

Precis: This systematic review and meta-analysis synthesise high-quality evidence from RCTs and quasi-RCTs to investigate the impact of commonly available conventional lipid-lowering agents on circulating levels of PCSK9 and lipid profiles.

Primary search strategy on MEDLINE

#1	Exp Hydroxymethylglutaryl-CoA Reductase Inhibitors/
#2	(statin\$ OR atorvastatin OR fluvastatin OR lovastatin or pitavastatin or pravastatin or cerivastatin OR rosuvastatin or simvastatin).tw. OR (lipitor\$ OR baycol OR lescol OR mevacor OR altacor OR pravachol OR lipostat OR crestor OR zocor OR mevinolin OR compactin OR fluindostatin).tw.
#3	#1 OR #2
#4	Exp Fibric Acids/
#5	(fibric acid OR fibrate\$.tw. OR (gemfibrozil OR bezafibrate OR ciprofibrat\$ OR fenofibrate OR clofibrate OR asufibrat\$ OR befibrat\$ OR befizal OR bezacur OR bezafibratum OR bezafisal OR dezagen OR bezalande OR bezalex OR bezapuren OR bezastad OR bionolip OR cedur OR closer OR difaterol OR durabezur OR eulitop OR hadiel OR klestran OR liparol OR lipitrol OR lipocin OR lipox OR norlip OR polyzalip OR redalip OR sklerofibrate OR regadrin OR befizal OR bezamerck OR reducterol OR bezalip OR solibay OR cedur OR azufibrate OR difaterol OR lipox OR clofenapate OR clofibric acid OR clofibrinic acid OR livesan OR liparison OR durafenat OR supralip OR lofibra OR fenobeta OR lipantil OR tricor OR controlip OR gemfibrozil OR gemfibro\$ OR lipazil OR lipid OR nugemfibrozil OR apogemfibrozil).tw.
#6	#4 OR #5
#7	(Exp Ezetimibe/) OR (ezetimibe OR ezetimib OR ezetrol OR zetia OR vytorin OR inegy).tw.
#8	(Cholestyramine OR nicotinic acid OR colestipol OR (Cholesterol next lowering) OR (lipid next lowering)).tw.
#9	(Bempedoic\$ or Nexletol or Nexlizet or Nilemdo\$ or Nustendi or ESP 55016 or ESP55016 or ESP-55016 or ETC 1002 or ETC1002 or ETC-1002 or AK499358 or 1EJ6Z6Q368 or 738606-46-7).tw.
#10	(exp Fish Oils/) OR (exp Fatty Acids, Omega-3/) OR (omega-3 or omega3 or (omega adj5 fat)).tw. OR (eicosapentaen or docosahexaen or linseed oil or linolenic acids or PUFA or n-3PUFA or n3PUFA or perilla or linseed or maxepa or perilla or linseed or maxepa or dha or docosahex\$ or eicosapent4 or epa or ethyl\$eicosapent or ethyleicosapent).tw. OR (n3 or n\$3 or w3 or w\$3) adj3 polyunsaturat\$.tw. OR (n3 or n\$3 or w3 or w\$3) adj3 oil).tw. OR (fish adj2 oil).tw. OR (cod adj2 oil).tw.
#11	#7 OR #8 OR #9 OR #10
#12	#3 OR #6 OR #11
#13	Exp Proprotein Convertase 9/
#14	(PCSK9 OR PCSK 9 OR PCSK\$9 OR Proprotein convertase subtilisin kexin type 9 OR Proprotein convertase subtilisin\$kexin type 9 OR proprotein convertase\$ OR pro\$protein convertase\$ OR NARC1 OR NARC 1 OR NARC\$1 OR neuronal

	apoptosis regulated convertase1 OR neuronal apoptosis regulated convertase 1 OR neuronal apoptosis regulated convertase\$1).tw.
#15	#11 OR #12
#16	#10 AND #13
#17	Randomized controlled trial.pt.
#18	Controlled clinical trial.pt.
#19	Randomized.ab.
#20	Placebo.ab.
#21	Drug therapy.fs.
#22	Randomly.ab.
#23	Trial.ab.
#24	Groups.ab.
#25	#15 OR #16 OR #17 OR #18 OR #19 OR #20 #21 OR #22
#26	#14 AND #23

Formal search strategy

Ovid MEDLINE(R) and In-Process, In-Data-Review & Other Non-Indexed Citations

No.	Searches
1	Proprotein Convertase 9/
2	(PCSK9 or PCSK-9).tw.
3	((kexin\$ adj3 "9") or (subtilisin\$ adj5 "9")).tw.
4	((proprotein or pro-protein) adj3 convertase\$ adj5 "9").tw.
5	(NARC1 or NARC-1).tw.
6	((neur\$ or apopt\$) adj5 convertase\$ adj3 "1").tw.
7	1 or 2 or 3 or 4 or 5 or 6
8	Hydroxymethylglutaryl-CoA Reductase Inhibitors/ or exp Hydroxymethylglutaryl CoA Reductases/
9	((("hydroxymethylglutaryl Coenzyme" or "hydroxymethylglutaryl CoA" or "HMG CoA") adj5 inhib\$) or statin or statins).tw.
10	(anticholesterol?emic or hypocholesterol?emic or hypocholester?emic or anticholester?emic).tw.
11	((cholesterol or lipid\$ or LDL or HDL or TG or TC or triglyceride) adj3 (reduc\$ or lower\$ or inhib\$ or drug\$ or agent\$)).tw.
12	Atorvastatin/ or exp Simvastatin/ or exp Lovastatin/ or Fluvastatin/ or Pravastatin/ or Rosuvastatin Calcium/

- 13 (Atorvastatin or atorlip or atovarol or cardyl or "ci 981" or ci981 or glustar or lipibec or lipitor or lipimar or liptonorm or lowlipen or sortis or storvas or tahor or torvast or totalip or xarator or "ym 548" or ym548 or zarator).tw.
- 14 (Simvastatin or Synvinolin or "MK 733" or MK733 or Zocor or avastinee or cholestat or clinfar or colostatina or colestricon or covastin or denan or epistatin or esvat or ethicol or eucor or ifistatin or kavelor or klonastin or kolestevan or lipecor or lipex or lipinorm or liponorm or lipovas or lodales or medipo or mersivas or "nor vastina" or normofat or orovax or rechol or simbado or simcard or simchol or simovil or simtin or simvacor or simvahex or simvalord or simvastar or simvata or simvatin or simvor or simvotin or sinvacor or sinvastatin or sinvinolin or sivastin or starzoco or torio or valemia or vasilip or vasotenal or vazim or vidastat or zimmex or zocord or zovast or inegy or vytorin or zetsim or zintrepid or cholib or fenofibrate\$ or "niacin simvastatin" or simcor or "rosiglitazone simvastatin" or avandastat or "sitagliptin simvastatin" or sitagliptin phosphate\$ or juvisync).tw.
- 15 (Pitavastatin or nsvastatin or itavastatin or alipza or livalo or livazo or pitava or ribar or vezepra or "P 872441" or "NK 104" or "nk104" or "nks 104" or nks104 or lippiza or nikita or trolise or zypitamag).tw.
- 16 (Cerivastatin or kazak or rivastatin or certa or "bay w 6228" or "bay w6228" or baycol or lipobay).tw
- 17 (Lovastatin or mevinolin or monacolin or "6 Methylcompactin" or "MK 803" or MK803 or mk0803 or mevacor or altocor or altoprev or artein or belvas or birotin or cholestra or cysin or ellanco or elstatin or lipdip or lipivas or lofacol or lomar or lostatin or lovacel or lovacol or lovalip or lovalord or lovastan or lovasterol or lovastin or lovatadin or lowachol or lozutin or medostatin or meverstin or mevinacor or monakolin or "msd 803" or neolipid or nergadan or ovasta or rodatin or rovacor or taucor or advicor).tw.
- 18 (Fluvastatin or fluindostatin or lescol or "XU 62-320" or "XU 62320" or xu62320 or canef or cranoc or "fractal lp" or leucol or lochol or locol or "sri 62320" or sri62320 or vastin).tw.
- 19 (Pravastatin or eptastatin or vasten or "CS 514" or CS514 or lipemol or liplat or "nu pravastatin" or prareduct or mevalotin or pravachol or elisor or selektine or pravacol or pravasin or lipostat or "RMS 431" or RMS431 or "SQ 31000" or SQ31000 or "SQ 31,000" or SQ31,000 or bristacol or astin or cholespar or epatostantin or eptastatine or kenstatin or lipidal or liprevil or novalas or prascolend or prastan or prava or pravaselect or pravasine or pravator or pravyl or sanaprav or selipran or stanidine or vasopran or xipral or pravafenix).tw.
- 20 (Rosuvastatin or ZD4522 or "ZD 4522" or crestor or rosuvax or "s 4522" or s4522 or certriad).tw.
- 21 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**

- 22 exp Ezetimibe/
- 23 (ezetimibe or ezetimib or ezetrol or zetia or vytorin or inegy or "SCH 58235" or SCH58235).tw.
- 24 22 or 23**
- 25 exp Fibric Acids/
- 26 (fibric acid or fibrat\$ or gemfibrozil or bezafibrate or ciprofibrat\$ or fenofibrate or clofibrate or asufibrat\$ or befibrat\$ or befizal or bezacur or bezafibratum or bezafisal or dezagen or bezalande or bezalex or bezapuren or bezastad or bionolip or cedur or closer or difaterol or durabezur or eulitop or hadiel or klestran or liparol or lipitrol or lipocin or lipox or norlip or polyzalip or redalip or sklerofibrate or regadrin or befizal or bezamerck or reducterol or bezalip or solibay or cedur or azufibrate or difaterol or lipox or clofenapate or clofibrin acid or clofibrinic acid or livesan or liparison or durafenat or supralip or lofibra or fenobeta or lipantil or tricor or controlip or gemfibrozil or gemfibro\$ or lipazil or lopid or nugemfibrozil or apogemfibrozil).tw.
- 27 25 or 26**
- 28 exp Nicotinic Acids/
- 29 (niacin or nicotinic acid or nicamin or nicotinate or "nico 400" or nico-400 or nico400 or induracin or nicolar or nicocap or wampocap or nicobid or "3 pyridinecarboxylic acid" or 3-pyridinecarboxylic acid or enduracin or niacinamide or papulex or "vitamin b3" or "vitamin b 3" or vitamin pp or nicotinamide or enduramide or nicobion or "3 pyridinecarboxamide" or 3-pyridinecarboxamide or nicotinsaureamid or Niaspan or Tredaptive or antipellagra factor or niacor or nicotinex or vitb3 or nicamid or nicomide-t or nicosedine).tw.
- 30 28 or 29**
- 31 exp "Bile Acids and Salts"/ and (sequestering agents/ or chelating agents/)
- 32 (((bile adj3 acid\$) or BA) adj3 sequestrant\$) or BAS).tw.
- 33 Colesevelam Hydrochloride/ or Cholestyramine Resin/ or Colestipol/
- 34 (Colesevelam or Cholestagel or Welchol or Lodalis or "GT 31104" or GT-31104 or GT31-104 or "GT31 104" or GT31104).tw.
- 35 (Cholestyramine\$ or Colestyramin\$ or Questran\$ or Prevalite or Cuemid\$ or Quantalan\$ or MK-135 or MK135 or "MK 135").tw.
- 36 (Colestipol or Colestid or Cholestabyl or "U-26597 A" or "U 26597 A" or "U26597 A" or Colestimide or colestilan or MCI-196).tw.
- 37 31 or 32 or 33 or 34 or 35 or 36**

- 38 ((bempedoi\$ adj3 acid\$) or Nexletol or Nexlizet or Nilemdo or Nustendi or Bempedoate or "ETC 1002" or ETC1002 or ETC-1002 or ESP55016 or ESP-55016 or "ESP 55016" or 738606-46-7).tw.
- 39 exp Fatty Acids, Omega-3/ or Fish Oils/ or Cod Liver Oil/
- 40 (omega3\$ or "omega 3\$" or fatty acid\$ or PUFA or n-3PUFA\$ or n3PUFA\$ or dha or docosahex\$ or eicosapent\$ or epa or ethyl-eicosapent\$ or ethyleicosapent\$ or alphalinolen\$ or alpha-linolen\$ or linolenate\$ or linolenic\$).tw.
- 41 ((n3 or n-3 or w3 or w-3) adj3 (oil\$ or polyunsaturat\$)).tw.
- 42 ((fish\$ or cod) adj2 oil\$).tw.
- 43 39 or 40 or 41 or 42**
- 44 21 or 24 or 27 or 30 or 37 or 38 or 43**
- 45 randomized controlled trial.pt.
- 46 controlled clinical trial.pt.
- 47 randomized.ab.
- 48 placebo.ab.
- 49 randomly.ab.
- 50 trial.ab.
- 51 groups.ab.
- 52 drug therapy.fs.
- 53 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52**
- 54 7 and 44 and 53**
- 55 exp animals/ not humans.sh.
- 56 54 not 55
- 57 limit 56 to (english language and yr="2003 -Current")
-

Cochrane Central Register of Controlled Trials (CENTRAL)

No.	Searches
#1	MeSH descriptor: [Proprotein Convertase 9] this term only
#2	PCSK9 or PCSK-9
#3	(kexin* OR subtilisin*) AND 9
#4	(proprotein OR pro-protein) AND convertase* AND 9
#5	NARC1 OR NARC-1
#6	(neur* or apopt*) AND convertase* AND 1
#7	#1 OR #2 OR #3 OR #4 OR #5 OR #6
#8	MeSH descriptor: [Hydroxymethylglutaryl-CoA Reductase Inhibitors] this term only
#9	MeSH descriptor: [Hydroxymethylglutaryl CoA Reductases] explode all trees
#10	((("hydroxymethylglutaryl Coenzyme" OR "hydroxymethylglutaryl CoA" OR "HMG CoA") AND inhib*) OR statin OR statins
#11	anticholesterol?emic OR hypocholesterol?emic OR hypocholester?emic OR anticholester?emic
#12	(cholesterol OR lipid* OR LDL OR HDL OR TG OR TC OR triglyceride) AND (reduc* OR lower* OR inhib* OR drug* OR agent*)
#13	MeSH descriptor: [Atorvastatin] this term only
#14	MeSH descriptor: [Simvastatin] explode all trees
#15	MeSH descriptor: [Lovastatin] explode all trees
#16	MeSH descriptor: [Fluvastatin] this term only
#17	MeSH descriptor: [Pravastatin] this term only
#18	MeSH descriptor: [Rosuvastatin Calcium] this term only
#19	Atorvastatin OR atorlip OR atovarol OR cardyl OR "ci 981" OR ci981 OR glustar OR lipibec OR lipitor OR lipimar OR liptonorm OR lowlipen OR sortis OR storvas OR tahor OR torvast OR totalip OR xarator OR "ym 548" OR ym548 OR zarator
#20	Simvastatin OR Synvinolin OR "MK 733" OR MK733 OR Zocor OR avastinee OR cholestat OR clinfar OR colostatina OR colestricon OR covastin OR denan OR epistatin OR esvat OR ethicol OR eucor OR ifistatin OR kavelor OR klonastin OR kolestevan OR lipecor OR lipex OR lipinorm OR liponorm OR lipovas OR lodales OR medipo OR mersivas OR "nor vastina" OR normofat OR orovas OR rechol OR simbado OR simcard OR simchol OR simovil OR simtin OR simvacor OR simvahex OR simvalord OR simvastar OR simvata OR simvatin OR simvor OR simvotin OR sinvacor OR sinvastatin OR sinvinolin OR sivastin OR

- starzoco OR torio OR valemia OR vasilip OR vasotenal OR vazim OR vidastat OR zimmex OR zocord OR zovast OR inegy OR vytorin OR zetsim OR zintrepid OR cholib OR fenofibrate* OR "niacin simvastatin" OR simcor OR "rosiglitazone simvastatin" OR avandastat OR "sitagliptin simvastatin" OR sitagliptin phosphate* OR juvisync
- #21 Pitavastatin OR nisvastatin OR itavastatin OR alipza OR livalo OR livazo OR pitava OR ribar OR vezepra OR "P 872441" OR "NK 104" OR "nk104" OR "nks 104" OR nks104 OR lippiza OR nikita OR trolise OR zypitamag
- #22 Cerivastatin OR kazak OR rivastatin OR certa OR "bay w 6228" OR "bay w6228" OR baycol OR lipobay
- #23 Lovastatin OR mevinolin OR monacolin OR "6 Methylcompactin" OR "MK 803" OR MK803 OR mk0803 OR mevacor OR altocor OR altoprev OR artein OR belvas OR birotin OR cholestra OR cysin OR ellanco OR elstatin OR lipdip OR lipivas OR lofacol OR lomar OR lostatin OR lovacel OR lovacol OR lovalip OR lovalord OR lovastan OR lovasterol OR lovastin OR lovataadin OR lowachol OR lozutin OR medostatin OR meverstin OR mevinacor OR monakolin OR "msd 803" OR neolipid OR nergadan OR ovasta OR rodatin OR rovacor OR taucor OR advicor
- #24 Fluvastatin OR fluindostatin OR lescol OR "XU 62-320" OR "XU 62320" OR xu62320 OR canef OR cranoc OR "fractal lp" OR leucol OR lochol OR locol OR "sri 62320" OR sri62320 OR vastin
- #25 Pravastatin OR eptastatin OR vasten OR "CS 514" OR CS514 OR lipemol OR liplat OR "nu pravastatin" OR prareduct OR mevalotin OR pravachol OR elisor OR selektine OR pravacol OR pravasin OR lipostat OR "RMS 431" OR RMS431 OR "SQ 31000" OR SQ31000 OR "SQ 31,000" OR SQ31,000 OR bristacol OR astin OR cholepar OR epatostantin OR eptastatine OR kenstatin OR lipidal OR liprevil OR novales OR prascolend OR prastan OR prava OR pravaselect OR pravasine OR pravator OR pravyl OR sanaprav OR selipran OR stanidine OR vasopran OR xipral OR pravafenix
- #26 Rosuvastatin OR ZD4522 OR "ZD 4522" OR crestor OR rosuvas OR "s 4522" OR s4522 OR certriad
- #27 #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
- #28 MeSH descriptor: [Ezetimibe] explode all trees
- #29 ezetimibe OR ezetimib OR ezetrol OR zetia OR vytorin OR inegy OR "SCH 58235" OR SCH58235
- #30 #28 OR #29
- #31 MeSH descriptor: [Fibric Acids] explode all trees

- #32 fibric acid OR fibrate* OR gemfibrozil OR bezafibrate OR ciprofibrat* OR fenofibrate OR clofibrate OR asufibrat* OR befibrat* OR befizal OR bezacur OR bezafibratum OR bezafisal OR dezagen OR bezalande OR bezalex OR bezapuren OR bezastad OR bionolip OR cedur OR closer OR difaterol OR durabezur OR eulitop OR hadiel OR klestran OR liparol OR lipitrol OR lipocin OR lipox OR norlip OR polyzalip OR redalip OR sklerofibrate OR regadrin OR befizal OR bezamerck OR reducterol OR bezalip OR solibay OR cedur OR azufibrate OR difaterol OR lipox OR clofenapate OR clofibric acid OR clofibrinic acid OR livesan OR liparison OR durafenat OR supralip OR lofibra OR fenobeta OR lipantil OR tricor OR controlip OR gemfibrozil OR gemfibro* OR lipazil OR lipid OR nugemfibrozil OR apogemfibrozil
- #33 #31 OR #32
- #34 MeSH descriptor: [Nicotinic Acids] in all MeSH products
- #35 niacin OR nicotinic acid OR nicamin OR nicotinate OR "nico 400" OR nico-400 OR nico400 OR induracin OR nicolar OR nicocap OR wampocap OR nicobid OR "3 pyridinecarboxylic acid" OR enduracin OR niacinamide OR papulex OR "vitamin b3" OR "vitamin b 3" OR vitamin pp OR nicotinamide OR enduramide OR nicobion OR "3 pyridinecarboxamide" OR nicotinsaureamid OR Niaspan OR Tredaptive OR antipellagra factor OR niacor OR nicotines OR vitb3 OR nicamid OR nicomide-t OR nicosedine
- #36 #34 OR #35
- #37 MeSH descriptor: [Bile Acids and Salts] explode all trees
- #38 MeSH descriptor: [Sequestering Agents] this term only
- #39 MeSH descriptor: [Chelating Agents] this term only
- #40 (#38 OR #39) AND #37
- #41 (((bile AND acid*) OR BA) AND sequestrant*) OR BAS
- #42 MeSH descriptor: [Colesevelam Hydrochloride] this term only
- #43 MeSH descriptor: [Cholestyramine Resin] this term only
- #44 MeSH descriptor: [Colestipol] this term only
- #45 Colesevelam OR Cholestagel OR Welchol OR Lodalis OR "GT 31104" OR GT-31104 OR "GT31 104" OR GT31104
- #46 Cholestyramine* OR Colestyramin* OR Questran* OR Prevalite OR Cuemid* OR Quantalan* OR MK-135 OR MK135 OR "MK 135"
- #47 Colestipol OR Colestid OR Cholestabyl OR "U-26597 A" OR "U 26597 A" OR "U26597 A" OR Colestimide OR colestilan OR MCI-196
- #48 #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47

- #49 bempedoi* AND acid* or Nexletol or Nexlizet or Nilemdo or Nustendi or Bempedoate or "ETC 1002" or ETC1002 or ETC-1002 or ESP55016 or ESP-55016 or "ESP 55016" or "738606 46 7"
- #50 MeSH descriptor: [Fatty Acids, Omega-3] explode all trees
- #51 MeSH descriptor: [Fish Oils] this term only
- #52 MeSH descriptor: [Cod Liver Oil] this term only
- #53 omega3* or "omega 3*" or fatty acid* or PUFA or n-3PUFA* or n3PUFA* or dha or docosahex* or eicosapent* or epa or ethyl-eicosapent* or ethyleicosapent* or alphinolen* or alpha-linolen* or linolenate* or linolenic*
- #54 (n3 or n-3 or w3 or w-3) AND (oil* or polyunsaturat*)
- #55 (fish* or cod) AND oil*
- #56 #50 OR #51 OR #52 OR #53 OR #54 OR #55
- #57 #27 OR #30 OR #33 OR #36 OR #48 OR #49 OR #56
- #58 #7 AND #57 with Publication Year from 2003 to present , in Trials

Embase

No.	Searches
#1	'proprotein convertase 9'/de
#2	pcsk9 OR 'pcsk 9' OR (kexin* NEAR/3 '9') OR (subtilisin* NEAR/5 '9') OR ((proprotein OR 'pro protein') NEAR/3 convertase* NEAR/5 '9') OR ((neur* OR apopt*) NEAR/5 convertase* NEAR/3 '1') OR narc1 OR 'narc 1'
#3	#1 OR #2
#4	'hydroxymethylglutaryl coenzyme a reductase inhibitor'/exp OR 'hydroxymethylglutaryl coenzyme a reductase'/de OR 'atorvastatin'/de OR 'simvastatin'/de OR 'lovastatin plus nicotinic acid'/de OR 'pravastatin'/de OR 'rosuvastatin'/de
#5	(('hydroxymethylglutaryl coenzyme' OR 'hydroxymethylglutaryl coa' OR 'hmg coa') NEAR/5 inhib*) OR statin OR statins OR anticholesterol\$emic OR hypocholesterol\$emic OR hypocholester\$emic OR anticholester\$emic OR ((cholesterol OR lipid* OR ldl OR hdl OR tg OR tc OR triglyceride) NEAR/3 (reduc* OR lower* OR inhib* OR drug* OR agent*))
#6	atorvastatin OR atorlip OR atovarol OR cardyl OR 'ci 981' OR ci981 OR glustar OR lipibec OR lipitor OR liprimar OR liptonorm OR lowlipen OR sortis OR storvas OR tahor OR torvast OR totalip OR xarator OR 'ym 548' OR ym548 OR zarator
#7	simvastatin OR synvinolin OR 'mk 733' OR mk733 OR zocor OR avastinee OR cholestat OR clinfar OR colastatina OR colestricon OR covastin OR denan OR epistatin OR esvat OR ethicol OR eucor OR ifistatin OR kavelor OR klonastin OR kolestevan OR lipecor OR lipex OR lipinorm OR liponorm OR lipovas OR lodales OR medipo OR mersivas OR 'nor vastina' OR normofat OR orovas OR rechol OR simbado OR simcard OR simchol OR simovil OR simtin OR simvacor OR simvahex OR simvalord OR simvastar OR simvata OR simvatin OR simvor OR simvotin OR sinvacor OR sinvastatin OR sinvinolin OR sivastin OR starzoco OR torio OR valemia OR vasilip OR vasotenal OR vazim OR vidastat OR zimmex OR zocord OR zovast OR inegy OR vytorin OR zetsim OR zintrepid OR cholib OR fenofibrate* OR 'niacin simvastatin' OR simcor OR 'rosiglitazone simvastatin' OR avandastat OR 'sitagliptin simvastatin' OR 'sitagliptin phosphate*' OR juvisync
#8	pitavastatin OR nisvastatin OR itavastatin OR alipza OR livalo OR livazo OR pitava OR ribar OR vezepa OR 'p 872441' OR 'nk 104' OR 'nk104' OR 'nks 104' OR nks104 OR lippiza OR nikita OR trolise OR zypitamag
#9	cerivastatin OR kazak OR rivastatin OR certa OR 'bay w 6228' OR 'bay w6228' OR baycol OR lipobay
#10	lovastatin OR mevinolin OR monacolin OR '6 methylcompactin' OR 'mk 803' OR mk803 OR mk0803 OR mevacor OR altocor OR altoprev OR artein OR belvas OR biotin OR cholestra OR cysin OR ellanco OR elstatin OR lipdip OR lipivas OR lofacol OR lomar OR

- lostatin OR lovacel OR lovacol OR lovalip OR lovalord OR lovastan OR lovasterol OR lovastin OR lovatadin OR lowachol OR lozutin OR medostatin OR meverstin OR mevinacor OR monakolin OR 'msd 803' OR neolipid OR nergadan OR ovasta OR rodatin OR rovacor OR taucor OR advicor
- #11 fluvastatin OR fluindostatin OR lescol OR 'xu 62-320' OR 'xu 62320' OR xu62320 OR canef OR cranoc OR 'fractal lp' OR leucol OR lochol OR locol OR 'sri 62320' OR sri62320 OR vastin
- #12 pravastatin OR eptastatin OR vasten OR 'cs 514' OR cs514 OR lipemol OR liplat OR 'nu pravastatin' OR prareduct OR mevalotin OR pravachol OR elisor OR selektine OR pravacol OR pravasin OR lipostat OR 'rms 431' OR rms431 OR 'sq 31000' OR sq31000 OR 'sq 31,000' OR sq31,000 OR bristacol OR astin OR cholespar OR epatostantin OR eptastatine OR kenstatin OR lipidal OR liprevil OR novales OR prascolend OR prastan OR prava OR pravaselect OR pravasine OR pravator OR pravyl OR sanprav OR selipran OR standine OR vasopran OR xipral OR pravafenix
- #13 rosuvastatin OR zd4522 OR 'zd 4522' OR crestor OR rosuvas OR 's 4522' OR s4522 OR certriad
- #14 #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13
- #15 'ezetimibe'/de OR ezetimibe OR ezetimib OR ezetrol OR zetia OR vytorin OR inegy OR 'sch 58235' OR sch58235
- #16 'fibric acid derivative'/exp OR 'fibric acid' OR fibrate* OR bezafibrate OR ciprofibrat* OR fenofibrate OR clofibrate OR asufibrat* OR befibrat* OR bezacur OR bezafibratum OR bezafisal OR dezagen OR bezalande OR bezalex OR bezapuren OR bezastad OR bionolip OR closer OR durabezur OR eulitop OR hadiel OR klestran OR liparol OR lipitrol OR lipocin OR norlip OR polyzalip OR redalip OR sklerofibrate OR regadrin OR befizal OR bezamerck OR reducterol OR bezalip OR solibay OR cedur OR azufibrate OR difaterol OR lipox OR clofenapate OR 'clofibric acid' OR 'clofibrinic acid' OR livesan OR liparison OR durafenat OR supralip OR lofibra OR fenobeta OR lipantil OR tricor OR controlip OR gemfibrozil OR gemfibro* OR lipazil OR lipid OR nugemfibrozil OR apogemfibrozil
- #17 'nicotinic acid'/de OR niacin OR 'nicotinic acid' OR nicamin OR nicotinate OR 'nico 400' OR nico400 OR induracin OR nicolar OR nicocap OR wampocap OR nicobid OR '3 pyridinecarboxylic acid' OR enduracin OR niacinamide OR papulex OR 'vitamin b3' OR 'vitamin b 3' OR 'vitamin pp' OR nicotinamide OR enduramide OR nicobion OR '3 pyridinecarboxamide' OR nicotinsaureamid OR niaspan OR tredaptive OR 'antipellagra factor' OR niacor OR nicotinx OR vitb3 OR nicamid OR 'nicomide t' OR nicosedine
- #18 'bile acid sequestrant'/exp OR 'colesevelam'/de OR 'colestyramine'/de OR 'colestipol'/de OR (bile NEAR/3 acid* NEAR/3 sequestrant*) OR (ba NEAR/3 sequestrant*) OR bas OR

- colesevelam OR cholestigel OR welchol OR lodalis OR 'gt 31104' OR 'gt31 104' OR gt31104 OR cholestyramine* OR colestyramin* OR questran* OR prevalite OR cuemid* OR quantalan* OR mk135 OR 'mk 135' OR colestipol OR colestid OR cholestabyl OR 'u-26597 a' OR 'u 26597 a' OR 'u26597 a' OR colestimide OR colestilan OR 'mci 196'
- #19 bempedoi* AND acid* OR nexletol OR nexlizet OR nilemdo OR nustendi OR bempedoate OR etc1002 OR 'etc 1002' OR esp55016 OR 'esp 55016' OR '738606 46 7'
- #20 'omega 3 fatty acid'/de OR 'fish oil'/de OR 'cod liver oil'/de OR omega3* OR 'omega 3*' OR 'fatty acid*' OR pufa OR 'n 3pufa*' OR n3pufa* OR dha OR docosahex* OR eicosapent* OR epa OR 'ethyl eicosapent*' OR ethyleicosapent* OR alphalinolen* OR 'alpha linolen*' OR linolenate* OR linolenic* OR ((n3 OR 'n 3' OR w3 OR 'w 3') NEAR/3 (oil* OR polyunsaturat*)) OR ((fish* OR cod) NEAR/2 oil*)
- #21 #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20
- #22 'randomized controlled trial'/exp OR 'randomization'/exp OR 'double blind procedure'/de OR 'triple blind procedure'/de OR 'single blind procedure'/de OR 'placebo'/de OR 'controlled clinical trial'/exp OR randomized:ab OR placebo:ab OR randomly:ab OR trial:ab OR groups:ab OR [controlled clinical trial]/lim OR [randomized controlled trial]/lim
- #23 #3 AND #21 AND #22
- #24 ('animal'/exp OR [animals]/lim) NOT ([humans]/lim OR 'human'/exp)
- #25 #23 NOT #24 AND [english]/lim AND [2003-2022]/py

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No.	Searches
#1	TS=(PCSK9 OR PCSK-9)
#2	TS=((kexin* NEAR/3 "9") OR (subtilisin* NEAR/5 "9"))
#3	TS=((proprotein OR pro-protein) NEAR/3 convertase* NEAR/5 "9")
#4	TS=(NARC1 OR NARC-1)
#5	TS=((neur* OR apopt*) NEAR/5 convertase* NEAR/3 "1")
#6	#5 OR #4 OR #3 OR #2 OR #1
#7	TS=((("hydroxymethylglutaryl Coenzyme" OR "hydroxymethylglutaryl CoA" OR "HMG CoA") NEAR/5 inhib*) OR statin OR statins)
#8	TS=(anticholesterol\$emic OR hypocholesterol\$emic OR hypocholester\$emic OR anticholester\$emic)
#9	TS=((cholesterol OR lipid* OR LDL OR HDL OR TG OR TC OR triglyceride) NEAR/3 (reduc* OR lower* OR inhib* OR drug* OR agent*))
#10	TS=(Atorvastatin OR atorlip OR atovarol OR cardyl OR "ci 981" OR ci981 OR glustar OR lipibec OR lipitor OR lipimar OR liptonorm OR lowlipen OR sortis OR storvas OR tahor OR torvast OR totalip OR xarator OR "ym 548" OR ym548 OR zarator)
#11	TS=(Simvastatin OR Synvinolin OR "MK 733" OR MK733 OR Zocor OR avastinee OR cholestat OR clinfar OR colastatina OR colestricon OR covastin OR denan OR epistatin OR esvat OR ethicol OR eucor OR ifistatin OR kavelor OR klonastin OR kolestevan OR lipecor OR lipex OR lipinorm OR liponorm OR lipovas OR lodales OR medipo OR mersivas OR "nor vastina" OR normofat OR orovas OR rechol OR simbado OR simcard OR simchol OR simovil OR simtin OR simvacor OR simvahex OR simvalord OR simvastar OR simvata OR simvatin OR simvor OR simvotin OR sinvacor OR sinvastatin OR sinvinolin OR sivastin OR starzoco OR torio OR valemia OR vasilip OR vasotenal OR vazim OR vidastat OR zimmex OR zocord OR zovast OR inegy OR vytorin OR zetsim OR zintrepid OR cholib OR fenofibrate* OR "niacin simvastatin" OR simcor OR "rosiglitazone simvastatin" OR avandastat OR "sitagliptin simvastatin" OR sitagliptin phosphate* OR juvisync)
#12	TS=(Pitavastatin OR nisvastatin OR itavastatin OR alipza OR livalo OR livazo OR pitava OR ribar OR vezeptra OR "P 872441" OR "NK 104" OR "nk104" OR "nks 104" OR nks104 OR lippiza OR nikita OR trolise OR zypitamag)
#13	TS=(Cerivastatin OR kazak OR rivastatin OR certa OR "bay w 6228" OR "bay w6228" OR baycol OR lipobay)

- #14 TS=(Lovastatin OR mevinolin OR monacolin OR "6 Methylcompactin" OR "MK 803" OR MK803 OR mk0803 OR mevacor OR altacor OR altoprev OR artein OR belvas OR birotin OR cholestra OR cysin OR ellanco OR elstatin OR lipdip OR lipivas OR lofacol OR lomar OR lostatin OR lovacel OR lovacol OR lovalip OR lovalord OR lovastan OR lovasterol OR lovastin OR lovatadin OR lowachol OR lozutin OR medostatin OR meverstin OR mevinacor OR monakolin OR "msd 803" OR neolipid OR nergadan OR ovasta OR rodatin OR rovacor OR taucor OR advicor)
- #15 TS=(Fluvastatin OR fluindostatin OR lescol OR "XU 62-320" OR "XU 62320" OR xu62320 OR canef OR cranoc OR "fractal lp" OR leucol OR lochol OR locol OR "sri 62320" OR sri62320 OR vastin)
- #16 TS=(Pravastatin OR eptastatin OR vasten OR "CS 514" OR CS514 OR lipemol OR liplat OR "nu pravastatin" OR prareduct OR mevalotin OR pravachol OR elisor OR selektine OR pravacol OR pravasin OR lipostat OR "RMS 431" OR RMS431 OR "SQ 31000" OR SQ31000 OR "SQ 31,000" OR SQ31,000 OR bristacol OR astin OR cholepar OR epatostantin OR eptastatine OR kenstatin OR lipidal OR liprevil OR novales OR prascolend OR prastan OR prava OR pravaselect OR pravasine OR pravator OR pravyl OR sanaprav OR selipran OR stanidine OR vasopran OR xipral OR pravafenix)
- #17 TS=(Rosuvastatin OR ZD4522 OR "ZD 4522" OR crestor OR rosuvastatin OR "s 4522" OR s4522 OR certriad)
- #18 #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17**
- #19 TS=(ezetimibe OR ezetimib OR ezetrol OR zetia OR vytorin OR inegy OR "SCH 58235" OR SCH58235)
- #20 TS=(fibric acid OR fibrate* OR gemfibrozil OR bezafibrate OR ciprofibrat* OR fenofibrate OR clofibrate OR asufibrat* OR befibrat* OR befizal OR bezacur OR bezafibratum OR bezafisal OR dezagen OR bezalande OR bezalex OR bezapuren OR bezastad OR bionolip OR cedur OR closer OR difaterol OR durabezur OR eulitop OR hadiel OR klestran OR liparol OR lipitrol OR lipocin OR lipox OR norlip OR polyzalip OR redalip OR sklerofibrate OR regadrin OR befizal OR bezamerck OR reducterol OR bezalip OR solibay OR cedur OR azufibrate OR difaterol OR lipox OR clofenapate OR clofibrac acid OR clofibrinic acid OR livesan OR liparison OR durafenat OR supralip OR lofibra OR fenobeta OR lipantil OR tricor OR controlip OR gemfibrozil OR gemfibro* OR lipazil OR lipid OR nugemfibrozil OR apogemfibrozil)
- #21 TS=(niacin OR nicotinic acid OR nicamin OR nicotinate OR "nico 400" OR nico-400 OR nico400 OR induracin OR nicolar OR nicocap OR wampocap OR nicobid OR "3 pyridinecarboxylic acid" OR 3-pyridinecarboxylic acid OR enduracin OR niacinamide OR papulex OR "vitamin b3" OR "vitamin b 3" OR vitamin pp OR nicotinamide OR enduramide)

OR nicobion OR "3 pyridinecarboxamide" OR 3-pyridinecarboxamide OR nicotinsaureamid
OR Niaspan OR Tredaptive OR antipellagra factor OR niacor OR nicotinex OR vitb3 OR
nicamid OR nicomide-t OR nicosedine)

#22 TS((((bile NEAR/3 acid*) OR BA) NEAR/3 sequestrant*) OR BAS) OR TS=(Colesevelam
OR Cholestage1 OR Welchol OR Lodalis OR "GT 31104" OR GT-31104 OR GT31-104 OR
"GT31 104" OR GT31104) OR TS=(Cholestyramine* OR Colestyramin* OR Questran* OR
Prevalite OR Cuemid* OR Quantalan* OR MK-135 OR MK135 OR "MK 135") OR
TS=(Colestipol OR Colestid OR Cholestabyl OR "U-26597 A" OR "U 26597 A" OR
"U26597 A" OR Colestimide OR colestilan OR MCI-196)

#23 TS=(bempedoi* AND acid* OR nexletol OR nexlizet OR nilemdo OR nustendi OR
bempedoate OR etc1002 OR "etc 1002" OR esp55016 OR "esp -55016" OR "738606 46 7")

#24 TS=(omega3* OR "omega 3*" OR "fatty acid*" OR pufa OR "n 3pufa*" OR n3pufa* OR
dha OR docosahex* OR eicosapent* OR epa OR "ethyl eicosapent*" OR ethyleicosapent*
OR alphalinolen* OR "alpha linolen*" OR linolenate* OR linolenic* OR ((n3 OR "n 3" OR
w3 OR "w 3") NEAR/3 (oil* OR polyunsaturat*)) OR ((fish* OR cod) NEAR/2 oil*))

#25 #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24

#26 TS=(randomized OR placebo OR randomly OR trial OR groups)

#27 #6 AND #25 AND #26

and English (语种) and 入库时间: 2003-01-01 to 2022-12-31 (出版日期)