

Lipid modification

Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease

Search appendix

Methods, evidence and recommendations

30 December 2013

Draft for Consultation

*Commissioned by the National Institute for
Health and Clinical Excellence*

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Healthcare professionals are expected to take NICE clinical guidelines fully into account when exercising their clinical judgement. However, the guidance does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of each patient, in consultation with the patient and/or their guardian or carer.

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1 Literature search strategies

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Search strategies used for the Lipid modification guideline were run in accordance with the NICE Guidelines Manual 2012: <http://publications.nice.org.uk/the-guidelines-manual-pmg6/>

All searches were run up to **11/12/13** unless otherwise stated. Any studies added to the databases after this date were not included unless specifically stated in the text. Where possible searches were limited to retrieve material published in English.

Table 1: Database date parameters (unless otherwise stated)

Database	Searched
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Database	Searched
Medline	All years – 11/11/2013
Embase	All years - 11/11/2013
AMED	All years - 11/11/2013
The Cochrane Library	Cochrane Reviews to 2013 Issue 11 of 12 CENTRAL to 2013 Issue 11 of 12 DARE, HTA and NHSEED to 2013 Issue 4 of 4

Searches for the **clinical reviews** were run in Medline (OVID), Embase (OVID) and the Cochrane Library (Wiley). Additional searches were run in AMED for some questions. Usually, searches were constructed in the following way:

- A PICO format was used for **intervention** searches where population (P) terms were combined with Intervention (I) and sometimes Comparison (C) terms. An intervention can be a drug, a procedure or a diagnostic test. Outcomes (O) are rarely used in search strategies for interventions. Search Filters were also added to the search where appropriate.
- A PEO format was used for **prognosis** searches where population (P) terms were combined with exposure (E) terms and sometimes outcomes (O). Search filters were added to the search where appropriate.

Searches for the **health economic reviews** were run in Medline (Ovid), Embase (Ovid), the NHS Economic Evaluations Database (NHS EED), the Health Technology Assessment (HTA) database and the Health Economic Evaluation Database (HEED). Searches in NHS EED and HEED were constructed only using population terms. For Medline and Embase an economic filter (instead of a study type filter) was added to the same clinical search strategy.

All searches in Medline and Embase had a filter added to exclude animal studies and papers relating to comments, letters and editorials.

A.1 Population search strategies

A.1.1 CVD population

Medline search terms

1.	cardiovascular diseases/
2.	heart diseases/
3.	myocardial ischemia/
4.	exp angina pectoris/
5.	coronary disease/
6.	coronary artery disease/
7.	exp coronary stenosis/
8.	myocardial infarction/
9.	exp heart failure/
10.	arrhythmias, cardiac/ or atrial fibrillation/
11.	vascular diseases/

12.	hypertension/
13.	atherosclerosis/
14.	peripheral arterial disease/
15.	peripheral vascular diseases/
16.	cerebrovascular disorders/
17.	exp stroke/
18.	exp brain ischemia/
19.	((cardiovascular or cardio-vascular or cardio vascular) adj3 (event\$ or disease\$)).ti,ab.
20.	((coronary or peripheral vascular or heart or peripheral arter\$) adj3 (disease\$ or event\$)).ti,ab.
21.	(mi or myocardial infarct\$).ti,ab.
22.	(cvd or chd or cad or pad or cva or hypertension).ti.
23.	(atheroscleros\$ or arterioscleros\$).ti,ab.
24.	(cerebrovascular accident\$ or stroke\$).ti,ab.
25.	(acs or angina or acute coronary syndrome\$).ti,ab.
26.	(af or atrial fibrillation).ti,ab.
27.	((chronic or congestive) adj2 heart failure).ti,ab.
28.	or/1-27

Additional search terms were added to Medline populations as below:

Questions 1, 2, 7 and 10

1	exp heart arrest/
2	((cardiovascular or cardio-vascular or cardio vascular) adj3 (event\$ or disease\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
3	((coronary or peripheral vascular or heart or peripheral arter\$) adj3 (disease\$ or event\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
4	((heart or cardiopulmonary or cardiac) adj3 (death\$ or arrest\$ or attack\$)).ti,ab.
5	(CVD or CHD or CAD or PAD or CVA).ti,ab.
6	(hypertension or hypertensive\$).ti,ab.
7	((high or raised or elevated) adj2 (blood pressure or bp)).ti,ab.

Questions 3 and 4

1	((cardiovascular or cardio-vascular or cardio vascular) adj3 (event\$ or disease\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
2	((coronary or peripheral vascular or heart or peripheral arter\$) adj3 (disease\$ or event\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
3	(CVD or CHD or CAD or PAD or CVA).ti,ab.
4	(hypertension or hypertensive\$).ti,ab.
5	((high or raised or elevated) adj2 (blood pressure or bp)).ti,ab.

Embase search terms

1.	*cardiovascular disease/
2.	*coronary artery disease/
3.	*vascular disease/
4.	*coronary artery atherosclerosis/

5.	*peripheral vascular disease/
6.	*peripheral occlusive artery disease/
7.	*arteriosclerosis/
8.	*ischemic heart disease/
9.	exp *Stroke/ or *stroke patient/
10.	*coronary artery obstruction/
11.	*hypertension/
12.	*heart disease/
13.	*heart arrhythmia/
14.	*heart fibrillation/ or *heart atrium fibrillation/
15.	*heart failure/ or exp *congestive heart failure/
16.	*acute coronary syndrome/ or exp *angina pectoris/ or *heart infarction/
17.	*cerebrovascular disease/
18.	*cerebrovascular accident/
19.	exp *brain ischemia/
20.	*brain infarction/
21.	*atherosclerosis/
22.	exp *cardiovascular risk/
23.	((cardiovascular or cardio-vascular or cardio vascular) adj3 (event\$ or disease\$)).ti,ab.
24.	((coronary or peripheral vascular or heart or peripheral arter\$) adj3 (disease\$ or event\$)).ti,ab.
25.	(MI or myocardial infarct\$).ti,ab.
26.	(CVD or CHD or CAD or PAD or CVA or hypertension).ti.
27.	(atheroscleros\$ or arterioscleros\$).ti,ab.
28.	(cerebrovascular accident\$ or stroke\$).ti,ab.
29.	(ACS or angina or acute coronary syndrome\$).ti,ab.
30.	(AF or atrial fibrillation).ti,ab.
31.	((chronic or congestive) adj2 heart failure).ti,ab.

Additional search terms were added to Embase populations as below:

Questions 1, 2, 6, 7 and 10

1.	exp *heart arrest/ or *heart death/
2.	((cardiovascular or cardio-vascular or cardio vascular) adj3 (event\$ or disease\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
3.	((coronary or peripheral vascular or heart or peripheral arter\$) adj3 (disease\$ or event\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
4.	((heart or cardiopulmonary or cardiac) adj3 (death\$ or arrest\$ or attack\$)).ti,ab.
5.	(CVD or CHD or CAD or PAD or CVA).ti,ab.
6.	(hypertension or hypertensive\$).ti,ab.
7.	((high or raised or elevated) adj2 (blood pressure or bp)).ti,ab.

Questions 3 and 4

1.	((cardiovascular or cardio-vascular or cardio vascular) adj3 (event\$ or disease\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
2.	((coronary or peripheral vascular or heart or peripheral arter\$) adj3 (disease\$ or event\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.

3.	(CVD or CHD or CAD or PAD or CVA).ti,ab.
4.	(hypertension or hypertensive\$).ti,ab.
5.	((high or raised or elevated) adj2 (blood pressure or bp)).ti,ab.

Cochrane search terms

1	MeSH descriptor: [Cardiovascular Diseases] this term only
2	MeSH descriptor: [Heart Diseases] this term only
3	MeSH descriptor: [Myocardial Ischemia] this term only
4	MeSH descriptor: [Angina Pectoris] explode all trees
5	MeSH descriptor: [Coronary Disease] this term only
6	MeSH descriptor: [Coronary Artery Disease] this term only
7	MeSH descriptor: [Coronary Stenosis] explode all trees
8	MeSH descriptor: [Myocardial Infarction] this term only
9	MeSH descriptor: [Heart Failure] explode all trees
10	MeSH descriptor: [Arrhythmias, Cardiac] this term only
11	MeSH descriptor: [Vascular Diseases] this term only
12	MeSH descriptor: [Atrial Fibrillation] this term only
13	MeSH descriptor: [Hypertension] this term only
14	MeSH descriptor: [Atherosclerosis] explode all trees
15	MeSH descriptor: [Peripheral Vascular Diseases] this term only
17	MeSH descriptor: [Cerebrovascular Disorders] this term only
18	MeSH descriptor: [Stroke] explode all trees
19	MeSH descriptor: [Brain Ischemia] explode all trees
20	((cardiovascular or cardio-vascular or "cardio vascular" or coronary or heart or "peripheral arterial" or "peripheral vascular") near/3 (event* or disease* or disorder* or risk* or benefit*)):ti,ab
21	(CVD or CVA or CHD or PAD or CAD):ti,ab
22	(myocardial next infarct*):ti,ab
23	(MI or hypertension or hypertensive* or atheroscleros* or arterioscleros*):ti,ab
24	((high or raised or elevated) near/2 ("blood pressure" or bp)):ti,ab
25	(cerebrovascular next accident*):ti,ab
26	(stroke* or ACS or angina or AF or "atrial fibrillation"):ti,ab
27	("acute coronary" next syndrome*):ti,ab
28	((chronic or congestive) next ("heart failure")):ti,ab
29	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28

Additional search terms were added to Cochrane populations as below:

Question 1 and 10

1	MeSH descriptor: [Heart Arrest] explode all trees
2	((heart or cardiopulmonary or cardiac) near/3 (death* or arrest* or attack*)):ti,ab

Questions 2, 5, 6 and 7

1	MeSH descriptor: [Heart Arrest] explode all trees
2	((heart or cardiopulmonary or cardiac) near/3 (death* or arrest* or attack*)):ti,ab
3	(heart or coronary or cardio* or cardiac* or atherosclero* or arteriosclero* or ischemi* or ischaemi* or myocardi* or atrial* or infarct* or vascular or stenosis* or hypertens* or cerebrovascular*):ti,ab

AMED search terms

1	exp cardiovascular disease/
2	((cardiovascular or cardio-vascular or cardio vascular) adj3 (event\$ or disease\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
3	((coronary or peripheral vascular or heart or peripheral arter\$) adj3 (disease\$ or event\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
4	(MI or myocardial infarct\$).ti,ab.
5	(CVD or CHD or CAD or PAD or CVA).ti,ab.
6	(hypertension or hypertensive\$).ti,ab.
7	((high or raised or elevated) adj2 (blood pressure or bp)).ti,ab.
8	(atheroscleros\$ or arterioscleros\$).ti,ab.
9	(cerebrovascular accident\$ or stroke\$).ti,ab.
10	(ACS or angina or acute coronary syndrome\$).ti,ab.
11	(AF or atrial fibrillation).ti,ab.
12	((chronic or congestive) adj2 heart failure).ti,ab.
13	(heart or coronary or cardio\$ or cardiac\$ or atherosclero\$ or arteriosclero\$ or ischemi\$ or ischaemi\$ or myocardi\$ or atrial\$ or infarct\$ or vascular or stenosis\$ or hypertens\$ or cerebrovascular).ti,ab.
14	or/1-13

Additional search terms added to AMED populations as below:**Question 2**

1	exp heart disease/
2	exp myocardial ischemia/
3	exp angina pectoris/
4	exp coronary disease/
5	exp myocardial infarction/
6	exp heart failure congestive/
7	exp arrhythmia/
8	exp atrial fibrillation/
9	exp vascular disease/
10	exp hypertension/
11	exp arteriosclerosis/
12	exp cerebrovascular disorders/
14	exp stroke/
15	exp cerebral ischemia/
16	exp heart arrest/

A.2 Study filter search terms

A.2.1 Excluded studies designs and publication types

The following study designs and publication types were removed from retrieved results using the NOT operator.

Medline search terms

1	letter/
2	editorial/
3	news/
4	exp historical article/
5	anecdotes as topic/
6	comment/
7	case report/
8	(letter or comment*).ti.
9	or/1-8
10	randomized controlled trial/ or random*.ti,ab.
11	9 not 10
12	animals/ not humans/
13	exp animals, laboratory/
14	exp animal experimentation/
15	exp models, animal/
16	exp rodentia/
17	(rat or rats or mouse or mice).ti.
18	or/11-17

Embase search terms

1	letter.pt. or letter/
2	note.pt.
3	editorial.pt.
4	case report/ or case study/
5	(letter or comment*).ti.
6	or/1-5
7	randomized controlled trial/ or random*.ti,ab.
8	6 not 7
9	animal/ not human/
10	nonhuman/
11	exp animal experiment/
12	exp experimental animal/
13	animal model/
14	exp rodent/
15	(rat or rats or mouse or mice).ti.
16	or/8-15

Amed search terms

1	letter/
2	editorial/
3	news/
4	exp historical article/
5	anecdotes as topic/
6	comment/
7	case report/
8	(letter or comment*).ti.
9	or/1-8
10	randomized controlled trial/ or random*.ti,ab.
11	9 not 10
12	animals/
13	exp animals, laboratory/
14	exp animal experimentation/
15	exp models, animal/
16	exp rodentia/
17	(rat or rats or mouse or mice).ti.
18	humans/ or (men or man or human).ti.
19	(12 or 13 or 14 or 15 or 16 or 17) not 18
20	11 or 19

A.2.2 Systematic review (SR) search terms

Medline search terms

1	meta-analysis/
2	meta-analysis as topic/
3	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
4	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
5	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
6	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
7	(search* adj4 literature).ab.
8	(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.
9	cochrane.jw.
10	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
11	or/1-10

Embase search terms

1	systematic review/
2	meta-analysis/
3	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
4	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
5	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
6	(search strategy or search criteria or systematic search or study selection or data extraction).ab.

7	(search* adj4 literature).ab.
8	(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.
9	cochrane.jw.
10	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
11	or/1-10

Amed search terms

1	meta-analysis/
2	meta-analysis as topic/
3	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
4	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
5	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
6	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
7	(search* adj4 literature).ab.
8	(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.
9	cochrane.jw.
10	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
11	or/1-10

A.2.3 Randomised controlled studies (RCTs) search terms**Medline search terms**

1	randomized controlled trial.pt.
2	controlled clinical trial.pt.
3	randomi#ed.ab.
4	placebo.ab.
5	randomly.ab.
6	clinical trials as topic.sh.
7	trial.ti.
8	or/1-7

Embase search terms

1	random*.ti,ab.
2	factorial*.ti,ab.
3	(crossover* or cross over*).ti,ab.
4	((doubl* or singl*) adj blind*).ti,ab.
5	(assign* or allocat* or volunteer* or placebo*).ti,ab.
6	crossover procedure/
7	single blind procedure/
8	randomized controlled trial/
9	double blind procedure/
10	or/1-9

Amed search terms

1	randomized controlled trial.pt.
2	controlled clinical trial.pt.
3	randomi#ed.ab.
4	placebo.ab.
5	randomly.ab.
6	clinical trials as topic.sh.
7	trial.ti.
8	or/1-7

A.2.4 Observational (OBS) studies

Medline search terms

1	Epidemiologic studies/
2	exp Case control studies/
3	exp Cohort studies/
4	Cross-sectional studies/
5	case control.ti,ab.
6	(cohort\$ or case series or clinical series).ti,ab.
7	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
8	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
9	or/1-8

Embase search terms

1	Clinical study/
2	exp Case control study/
3	Family study/
4	Longitudinal study/
5	Retrospective study/
6	Prospective study/
7	Cross-sectional study/
8	Cohort analysis/
9	Follow-up/
10	cohort*.ti,ab.
11	9 and 10
12	case control.ti,ab.
13	(cohort\$ or case series or clinical series).ti,ab.
14	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
15	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
16	or/1-8,11-15

A.2.5 Risk/statistical analysis (RISK)

Medline search terms

1	exp risk/
2	proportional hazards models/
3	multivariate analysis/
4	Adverse Drug Reaction Reporting Systems/
5	(risk\$ adj2 (factor\$ or benefit\$ or relative or assessment)).ti,ab.
6	or/1-5

Embase search terms

1	(risk adj2 (assessment or relative or benefit\$ or factor\$)).ti,ab.
2	risk/ or risk assessment/ or risk factor/ or drug surveillance program/
3	multivariate analysis/ or proportional hazards model/
4	or/1-3

A.2.6 Economic (HE) studies

Medline search terms

1	economics/
2	value of life/
3	exp "costs and cost analysis"/
4	exp economics, hospital/
5	exp economics, medical/
6	economics, nursing/
7	economics, pharmaceutical/
8	exp "fees and charges"/
9	exp budgets/
10	budget*.ti,ab.
11	cost*.ti.
12	(economic* or pharmaco?economic*).ti.
13	(price* or pricing*).ti,ab.
14	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
15	(financ* or fee or fees).ti,ab.
16	(value adj2 (money or monetary)).ti,ab.
17	or/1-16

Embase search terms

1	health economics/
2	exp economic evaluation/
3	exp health care cost/
4	exp fee/
5	budget/
6	funding/
7	budget*.ti,ab.
8	cost*.ti.

9	(economic* or pharmaco?economic*).ti.
10	(price* or pricing*).ti,ab.
11	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
12	(financ* or fee or fees).ti,ab.
13	(value adj2 (money or monetary)).ti,ab.
14	or/1-13

A.2.7 Quality of life and model (QoL) search terms

Medline search terms

1	quality-adjusted life years/
2	sickness impact profile/
3	(quality adj2 (wellbeing or well being)).ti,ab.
4	sickness impact profile.ti,ab.
5	disability adjusted life.ti,ab.
6	(qal* or qtime* or qwb* or daly*).ti,ab.
7	(euroqol* or eq5d* or eq 5*).ti,ab.
8	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
9	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
10	(hui or hui1 or hui2 or hui3).ti,ab.
11	(health* year* equivalent* or hye or hyes).ti,ab.
12	discrete choice*.ti,ab.
13	rosser.ti,ab.
14	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
15	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
16	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
17	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
18	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
19	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
20	or/1-19

Embase search terms

1	quality adjusted life year/
2	"quality of life index"/
3	short form 12/ or short form 20/ or short form 36/ or short form 8/
4	sickness impact profile/
5	(quality adj2 (wellbeing or well being)).ti,ab.
6	sickness impact profile.ti,ab.
7	disability adjusted life.ti,ab.
8	(qal* or qtime* or qwb* or daly*).ti,ab.
9	(euroqol* or eq5d* or eq 5*).ti,ab.
10	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
11	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
12	(hui or hui1 or hui2 or hui3).ti,ab.
13	(health* year* equivalent* or hye or hyes).ti,ab.
14	discrete choice*.ti,ab.

15	rosser.ti,ab.
16	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
17	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
18	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
19	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
20	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
21	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
22	or/1-21

A.3 Searches by specific questions

A.3.1 Anion exchange resins

Q. For adults without established CVD (primary prevention) and with established CVD (secondary prevention), what is the clinical evidence and cost effectiveness of Anion-exchange resins?

Search constructed by combining the columns in the following table using the AND Boolean operator

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD With additional lines	Anion exchange resins		The following filters were used in Medline and Embase only: SR and RCT	See Table 1

Medline search terms

1	exp anion exchange resins/
2	((anion exchange or anionic exchange) adj2 resin*).ti,ab.
3	((anion or anionic) adj2 exchanger*).ti,ab.
4	(cholestyramin* or colestyramin* or colestimide or cholybar or colextran or colestilan or cholestagel or colestipol or colestipol or colestid or questran* or quantalan* or cuemid* or colesevelam).ti,ab.
5	(bile acid adj3 (sequestrant* or sequestering agent* or resin*)).ti,ab.
6	or/1-5

Embase search terms

1	exp *anion exchange resin/
2	exp *bile acid sequestrant/
3	*colestilan/ or *colestipol/ or *colestyramine/ or *colesevelam/ or *diethylaminoethyl-dextran/
4	((anion exchange or anionic exchange) adj2 resin*).ti,ab.
5	((anion or anionic) adj2 exchanger*).ti,ab.
6	(cholestyramin* or colestyramin* or colestimide or cholybar or colextran or colestilan or cholestagel or colestipol or colestipol or colestid or questran* or quantalan* or cuemid* or colesevelam).ti,ab.
7	(bile acid adj3 (sequestrant* or sequestering agent* or resin*)).ti,ab.
8	or/1-7

Cochrane search terms

1	MeSH descriptor Anion Exchange Resins explode all trees
---	---

2	((("anion exchange" or "anionic exchange") near/2 resin*):ti,ab
3	((anion or anionic) next exchanger*):ti,ab
4	(cholestyramin* or colestyramin* or colestimide or cholyber or colextran or colestilan or cholestigel or colestipol or cholestipol or colestid or questran* or quantalan* or cuemid or colesevelam):ti,ab
5	("bile acid" near/3 (sequestrant* or "sequestering agent" or "sequestering agents" or resin*)):ti,ab
6	#1 or #2 or #3 or #4 or #5

A.3.2 Dietary intervention

Q. What is the clinical and cost effectiveness of dietary intervention strategies versus usual diet in primary and secondary prevention of CVD?

This question was run as two separate searches.

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD not child or adolescent	Dietary intervention		The following filters were used in Medline and Embase only: SR and RCT	See Table 1
With additional lines				

Medline search terms

1	exp diet, Mediterranean/
2	(Mediterranean adj3 diet*).ti,ab.
3	(Mediterranean adj6 food*).ti,ab.
4	(Mediterranean adj6 nutrition*).ti,ab.
5	(Mediterranean adj6 eat*).ti,ab.
6	exp *dietary fats, unsaturated/
7	*diet/
8	*diet therapy/
9	(diet* adj2 (therap* or change* or intervention* or treatment*)).ti,ab.
10	(diet* adj2 (lipid* or cholesterol)).ti,ab.
11	exp *plant oils/
12	olive oil.ti,ab.
13	or/1-12
14	((child* or adolescen* or school* or infant* or teen* or paediatric* or pediatric* or youth*) not adult*).ti.
15	13 not 14

Embase search terms

1	exp diet, Mediterranean/
2	(Mediterranean adj3 diet*).ti,ab.
3	(Mediterranean adj6 food*).ti,ab.
4	(Mediterranean adj6 nutrition*).ti,ab.
5	(Mediterranean adj6 eat*).ti,ab.
6	exp *dietary fats, unsaturated/

7	*diet/
8	*diet therapy/
9	(diet* adj2 (therap* or change* or intervention* or treatment*)):ti,ab.
10	(diet* adj2 (lipid* or cholesterol)):ti,ab.
11	exp *plant oils/
12	olive oil.ti,ab.
13	or/1-12
14	((child* or adolescen* or school* or infant* or teen* or paediatric* or pediatric* or youth*) not adult*).ti.
15	13 not 14

Cochrane search terms

1	MeSH descriptor: [Diet, Mediterranean] explode all trees
2	Mediterranean near/3 diet
3	Mediterranean near/6 food
4	Mediterranean near/6 nutrition
5	Mediterranean near/6 eat
6	MeSH descriptor: [Dietary Fats, Unsaturated] this term only
7	MeSH descriptor: [Diet] this term only
8	MeSH descriptor: [Diet Therapy] this term only
9	diet near/2 (therap* or change* or intervention* or treatment*):ti,ab
10	diet near/2 (lipid* or cholesterol):ti,ab
11	MeSH descriptor: [Plant Oils] this term only
12	olive oil:ti,ab
13	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD With additional lines	Red yeast rice supplement		The following filters were used in Medline and Embase only: SR and RCT	See Table 1

Medline search terms

1	exp Monascus/
2	(red adj3 rice).ti,ab.
3	(xeuzhikang or monascus or akakoji or angkak or ang-kak or Hypocol or Cholestin).ti,ab.
4	or/1-3

Embase search terms

1	exp Monascus purpureus/ or exp Monascus/
2	exp cholestin/
3	(red adj3 rice).ti,ab.
4	(xeuzhikang or monascus or akakoji or angkak or ang-kak or Hypocol or Cholestin).ti,ab.
5	or/1-4

Cochrane search terms

1	MeSH descriptor: [Monascus] this term only
2	red near/3 rice
3	(xeuzhikang or monascus or akakoji or angkak or ang-kak or Hypocol or Cholestin):ti,ab
4	#1 or #2 or #3

AMED search terms

1	(red adj3 rice).mp. [mp=abstract, heading words, title]
2	(xeuzhikang or monascus or akakoji or angkak or ang-kak or Hypocol or Cholestin).ti,ab.
3	or/1-2

A.3.3 Fibrates

Q. a) For adults without CVD (primary prevention), what is the clinical and cost effectiveness of fibrates versus placebo (or versus statin)?

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD	Fibrates with and without statins		The following filters were used in Medline and Embase only: SR and RCT	See Table 1

Medline search terms

1.	exp fibric acids/
2.	(fibrate* or bezafibrate or clofibrate or fenofibrate or lopid or gemfibrozil or bezalip or tricor or fibracor or lipantil or supralip or modalim or ciprofibrate).ti,ab.
3.	((fibrac or fenofibrac or clofibrac) adj2 acid*).ti,ab.
4.	or/1-4

Embase search terms

1.	exp *fibric acid derivative/
2.	((fibrac or fenofibrac or clofibrac) adj2 acid*).ti,ab.
3.	(fibrate* or bezafibrate or clofibrate or fenofibrate or lopid or gemfibrozil or bezalip or tricor or fibracor or lipantil or supralip or modalim or ciprofibrate).ti,ab.
4.	1 or 2 or 3

Cochrane search terms

1.	MeSH descriptor Fibric Acids explode all trees
2.	((fibrac or clofibrac or fenofibrac) next acid*).ti,ab
3.	(fibrate* or bezafibrate or clofibrate or fenofibrate or lopid or gemfibrozil or bezalip or tricor or fibracor or lipantil or supralip or modim or ciprofibrate):ti,ab
4.	#1 or #2 or #3

A.3.4 Nicotinic acids

Q. For adults without CVD (primary prevention), what is the clinical and cost effectiveness of Nicotinic acid versus placebo (or versus statin)?

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD	Nicotinic acids		The following filters were used in Medline and Embase only: SR and RCT	See Table 1

Medline search terms

1.	nicotinic acids/ or niacin/
2.	nicotinic.ti,ab.
3.	niacin.ti,ab.
4.	(nicotinate* or acipimox or acipemox).ti,ab.
5.	(olbetam or niaspan or tredaptive).ti,ab.
6.	((3 pyridinecarboxylic or 3-pyridinecarboxylic) adj3 acid).ti,ab.
7.	or/1-6

Embase search terms

1.	*nicotinic acid/ or *laropiprant plus nicotinic acid/ or *acipimox/
2.	nicotinic.ti,ab.
3.	(niacin or nicotinate* or acipimox or acipemox or olbetam or niaspan or tredaptive).ti,ab.
4.	((3 pyridinecarboxylic or 3-pyridinecarboxylic) adj3 acid).ti,ab.
5.	or/1-4

Cochrane search terms

1.	MeSH descriptor Nicotinic Acids, this term only
2.	MeSH descriptor Niacin, this term only
3.	(nicotinic or niacin or nicotinate* or niaspan or olbetam or tredaptive or acipimox or acipemox):ti,ab
4.	#1 or #2 or #3

A.3.5 Omega-3 fatty acids

Q. For adults with established CVD (secondary prevention), what is the clinical evidence and cost effectiveness of omega-3 fatty acids?

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD With additional	Omega -3 fatty acids, statins and placebo		The following filters were used in Medline and Embase only: SR	See Table 1

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
lines			and RCT	

Medline search terms

1.	exp fish oils/
2.	fatty acids, unsaturated/ or exp fatty acids, omega-3/
3.	dietary fats, unsaturated/
4.	(fish adj3 oil*).ti,ab.
5.	(omega 3 or omega-3).ti,ab.
6.	((n 3 or n3 or n-3) adj3 ((fatty adj3 acid*) or PUFA*)).ti,ab.
7.	((docosahexaenoic or docosahexenoic or eicosapentaenoic or eicosapentanoic or icosapentaenoic or timnodonic or linolenic or a-linolenic or alpha linolenic) adj2 acid*).ti,ab.
8.	(linolenate or maxepa or omacor).ti,ab.
9.	((DHA or ALA or EPA) and (omega 3 or omega-3 or PUFA* or fatty acid*)).ti,ab.
10.	or/1-9

Embase population

1.	fish oil/
2.	polyunsaturated fatty acid/
3.	omega 3 fatty acid/
4.	unsaturated fatty acid/ or docosahexaenoic acid/ or icosapentaenoic acid/ or icosapentaenoic acid ethyl ester/ or linolenic acid/ or omega 3 fatty acid ester/
5.	(fish adj3 oil*).ti,ab.
6.	(omega 3 or omega-3).ti,ab.
7.	((n3 or n 3 or n-3) adj3 ((fatty adj3 Acid*) or PUFA*)).ti,ab.
8.	((docosahexaenoic or docosahexenoic or eicosapentaenoic or eicosapentanoic or icosapentaenoic or timnodonic or linolenic or a-linolenic or alpha linolenic) adj2 acid*).ti,ab.
9.	(linolenate or omacor or maxepa).ti,ab.
10.	((DHA or ALA or EPA) and (omega 3 or omega-3 or PUFA* or fatty acid*)).ti,ab.
11.	or/1-10

Cochrane search terms

1	MeSH descriptor Fish Oils explode all trees
2	MeSH descriptor Fatty Acids, Unsaturated, this term only
3	MeSH descriptor Fatty Acids, Omega-3 explode all trees
4	MeSH descriptor Dietary Fats, Unsaturated, this term only
5	(fish near/3 oil*):ti,ab
6	((n-3 or n3 or "n 3") near/3 (PUFA* or "fatty acid" or "fatty acids" or polyunsaturat*)):ti,ab
7	(linolenate or "omega 3" or omega-3 or omacor or maxepa):ti,ab
8	((DHA or ALA or EPA) and (omega or PUFA* or "fatty acid" or "fatty acids")):ti,ab
9	((doxosahexaenoic or docosahexenoic or eicosapentaenoic or eicosapentanoic or icosapentaenoic or timnodonic or linolenic or a-linolenic or "alpha linolenic" or alpha-linolenic) next acid):ti,ab
10	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9

A.3.6 Risk tools

Q a) Which risk assessment tools are the most accurate for predicting the risk of CVD events in adults without established CVD (primary prevention)?

b) Which risk assessment tools are the most accurate for predicting the risk of CVD events in adults with diabetes and without established CVD (primary prevention)?

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD With additional lines	Risk tools including: QRISK 2 Framingham Age alone		The following filters were used in Medline and Embase only: SR and RCT	See Table 1
CVD With additional lines	Risk tools including: QRISK 2 UKPDS Risk Engine Age alone		The following filters were used in Medline and Embase only: SR and RCT	See Table 1

Medline search terms

1.	(Qrisk* or QDiabetes* or JBS3 or ClinRisk*).ti,ab.
2.	(Framingham adj2 (risk* or score* or algorithm* or prediction or calculator)).ti,ab.
3.	FRS.ti,ab.
4.	(SCORE adj3 chart*).ti,ab.
5.	(SCORE adj risk).ti,ab.
6.	(SCORE adj3 (10 y* or 10y*)).ti,ab.
7.	(systematic coronary risk evaluation or risk chart* or HeartScore*).ti,ab.
8.	(SCORE adj3 CVD adj3 risk).ti,ab.
9.	ASSIGN.ti,ab.
10.	((Scottish Intercollegiate Guidelines Network or SIGN) adj3 (risk or score)).ti,ab.
11.	(UKPDS adj3 (Risk* or score* or Engine or calculat*)).ti,ab.
12.	or/1-11
13.	framingham.ti,ab,in.
14.	((CVD or CHD) adj risk).ti,ab.
15.	13 and 14
16.	12 or 15

Embase search terms

1	Qrisk score/
2	Framingham risk score/
3	(Qrisk\$ or QDiabetes\$ or JBS3 or ClinRisk*).ti,ab.
4	(Framingham adj2 (risk\$ or score\$ or algorithm\$ or prediction or calculator)).ti,ab.
5	FRS.ti,ab.
6	(SCORE adj3 chart*).ti,ab.
7	(SCORE adj risk).ti,ab.
8	(SCORE adj3 (10 y* or 10y*)).ti,ab.

9	(systematic coronary risk evaluation or risk chart\$ or HeartScore\$).ti,ab.
10	(SCORE adj3 CVD adj3 risk).ti,ab.
11	ASSIGN.ti,ab.
12	((Scottish Intercollegiate Guidelines Network or SIGN) adj3 (risk or score)).ti,ab.
13	(UKPDS adj3 (Risk\$ or score\$ or Engine or calculat\$)).ti,ab.
14	or/1-13
15	Framingham.ti,ab,in.
16	((CVD or CHD) adj risk).ti,ab.
17	15 and 16
18	14 or 17

Cochrane search terms

1	(Qrisk* or QDiabetes* or JBS3 or ClinRisk*):ti,ab,kw
2	(Framingham near/2 (risk* or score* or algorithm* or prediction or calculator)):ti,ab,kw
3	FRS:ti,ab,kw
4	(SCORE near/3 chart*):ti,ab,kw
5	(SCORE near risk):ti,ab,kw
6	(SCORE near/3 (10 y* or 10y*)):ti,ab,kw
7	(systematic coronary risk evaluation or risk chart* or HeartScore*):ti,ab,kw
8	(SCORE near/3 CVD near/3 risk):ti,ab,kw
9	(ASSIGN near/3 (risk* or scor* or calculat* or CVD or cardiovascular)):ti,ab,kw
10	((Scottish Intercollegiate Guidelines Network or SIGN) near/3 (risk or score)):ti,ab,kw
11	(UKPDS near/3 (Risk* or score* or Engine or calculat*)):ti,ab,kw
12	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10
13	Framingham:ti,ab,kw
14	((CVD or CHD) near/1 risk):ti,ab,kw
15	13 and 14
16	12 or 15

A.3.7 Stanols and sterols

Q. What is the clinical and cost effectiveness of foods enriched with phytosterols (plant stanols and sterols) or phytosterol supplements versus placebo for adults without established CVD?

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD With additional lines	Stanols and sterols		The following filters were used in Medline and Embase only: SR and RCT	See Table 1

Medline search terms

1	sterols/ or exp phytosterols/
2	(stanol* or sterol* or plant steroid or plant steroids or phytosterol* or phytasterol* or sitosterol* or campesterol* or campestanol* or stigmasterol* or sitostanol* or benecol*).ti,ab.

3	1 or 2
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Embase search terms

1	(stanol* or sterol* or plant steroid or plant steroids or stigmasterol or phytasterol* or phytosterol* or sitosterol* or campesterol* or sitostanol* or campestanol* or benecol*).ti,ab.
2	sterol/ or campestanol/ or campesterol/ or phytosterol/ or sitostanol/ or sitosterol/
3	1 or 2

Cochrane search terms

1	MeSH descriptor: [Sterols] this term only
2	MeSH descriptor: [Phytosterols] explode all trees
3	(stanol* or sterol* or phytosterol* or phytasterol* or stigmasterol* or campesterol* or campestanol* or benecol or sitosterol* or sitostanol* or "plant steroid" or plant steroids):ti,ab
4	#1 or #2 or #3

AMED search terms

1	sterols/
2	(stanol* or sterol* or plant steroid or plant steroid* or phytasterol* or phytosterol* or sitosterol* or campesterol* or sitostanol* or campestanol* or stigmasterol* or benecol*).ti,ab.
3	1 or 2

A.3.8 Statins adherence

Q. What is the clinical and cost effectiveness of interventions that improve adherence to statin therapy for adults without established CVD (primary prevention) and with established CVD (secondary prevention)?

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
No population used	Coenzyme Q10 Vitamin D		The following filters were used in Medline and Embase only: SR, RCT, OBS	See Table 1

Medline search terms

1.	exp hydroxymethylglutaryl-coa reductase inhibitors/
2.	statin\$.ti,ab.
3.	((hydroxymethylglutaryl-coa or hmg-coa) adj3 (reductase or inhibitors)).ti,ab.
4.	exp simvastatin/
5.	(simvastatin* or zocor).ti,ab.
6.	(atorvastatin* or lipitor).ti,ab.
7.	(rosuvastatin* or crestor).ti,ab.
8.	exp pravastatin/
9.	(pravastatin* or lipostat).ti,ab.
10.	(fluvastatin* or lescol).ti,ab.

11.	or/1-10
12.	ubiquinone/
13.	coenzyme q\$.ti,ab.
14.	ubiquinone.ti,ab.
15.	(ubidecarenone or q-ter or bio-quinone or coq\$ or ubisemiquinone).ti,ab.
16.	or/12-15
17.	exp vitamin d/
18.	(vitamin adj (d or d2 or d3 or d4 or d5)).ti,ab.
19.	(dihyrotachysterol\$ or maxacalcitol or calciferol or calcifediol or doxercalciferol or cholecalciferol or ercalcidiol or hectorol or sitocalcalciferol or paracalcin).ti,ab.
20.	(paracalcitol or zemplar or ergocalciferol or alfacalcidol or one-alpha or calcitriol or rocaltrol or calcijex or oxacalcitriol or falecalcitriol or fluorocalcitriol).ti,ab.
21.	(dihydroxyvitamin\$ or hydroxyvitamin\$ or hydroxycalciferol or dihydroxycalciferol or hydroxyergocalciferol or dihydroxyergocalciferol or hydroxycholecalciferol or dihydroxycholecalciferol).ti,ab.
22.	or/17-21
23.	medication adherence/
24.	(statin\$ adj3 (adher\$ or non-adher\$)).ti,ab.
25.	16 or 22 or 23 or 24
26.	11 and 25

Embase search terms

1.	exp *hydroxymethylglutaryl-coa reductase inhibitor/
2.	((hydroxymethylglutaryl-coa or hmg-coa) adj3 (reductase or inhibitors)).ti,ab.
3.	statin\$.ti,ab.
4.	exp simvastatin/
5.	(simvastatin* or zocor).ti,ab.
6.	(atorvastatin* or lipitor).ti,ab.
7.	(rosuvastatin* or crestor).ti,ab.
8.	exp pravastatin/
9.	(pravastatin* or lipostat).ti,ab.
10.	(fluvastatin* or lescol).ti,ab.
11.	exp atorvastatin/ or exp rosuvastatin/
12.	or/1-11
13.	ubiquinone/
14.	ubiquinone derivative/
15.	coenzyme q\$.ti,ab.
16.	ubiquinone.ti,ab.
17.	(ubidecarenone or q-ter or bio-quinone or coq\$ or ubisemiquinone).ti,ab.
18.	or/13-17
19.	exp vitamin d/
20.	(vitamin adj (d or d2 or d3 or d4 or d5)).ti,ab.
21.	(dihyrotachysterol\$ or maxacalcitol or calciferol or calcifediol or doxercalciferol or cholecalciferol or ercalcidiol or hectorol or sitocalcalciferol or paracalcin).ti,ab.
22.	(paracalcitol or zemplar or ergocalciferol or alfacalcidol or one-alpha or calcitriol or rocaltrol or calcijex or oxacalcitriol or falecalcitriol or fluorocalcitriol).ti,ab.
23.	(dihydroxyvitamin\$ or hydroxyvitamin\$ or hydroxycalciferol or dihydroxycalciferol or

	hydroxyergocalciferol or dihydroxyergocalciferol or hydroxycholecalciferol or dihydroxycholecalciferol).ti,ab.
24.	or/19-23
25.	(statin\$ adj3 (adher\$ or non-adher\$)).ti,ab.
26.	18 or 24 or 25
27.	12 and 26

Cochrane search terms

1	MeSH descriptor: [Hydroxymethylglutaryl-CoA Reductase Inhibitors] explode all trees
2	((Hydroxymethylglutaryl-CoA or HMG-CoA) near/3 (reductase or inhibitors)):ti,ab
3	MeSH descriptor: [Simvastatin] this term only
4	(statin* or simvastatin* or zocor):ti,ab
5	(atorvastatin* or lipitor):ti,ab
6	(rosuvastatin* or crestor):ti,ab
7	mesh descriptor: [pravastatin] this term only
8	(pravastatin* or lipostat):ti,ab
9	(fluvastatin* or lescol):ti,ab
10	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9
11	MeSH descriptor: [Ubiquinone] this term only
12	("coenzyme Q10"):ti,ab
13	("coenzyme Q" or "coenzyme Q(10)") :ti,ab
14	(ubiquinone or ubidecarenone or Q-ter or bio-quinone or coQ or coQ10 or ubisemiquinone):ti,ab
15	MeSH descriptor: [Vitamin D] explode all trees
16	(vitamin next/1 (D or D2 or D3 or D4 or D5)):ti,ab
17	MeSH descriptor: [Medication Adherence] this term only
18	((adher* or non-adher* or nonadher*) near/3 statin*) .ti,ab
19	#11 or #12 or #13 or #14 or #15 or #16 or #17 or #18
20	#10 and #19

A.3.9 Statins adverse events

Q. Who is at risk of adverse effects from statin treatment? (Are some subgroups at different risk of adverse events?)

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
No population used	Simvastatin Atorvastatin Rosuvastatin Pravastatin Fluvastatin		The following filters were used in Medline and Embase only: SR, RCT, OBS and RISK	See Table 1

Medline search terms

1.	*Hydroxymethylglutaryl-CoA Reductase Inhibitors/
2.	statin\$.ti,ab.

3.	((Hydroxymethylglutaryl-CoA or HMG-CoA) adj3 (reductase or inhibitors)).ti,ab.
4.	exp *simvastatin/
5.	(simvastatin* or zocor).ti,ab.
6.	(atorvastatin* or lipitor).ti,ab.
7.	(rosuvastatin* or crestor).ti,ab.
8.	exp *pravastatin/
9.	(pravastatin* or lipostat).ti,ab.
10.	(fluvastatin* or lescol).ti,ab.
11.	or/1-10
12.	diabetes mellitus/ci or exp diabetes mellitus, type 2/ci
13.	*Hydroxymethylglutaryl-CoA Reductase Inhibitors/ae
14.	exp *pravastatin/ae or exp *simvastatin/ae
15.	rhabdomyolysis/ci [chemically induced]
16.	musculoskeletal pain/ci
17.	muscular diseases/ci [chemically induced]
18.	cataract/ci [chemically induced]
19.	drug-induced liver injury/
20.	acute kidney injury/ci [chemically induced]
21.	muscular disorders, atrophic/ci [chemically induced]
22.	muscular atrophy/ci [chemically induced]
23.	muscle weakness/ci [chemically induced]
24.	polyneuropathies/ci [chemically induced]
25.	fatigue/ci
26.	(statin\$ adj2 risk\$).ti.
27.	((myalgia\$ or myopath\$ or fatigue or tiredness or polyneuropath\$ or neuropath\$ or rhabdomyolysis) adj10 statin\$).ti,ab.
28.	((muscle\$ or muscular or musculoskeletal) adj2 (pain or tenderness or weakness) adj10 statin\$).ti,ab.
29.	(nerve damage adj10 statin\$).ti,ab.
30.	((incident or new onset) adj2 diabetes adj10 statin\$).ti,ab.
31.	((hepatic or liver or renal or kidney) adj2 (failure or dysfunction or problem\$) adj10 statin\$).ti,ab.
32.	((raised or elevat\$) adj3 (liver enzymes or hepatic enzymes) adj10 statin\$).ti,ab.
33.	((side or adverse or unintended) adj2 (event\$ or effect\$) adj3 statin\$).ti,ab.
34.	or/12-33
35.	11 and 34

Embase search terms

1.	*Hydroxymethylglutaryl-CoA Reductase Inhibitor/
2.	((Hydroxymethylglutaryl-CoA or HMG-CoA) adj3 (reductase or inhibitors)).ti.
3.	statin\$.ti.
4.	exp *simvastatin/
5.	(simvastatin* or zocor).ti.
6.	(atorvastatin* or lipitor).ti.
7.	(rosuvastatin* or crestor).ti.
8.	exp *pravastatin/

9.	(pravastatin* or lipostat).ti.
10.	(fluvastatin* or lescol).ti.
11.	exp *atorvastatin/ or exp *rosuvastatin/
12.	or/1-11
13.	*hydroxymethylglutaryl-coa reductase inhibitor/ae
14.	*rhabdomyolysis/si [side effect]
15.	*diabetes mellitus/si [side effect]
16.	*non insulin dependent diabetes mellitus/si [side effect]
17.	*musculoskeletal pain/si [side effect]
18.	*muscle weakness/si or *fatigue/si
19.	*liver dysfunction/si [side effect]
20.	*toxic hepatitis/si
21.	*myalgia/si [side effect]
22.	*myopathy/si [side effect]
23.	*muscle disease/si [side effect]
24.	*cataract/si [side effect]
25.	*acute kidney failure/si [side effect]
26.	*muscle atrophy/si [side effect]
27.	*polyneuropathy/si [side effect]
28.	*drug induced disease/ and statin\$.ti,ab.
29.	(statin\$ adj2 risk\$).ti.
30.	((myalgia\$ or myopath\$ or fatigue or tiredness or polyneuropath\$ or neuropath\$ or rhabdomyolysis) adj10 statin\$).ti,ab.
31.	((muscle\$ or muscular or musculoskeletal) adj2 (pain or tenderness or weakness) adj10 statin\$).ti,ab.
32.	(nerve damage adj10 statin\$).ti,ab.
33.	((incident or new onset) adj2 diabetes adj10 statin\$).ti,ab.
34.	((hepatic or liver or renal or kidney) adj2 (failure or dysfunction or problem\$) adj10 statin\$).ti,ab.
35.	((raised or elevat\$) adj3 (liver enzymes or hepatic enzymes) adj10 statin\$).ti,ab.
36.	((side or adverse or unintended) adj2 (event\$ or effect\$) adj3 (pravastatin or simvastatin or fluvastatin or atorvastatin or zocor or lipitor or rosuvastatin or crestor or lipostat or lescol or statin\$)).ti,ab.
37.	or/13-36
38.	12 and 37

Cochrane search terms

1	MeSH descriptor: [Hydroxymethylglutaryl-CoA Reductase Inhibitors] this term only
2	((Hydroxymethylglutaryl-CoA or HMG-CoA) near/3 (reductase or inhibitors)):ti
3	MeSH descriptor: [Simvastatin] explode all trees
4	statin*:ti
5	(simvastatin* or zocor):ti
6	(atorvastatin* or lipitor):ti
7	(rosuvastatin* or crestor):ti
8	MeSH descriptor: [Pravastatin] explode all trees
9	(pravastatin* or lipostat):ti
10	(fluvastatin* or lescol):ti

11	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10
12	MeSH descriptor: [Diabetes Mellitus] this term only and with qualifiers: [Chemically induced - CI]
13	MeSH descriptor: [Diabetes Mellitus, Type 2] explode all trees and with qualifiers: [Chemically induced - CI]
14	MeSH descriptor: [Hydroxymethylglutaryl-CoA Reductase Inhibitors] this term only and with qualifiers: [Adverse effects - AE]
15	MeSH descriptor: [Rhabdomyolysis] this term only and with qualifiers: [Chemically induced - CI]
16	MeSH descriptor: [Muscular Diseases] this term only and with qualifiers: [Chemically induced - CI]
17	MeSH descriptor: [Cataract] this term only and with qualifiers: [Chemically induced - CI]
18	MeSH descriptor: [Drug-Induced Liver Injury] this term only
19	MeSH descriptor: [Acute Kidney Injury] this term only and with qualifiers: [Chemically induced - CI]
20	MeSH descriptor: [Muscular Atrophy] this term only and with qualifiers: [Chemically induced - CI]
21	MeSH descriptor: [Muscle Weakness] this term only and with qualifiers: [Chemically induced - CI]
22	MeSH descriptor: [Polyneuropathies] this term only and with qualifiers: [Chemically induced - CI]
23	MeSH descriptor: [Fatigue] this term only and with qualifiers: [Chemically induced - CI]
24	(statin near/2 risk*):ti
25	((myalgia* or myopath* or fatigue or tiredness or polyneuropath* or neuropath* or rhabdomyolysis) near/10 statin*):ti,ab
26	((muscle* or muscular or musculoskeletal) near/2 (pain or tenderness or weakness) near/10 statin*):ti,ab
27	((incident or new-onset) next/1 diabetes) near/10 statin*):ti,ab
28	((hepatic or liver or renal or kidney) near/2 (failure or dysfunction or problem*) near/10 statin*):ti,ab
29	((raised or elevat*) near/3 ("liver enzymes" or "hepatic enzymes") near/10 statin*) .ti,ab
30	((side or adverse or unintended) near/2 (event* or effect*) near/3 (pravastatin or atorvastatin or rosuvastatin or fluvastatin or lipitor or crestor or simvastatin or zocor or lescol or lipostat or statin*)) .ti,ab
31	#12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30
32	#11 and #31

A.3.10 Statins efficacy

Q. For adults without established CVD (primary prevention) and with established CVD (secondary prevention) what is the clinical and cost effectiveness of statin therapy?

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD	Simvastatin		The following filters were used in Medline and Embase only: SR	See Table 1
With additional	Atorvastatin Rosuvastatin			

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
lines	Pravastatin Fluvastatin		and RCT	

Medline search terms

1	*Hydroxymethylglutaryl-CoA Reductase Inhibitors/
2	statin*.ti,ab.
3	((Hydroxymethylglutaryl-CoA or HMG-CoA) adj3 (reductase or inhibitors)).ti,ab.
4	exp *simvastatin/
5	(simvastatin* or zocor).ti,ab.
6	(atorvastatin* or lipitor).ti,ab.
7	(rosuvastatin* or crestor).ti,ab.
8	exp *pravastatin/
9	(pravastatin* or lipostat).ti,ab.
10	(fluvastatin* or lescol).ti,ab.
11	or/1-10

Embase search terms

1	*Hydroxymethylglutaryl-CoA Reductase Inhibitor/
2	((Hydroxymethylglutaryl-CoA or HMG-CoA) adj3 (reductase or inhibitors)).ti,ab.
3	statin*.ti,ab.
4	exp *simvastatin/
5	(simvastatin* or zocor).ti,ab.
6	(atorvastatin* or lipitor).ti,ab.
7	(rosuvastatin* or crestor).ti,ab.
8	exp *pravastatin/
9	(pravastatin* or lipostat).ti,ab.
10	(fluvastatin* or lescol).ti,ab.
11	exp *atorvastatin/ or exp *rosuvastatin/
12	or/1-11

Cochrane search terms

1	MeSH descriptor: [Hydroxymethylglutaryl-CoA Reductase Inhibitors] this term only
2	((Hydroxymethylglutaryl-CoA or HMG-CoA) near/3 (reductase or inhibitors)):ti,ab
3	MeSH descriptor: [Simvastatin] this term only
4	(simvastatin* or zocor):ti,ab
5	(atorvastatin* or lipitor):ti,ab
6	(rosuvastatin* or crestor):ti,ab
7	mesh descriptor: [pravastatin] this term only
8	(pravastatin* or lipostat):ti,ab
9	(fluvastatin* or lescol):ti,ab
10	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9

Economics search

Economic searches were conducted in Medline, Embase, HEED and CRD for NHS EED and HTA.

Search constructed by combining the columns in the following table using the AND Boolean operator.

Population	Intervention / exposure	Comparison	Study filter used	Date parameters
CVD or hyperlipidaemia or stanols or sterols anion exchange resins omega-3 nicotinic acids fibrates			The following filters were used in Medline and Embase only: HE	Medline: Oct 2012 – 20/11/13 Embase: Week 40 - 20/11/13

Medline search terms

1	hyperlipidemias/ or hypercholesterolemia/ or dyslipidemias/
2	(dyslipid?emi\$ or hyperlipid?emi\$ or hypercholesterol?emi\$ or hyperlip?emi\$).ti,ab.
3	(hypolipid?emic or hypocholesterol?emic).ti,ab.
4	((lipid\$ or cholesterol) adj3 (disorder\$ or abnormal\$ or level\$ or modif\$)).ti,ab.
5	((high* or raised or elevat* or increas*) adj3 (cholesterol or lipid\$)).ti,ab.
6	((reduced or reduction or reducing or low* or decreas*) adj3 (cholesterol or lipid*)).ti,ab.
7	or/1-6
8	Cardiovascular Diseases/
9	Heart diseases/
10	Myocardial Ischemia/
11	exp Angina Pectoris/
12	Coronary Disease/
13	Coronary Artery Disease/
14	exp Coronary Stenosis/
15	Myocardial Infarction/
16	exp Heart Failure/
17	arrhythmias, cardiac/ or atrial fibrillation/
18	Vascular Diseases/
19	hypertension/
20	Atherosclerosis/
21	Peripheral Arterial Disease/
22	Peripheral Vascular Diseases/
23	Arteriosclerosis/
24	Cerebrovascular Disorders/
25	exp Stroke/
26	exp brain ischemia/
27	((cardiovascular or cardio-vascular or cardio vascular) adj3 (event\$ or disease\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
28	((coronary or peripheral vascular or heart or peripheral arter\$) adj3 (disease\$ or event\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
29	(MI or myocardial infarct\$).ti,ab.
30	(CVD or CHD or CAD or PAD or CVA).ti,ab.
31	(hypertension or hypertensive\$).ti,ab.
32	((high or raised or elevated) adj2 (blood pressure or bp)).ti,ab.

33	(atheroscleros\$ or arterioscleros\$).ti,ab.
34	(cerebrovascular accident\$ or stroke\$).ti,ab.
35	(ACS or angina or acute coronary syndrome\$).ti,ab.
36	(AF or atrial fibrillation).ti,ab.
37	((chronic or congestive) adj2 heart failure).ti,ab.
38	(heart or coronary or cardio\$ or cardiac\$ or atherosclero\$ or arteriosclero\$ or ischemi\$ or ischaemi\$ or myocardi\$ or atrial\$ or infarct\$ or vascular or stenosis\$ or hypertens\$ or cerebrovascular).ti,ab.
39	or/8-38
40	sterols/ or exp phytosterols/
41	(stanol\$ or sterol\$ or plant steroid or plant steroids or phytosterol\$ or phytasterol\$ or sitosterol\$ or campesterol\$ or campestanol\$ or stigmasterol\$ or sitostanol\$ or benecol\$).ti,ab.
42	40 or 41
43	exp Anion Exchange Resins/
44	((anion exchange or anionic exchange) adj2 resin\$).ti,ab.
45	((anion or anionic) adj2 exchanger\$).ti,ab.
46	(cholestyramin\$ or colestyramin\$ or colestimide or cholybar or colextran or colestilan or cholestigel or cholestipol or colestipol or colestid or questran\$ or quantalan\$ or cuemid\$ or colesevelam).ti,ab.
47	(bile acid adj3 (sequestrant\$ or sequestering agent\$ or resin\$)).ti,ab.
48	or/43-47
49	exp Fish Oils/
50	fatty acids, unsaturated/ or exp fatty acids, omega-3/
51	Dietary Fats, Unsaturated/
52	(fish adj3 oil\$).ti,ab.
53	(omega 3 or omega-3).ti,ab.
54	((n 3 or n3 or n-3) adj3 ((fatty adj3 acid\$) or PUFA\$)).ti,ab.
55	((docosahexaenoic or docosahexenoic or eicosapentaenoic or eicosapentanoic or icosapentaenoic or timnodonic or linolenic or a-linolenic or alpha linolenic) adj2 acid\$).ti,ab.
56	(linolenate or maxepa or omacor).ti,ab.
57	((DHA or ALA or EPA) and (omega 3 or omega-3 or PUFA* or fatty acid\$)).ti,ab.
58	or/49-57
59	Nicotinic Acids/ or niacin/
60	Nicotinic.ti,ab.
61	niacin.ti,ab.
62	(nicotinate\$ or acipimox or acipemox).ti,ab.
63	(olbetam or niaspan or tredaptive).ti,ab.
64	((3 pyridinecarboxylic or 3-pyridinecarboxylic) adj3 acid).ti,ab.
65	or/59-64
66	exp Fibric Acids/
67	(fibrate\$ or bezafibrate or clofibrate or fenofibrate or lopid or gemfibrozil or bezalip or tricor or fibracor or lipantil or supralip or modalim or ciprofibrate).ti,ab.
68	((fibric or fenofibric or clofibric) adj2 acid\$).ti,ab.
69	or/66-68
70	7 or 38 or 42 or 48 or 58 or 65 or 69

Embase search terms

1	*hyperlipidemia/
2	*hypercholesterolemia/
3	(dyslipid?emi\$ or hyperlipid?emi\$ or hypercholesterol?emi\$ or hyperlip?emi\$).ti,ab.
4	(hypolipid?emic or hypocholesterol?emic).ti,ab.
5	((lipid\$ or cholesterol) adj3 (disorder\$ or abnormal\$ or level\$ or modif\$)).ti,ab.
6	((high* or raised or elevat* or increas*) adj3 (cholesterol or lipid\$)).ti,ab.
7	((reduced or reduction or reducing or low* or decreas*) adj3 (cholesterol or lipid*)).ti,ab.
8	or/1-7
9	*cardiovascular disease/
10	*coronary artery disease/
11	*vascular disease/
12	*coronary artery atherosclerosis/
13	*peripheral vascular disease/
14	*peripheral occlusive artery disease/
15	*arteriosclerosis/
16	*ischemic heart disease/
17	exp *Stroke/ or *stroke patient/
18	*coronary artery obstruction/
19	*hypertension/
20	*heart disease/
21	*heart arrhythmia/
22	*heart fibrillation/ or *heart atrium fibrillation/
23	*heart failure/ or exp *congestive heart failure/
24	*acute coronary syndrome/ or exp *angina pectoris/ or *heart infarction/
25	*cerebrovascular disease/
26	*cerebrovascular accident/
27	exp *brain ischemia/
28	exp *heart arrest/ or *heart death/
29	*brain infarction/
30	*atherosclerosis/
31	exp *cardiovascular risk/
32	((cardiovascular or cardio-vascular or cardio vascular) adj3 (event\$ or disease\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
33	((coronary or peripheral vascular or heart or peripheral arter\$) adj3 (disease\$ or event\$ or disorder\$ or risk\$ or benefit\$)).ti,ab.
34	(MI or myocardial infarct\$).ti,ab.
35	((heart or cardiopulmonary or cardiac) adj3 (death\$ or arrest\$ or attack\$)).ti,ab.
36	(CVD or CHD or CAD or PAD or CVA).ti,ab.
37	(hypertension or hypertensive\$).ti,ab.
38	((high or raised or elevated) adj2 (blood pressure or bp)).ti,ab.
39	(atheroscleros\$ or arterioscleros\$).ti,ab.
40	(cerebrovascular accident\$ or stroke\$).ti,ab.
41	(ACS or angina or acute coronary syndrome\$).ti,ab.
42	(AF or atrial fibrillation).ti,ab.
43	((chronic or congestive) adj2 heart failure).ti,ab.

44	(heart or coronary or cardio\$ or cardiac\$ or atherosclero\$ or arteriosclero\$ or ischemi\$ or ischaemi\$ or myocardi\$ or atrial\$ or infarct\$ or vascular or stenosis\$ or hypertens\$ or cerebrovascular).ti,ab.
45	or/9-44
46	(stanol\$ or sterol\$ or plant steroid or plant steroids or stigmasterol or phytasterol\$ or phytosterol\$ or sitosterol\$ or campesterol\$ or sitostanol\$ or campestanol\$ or benecol\$).ti,ab.
47	sterol/ or campestanol/ or campesterol/ or phytosterol/ or sitostanol/ or sitosterol/
48	46 or 47
49	fish oil/
50	polyunsaturated fatty acid/
51	omega 3 fatty acid/
52	unsaturated fatty acid/ or docosahexaenoic acid/ or icosapentaenoic acid/ or icosapentaenoic acid ethyl ester/ or linolenic acid/ or omega 3 fatty acid ester/
53	(fish adj3 oil\$).ti,ab.
54	(omega 3 or omega-3).ti,ab.
55	((n3 or n 3 or n-3) adj3 ((fatty adj3 Acid\$) or PUFA\$)).ti,ab.
56	((docosahexaenoic or docosahexenoic or eicosapentaenoic or eicosapentanoic or icosapentaenoic or timnodonic or linolenic or a-linolenic or alpha linolenic) adj2 acid\$).ti,ab.
57	(linolenate or omacor or maxepa).ti,ab.
58	((DHA or ALA or EPA) and (omega 3 or omega-3 or PUFA\$ or fatty acid\$)).ti,ab.
59	or/50-58
60	exp *fibric acid derivative/
61	((fibric or fenofibric or clofibric) adj2 acid\$).ti,ab.
62	(fibrate\$ or bezafibrate or clofibrate or fenofibrate or lipid or gemfibrozil or bezalip or tricor or fibrivor or lipantil or supralip or modalim or ciprofibrate).ti,ab.
63	60 or 61 or 62
64	*nicotinic acid/ or *laropiprant plus nicotinic acid/ or *acipimox/
65	nicotinic.ti,ab.
66	(niacin or nicotinate\$ or acipimox or acipemox or olbetam or niaspan or tredaptive).ti,ab.
67	((3 pyridinecarboxylic or 3-pyridinecarboxylic) adj3 acid).ti,ab.
68	or/64-67
69	exp *anion exchange resin/
70	exp *bile acid sequestrant/
71	*colestilan/ or *colestipol/ or *colestyramine/ or *colesevelam/ or *diethylaminoethyl dextran/
72	((anion exchange or anionic exchange) adj2 resin\$).ti,ab.
73	((anion or anionic) adj2 exchanger\$).ti,ab.
74	(cholestyramin\$ or colestyramin\$ or colestimide or cholybar or colextran or colestilan or cholestagel or colestipol or cholestipol or colestid or questran\$ or quantalan\$ or cuemid\$ or colesevelam).ti,ab.
75	(bile acid adj3 (sequestrant\$ or sequestering agent\$ or resin\$)).ti,ab.
76	or/69-75
77	8 or 45 or 48 or 59 or 63 or 68 or 76

CRD search terms

1	MeSH DESCRIPTOR Hyperlipidemias EXPLODE ALL TREES IN NHSEED,HTA
2	MeSH DESCRIPTOR Hyperlipidemias EXPLODE ALL TREES WITH QUALIFIER hypercholesterolemia IN NHSEED,HTA

3	MeSH DESCRIPTOR Hyperlipidemias EXPLODE ALL TREES WITH QUALIFIER dyslipidemias IN NHSEED,HTA
4	(dyslipidaemi*):TI OR (dyslipidemi*):TI OR (hyperlipidemi*):TI OR (hyperlipidaemi*):TI IN NHSEED, HTA
5	(hypercholesterolemi*):TI OR (hypercholesterolaemi*):TI OR (hyperlipaemi*):TI OR (hyperlipemi*):TI IN NHSEED, HTA
6	(hypolipidaemic):TI OR (hypolipidemic):TI OR (hypocholesterolaemic):TI OR (hypocholesterolemic):TI IN NHSEED, HTA
7	(hypolipidaemic):TI OR (hypolipidemic):TI OR (hypocholesterolaemic):TI OR (hypocholesterolemic):TI IN NHSEED, HTA
8	(lipid*):TI OR (cholesterol):TI IN NHSEED, HTA
9	(disorder*):TI OR (abnormal*):TI OR (level*):TI OR (modif*):TI OR (high*):TI IN NHSEED, HTA
10	(raised):TI OR (elevat*):TI OR (increas*):TI OR (reduced):TI OR (reduction):TI IN NHSEED, HTA
11	(reducing):TI OR (low*):TI OR (decreas*):TI IN NHSEED, HTA
12	#9 OR #10 OR #11
13	#8 AND #12
14	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #13
15	MeSH DESCRIPTOR cardiovascular diseases
16	MeSH DESCRIPTOR coronary disease
17	MeSH DESCRIPTOR vascular diseases
18	MeSH DESCRIPTOR coronary artery disease
19	MeSH DESCRIPTOR atherosclerosis
20	MeSH DESCRIPTOR Peripheral Vascular Diseases EXPLODE ALL TREES
21	MeSH DESCRIPTOR arteriosclerosis
22	MeSH DESCRIPTOR heart diseases
23	MeSH DESCRIPTOR stroke EXPLODE ALL TREES
24	(CVD OR CHD OR CAD OR PAD OR CVA):TI
25	((cardiovascular OR cardio-vascular) NEAR3 (event* OR disease*)):TI OR (((coronary OR peripheral vascular or heart or peripheral arterial) NEAR3 (event* OR disease*)):TI OR (atheroscleros* OR stroke* OR cerebrovascular accident* OR arterioscleros*):TI
26	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25
27	MeSH DESCRIPTOR secondary prevention
28	MeSH DESCRIPTOR primary prevention
29	MeSH DESCRIPTOR risk
30	MeSH DESCRIPTOR risk factors
31	MeSH DESCRIPTOR risk assessment
32	((cardio* OR cardiac OR stroke or coronary) NEAR3 (risk OR prevention)):TI OR (((risk OR prevent*) NEAR3 (coronary OR cardio* OR stroke* OR cardiac)):TI
33	#27 OR #28 OR #29 OR #30 OR #31 OR #32
34	((high OR raised OR elevated) NEAR2 cholesterol):TI OR ((lipid* NEAR3 (disorder* OR abnormal*)):TI
35	(dyslipidemia* or hyperlipidemia* or hyperlipemia* OR hypercholesterolemia)
36	MeSH DESCRIPTOR hypercholesterolemia
37	MeSH DESCRIPTOR Hyperlipidemias
38	#34 OR #35 OR #36 OR #37
39	#26 AND #33
40	#38 OR #39

41	MeSH DESCRIPTOR cardiovascular diseases
42	MeSH DESCRIPTOR heart diseases
43	MeSH DESCRIPTOR myocardial ischemia
44	MeSH DESCRIPTOR angina pectoris EXPLODE ALL TREES
45	MeSH DESCRIPTOR coronary disease
46	MeSH DESCRIPTOR coronary artery disease
47	MeSH DESCRIPTOR coronary stenosis
48	MeSH DESCRIPTOR myocardial infarction
49	MeSH DESCRIPTOR heart failure EXPLODE ALL TREES
50	MeSH DESCRIPTOR arrhythmias, cardiac
51	MeSH DESCRIPTOR vascular diseases
52	MeSH DESCRIPTOR atrial fibrillation
53	MeSH DESCRIPTOR hypertension
54	MeSH DESCRIPTOR atherosclerosis EXPLODE ALL TREES
55	MeSH DESCRIPTOR peripheral vascular diseases
56	MeSH DESCRIPTOR arteriosclerosis
57	MeSH DESCRIPTOR cerebrovascular disorders
58	MeSH DESCRIPTOR stroke EXPLODE ALL TREES
59	MeSH DESCRIPTOR brain ischemia EXPLODE ALL TREES
60	MeSH DESCRIPTOR heart arrest EXPLODE ALL TREES
61	#41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60
62	(CVD or CVA or CHD or PAD or CAD or MI or ACS or AF)
63	(((high or raised or elevated) adj3 ("blood pressure" or BP)))
64	((peripheral adj2 arter*))
65	((stroke* or angina or atrial or heart or coronary or cardio* or cardiac* or athersclero* or arteriosclero* or ischemi* or ischaemi* or myocardi* or infarct* or vascular* or stenosis* or hypertens* or cerebrovascular))
66	#61 OR #62 OR #63 OR #64 OR #65
67	MeSH DESCRIPTOR sterols
68	MeSH DESCRIPTOR phytosterols EXPLODE ALL TREES
69	((stanol* or sterol* or phytosterol* or phytasterol* or stigmasterol* or campesterol* or campestanol* or benecol or sitosterol* or sitostanol* or "plant steroid" or "plant steroids"))
70	MeSH DESCRIPTOR fibric acids EXPLODE ALL TREES
71	(((fibrin or clofibrin or fenofibrin) adj2 acid*))
72	((fibrate* or bezafibrate or clofibrate or fenofibrate or lipid or gemfibrozil or bezalip or tricor or fibrin or lipantil or supralip or modim or ciprofibrate))
73	MeSH DESCRIPTOR nicotinic acids
74	MeSH DESCRIPTOR niacin
75	((nicotinic or niacin or nicotinate* or niaspan or olbetam or tredaptive or acipimox or acipemox))
76	MeSH DESCRIPTOR anion exchange resins EXPLODE ALL TREES
77	((("anion exchange" or "anionic exchange") adj2 resin*))
78	((anion or anionic) adj2 exchanger*)
79	((cholestyramin* or colestyramin* or colestimide or colestid or cholyber or colextran or colestilan or cholestigel or colestipol or cholestipol or questran or quantalan or cuemid or colesevelam))

80	("bile acid") adj3 (sequestrant* or "sequestering agent" or "sequestering agents" or resin*)
81	MeSH DESCRIPTOR fish oils EXPLODE ALL TREES
82	MeSH DESCRIPTOR fatty acids, unsaturated
83	MeSH DESCRIPTOR fatty acids, omega-3 EXPLODE ALL TREES
84	MeSH DESCRIPTOR dietary fats, unsaturated
85	(fish adj3 oil*)
86	(linolenate*)
87	((((omega-3 or "omega 3" or n-3 or "n 3" or n3) adj3 (PUFA or PUFAS or "fatty acid" or "fatty acids"))))
88	((((DHA or ALA or EPA) adj6 (omega or PUFA* or "fatty acid" or "fatty acids"))))
89	((((doxosahexaenoic or docosahexenoic or eicosapentaenoic or eicosapentanoic or icosapentaenoic or timnodonic or linolenic or a-linolenic or alpha-linolenic) adj2 acid))
90	#67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89
91	#66 AND #90
92	#40 OR #91
94	#14 OR #40 OR #91

HEED search terms

1	ax=hyperlipidemi* or hyperlipidaemia*
2	ax=hypercholesterolemi* or hypercholesterolaemi*
3	ax=dyslipidemi* or dyslipidaemi*
4	cs=1 or 2 or 3
5	ax=disorder* or abnormal*
6	ax=lipid*
7	cs=5 and 6
8	ax=high or raised or elevated
9	ax=cholesterol
10	cs=8 and 9
11	cs=4 or 7 or 10
12	ax=lipid* or cholesterol
13	ax= disorder* or abnormal* or level* or modif* or high* or raised or elevat* or increas* or reduced or reduction or reducing or low* or decreas*
14	cs=12 and 13
15	cs=11 or 14

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