

Gout: Diagnosis and Management

NICE guideline: search strategies

NICE guideline <number>

Search strategies

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Draft for Consultation

*This guideline was developed by the
National Guideline Centre*

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The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The recommendations in this guideline are not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and, where appropriate, their carer or guardian.

Local commissioners and providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

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Search StrategySearch Strategy

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Appendix A: Search Strategy

Gout: Diagnosis and Management search strategy

This literature search strategy was used for the following reviews:

- What information and support is needed by people with gout and their families or carers in relation to gout, and when should this be provided?
- What signs and symptoms indicate gout as a possible diagnosis?
- What are the most accurate and cost-effective approaches to diagnosing gout, in particular serum urate level compared with joint aspiration?
- What is the clinical and cost effectiveness of pharmacological interventions (including NSAIDs, colchicine, corticosteroids and IL-1 inhibitors) and non-pharmacological interventions for managing gout flares?
- When should urate-lowering therapy be started, in relation to a flare, in people with gout?
- In people with gout (including people with gout and chronic kidney disease), what is the clinical and cost effectiveness of colchicine, NSAIDs, corticosteroids and IL-1 inhibitors for the prevention of gout flares during the initiation or titration of urate-lowering therapy?
- What is the clinical and cost effectiveness of diet and lifestyle modifications for gout?
- What is the clinical and cost effectiveness of a 'treat-to-target' urate lowering management strategy compared with usual care for gout?
- What is the best serum urate level target to use when treating-to-target in gout?
- What is the optimum frequency of serum urate level monitoring for people continuing on urate-lowering therapies for gout?
- What follow-up should be offered to people with gout after a gout flare?
- What are the indications for referring people with gout to specialist services?
- What is the clinical and cost effectiveness of surgical excision of tophi (deposits of monosodium urate crystals) in people with gout?
- Which people with gout should be offered a urate-lowering therapy such as a xanthine oxidase inhibitor, a uricosuric or a uricase?
- In people with gout (including people with gout and chronic kidney disease), which urate-lowering therapies (either alone or in combination with each other) are the most clinically and cost effective for first-line treatment?

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual.{NICE2014}

For more information, please see the Methodology review published as part of the accompanying documents for this guideline.

A.1 Clinical search literature search strategy

A.1.1 Patient Information

Searches for patient views were run in Medline (OVID), Embase (OVID), CINAHL, Current Nursing and Allied Health Literature (EBSCO) and PsycINFO (ProQuest). Search filters were applied to the search where appropriate.

Table 1: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 06 July 2021	Qualitative studies

Database	Dates searched	Search filter used
		Exclusions (animal studies, letters, comments)
Embase (OVID)	1974 – 06 July 2021	Qualitative studies Exclusions (animal studies, letters, comments)
CINAHL, Current Nursing and Allied Health Literature (EBSCO)	Inception – 06 July 2021	English language studies
PsycINFO (ProQuest)	Inception – 06 July 2021	English language studies

Medline (Ovid) search terms

1.	exp Gout/
2.	gout*.ti,ab.
3.	toph*.ti,ab.
4.	podagra.ti,ab.
5.	pseudogout.ti,ab.
6.	or/1-5
7.	letter/
8.	editorial/
9.	news/
10.	exp historical article/
11.	Anecdotes as Topic/
12.	comment/
13.	case report/
14.	(letter or comment*).ti.
15.	or/7-14
16.	randomized controlled trial/ or random*.ti,ab.
17.	15 not 16
18.	animals/ not humans/
19.	exp Animals, Laboratory/
20.	exp Animal Experimentation/
21.	exp Models, Animal/
22.	exp Rodentia/
23.	(rat or rats or mouse or mice).ti.
24.	or/17-23
25.	6 not 24
26.	Limit 25 to English language
27.	Qualitative research/ or Narration/ or exp Interviews as Topic/ or exp "Surveys and Questionnaires"/ or Health care surveys/
28.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*).ti,ab.
29.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van

	kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).ti,ab.
30.	or/27-29
31.	26 and 30

Embase (Ovid) search terms

1.	exp Gout/
2.	gout*.ti,ab.
3.	toph*.ti,ab.
4.	podagra.ti,ab.
5.	pseudogout.ti,ab.
6.	or/1-5
7.	letter.pt. or letter/
8.	note.pt.
9.	editorial.pt.
10.	case report/ or case study/
11.	(letter or comment*).ti.
12.	or/7-11
13.	randomized controlled trial/ or random*.ti,ab.
14.	12 not 13
15.	animal/ not human/
16.	nonhuman/
17.	exp Animal Experiment/
18.	exp Experimental Animal/
19.	animal model/
20.	exp Rodent/
21.	(rat or rats or mouse or mice).ti.
22.	or/14-21
23.	6 not 22
24.	Limit 23 to English language
25.	health survey/ or exp questionnaire/ or exp interview/ or qualitative research/ or narrative/
26.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*).ti,ab.
27.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).ti,ab.
28.	or/25-27
29.	24 and 28

CINAHL (EBSCO) search terms

S1.	(MH "Gout")
S2.	gout*
S3.	toph*
S4.	podagra
S5.	pseudogout

S6.	S1 OR S2 OR S3 OR S4 OR S5
S7.	PT anecdote or PT audiovisual or PT bibliography or PT biography or PT book or PT book review or PT brief item or PT cartoon or PT commentary or PT computer program or PT editorial or PT games or PT glossary or PT historical material or PT interview or PT letter or PT listservs or PT masters thesis or PT obituary or PT pamphlet or PT pamphlet chapter or PT pictorial or PT poetry or PT proceedings or PT "questions and answers" or PT response or PT software or PT teaching materials or PT website
S8.	S6 not S7
S9.	(MH "Qualitative Studies+")
S10.	(MH "Qualitative Validity+")
S11.	(MH "Interviews+") OR (MH "Focus Groups") OR (MH "Surveys") OR (MH "Questionnaires+")
S12.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*)
S13.	S9 or S10 or S11 or S12
S14.	S8 and S13

PsycINFO (ProQuest) search terms

1.	(Gout* OR toph* OR podagra OR pseudogout) NOT ((su.exact.explode("rodents") OR su.exact.explode("mice") OR (su.exact("animals"))) NOT ((su.exact("human males") OR su.exact("human females") OR ti(rat OR rats OR mouse OR mice)))
2.	((su.exact.explode("qualitative methods") or su.exact("narratives") or su.exact.explode("questionnaires") or su.exact.explode("interviews") or su.exact.explode("health care services") or ti,ab(qualitative or interview* or focus group* or theme* or questionnaire* or survey*) or ti,ab(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* near/3 analys*) or theoretical-sampl* or purposive-sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*))
3.	1 and 2

A.2 Clinical search literature search strategy

A.2.1 Signs and Symptoms

Searches for patient views were run in Medline (OVID), Embase (OVID), CINAHL, Current Nursing and Allied Health Literature (EBSCO) and PsycINFO (ProQuest). Search filters were applied to the search where appropriate.

Table 2: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 06 July 2021	Randomised controlled trials Systematic review studies Observational studies Diagnostic tests studies Exclusions (animal studies, letters, comments)
Embase (OVID)	1974 – 06 July 2021	Randomised controlled trials Systematic review studies Observational studies Diagnostic tests studies

Database	Dates searched	Search filter used
		Exclusions (animal studies, letters, comments)

Medline (Ovid) search terms

32.	exp Gout/
33.	gout*.ti,ab.
34.	toph*.ti,ab.
35.	podagra.ti,ab.
36.	pseudogout.ti,ab.
37.	or/1-5
38.	letter/
39.	editorial/
40.	news/
41.	exp historical article/
42.	Anecdotes as Topic/
43.	comment/
44.	case report/
45.	(letter or comment*).ti.
46.	or/7-14
47.	randomized controlled trial/ or random*.ti,ab.
48.	15 not 16
49.	animals/ not humans/
50.	exp Animals, Laboratory/
51.	exp Animal Experimentation/
52.	exp Models, Animal/
53.	exp Rodentia/
54.	(rat or rats or mouse or mice).ti.
55.	or/17-23
56.	6 not 24
57.	Limit 25 to English language
58.	randomized controlled trial.pt.
59.	controlled clinical trial.pt.
60.	randomi#ed.ti,ab.
61.	placebo.ab.
62.	randomly.ti,ab.
63.	Clinical Trials as topic.sh.
64.	trial.ti.
65.	or/27-33
66.	Meta-Analysis/
67.	exp Meta-Analysis as Topic/
68.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
69.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
70.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
71.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.

72.	(search* adj4 literature).ab.
73.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
74.	cochrane.jw.
75.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
76.	or/35-44
77.	Epidemiologic studies/
78.	Observational study/
79.	exp Cohort studies/
80.	(cohort adj (study or studies or analys* or data)).ti,ab.
81.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
82.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
83.	Controlled Before-After Studies/
84.	Historically Controlled Study/
85.	Interrupted Time Series Analysis/
86.	(before adj2 after adj2 (study or studies or data)).ti,ab.
87.	exp case control studies/
88.	case control*.ti,ab.
89.	Cross-sectional studies/
90.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
91.	or/46-59
92.	(predictive value* or PPV or NPV).ti,ab.
93.	likelihood ratio*.ti,ab.
94.	likelihood function/
95.	((area under adj4 curve) or AUC).ti,ab.
96.	(receive* operat* characteristic* or receive* operat* curve* or ROC curve*).ti,ab.
97.	gold standard.ab.
98.	exp Diagnostic errors/
99.	(false positiv* or false negativ*).tw.
100.	Diagnosis, Differential/
101.	(diagnos* adj3 (performance* or accurac* or utilit* or value* or efficien* or effectiveness or precision or validat* or validity or differential or error*)).ti,ab.
102.	or/61-70
103.	26 and (34 or 45 or 60 or 71)

Embase (Ovid) search terms

30.	exp Gout/
31.	gout*.ti,ab.
32.	toph*.ti,ab.
33.	podagra.ti,ab.
34.	pseudogout.ti,ab.
35.	or/1-5
36.	letter.pt. or letter/
37.	note.pt.
38.	editorial.pt.

39.	case report/ or case study/
40.	(letter or comment*).ti.
41.	or/7-11
42.	randomized controlled trial/ or random*.ti,ab.
43.	12 not 13
44.	animal/ not human/
45.	nonhuman/
46.	exp Animal Experiment/
47.	exp Experimental Animal/
48.	animal model/
49.	exp Rodent/
50.	(rat or rats or mouse or mice).ti.
51.	or/14-21
52.	6 not 22
53.	Limit 23 to English language
54.	random*.ti,ab.
55.	factorial*.ti,ab.
56.	(crossover* or cross over*).ti,ab.
57.	((doubl* or singl*) adj blind*).ti,ab.
58.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
59.	crossover procedure/
60.	single blind procedure/
61.	randomized controlled trial/
62.	double blind procedure/
63.	or/25-33
64.	systematic review/
65.	meta-analysis/
66.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
67.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
68.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
69.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
70.	(search* adj4 literature).ab.
71.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
72.	cochrane.jw.
73.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
74.	or/35-44
75.	Clinical study/
76.	Observational study/
77.	family study/
78.	longitudinal study/
79.	retrospective study/
80.	prospective study/
81.	cohort analysis/

82.	follow-up/
83.	cohort*.ti,ab.
84.	53 and 54
85.	(cohort adj (study or studies or analys* or data)).ti,ab.
86.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
87.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
88.	(before adj2 after adj2 (study or studies or data)).ti,ab.
89.	exp case control study/
90.	case control*.ti,ab.
91.	cross-sectional study/
92.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
93.	or/46-52,55-63
94.	exp "sensitivity and specificity"/
95.	(sensitivity or specificity).ti,ab.
96.	((pre test or pretest or post test) adj probability).ti,ab.
97.	(predictive value* or PPV or NPV).ti,ab.
98.	likelihood ratio*.ti,ab.
99.	((area under adj4 curve) or AUC).ti,ab.
100.	(receive* operat* characteristic* or receive* operat* curve* or ROC curve*).ti,ab.
101.	diagnostic accuracy/
102.	diagnostic test accuracy study/
103.	gold standard.ab.
104.	exp diagnostic error/
105.	(false positiv* or false negativ*).ti,ab.
106.	differential diagnosis/
107.	(diagnos* adj3 (performance* or accurac* or utilit* or value* or efficien* or effectiveness or precision or validat* or validity or differential or error*)).ti,ab.
108.	or/65-78
109.	24 and (34 or 45 or 64 or 79)

A.3 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to Gout: Diagnosis and Management population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase for health economics, economic modelling and quality of life studies.

Table 3: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	1946 – 14 June 2021	Health economics studies Quality of life studies

Database	Dates searched	Search filter used
		Exclusions (animal studies, letters, comments)
Embase	1974 – 14 June 2021	Health economics studies Quality of life studies Exclusions (animal studies, letters, comments)
Centre for Research and Dissemination (CRD)	HTA - Inception – 14 June 2021 NHSEED - Inception to March 2015	None

Medline (Ovid) search terms

1.	exp Gout/
2.	gout*.ti,ab.
3.	toph*.ti,ab.
4.	Uric Acid/
5.	uric acids*.ti,ab.
6.	(urate adj (crystal* or sodium or mono sodium)).ti,ab.
7.	hyperuricemia/
8.	(hyperuric* or hyper uric*).ti,ab.
9.	podagra.ti,ab.
10.	or/1-9
11.	letter/
12.	editorial/
13.	news/
14.	exp historical article/
15.	Anecdotes as Topic/
16.	comment/
17.	case report/
18.	(letter or comment*).ti.
19.	or/11-18
20.	randomized controlled trial/ or random*.ti,ab.
21.	19 not 20
22.	animals/ not humans/
23.	exp Animals, Laboratory/
24.	exp Animal Experimentation/
25.	exp Models, Animal/
26.	exp Rodentia/
27.	(rat or rats or mouse or mice).ti.
28.	or/21-27
29.	10 not 28
30.	limit 29 to English language

31.	Economics/
32.	Value of life/
33.	exp "Costs and Cost Analysis"/
34.	exp Economics, Hospital/
35.	exp Economics, Medical/
36.	Economics, Nursing/
37.	Economics, Pharmaceutical/
38.	exp "Fees and Charges"/
39.	exp Budgets/
40.	budget*.ti,ab.
41.	cost*.ti.
42.	(economic* or pharmaco?economic*).ti.
43.	(price* or pricing*).ti,ab.
44.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
45.	(financ* or fee or fees).ti,ab.
46.	(value adj2 (money or monetary)).ti,ab.
47.	or/31-46
48.	quality-adjusted life years/
49.	sickness impact profile/
50.	(quality adj2 (wellbeing or well being)).ti,ab.
51.	sickness impact profile.ti,ab.
52.	disability adjusted life.ti,ab.
53.	(qal* or qtime* or qwb* or daly*).ti,ab.
54.	(euroqol* or eq5d* or eq 5*).ti,ab.
55.	(qol* or hq1* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
56.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
57.	(hui or hui1 or hui2 or hui3).ti,ab.
58.	(health* year* equivalent* or hye or hyes).ti,ab.
59.	discrete choice*.ti,ab.
60.	rosser.ti,ab.
61.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
62.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
63.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
64.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
65.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
66.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
67.	or/48-66
68.	30 and (47 or 67)

Embase (Ovid) search terms

1.	exp gout/
2.	gout*.ti,ab.

3.	toph*.ti,ab.
4.	exp uric acid/
5.	uric acid*.ti,ab.
6.	(urate adj (crystal* or sodium or mono sodium)).ti,ab.
7.	exp hyperuricemia/
8.	(hyperuric* or hyper uric*).ti,ab.
9.	podagra.ti,ab.
10.	or/1-9
11.	letter.pt. or letter/
12.	note.pt.
13.	editorial.pt.
14.	Case report/ or Case study/
15.	(letter or comment*).ti.
16.	or/11-15
17.	randomized controlled trial/ or random*.ti,ab.
18.	16 not 17
19.	animal/ not human/
20.	Nonhuman/
21.	exp Animal Experiment/
22.	exp Experimental animal/
23.	Animal model/
24.	exp Rodent/
25.	(rat or rats or mouse or mice).ti.
26.	or/18-25
27.	10 not 26
28.	limit 27 to English language
29.	health economics/
30.	exp economic evaluation/
31.	exp health care cost/
32.	exp fee/
33.	budget/
34.	funding/
35.	budget*.ti,ab.
36.	cost*.ti.
37.	(economic* or pharmaco?economic*).ti.
38.	(price* or pricing*).ti,ab.
39.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
40.	(financ* or fee or fees).ti,ab.
41.	(value adj2 (money or monetary)).ti,ab.
42.	or/29-41
43.	quality adjusted life year/
44.	"quality of life index"/
45.	short form 12/ or short form 20/ or short form 36/ or short form 8/
46.	sickness impact profile/
47.	(quality adj2 (wellbeing or well being)).ti,ab.
48.	sickness impact profile.ti,ab.

49.	disability adjusted life.ti,ab.
50.	(qal* or qtime* or qwb* or daly*).ti,ab.
51.	(euroqol* or eq5d* or eq 5*).ti,ab.
52.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
53.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
54.	(hui or hui1 or hui2 or hui3).ti,ab.
55.	(health* year* equivalent* or hye or hyes).ti,ab.
56.	discrete choice*.ti,ab.
57.	rosser.ti,ab.
58.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
59.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
60.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
61.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
62.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
63.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
64.	or/43-63
65.	28 and (42 or 64)

NHS EED and HTA (CRD) search terms

#1.	MeSH DESCRIPTOR Gout EXPLODE ALL TREES
#2.	(gout*)
#3.	(toph*)
#4.	MeSH DESCRIPTOR Uric Acid EXPLODE ALL TREES
#5.	(uric acid*)
#6.	((urate near (crystal* or sodium or mono sodium)))
#7.	MeSH DESCRIPTOR Hyperuricemia EXPLODE ALL TREES
#8.	((hyperuric* or hyper uric*))
#9.	(podagra)
#10.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9

A.4 Clinical search literature search strategy

A.4.1 Managing a Gout Flare

Searches for patient views were run in Medline (OVID), Embase (OVID), CINAHL, Current Nursing and Allied Health Literature (EBSCO) and PsycINFO (ProQuest). Search filters were applied to the search where appropriate.

Table 4: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 06 July 2021	Randomised controlled trials Systematic review studies Observational studies Exclusions (animal studies, letters, comments)
Embase (OVID)	1974 – 06 July 2021	Randomised controlled trials

Database	Dates searched	Search filter used
		Systematic review studies Observational studies Exclusions (animal studies, letters, comments)
The Cochrane Library (Wiley)	Cochrane Reviews to 2021 Issue 7 of 12 CENTRAL to 2021 Issue 7 of 12	None

Medline (Ovid) search terms

104.	exp Gout/
105.	gout*.ti,ab.
106.	toph*.ti,ab.
107.	podagra.ti,ab.
108.	pseudogout.ti,ab.
109.	or/1-5
110.	letter/
111.	editorial/
112.	news/
113.	exp historical article/
114.	Anecdotes as Topic/
115.	comment/
116.	case report/
117.	(letter or comment*).ti.
118.	or/7-14
119.	randomized controlled trial/ or random*.ti,ab.
120.	15 not 16
121.	animals/ not humans/
122.	exp Animals, Laboratory/
123.	exp Animal Experimentation/
124.	exp Models, Animal/
125.	exp Rodentia/
126.	(rat or rats or mouse or mice).ti.
127.	or/17-23
128.	6 not 24
129.	Limit 25 to English language
130.	randomized controlled trial.pt.
131.	controlled clinical trial.pt.
132.	randomi#ed.ti,ab.
133.	placebo.ab.
134.	randomly.ti,ab.
135.	Clinical Trials as topic.sh.
136.	trial.ti.
137.	or/27-33

138.	Meta-Analysis/
139.	exp Meta-Analysis as Topic/
140.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
141.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
142.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
143.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
144.	(search* adj4 literature).ab.
145.	(medline or pubmed or cochrane or embase or psychlit or psychlit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
146.	cochrane.jw.
147.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
148.	or/35-44
149.	Epidemiologic studies/
150.	Observational study/
151.	exp Cohort studies/
152.	(cohort adj (study or studies or analys* or data)).ti,ab.
153.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
154.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
155.	Controlled Before-After Studies/
156.	Historically Controlled Study/
157.	Interrupted Time Series Analysis/
158.	(before adj2 after adj2 (study or studies or data)).ti,ab.
159.	exp case control studies/
160.	case control*.ti,ab.
161.	Cross-sectional studies/
162.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
163.	or/46-59
164.	26 and (34 or 45 or 60)

Embase (Ovid) search terms

110.	exp Gout/
111.	gout*.ti,ab.
112.	toph*.ti,ab.
113.	podagra.ti,ab.
114.	pseudogout.ti,ab.
115.	or/1-5
116.	letter.pt. or letter/
117.	note.pt.
118.	editorial.pt.
119.	case report/ or case study/
120.	(letter or comment*).ti.
121.	or/7-11
122.	randomized controlled trial/ or random*.ti,ab.

123.	12 not 13
124.	animal/ not human/
125.	nonhuman/
126.	exp Animal Experiment/
127.	exp Experimental Animal/
128.	animal model/
129.	exp Rodent/
130.	(rat or rats or mouse or mice).ti.
131.	or/14-21
132.	6 not 22
133.	Limit 23 to English language
134.	random*.ti,ab.
135.	factorial*.ti,ab.
136.	(crossover* or cross over*).ti,ab.
137.	((doubl* or singl*) adj blind*).ti,ab.
138.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
139.	crossover procedure/
140.	single blind procedure/
141.	randomized controlled trial/
142.	double blind procedure/
143.	or/25-33
144.	systematic review/
145.	meta-analysis/
146.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
147.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
148.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
149.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
150.	(search* adj4 literature).ab.
151.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
152.	cochrane.jw.
153.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
154.	or/35-44
155.	Clinical study/
156.	Observational study/
157.	family study/
158.	longitudinal study/
159.	retrospective study/
160.	prospective study/
161.	cohort analysis/
162.	follow-up/
163.	cohort*.ti,ab.
164.	53 and 54
165.	(cohort adj (study or studies or analys* or data)).ti,ab.

166.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
167.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
168.	(before adj2 after adj2 (study or studies or data)).ti,ab.
169.	exp case control study/
170.	case control*.ti,ab.
171.	cross-sectional study/
172.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
173.	or/46-52,55-63
174.	24 and (34 or 45 or 64)

Cochrane Library (Wiley) search terms

#1.	MeSH descriptor: [Gout] explode all trees
#2.	gout*.ti,ab
#3.	toph*.ti,ab
#4.	podagra:ti,ab
#5.	pseudogout:ti,ab
#6.	(or #1-#5)

A.5 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to Gout: Diagnosis and Management population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase for health economics, economic modelling and quality of life studies.

Table 5: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	1946 – 14 June 2021	Health economics studies Quality of life studies Exclusions (animal studies, letters, comments)
Embase	1974 – 14 June 2021	Health economics studies Quality of life studies Exclusions (animal studies, letters, comments)
Centre for Research and Dissemination (CRD)	HTA - Inception – 14 June 2021 NHSEED - Inception to March 2015	None

Medline (Ovid) search terms

69.	exp Gout/
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70.	gout*.ti,ab.
71.	toph*.ti,ab.
72.	Uric Acid/
73.	uric acids*.ti,ab.
74.	(urate adj (crystal* or sodium or mono sodium)).ti,ab.
75.	hyperuricemia/
76.	(hyperuric* or hyper uric*).ti,ab.
77.	podagra.ti,ab.
78.	or/1-9
79.	letter/
80.	editorial/
81.	news/
82.	exp historical article/
83.	Anecdotes as Topic/
84.	comment/
85.	case report/
86.	(letter or comment*).ti.
87.	or/11-18
88.	randomized controlled trial/ or random*.ti,ab.
89.	19 not 20
90.	animals/ not humans/
91.	exp Animals, Laboratory/
92.	exp Animal Experimentation/
93.	exp Models, Animal/
94.	exp Rodentia/
95.	(rat or rats or mouse or mice).ti.
96.	or/21-27
97.	10 not 28
98.	limit 29 to English language
99.	Economics/
100.	Value of life/
101.	exp "Costs and Cost Analysis"/
102.	exp Economics, Hospital/
103.	exp Economics, Medical/
104.	Economics, Nursing/
105.	Economics, Pharmaceutical/
106.	exp "Fees and Charges"/
107.	exp Budgets/
108.	budget*.ti,ab.
109.	cost*.ti.
110.	(economic* or pharmaco?economic*).ti.
111.	(price* or pricing*).ti,ab.

112.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
113.	(financ* or fee or fees).ti,ab.
114.	(value adj2 (money or monetary)).ti,ab.
115.	or/31-46
116.	quality-adjusted life years/
117.	sickness impact profile/
118.	(quality adj2 (wellbeing or well being)).ti,ab.
119.	sickness impact profile.ti,ab.
120.	disability adjusted life.ti,ab.
121.	(qal* or qtime* or qwb* or daly*).ti,ab.
122.	(euroqol* or eq5d* or eq 5*).ti,ab.
123.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
124.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
125.	(hui or hui1 or hui2 or hui3).ti,ab.
126.	(health* year* equivalent* or hye or hyes).ti,ab.
127.	discrete choice*.ti,ab.
128.	rosser.ti,ab.
129.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
130.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
131.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
132.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
133.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
134.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
135.	or/48-66
136.	30 and (47 or 67)

Embase (Ovid) search terms

66.	exp gout/
67.	gout*.ti,ab.
68.	toph*.ti,ab.
69.	exp uric acid/
70.	uric acid*.ti,ab.
71.	(urate adj (crystal* or sodium or mono sodium)).ti,ab.
72.	exp hyperuricemia/
73.	(hyperuric* or hyper uric*).ti,ab.
74.	podagra.ti,ab.
75.	or/1-9
76.	letter.pt. or letter/
77.	note.pt.
78.	editorial.pt.
79.	Case report/ or Case study/
80.	(letter or comment*).ti.

81.	or/11-15
82.	randomized controlled trial/ or random*.ti,ab.
83.	16 not 17
84.	animal/ not human/
85.	Nonhuman/
86.	exp Animal Experiment/
87.	exp Experimental animal/
88.	Animal model/
89.	exp Rodent/
90.	(rat or rats or mouse or mice).ti.
91.	or/18-25
92.	10 not 26
93.	limit 27 to English language
94.	health economics/
95.	exp economic evaluation/
96.	exp health care cost/
97.	exp fee/
98.	budget/
99.	funding/
100.	budget*.ti,ab.
101.	cost*.ti.
102.	(economic* or pharmaco?economic*).ti.
103.	(price* or pricing*).ti,ab.
104.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
105.	(financ* or fee or fees).ti,ab.
106.	(value adj2 (money or monetary)).ti,ab.
107.	or/29-41
108.	quality adjusted life year/
109.	"quality of life index"/
110.	short form 12/ or short form 20/ or short form 36/ or short form 8/
111.	sickness impact profile/
112.	(quality adj2 (wellbeing or well being)).ti,ab.
113.	sickness impact profile.ti,ab.
114.	disability adjusted life.ti,ab.
115.	(qal* or qtime* or qwb* or daly*).ti,ab.
116.	(euroqol* or eq5d* or eq 5*).ti,ab.
117.	(qol* or hq1* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
118.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
119.	(hui or hui1 or hui2 or hui3).ti,ab.
120.	(health* year* equivalent* or hye or hyes).ti,ab.
121.	discrete choice*.ti,ab.
122.	rosser.ti,ab.
123.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
124.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.

125.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
126.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
127.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
128.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
129.	or/43-63
130.	28 and (42 or 64)

NHS EED and HTA (CRD) search terms

#11.	MeSH DESCRIPTOR Gout EXPLODE ALL TREES
#12.	(gout*)
#13.	(toph*)
#14.	MeSH DESCRIPTOR Uric Acid EXPLODE ALL TREES
#15.	(uric acid*)
#16.	((urate near (crystal* or sodium or mono sodium)))
#17.	MeSH DESCRIPTOR Hyperuricemia EXPLODE ALL TREES
#18.	((hyperuric* or hyper uric*))
#19.	(podagra)
#20.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9

A.6 Clinical search literature search strategy

A.6.1 Patient Selection

Searches for patient views were run in Medline (OVID), Embase (OVID), CINAHL, Current Nursing and Allied Health Literature (EBSCO) and PsycINFO (ProQuest). Search filters were applied to the search where appropriate.

Searches were constructed using one or more of the following approaches:

- Population AND Study filter(s)

Table 6: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 06 July 2021	Observational studies Prognostic studies Exclusions (animal studies, letters, comments)
Embase (OVID)	1974 – 06 July 2021	Observational studies Prognostic studies Exclusions (animal studies, letters, comments)

Medline (Ovid) search terms

165.	exp Gout/
166.	gout*.ti,ab.
167.	toph*.ti,ab.
168.	podagra.ti,ab.

169.	pseudogout.ti,ab.
170.	or/1-5
171.	letter/
172.	editorial/
173.	news/
174.	exp historical article/
175.	Anecdotes as Topic/
176.	comment/
177.	case report/
178.	(letter or comment*).ti.
179.	or/7-14
180.	randomized controlled trial/ or random*.ti,ab.
181.	15 not 16
182.	animals/ not humans/
183.	exp Animals, Laboratory/
184.	exp Animal Experimentation/
185.	exp Models, Animal/
186.	exp Rodentia/
187.	(rat or rats or mouse or mice).ti.
188.	or/17-23
189.	6 not 24
190.	Limit 25 to English language
191.	Epidemiologic studies/
192.	Observational study/
193.	exp Cohort studies/
194.	(cohort adj (study or studies or analys* or data)).ti,ab.
195.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
196.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
197.	Controlled Before-After Studies/
198.	Historically Controlled Study/
199.	Interrupted Time Series Analysis/
200.	(before adj2 after adj2 (study or studies or data)).ti,ab.
201.	exp case control studies/
202.	case control*.ti,ab.
203.	Cross-sectional studies/
204.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
205.	or/27-40
206.	predict.ti.
207.	(validat* or rule*).ti,ab.
208.	(predict* and (outcome* or risk* or model*)).ti,ab.
209.	((history or variable* or criteria or scor* or characteristic* or finding* or factor*) and (predict* or model* or decision* or identif* or prognos*)).ti,ab.
210.	decision*.ti,ab. and Logistic models/
211.	(decision* and (model* or clinical*)).ti,ab.

212.	(prognostic and (history or variable* or criteria or scor* or characteristic* or finding* or factor* or model*)).ti,ab.
213.	(stratification or discrimination or discriminate or c statistic or "area under the curve" or AUC or calibration or indices or algorithm or multivariable).ti,ab.
214.	ROC curve/
215.	or/42-50
216.	26 and (41 or 51)

Embase (Ovid) search terms

175.	exp Gout/
176.	gout*.ti,ab.
177.	toph*.ti,ab.
178.	podagra.ti,ab.
179.	pseudogout.ti,ab.
180.	or/1-5
181.	letter.pt. or letter/
182.	note.pt.
183.	editorial.pt.
184.	case report/ or case study/
185.	(letter or comment*).ti.
186.	or/7-11
187.	randomized controlled trial/ or random*.ti,ab.
188.	12 not 13
189.	animal/ not human/
190.	nonhuman/
191.	exp Animal Experiment/
192.	exp Experimental Animal/
193.	animal model/
194.	exp Rodent/
195.	(rat or rats or mouse or mice).ti.
196.	or/14-21
197.	6 not 22
198.	Limit 23 to English language
199.	Clinical study/
200.	Observational study/
201.	family study/
202.	longitudinal study/
203.	retrospective study/
204.	prospective study/
205.	cohort analysis/
206.	follow-up/
207.	cohort*.ti,ab.
208.	32 and 33
209.	(cohort adj (study or studies or analys* or data)).ti,ab.
210.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.

211.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
212.	(before adj2 after adj2 (study or studies or data)).ti,ab.
213.	exp case control study/
214.	case control*.ti,ab.
215.	cross-sectional study/
216.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
217.	or/25-31,34-42
218.	predict.ti.
219.	(validat* or rule*).ti,ab.
220.	(predict* and (outcome* or risk* or model*)).ti,ab.
221.	((history or variable* or criteria or scor* or characteristic* or finding* or factor*) and (predict* or model* or decision* or identif* or prognos*)).ti,ab.
222.	decision*.ti,ab. and Statistical model/
223.	(decision* and (model* or clinical*)).ti,ab.
224.	(prognostic and (history or variable* or criteria or scor* or characteristic* or finding* or factor* or model*)).ti,ab.
225.	(stratification or discrimination or discriminate or c statistic or "area under the curve" or AUC or calibration or indices or algorithm or multivariable).ti,ab.
226.	Receiver operating characteristic/
227.	or/44-52
228.	24 and (43 or 53)

A.7 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to a Gout population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase for health economics studies and quality of life studies.

Table 7: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	1946 – 14 June 2021	Health economics studies Quality of life studies Exclusions (animal studies, letters, comments)
Embase	1974 – 14 June 2021	Health economics studies Quality of life studies Exclusions (animal studies, letters, comments)
Centre for Research and Dissemination (CRD)	HTA - Inception – 14 June 2021 NHSEED - Inception to March 2015	None

Medline (Ovid) search terms

137.	exp Gout/
138.	gout*.ti,ab.
139.	toph*.ti,ab.
140.	Uric Acid/
141.	uric acids*.ti,ab.
142.	(urate adj (crystal* or sodium or mono sodium)).ti,ab.
143.	hyperuricemia/
144.	(hyperuric* or hyper uric*).ti,ab.
145.	podagra.ti,ab.
146.	or/1-9
147.	letter/
148.	editorial/
149.	news/
150.	exp historical article/
151.	Anecdotes as Topic/
152.	comment/
153.	case report/
154.	(letter or comment*).ti.
155.	or/11-18
156.	randomized controlled trial/ or random*.ti,ab.
157.	19 not 20
158.	animals/ not humans/
159.	exp Animals, Laboratory/
160.	exp Animal Experimentation/
161.	exp Models, Animal/
162.	exp Rodentia/
163.	(rat or rats or mouse or mice).ti.
164.	or/21-27
165.	10 not 28
166.	limit 29 to English language
167.	Economics/
168.	Value of life/
169.	exp "Costs and Cost Analysis"/
170.	exp Economics, Hospital/
171.	exp Economics, Medical/
172.	Economics, Nursing/
173.	Economics, Pharmaceutical/
174.	exp "Fees and Charges"/

175.	exp Budgets/
176.	budget*.ti,ab.
177.	cost*.ti.
178.	(economic* or pharmaco?economic*).ti.
179.	(price* or pricing*).ti,ab.
180.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
181.	(financ* or fee or fees).ti,ab.
182.	(value adj2 (money or monetary)).ti,ab.
183.	or/31-46
184.	quality-adjusted life years/
185.	sickness impact profile/
186.	(quality adj2 (wellbeing or well being)).ti,ab.
187.	sickness impact profile.ti,ab.
188.	disability adjusted life.ti,ab.
189.	(qal* or qtime* or qwb* or daly*).ti,ab.
190.	(euroqol* or eq5d* or eq 5*).ti,ab.
191.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
192.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
193.	(hui or hui1 or hui2 or hui3).ti,ab.
194.	(health* year* equivalent* or hye or hyes).ti,ab.
195.	discrete choice*.ti,ab.
196.	rosser.ti,ab.
197.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
198.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
199.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
200.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
201.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
202.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
203.	or/48-66
204.	30 and (47 or 67)

Embase (Ovid) search terms

131.	exp gout/
132.	gout*.ti,ab.
133.	toph*.ti,ab.
134.	exp uric acid/
135.	uric acid*.ti,ab.
136.	(urate adj (crystal* or sodium or mono sodium)).ti,ab.
137.	exp hyperuricemia/
138.	(hyperuric* or hyper uric*).ti,ab.

139.	podagra.ti,ab.
140.	or/1-9
141.	letter.pt. or letter/
142.	note.pt.
143.	editorial.pt.
144.	Case report/ or Case study/
145.	(letter or comment*).ti.
146.	or/11-15
147.	randomized controlled trial/ or random*.ti,ab.
148.	16 not 17
149.	animal/ not human/
150.	Nonhuman/
151.	exp Animal Experiment/
152.	exp Experimental animal/
153.	Animal model/
154.	exp Rodent/
155.	(rat or rats or mouse or mice).ti.
156.	or/18-25
157.	10 not 26
158.	limit 27 to English language
159.	health economics/
160.	exp economic evaluation/
161.	exp health care cost/
162.	exp fee/
163.	budget/
164.	funding/
165.	budget*.ti,ab.
166.	cost*.ti.
167.	(economic* or pharmaco?economic*).ti.
168.	(price* or pricing*).ti,ab.
169.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
170.	(financ* or fee or fees).ti,ab.
171.	(value adj2 (money or monetary)).ti,ab.
172.	or/29-41
173.	quality adjusted life year/
174.	"quality of life index"/
175.	short form 12/ or short form 20/ or short form 36/ or short form 8/
176.	sickness impact profile/
177.	(quality adj2 (wellbeing or well being)).ti,ab.
178.	sickness impact profile.ti,ab.
179.	disability adjusted life.ti,ab.
180.	(qal* or qtime* or qwb* or daly*).ti,ab.
181.	(euroqol* or eq5d* or eq 5*).ti,ab.
182.	(qol* or hqi* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.

183.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
184.	(hui or hui1 or hui2 or hui3).ti,ab.
185.	(health* year* equivalent* or hye or hyes).ti,ab.
186.	discrete choice*.ti,ab.
187.	rosser.ti,ab.
188.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
189.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
190.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
191.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
192.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
193.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
194.	or/43-63
195.	28 and (42 or 64)

NHS EED and HTA (CRD) search terms

#21.	MeSH DESCRIPTOR Gout EXPLODE ALL TREES
#22.	(gout*)
#23.	(toph*)
#24.	MeSH DESCRIPTOR Uric Acid EXPLODE ALL TREES
#25.	(uric acid*)
#26.	((urate near (crystal* or sodium or mono sodium)))
#27.	MeSH DESCRIPTOR Hyperuricemia EXPLODE ALL TREES
#28.	((hyperuric* or hyper uric*))
#29.	(podagra)
#30.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9

A.8 Clinical search literature search strategy

A.8.1 Urate Lowering Therapies

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 8: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 06 July 2021	Randomised controlled trials Systematic review studies Observational studies Exclusions (animal studies, letters, comments)
Embase (OVID)	1974 – 06 July 2021	Randomised controlled trials Systematic review studies Observational studies

Database	Dates searched	Search filter used
		Exclusions (animal studies, letters, comments)
The Cochrane Library (Wiley)	Cochrane Reviews to 2021 Issue 7 of 12 CENTRAL to 2021 Issue 7 of 12	None

Medline (Ovid) search terms

217.	exp Gout/
218.	gout*.ti,ab.
219.	toph*.ti,ab.
220.	podagra.ti,ab.
221.	pseudogout.ti,ab.
222.	or/1-5
223.	letter/
224.	editorial/
225.	news/
226.	exp historical article/
227.	Anecdotes as Topic/
228.	comment/
229.	case report/
230.	(letter or comment*).ti.
231.	or/7-14
232.	randomized controlled trial/ or random*.ti,ab.
233.	15 not 16
234.	animals/ not humans/
235.	exp Animals, Laboratory/
236.	exp Animal Experimentation/
237.	exp Models, Animal/
238.	exp Rodentia/
239.	(rat or rats or mouse or mice).ti.
240.	or/17-23
241.	6 not 24
242.	Limit 25 to English language
243.	randomized controlled trial.pt.
244.	controlled clinical trial.pt.
245.	randomi#ed.ti,ab.
246.	placebo.ab.
247.	randomly.ti,ab.
248.	Clinical Trials as topic.sh.
249.	trial.ti.
250.	or/27-33
251.	Meta-Analysis/
252.	exp Meta-Analysis as Topic/

253.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
254.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
255.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
256.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
257.	(search* adj4 literature).ab.
258.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
259.	cochrane.jw.
260.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
261.	or/35-44
262.	Epidemiologic studies/
263.	Observational study/
264.	exp Cohort studies/
265.	(cohort adj (study or studies or analys* or data)).ti,ab.
266.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
267.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
268.	Controlled Before-After Studies/
269.	Historically Controlled Study/
270.	Interrupted Time Series Analysis/
271.	(before adj2 after adj2 (study or studies or data)).ti,ab.
272.	exp case control studies/
273.	case control*.ti,ab.
274.	Cross-sectional studies/
275.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
276.	or/46-59
277.	26 and (34 or 45 or 60)

Embase (Ovid) search terms

229.	exp Gout/
230.	gout*.ti,ab.
231.	toph*.ti,ab.
232.	podagra.ti,ab.
233.	pseudogout.ti,ab.
234.	or/1-5
235.	letter.pt. or letter/
236.	note.pt.
237.	editorial.pt.
238.	case report/ or case study/
239.	(letter or comment*).ti.
240.	or/7-11
241.	randomized controlled trial/ or random*.ti,ab.
242.	12 not 13
243.	animal/ not human/

244.	nonhuman/
245.	exp Animal Experiment/
246.	exp Experimental Animal/
247.	animal model/
248.	exp Rodent/
249.	(rat or rats or mouse or mice).ti.
250.	or/14-21
251.	6 not 22
252.	Limit 23 to English language
253.	random*.ti,ab.
254.	factorial*.ti,ab.
255.	(crossover* or cross over*).ti,ab.
256.	((doubl* or singl*) adj blind*).ti,ab.
257.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
258.	crossover procedure/
259.	single blind procedure/
260.	randomized controlled trial/
261.	double blind procedure/
262.	or/25-33
263.	systematic review/
264.	meta-analysis/
265.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
266.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
267.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
268.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
269.	(search* adj4 literature).ab.
270.	(medline or pubmed or cochrane or embase or psychlit or psychlit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
271.	cochrane.jw.
272.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
273.	or/35-44
274.	Clinical study/
275.	Observational study/
276.	family study/
277.	longitudinal study/
278.	retrospective study/
279.	prospective study/
280.	cohort analysis/
281.	follow-up/
282.	cohort*.ti,ab.
283.	53 and 54
284.	(cohort adj (study or studies or analys* or data)).ti,ab.
285.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.

286.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
287.	(before adj2 after adj2 (study or studies or data)).ti,ab.
288.	exp case control study/
289.	case control*.ti,ab.
290.	cross-sectional study/
291.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
292.	or/46-52,55-63
293.	24 and (34 or 45 or 64)

Cochrane Library (Wiley) search terms

#7.	MeSH descriptor: [Gout] explode all trees
#8.	gout*:ti,ab
#9.	toph*:ti,ab
#10.	podagra:ti,ab
#11.	pseudogout:ti,ab
#12.	(or #1-#5)

A.9 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to a Gout population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase for health economics studies and quality of life studies.

Table 9: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	1946 – 14 June 2021	Health economics studies Quality of life studies Modelling Studies Exclusions (animal studies, letters, comments)
Embase	1974 – 14 June 2021	Health economics studies Quality of life studies Modelling Studies Exclusions (animal studies, letters, comments)
Centre for Research and Dissemination (CRD)	HTA - Inception – 14 June 2021 NHSEED - Inception to March 2015	None

Medline (Ovid) search terms

205.	exp Gout/
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206.	gout*.ti,ab.
207.	toph*.ti,ab.
208.	Uric Acid/
209.	uric acids*.ti,ab.
210.	(urate adj (crystal* or sodium or mono sodium)).ti,ab.
211.	hyperuricemia/
212.	(hyperuric* or hyper uric*).ti,ab.
213.	podagra.ti,ab.
214.	or/1-9
215.	letter/
216.	editorial/
217.	news/
218.	exp historical article/
219.	Anecdotes as Topic/
220.	comment/
221.	case report/
222.	(letter or comment*).ti.
223.	or/11-18
224.	randomized controlled trial/ or random*.ti,ab.
225.	19 not 20
226.	animals/ not humans/
227.	exp Animals, Laboratory/
228.	exp Animal Experimentation/
229.	exp Models, Animal/
230.	exp Rodentia/
231.	(rat or rats or mouse or mice).ti.
232.	or/21-27
233.	10 not 28
234.	limit 29 to English language
235.	Economics/
236.	Value of life/
237.	exp "Costs and Cost Analysis"/
238.	exp Economics, Hospital/
239.	exp Economics, Medical/
240.	Economics, Nursing/
241.	Economics, Pharmaceutical/
242.	exp "Fees and Charges"/
243.	exp Budgets/
244.	budget*.ti,ab.
245.	cost*.ti.

246.	(economic* or pharmaco?economic*).ti.
247.	(price* or pricing*).ti,ab.
248.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
249.	(financ* or fee or fees).ti,ab.
250.	(value adj2 (money or monetary)).ti,ab.
251.	or/31-46
252.	quality-adjusted life years/
253.	sickness impact profile/
254.	(quality adj2 (wellbeing or well being)).ti,ab.
255.	sickness impact profile.ti,ab.
256.	disability adjusted life.ti,ab.
257.	(qal* or qtime* or qwb* or daly*).ti,ab.
258.	(euroqol* or eq5d* or eq 5*).ti,ab.
259.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
260.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
261.	(hui or hui1 or hui2 or hui3).ti,ab.
262.	(health* year* equivalent* or hye or hyes).ti,ab.
263.	discrete choice*.ti,ab.
264.	rosser.ti,ab.
265.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
266.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
267.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
268.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
269.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
270.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
271.	or/48-66
272.	exp models, economic/
273.	*Models, Theoretical/
274.	*Models, Organizational/
275.	markov chains/
276.	monte carlo method/
277.	exp Decision Theory/
278.	(markov* or monte carlo).ti,ab.
279.	econom* model*.ti,ab.
280.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
281.	or/68-76
282.	30 and (47 or 67 or 77)

Embase (Ovid) search terms

196.	exp gout/
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197.	gout*.ti,ab.
198.	toph*.ti,ab.
199.	exp uric acid/
200.	uric acid*.ti,ab.
201.	(urate adj (crystal* or sodium or mono sodium)).ti,ab.
202.	exp hyperuricemia/
203.	(hyperuric* or hyper uric*).ti,ab.
204.	podagra.ti,ab.
205.	or/1-9
206.	letter.pt. or letter/
207.	note.pt.
208.	editorial.pt.
209.	Case report/ or Case study/
210.	(letter or comment*).ti.
211.	or/11-15
212.	randomized controlled trial/ or random*.ti,ab.
213.	16 not 17
214.	animal/ not human/
215.	Nonhuman/
216.	exp Animal Experiment/
217.	exp Experimental animal/
218.	Animal model/
219.	exp Rodent/
220.	(rat or rats or mouse or mice).ti.
221.	or/18-25
222.	10 not 26
223.	limit 27 to English language
224.	health economics/
225.	exp economic evaluation/
226.	exp health care cost/
227.	exp fee/
228.	budget/
229.	funding/
230.	budget*.ti,ab.
231.	cost*.ti.
232.	(economic* or pharmaco?economic*).ti.
233.	(price* or pricing*).ti,ab.
234.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
235.	(financ* or fee or fees).ti,ab.
236.	(value adj2 (money or monetary)).ti,ab.
237.	or/29-41
238.	quality adjusted life year/
239.	"quality of life index"/

240.	short form 12/ or short form 20/ or short form 36/ or short form 8/
241.	sickness impact profile/
242.	(quality adj2 (wellbeing or well being)).ti,ab.
243.	sickness impact profile.ti,ab.
244.	disability adjusted life.ti,ab.
245.	(qal* or qtime* or qwb* or daly*).ti,ab.
246.	(euroqol* or eq5d* or eq 5*).ti,ab.
247.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
248.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
249.	(hui or hui1 or hui2 or hui3).ti,ab.
250.	(health* year* equivalent* or hye or hyes).ti,ab.
251.	discrete choice*.ti,ab.
252.	rosser.ti,ab.
253.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
254.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
255.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
256.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
257.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
258.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
259.	or/43-63
260.	statistical model/
261.	exp economic aspect/
262.	65 and 66
263.	*theoretical model/
264.	*nonbiological model/
265.	stochastic model/
266.	decision theory/
267.	decision tree/
268.	monte carlo method/
269.	(markov* or monte carlo).ti,ab.
270.	econom* model*.ti,ab.
271.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
272.	or/67-76
273.	28 and (42 or 64 or 77)

NHS EED and HTA (CRD) search terms

#31.	MeSH DESCRIPTOR Gout EXPLODE ALL TREES
#32.	(gout*)
#33.	(toph*)
#34.	MeSH DESCRIPTOR Uric Acid EXPLODE ALL TREES
#35.	(uric acid*)
#36.	((urate near (crystal* or sodium or mono sodium)))
#37.	MeSH DESCRIPTOR Hyperuricemia EXPLODE ALL TREES
#38.	((hyperuric* or hyper uric*))
#39.	(podagra)
#40.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9

