







Chapter 10. Musculoskeletal and joint diseases

[For cost information please go to the most recent cost comparison charts](#)

Key

	<p>Red drug see GMMMG RAG list <i>Click on the symbols to access this list</i></p>
	<p>Amber drug see GMMMG RAG list <i>Click on the symbols to access this list</i></p>
	<p>Green drug see GMMMG RAG list <i>Click on the symbols to access this list</i></p>
	<p>If a medicine is unlicensed this should be highlighted in the template as follows</p> <p style="text-align: right;">Drug name U</p>
	<p>Not Recommended</p>
	<p>Over the Counter</p>
<p>Order of Drug Choice</p>	<p>Where there is no preferred 1st line agent provided, the drug choice appears in alphabetical order.</p>

BNF chapter	10	Musculoskeletal and joint diseases
Section	10.1	Drugs used in rheumatic diseases and gout
Subsection	10.1.1	Non-steroidal anti-inflammatory drugs
First choice	Ibuprofen tablets 200mg; 400mg; 600mg	MHRA DSU: High-dose ibuprofen: small increase in cardiovascular risk, June 2015
Alternatives	Naproxen tablets 250mg; 500mg	
	Diclofenac tablets 50mg	MHRA DSU: diclofenac: new contraindications and warnings, June 2013. MHRA DSU: NSAIDs: cardiovascular risks October 2012. Further evidence that the cardiovascular risk with diclofenac is higher than other non-selective NSAIDs and similar to the selective COX-2 inhibitors
	Etoricoxib tablets 30mg, 60mg, 90mg, 120mg	MHRA DSU: Etoricoxib (Arcoxia): revised dose recommendation for rheumatoid arthritis and ankylosing spondylitis MHRA DSU: etoricoxib: prescribing to patients with high blood pressure, July 2008.






General Guidance applicable to all drugs






- [NICE CG177: Osteoarthritis: Care and management in adults.](#)
- [NICE CG79: Rheumatoid arthritis: The management of rheumatoid arthritis in adults.](#)
- [CKS \(2013\) NSAID prescribing issues](#)
- [BNF: Prophylaxis and treatment of NSAID-associated gastro-intestinal ulcers](#)
- [CKS \(2013\): Patients on low dose aspirin](#)
- [MHRA DSU: Non-steroidal anti-inflammatory drugs: reminder on renal failure and impairment, May 2009](#)
- [MHRA DSU: Non-steroidal anti-inflammatory drugs: cardiovascular risk, October 2012](#)
- [MHRA DSU: NSAIDs and coxibs: balancing of cardiovascular and gastrointestinal risks, December 2007](#)

Subsection	10.1.2 Corticosteroids	
Systemic corticosteroids		
The general actions, uses, and cautions of corticosteroids are described in BNF section 6.3 .		
Local corticosteroid injections		
First choice	Methylprednisolone acetate 40mg/ml or Methylprednisolone acetate 40mg, lidocaine hydrochloride 10mg/ml	
Alternatives	Dexamethasone sodium phosphate 3.8mg/ml	MHRA DSU: Dexamethasone 4 mg/ml injection (Organon Laboratories Limited): reformulation with changes in name, concentration, storage conditions, and presentation, October 2014.
	Hydrocortisone acetate 25mg/ml	
	Triamcinolone acetonide 10mg/ml Triamcinolone acetonide 40mg/ml	
Subsection	10.1.3 Drugs that suppress the rheumatic disease process	
DMARDS		
First Choice	Methotrexate 2.5mg tablets	<p>A</p> <p>NPSA Alert, June 2006. Improving compliance with oral methotrexate guidelines.</p> <p>When prescribing oral methotrexate only ever prescribe 2.5mg tablets and pay particular attention to correct dosing instructions – weekly dosing.</p> <p>Co-prescribe oral folic acid 5mg weekly with methotrexate (to be taken</p>

	<p>Methotrexate 50mg/ml pre-filled Pen injection (Metobject® brand only amber formulation)</p>	<p>at least 24 hours after the methotrexate [often 2 -3 days after]) and increase dose if necessary dependant on folate levels.</p> <p>A</p> <p>Specialist initiation only</p> <p>If moving the parenteral formulation to homecare, clinicians should ensure that responsibility for the different aspects of care is clearly defined (in particular blood monitoring.</p>
	<p>Sulfasalazine e/c 500mg tablets</p>	<p>A</p>
	<p>Hydroxychloroquine sulphate 200mg tablets</p>	<p>A</p>
Alternatives	<p>Leflunomide tablets 10mg; 15mg; 20mg</p>	<p>A</p> <p>Specialist initiation only</p>
	<p>Azathioprine tablets 25mg; 50mg</p>	<p>A</p>
	<p>Ciclosporin capsules 10mg; 25mg; 50mg; 100mg</p>	<p>A</p> <p>BNF Online Patients should be stabilised on a particular brand of oral ciclosporin because switching between formulations without close monitoring may lead to clinically important changes in blood-ciclosporin concentration. Prescribing and dispensing of ciclosporin should be by brand name to avoid inadvertent switching.</p>
	<p>Mycophenolate U Tablets 500mg, Capsules 250mg</p>	<p>A</p> <p>MHRA DSU: Mycophenolate mofetil, mycophenolic acid: new pregnancy-prevention advice for women and men 2015</p> <p>MHRA DSU: Mycophenolate mofetil: pure red cell aplasia, July</p>

		2009 MHRA DSU: Mycophenolate mofetil (CellCept) and mycophenolic acid: risk of hypogammaglobulinaemia and risk of bronchiectasis, January 2015
<p>General guidance applicable to all drugs</p> <ul style="list-style-type: none"> NICE CG79: Rheumatoid arthritis: The management of rheumatoid arthritis in adults. 		
<p>Biologics (secondary care use only)</p>		
<p>GMMMG High Cost Drugs Pathway for Rheumatoid Arthritis (July 2017)</p>		
<p>First Choices (Follow relevant pathway)</p>	<p>Abatacept</p>	<p>Prevents full activation of T-lymphocytes</p> <p></p>
	<p>Adalimumab</p>	<p>TNF inhibitor</p> <p></p> <p>NICE TA195: Adalimumab, etanercept, infliximab, rituximab and abatacept for the treatment of rheumatoid arthritis after the failure of a TNF inhibitor.</p> <p>NICE TA375: Adalimumab, etanercept, infliximab, certolizumab pegol, golimumab, tocilizumab and abatacept for rheumatoid arthritis not previously treated with DMARDs or after conventional DMARDs only have failed</p> <p>TA392: Adalimumab for treating moderate to severe hidradenitis suppurativa</p>
	<p>Apremilast[▼] (Otezla®)</p>	<p>PDE4 Inhibitor</p> <p></p> <p>TA433: Apremilast for treating active psoriatic arthritis</p>

	<p>MHRA: Apremilast (Otezla ▼): risk of suicidal thoughts and behaviour</p>
<p>Baricitinib (Olumiant®) 2mg and 4mg tablets</p>	<p></p> <p>NICE TA466: Baricitinib for moderate to severe rheumatoid arthritis</p>
<p>Belimumab</p>	<p>Inhibits activity of B-lymphocyte stimulator</p> <p></p> <p>TA397: Belimumab for treating active autoantibody-positive systemic lupus erythematosus</p>
<p>Certolizumab</p>	<p>TNF inhibitor</p> <p></p> <p>NICE TA415: Certolizumab pegol for treating rheumatoid arthritis after inadequate response to a TNF-alpha inhibitor</p> <p>NICE TA445: Certolizumab pegol and secukinumab for treating active psoriatic arthritis after inadequate response to DMARDs</p>
<p>Etanercept</p>	<p>TNF inhibitor</p> <p></p> <p>NICE TA35: Guidance on the use of etanercept for the treatment of juvenile idiopathic arthritis.</p> <p>NICE TA199: Etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis.</p>
<p>Golimumab</p>	<p>TNF inhibitor</p> <p></p> <p>NICE TA220: Golimumab for the treatment of psoriatic</p>

	<p>arthritis.</p> <p>NICE TA225: Golimumab for the treatment of rheumatoid arthritis after the failure of previous disease-modifying anti-rheumatic drugs.</p>
Infliximab	<p>TNF inhibitor</p> <p></p>
Rituximab	<p>Anti-lymphocytic - causes lysis of B lymphocytes</p> <p></p> <p>MHRA DSU: Rituximab: progressive multifocal leukoencephalopathy in a patient without prior treatment for rheumatoid arthritis, December 2009.</p> <p>MHRA DSU: Rituximab: screen for hepatitis B virus before treatment, December 2013</p> <p>NICE TA308: Rituximab in combination with glucocorticoids for treating anti-neutrophil cytoplasmic antibody-associated vasculitis.</p> <p>GMMMG Rituximab biosimilar recommendation (August 2017)</p>
Sarilumab	<p>Interleukin-6 antagonist</p> <p></p> <p>NICE TA485: Sarilumab for moderate to severe rheumatoid arthritis</p>
Secukinumab	<p></p> <p>TA407: Secukinumab for active ankylosing spondylitis after treatment with non-steroidal anti-inflammatory drugs or TNF-alpha inhibitors</p>
Tocilizumab	<p>Interleukin-6 antagonist</p> <p></p> <p>NICE TA238: Systemic juvenile idiopathic arthritis – tocilizumab.</p> <p>NICE TA247: Tocilizumab for</p>

		the treatment of systemic juvenile idiopathic arthritis.
	Tofacitinib	Janus Kinase Inhibitor R NICE TA480: Tofacitinib for moderate to severe rheumatoid arthritis
	Ustekinumab	R NICE TA340: Ustekinumab for treating active psoriatic arthritis.
<p>General guidance applicable to all drugs</p> <ul style="list-style-type: none"> • Biologics in Rheumatoid Arthritis can be used, without prior funding approval, according to GMMMG approved pathways High Cost Drugs Pathway for Rheumatoid Arthritis and Harmonised Biologics Pathway for Ankylosing Spondylitis and Psoriatic Arthritis • MHRA DSU: Tumour necrosis factor alpha inhibitors: risk of tuberculosis—screen all patients before starting treatment and monitor them closely, April 2014 • NICE Bites (edition 39a, March 2012): Rheumatoid Arthritis and CG79. • MHRA DSU: TNFa inhibitors: risk of TB – screen all patients before starting treatment and monitor them closely(April 2016) <p>Additional NICE guidance and technology appraisals:</p> <ul style="list-style-type: none"> • NICE CG79: Rheumatoid arthritis: The management of rheumatoid arthritis in adults. • NICE TA383: TNF-alpha inhibitors for ankylosing spondylitis and non-radiographic axial spondyloarthritis 		
Subsection	10.1.4 Gout and cytotoxic induced hyperuricaemia	
Acute attack		
First choice Alternative where NSAIDS contraindicated	Colchicine 500microgram tablets	MHRA DSU: colchicine: extremely toxic in overdose, November 2009. British Society for Rheumatology and British Health Professionals in Rheumatology Guideline for the Management of Gout
Long-term control of gout		
First choice	Allopurinol tablets	

	100mg; 300mg	
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<p>Alternatives</p>	<p>Febuxostat tablets 80mg; 120mg</p>	<p>G_n</p> <p>Use only where allopurinol is contraindicated or not tolerated. (As per NICE guidance and/or on specialist advice.)</p> <p>NICE TA164: Febuxostat for the management of hyperuricaemia in people with gout.</p> <p>MHRA DSU: Febuxostat (Adenuric▼): stop treatment if signs or symptoms of serious hypersensitivity occur, June 2012.</p>
	<p>Sulfinpyrazone tablets 100mg; 200mg</p>	
<p>General guidance applicable to all drugs</p> <ul style="list-style-type: none"> British Society for Rheumatology and British Health Professionals in Rheumatology Guideline for the Management of Gout <p>NICE Technology Appraisals:</p> <ul style="list-style-type: none"> NICE TA291: Pegloticase for treating severe debilitating chronic tophaceous gout NICE TA281: Canakinumab for treating gouty arthritis attacks and reducing the frequency of subsequent attacks (terminated appraisal) 		
<p>Subsection</p>	<p>10.1.5 Other drugs for rheumatic diseases</p>	
<p>Applicable guidance:</p> <ul style="list-style-type: none"> NICE CG177: Osteoarthritis: Care and management in adults. - section 1.4.5 Do not offer glucosamine or chondroitin products for the management of osteoarthritis. GMMMG 'Do Not Prescribe and Grey Lists': Glucosamine. GM Policy Statement (2014). Hyaluronic Acid injections for Osteoarthritis. (GM037) <p>NICE Technology Appraisals:</p> <ul style="list-style-type: none"> NICE TA477: Autologous chondrocyte implantation for treating symptomatic articular cartilage defects of the knee 		

Section	10.2 Drugs used in neuromuscular disorders	
Subsection	10.2.1 Drugs that enhance neuromuscular transmission	
First choice	Pyridostigmine 60mg tablets	
Alternatives	Neostigmine 15mg tablets	
Subsection	10.2.2 Skeletal muscle relaxants	
First choice	Dantrolene capsules 25mg; 100mg	
Alternatives	Diazepam tablets 2mg; 5mg; 10mg oral solution 2mg/5ml	
	Baclofen 10mg tablets Baclofen oral solution 5mg/5ml	
	Tizanidine tablets 2mg; 4mg	Gn

Section	10.3 Drugs for the relief of soft-tissue inflammation	
Subsection	10.3.1 Enzymes (Secondary care use)	
	Collagenase (Xiapex®)	<p>R</p> <p>NICE TA459: Collagenase clostridium histolyticum for treating Dupuytren's contracture</p>
Subsection	10.3.2 Rubefaciants and other topical antirheumatics	
Rubefaciants		
<p>The evidence available does not support the use of topical rubefaciants in acute or chronic musculoskeletal pain and thus they are not recommended within this formulary. If clinicians do decide to prescribe they should ensure they choose the cheapest product available.</p>		
Topical NSAIDS		
Options	Ibuprofen 5% Gel (Available as 30g, 50g or 100g tubes)	
	Ketoprofen 2.5% Gel (Available as 30g, 50g or 100g tubes)	MHRA DSU: topical ketoprofen: reminder on photosensitivity reactions, June 2009 and MHRA August 2010:
	Piroxicam 0.5% Gel (Available as 60g or 112g tubes)	
Capsaicin		
Options	Capsaicin 0.025% cream	NICE CG177: Osteoarthritis: Care and management in adults. GMMMG Neuropathic Pain Guideline March 2014
	Capsaicin 0.075% cream	
Poultices		
Not recommended for prescribing		