually begins after 4-6 weeks, and benefits may accrue for up to 6 months. Adverse effects usually occur early in therapy.

Leflunomide has a very long half-life of approximately 2 weeks, and in circumstances where rapid elimination is required, a washout procedure may be given if advised by the specialist. This may be due to severe adverse effects, pregnancy, severe infection or if an alternative DMARD is indicated. Washout is typically given as colestyramine 8g taken three times daily or activated charcoal 50g four times daily, for up to 11 days. [See section 6](#) for further information.

2. Indications

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Leflunomide is licensed for use in:

- Rheumatoid arthritis
- Psoriatic arthritis

It may also be used off-label for other inflammatory conditions including:

- Rheumatology conditions (e.g., systemic lupus erythematosus, axial spondyloarthritis)
- Interstitial lung disease
- Vasculitis

The specialist must specify the indication for each patient when initiating shared care and clearly state when use is off-label.

3. Locally agreed off-label use

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To be agreed and completed locally (include supporting information)

4. Contraindications and cautions

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This information does not replace the Summary of Product Characteristics (SPC), and should be read in conjunction with it. Please see [BNF](#) & [SPC](#) for comprehensive information.

Contraindications:

- Hypersensitivity to leflunomide or any excipients
- Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption
- Serious infection
- Liver impairment – active metabolite may accumulate
- Moderate to severe renal impairment
- Severe hypoproteinaemia or unexplained hyperproteinaemia
- Severe immunodeficiency
- Pregnancy and breastfeeding, or patients who are not using effective contraception during treatment. People of child-bearing potential should use effective contraception for up to 2 years after stopping treatment. Avoid, where possible in people of child-bearing potential. See [section 12](#).
- Impairment of bone marrow function as indicated by anaemia and cytopenias due to causes other than RA.
- Live vaccines (see BNF or Immunisation against infectious disease - '[The Green Book](#)' available at www.dh.gov.uk): Avoid as severe antigenic reactions may occur if a live vaccine is given concurrently. N.B. Routine influenza and pneumococcal vaccinations are highly recommended.

Cautions:

- Anaemia: avoid if significant and due to causes other than rheumatoid or psoriatic arthritis.
- Localised or systemic infection which may be more severe
- History of HIV, tuberculosis, hepatitis B or C as per specialist discretion

- Impaired bone-marrow function or those at risk of bone marrow suppression, leucopenia, or thrombocytopenia: avoid if significant and due to causes other than rheumatoid or psoriatic arthritis as there is an increased risk of haematological disorders.
- Use of concurrent haematotoxic or hepatotoxic DMARDs e.g., methotrexate (although combination therapy with methotrexate has been used).
- There is a theoretical risk of male-mediated foetal toxicity so effective contraception should be used throughout treatment. Those patients wishing to father a child should discuss with the specialist who may want to follow the washout procedure before advising he attempt conception (see [section 6](#)).
- Long half-life: The active metabolite of leflunomide, A771726, has a long half-life, usually 1 to 4 weeks. Therefore, serious adverse effects might occur even if the treatment with leflunomide has been stopped. Refer to rheumatology specialist team prior to washout procedure if serious adverse effects occur.
- Alcohol - Intake must be kept well within national limits.
- Liver reactions - Rare cases of severe liver injury, including cases with fatal outcomes, have been reported during treatment with leflunomide.
- Infections – may be more severe; consider early and vigorous treatment.
- Patients who have no history of exposure to varicella zoster virus (VZV) i.e., chickenpox or herpes zoster (shingles), should avoid contact with individuals with chickenpox or herpes zoster. Varicella–zoster immunoglobulin (VZIG) is recommended for individuals who are at increased risk of severe varicella (including patients taking immunosuppressant medicines e.g., azathioprine, ciclosporin, methotrexate, leflunomide) and who have no antibodies to varicella–zoster virus and who have significant exposure to chickenpox or herpes zoster. If the patient is infected with VZV, appropriate measures should be taken, which may include antiviral therapy and supportive care.

5. Initiation and ongoing dose regimen

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- . Once the patient is known to be tolerating the medicine, transfer to shared care would normally take place. Before transfer to shared care, the patient is expected to have had at least one specialist review and be stable (no increase in medication dose for at least 6 weeks alongside satisfactory investigation results). On transferring shared care, the specialist will provide at least 4 weeks medication to enable the practice to receive and process the shared care agreement and set up prescribing and ongoing monitoring. Any bloods required within the 4 weeks should be requested/organised and followed up by the specialist.
- The duration of treatment & frequency of review will be determined by the specialist, based on clinical response and tolerability.
- All dose or formulation adjustments will be the responsibility of the initiating specialist unless directions have been discussed and agreed with the primary care clinician.
- Termination of treatment will be the responsibility of the specialist.

Initial stabilisation:

An initial dose of 10-20mg once daily is normally given when monotherapy is used.

In cases of combination therapy with another potentially hepatotoxic DMARD, like methotrexate, 10mg once a day is usually recommended (therapeutic efficacy may be reduced with the reduced dosage).

The initiating specialist must prescribe the loading period.

Maintenance dose (following initial stabilisation):

10-20mg once daily.

The initiating specialist must prescribe the initial maintenance dose.

Duration of treatment:

All DMARDs are long-term treatments. Clinical benefits may take up to 6 months.

Conditions requiring dose adjustment:

None

6. Pharmaceutical aspects

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Route of administration:	Oral
Formulation:	<ul style="list-style-type: none">• 10mg and 20mg tablets.

Administration details:	Tablets should be swallowed whole with sufficient amounts of water. Administration with food does not affect absorption.
Other important information:	<p>The active metabolite of leflunomide has a half-life of approximately 2 weeks and undergoes extensive enterohepatic recycling and may therefore persist for long periods of time even after administration has stopped. It is not sufficient to only stop the drug because adverse effects may still occur or worsen.</p> <p>If serious adverse effects occur, the patient becomes pregnant before starting treatment with an alternative DMARD, or for other reasons which require the rapid elimination of leflunomide, a washout procedure may be necessary. This is given as colestyramine 8g taken three times daily or activated charcoal 50g four times daily, usually for 11 days. This should be discussed with a specialist before initiating procedure.</p> <p>The washout procedure interrupts the enterohepatic recycling mechanism and reduces the half-life of leflunomide to around 1 - 2 days. If the patient cannot manage the full 11-day course, there is evidence that even a few days treatment is likely to be beneficial and that 48 hours of treatment may reduce the active metabolite of leflunomide by 49 - 65% if using colestyramine and by 48% for charcoal.</p> <p>N.B. Both colestyramine and activated powdered charcoal may influence the absorption of oestrogens and progestogens such that reliable contraception with oral contraceptives may not be guaranteed during the washout procedure with colestyramine or activated powdered charcoal. The use of alternative effective contraceptive methods is recommended.</p>

7. Significant medicine interactions

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The following list is not exhaustive. Please see [BNF](#) & [SPC](#) for comprehensive information and recommended management.

- **Anticoagulants:** The anticoagulant effect of vitamin K anticoagulants may be increased by leflunomide. Close INR monitoring and follow-up is recommended.
- **Live vaccines** (e.g., oral polio, oral typhoid, MMR, BCG) should generally be avoided. Clinician discretion is advised, see [section 9](#)
- **JAK kinase inhibitors**, e.g., baricitinib, filgotinib: due to the increased risk of immunosuppression.

- **Colestyramine and activated charcoal:** Co-administration leads to a rapid and significant decrease in plasma levels of leflunomide metabolites by interrupting enterohepatic recirculation
- **Repaglinide, paclitaxel, pioglitazone, cefaclor, benzylpenicillin, ciprofloxacin, indomethacin, ketoprofen, furosemide, cimetidine, zidovudine, venetoclax:** Leflunomide may increase the exposure to these products.
- **Rosuvastatin** levels may be increased by leflunomide. A maximum rosuvastatin dose of 10mg is recommended. Caution is recommended with **other statins** and dose reduction may be required.
- **Methotrexate:** Increased risk of toxicity – increased frequency of monitoring required.
- **Phenytoin:** No clinical reports, potentially increased phenytoin levels.

8. Baseline investigations, initial monitoring and ongoing monitoring to be undertaken by specialist

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Monitoring at baseline and during initiation is the responsibility of the specialist; only once the patient is optimised on the chosen medication with no anticipated further changes expected in the immediate future will prescribing and monitoring be transferred to primary care.

Baseline investigations:

- Height and weight (to allow assessment of weight loss as this may be attributable to leflunomide)
- Blood pressure
- Full blood count (FBC)
- Urea and electrolytes (U&Es) & creatinine clearance (CrCl)
- Alanine aminotransferase (ALT) and/or aspartate aminotransferase (AST), and albumin
- Screening for viral infections as per local policy, e.g., HIV, hepatitis B and C, varicella zoster, Epstein Barr virus, cytomegalovirus should be undertaken at clinician discretion.
- Screening for lung disease, including interstitial lung disease, should be undertaken at clinician discretion on a case-by-case basis.
- Provide or request appropriate vaccination prior to treatment initiation, according to local arrangements (e.g., pneumococcal, shingles, influenza, COVID-19)
- Pregnancy should be excluded before starting treatment.

Initial monitoring:

To be repeated every 2 weeks until the dose has been stable for 6 weeks, then monthly for 3 months.

- Blood pressure
- FBC

- U&Es, including creatinine and CrCl
- AST and/or ALT, and albumin

Following a dose change repeat every 2 weeks until the dose has been stable for 6 weeks, then revert to previous schedule.

More frequent monitoring, e.g., monthly, is appropriate in patients at higher risk of toxicity; e.g., concurrent use of more than one DMARD. This is particularly important for patients co-prescribed methotrexate and leflunomide. The combination is highly effective but potentially synergistically toxic to liver and bone marrow and increase monitoring frequency is strongly advised.

Ongoing monitoring:

The specialist will retain the responsibility for monitoring the patient’s ongoing response to treatment and advise if a dose change or treatment cessation is appropriate. This should usually be undertaken annually.

When a patient is reviewed, advise primary care whether treatment should be continued, confirm the ongoing dose, and whether the ongoing monitoring outlined in [section 9](#) remains appropriate.

9. Ongoing monitoring requirements to be undertaken by primary care

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See [section 10](#) for further guidance on management of adverse effects/responding to monitoring results.

Monitoring and advice	Frequency
<ul style="list-style-type: none"> • FBC • U&Es, including creatinine and CrCl • ALT and/or AST and albumin • BP & weight 	<p>Monthly for the first 3 months of treatment followed by:</p> <p>At least every 12 weeks, and more frequently in patients at higher risk of toxicity, as advised by the specialist team.</p> <p>Patients would be weighed at each visit.</p> <p>Patients receiving methotrexate with leflunomide need to continue with monthly blood tests throughout their treatment. The exact frequency of monitoring to be</p>

	communicated by the specialist in all cases.
<ul style="list-style-type: none"> • Patients aged from 50 years who are severely immunosuppressed and have not received the shingles vaccine before will be eligible for the shingles vaccine (varicella zoster). This will be provided as two doses of the non-live vaccine. If the patient is taking additional DMARDs, check advice for all drugs. Please refer to Green Book Chapter 6 and Chapter 28a (Shingles) for further details. • Annual influenza (The Green Book, Chapter 19) vaccinations are recommended. • COVID-19 vaccination is safe and recommended. • Repeat pneumococcal vaccine is highly recommended. See Green Book Chapter 25 for advice. 	<ul style="list-style-type: none"> • Shingles vaccination: Chapter 28a (Shingles). • Influenza vaccination: annual. It is advisable to add the patient to the influenza vaccine list. • Other vaccinations as per national schedule, e.g., pneumococcal vaccine, COVID-19.

(If relevant) If monitoring results are forwarded to the specialist team, please include clear clinical information on the reason for sending, to inform action to be taken by secondary care.

10. Adverse effects and other management

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Any serious adverse reactions should be reported to the MHRA via the Yellow Card scheme. Visit www.mhra.gov.uk/yellowcard

For a full list of side effects and information on incidence of ADRs, refer to the BNF or see relevant summaries of product characteristics

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

Result	Action for primary care
<p>As well as responding to absolute values in laboratory tests, a rapid change or a consistent trend in any value should prompt caution and extra vigilance.</p> <p>Other benchmark values may be set by secondary care in specific clinical circumstances. This will be communicated by the specialist.</p>	

<p>Full blood count:</p> <ul style="list-style-type: none"> • White blood cells $<3.5 \times 10^9/L$ • Lymphocytes less than $0.5 \times 10^9/L$ • Neutrophils $<1.6 \times 10^9/L$ • Platelets $<140 \times 10^9/L$ Eosinophilia $>0.5 \times 10^9/L$ 	<p>Withhold and discuss with specialist team.</p>
<p>Mean cell volume >105 fL</p>	<p>Consider interruption in treatment. Check serum folate, B12, alcohol history and TSH and treat any underlying abnormality. If results of these additional investigations are normal discuss with specialist team urgently.</p>
<p>Blood Pressure</p>	<p>Treat hypertension in line with NICE guidance. If BP remains uncontrolled, withhold leflunomide and discuss with specialist team.</p>
<p>Weight</p>	<p>If $>10\%$ weight loss with no cause identified, withhold leflunomide and discuss with specialist team.</p>
<p>Signs or symptoms of bone marrow suppression, e.g., unexplained bleeding or bruising with or without sore throat, mouth ulcers.</p>	<p>Check FBC immediately and discuss with the specialist team. See haematological monitoring above.</p>
<p>Acute infection</p>	<p>During serious infections temporarily withhold leflunomide until the patient has recovered. Consider if additional investigations (e.g. FBC) and washout procedure required – discuss with specialist team. See section 6.</p>
<p>Liver function tests: ALT or AST >100 units/L, or any sudden increases (e.g. double of baseline), OR Unexplained fall in serum albumin $<30g/L$ Jaundice</p>	<p>Withhold and discuss with specialist team. Consider washout procedure. See section 6. Assess for other causes of hepatic dysfunction such as alcohol history and drug interactions, including OTC or complementary medication.</p>

<p>Renal function:</p> <p>Creatinine increase of greater than 30% from baseline in the last 12 months or GFR reduces to less than 60mL/min</p>	<p>Withhold and discuss with specialist team.</p>
<p>Gastrointestinal disorders:</p> <p>Nausea</p> <p>Diarrhoea</p>	<p>Review for reversible causes. Withhold until discuss with specialist team if persistent or severe. Washout, under specialist advice, may be required if severe. See section 6</p> <p>Diarrhoea is common and usually settles. If persistent or severe, withhold and discuss with specialist team.</p>
<p>Ulcerative stomatitis, haematemesis, black or bloody stools, or suspected pancreatitis.</p>	<p>Withhold and discuss with specialist team. Washout, under specialist advice, may be required if severe. See section 6.</p>
<p>Symptoms of interstitial lung disease e.g. persistent cough, dyspnoea, fever</p>	<p>If leflunomide-induced lung disease is suspected, discuss with specialist team urgently. Consider washout procedure. See section 6 Treat with corticosteroids as advised by specialist and do not restart leflunomide.</p>
<p>Skin</p> <p>Generalised rash</p>	<p>Discuss with specialist, washout may be required if severe. See section 6.</p>
<p>Pregnancy</p>	<p>Stop leflunomide immediately and discuss with specialist team urgently. Washout should be considered. See section 12.</p>

11. Advice to patients and carers

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The specialist will counsel the patient with regard to the benefits and risks of treatment and will provide the patient with any relevant information and advice, including patient information leaflets on individual medicines.

The patient should be advised to report any of the following signs or symptoms to their primary care prescriber without delay:

- Symptoms of chickenpox or contact with a person with chickenpox or shingles. Any exposure of patients with no varicella-zoster virus antibodies to chickenpox and shingles sufferers should be reported for assessment and possible treatment.
- Persistent cough, shortness of breath, or any other problems with breathing.

- Sore throat, mouth ulcers, high temperature, skin rash, swollen glands, or any other signs or symptoms of infection
- Signs or symptoms of liver problems, such as yellow skin or eyes (jaundice), itching all over, nausea or vomiting, abdominal discomfort.
- Unexplained bleeding or bruising, black stools, or blood in the vomit or stools.
- Suspected or confirmed pregnancy.
- Any tingling, numbness or weakness in extremities that may indicate peripheral neuropathy

The patient should be advised:

- Moderate their alcohol intake to no more than 4 units per week while taking leflunomide, taking alcohol and leflunomide together increases the risk of liver injury.
- Tell anyone who prescribes them a medicine that they are taking leflunomide. Always ask a pharmacist before purchasing any medicines over the counter, including herbal remedies, and ask if they are safe.
- Must not become pregnant whilst taking leflunomide or for 2 years after stopping therapy.
- To use effective contraception, and to take a pregnancy test if they think they could be pregnant. Patients should inform the specialist or GP as soon as possible if they become pregnant. All patients, both male and female, should inform their specialist well in advance if they are planning a pregnancy so that changes can be made to their treatment regime.
- The patient will also be given an approved information leaflet from Versus Arthritis. Further copies are available [here](#).

Patient information:

- [VersusArthritis Leflunomide](#)

12. Pregnancy, paternal exposure and breast feeding

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It is the responsibility of the specialist to provide advice on the need for contraception to male and female patients on initiation and at each review, but the ongoing responsibility for providing this advice rests with both the primary care prescriber and the specialist.

Pregnancy:

Leflunomide is teratogenic and contraindicated in pregnancy. Patients of child-bearing potential should use effective contraception during and for up to 2 years after treatment, unless a washout procedure is followed (see below). See [FSRH statement on contraception for women using known teratogenic drugs](#) for information on contraceptives considered highly effective.

The active metabolite of leflunomide is highly protein bound and because of extensive enterohepatic recycling its half-life is prolonged. The manufacturer currently recommends a two-

year waiting period after discontinuation of the medicine before attempting to conceive. The manufacturer also advises that the plasma levels of the active metabolite of leflunomide (teriflunomide) should be below 0.02mg/L at the end of the two-year period, confirmed by a second test after an interval of at least 14 days. If both tests show plasma levels of teriflunomide to be less than 0.02mg/L, then no teratogenic risk is expected. It is important to note that this test may only be available to patients who are taking the branded Arava® leflunomide tablets.

If a waiting period of 2 years using effective contraception is considered unpractical, a washout procedure may be advisable ([see section 6](#)). Following this, the recommendations regarding verification of teriflunomide levels remain. Two tests must be done no less than 14 days apart and conception is not advised until one and a half months after the first plasma concentration below 0.02mg/L. This test may only be available to patients who are taking the branded Arava® leflunomide tablets.

If a woman becomes pregnant while taking leflunomide or within two years after discontinuation, the manufacturer recommends an immediate 11-day washout procedure with colestyramine or activated charcoal (see [section 6](#)). Contact Rheumatology team and refer to early pregnancy unit as soon as possible.

Information for healthcare professionals: [Leflunomide in pregnancy \(UKTIS\)](#)

Information for patients and carers: [Leflunomide in pregnancy \(Bumps\)](#)

Breastfeeding:

Leflunomide and its metabolites pass into breast milk in animal studies. Manufacturer states that leflunomide is contraindicated for breastfeeding patients.

Information for healthcare professionals: <https://www.sps.nhs.uk/medicines/leflunomide/>

Paternal exposure:

Male patients should be aware of the possible male-mediated foetal toxicity. Effective contraception during treatment with leflunomide should also be guaranteed.

13. Specialist contact information

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Name: **Named Rheumatology Consultant as per clinic letter**

Role and specialty: **Consultant Rheumatologist**

Daytime telephone number:

NUH: 0115 919 4477 Secretaries Extension: 78947,

SFH: 01623 676002 then choose option 2

Email address:

NUH: Nuhnt.ntcrheumatologysecretaries@nhs.net,

SFH: sfh-tr.rheumqueries@nhs.net

14. Additional information

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Where patient care is transferred from one specialist service or GP practice to another, a new shared care agreement must be completed. Ensure that the specialist is informed in writing of any changes to the patient's GP or their contact details.

15. References

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16. Other relevant national guidance

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- Shared Care for Medicines Guidance – A Standard Approach (RMOC). Available from <https://www.sps.nhs.uk/articles/rmoc-shared-care-guidance/>
- NHSE guidance – Responsibility for prescribing between primary & secondary/tertiary care. Available from <https://www.england.nhs.uk/publication/responsibility-for-prescribing-between-primary-and-secondary-tertiary-care/>
- General Medical Council. Good practice in prescribing and managing medicines and devices. Shared care. Available from <https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-practice-in-prescribing-and-managing-medicines-and-devices/shared-care>
- NICE NG197: Shared decision making. Last updated June 2021. <https://www.nice.org.uk/guidance/ng197/>

17. Local arrangements for referral

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Define the referral procedure from hospital to primary care prescriber & route of return should the patient's condition change.

- The request for shared care should be accompanied by individual patient information, outlining all relevant aspects of the patient's care and which includes direction to the information sheets at the [APC website](#).
- The specialist will request shared care with the GP in writing.
- If the GP doesn't agree to shared care, they should inform the specialist of their decision in writing within 14 days, outlining the reason for the decline. The agreement can be assumed if the GP does not provide a written decline.
- In cases where shared care arrangements are not in place or where problems have arisen within the agreement, and patient care may be affected, the responsibility for the patient's management, including prescribing, reverts to the specialist.
Should the patient's condition change, the GP should contact the relevant specialist using the details provided with the shared care request letter.

Rheumatological Condition: Leflunomide SCP			
Version	Author(s)	Date	Changes
V1.0	Shary Walker, Interface and Formulary Pharmacist	Nov 2023	<ul style="list-style-type: none"> • Adopted from the National template published by NHS England in July 2022. The information is cross-referenced between the national template and the local shared care guidelines. • Additional information included to reflect the locally agreed shared care protocol. • Consultations: <ul style="list-style-type: none"> ▪ Dr Asha Srikanth – NUH Consultant Rheumatologist, Rheumatology Head of Service ▪ Gail Burbage – NUH Rheumatology Nurse Consultant ▪ Dr Clare Wilkinson – SFH Consultant Rheumatologist