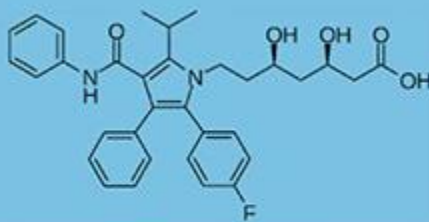


up-to-date with a click!

View this email in your browser

**IAS STATIN**  
NEWSLETTER



 INTERNATIONAL  
ATHEROSCLEROSIS  
SOCIETY

A CURATED WEEKLY UPDATE OF ALL STATIN PUBLICATIONS

Update - April, 2021



Curated by Peter Lansberg,  
a Dutch lipidologist and educator, and  
reviewed by prof. Philip Barter, Past President of the  
International Atherosclerosis Society.

---

The IAS statin literature update will keep you up-to-date with all recent statin publications, using a curated approach to select relevant articles.

---

## Statin publications April 2021

### Add on treatments

1. Mason RP, Eckel RH. Mechanistic Insights from REDUCE-IT STRENGTHen the Case Against Triglyceride Lowering as a Strategy for Cardiovascular Disease Risk Reduction. *Am J Med* 2021.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33864765>

2. Budenholzer B. In statin-treated patients at high CV risk, adding omega-3 fatty acids vs. corn oil to usual care did not reduce MACE. Annals of internal medicine 2021; 174:Jc40. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33819062>
3. Tanner M. In at-risk patients without CVD, polypill plus aspirin reduced a composite of major CV events at 4.6 y. Annals of internal medicine 2021; 174:Jc41. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33819061>
4. Averna M, Banach M, Bruckert E *et al.* Practical guidance for combination lipid-modifying therapy in high- and very-high-risk patients: A statement from a European Atherosclerosis Society Task Force. Atherosclerosis 2021; 325:99-109. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33892925>
5. Cacciottolo PJ, Kostapanos MS, Hernan Sancho E *et al.* Investigating the Lowest Threshold of Vascular Benefits from LDL Cholesterol Lowering with a PCSK9 mAb Inhibitor (Alirocumab) in Patients with Stable Cardiovascular Disease (INTENSITY-HIGH): protocol and study rationale for a randomised, open label, parallel group, mechanistic study. BMJ Open 2021; 11:e037457. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33849844>
6. Bhardwaj A, Embury MD, Rojo RD *et al.* Efficacy of fluvastatin and aspirin for prevention of hormonally insensitive breast cancer. Breast Cancer Res Treat 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33893908>
7. Choi JM, Lee SH, Jang YJ *et al.* Medication Adherence and Clinical Outcome of Fixed-Dose Combination vs. Free Combination of Angiotensin Receptor Blocker and Statin. Circulation journal : official journal of the Japanese Circulation Society 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33790135>
8. Jordy AB, Albayaty M, Breitschaft A *et al.* Effect of Oral Semaglutide on the Pharmacokinetics of Levonorgestrel and Ethinylestradiol in Healthy Postmenopausal Women and Furosemide and Rosuvastatin in Healthy Subjects. Clinical pharmacokinetics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33782832>
9. Nebot N, Won CS, Moreno V *et al.* Evaluation of the Effects of Repeat-Dose Dabrafenib on the Single-Dose Pharmacokinetics of Rosuvastatin (OATP1B1/1B3 Substrate) and Midazolam (CYP3A4 Substrate). Clinical pharmacology in drug development 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33932130>
10. Ferrari F, Martins VM, Teixeira M *et al.* COVID-19 and Thromboinflammation: Is There a Role for Statins? Clinics (Sao Paulo, Brazil) 2021; 76:e2518. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33787678>
11. Picard F, Steg PG. Cardiovascular Disease Risk Reduction in Mild-Moderate Hypertriglyceridemia: Integrating Prescription of Omega-3 with Standard

Treatment. Curr Atheroscler Rep 2021; 23:27.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33788024>

12. Goldenberg RM, Cheng AYY, Gilbert JD *et al.* The role of icosapent ethyl in cardiovascular risk reduction. Current opinion in cardiology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33929367>
13. Tomlinson B, Patil NG, Fok M, Lam CWK. Role of PCSK9 Inhibitors in Patients with Familial Hypercholesterolemia. Endocrinol Metab (Seoul) 2021; 36:279-295.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33866776>
14. Elmekawy HA, Belal F, Abdelaziz AE *et al.* Pharmacokinetic interaction between atorvastatin and fixed-dose combination of sofosbuvir/ledipasvir in healthy male Egyptian volunteers. Eur J Clin Pharmacol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33791829>
15. Engell AE, Svendsen ALO, Lind BS *et al.* Drug-drug interactions between vitamin K antagonists and statins: a systematic review. Eur J Clin Pharmacol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33895864>
16. Lalagkas PN, Poulentzas G, Kontogiorgis C, Douros A. Potential drug-drug interaction between sodium-glucose co-transporter 2 inhibitors and statins: pharmacological and clinical evidence. Expert Opin Drug Metab Toxicol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33888031>
17. Lupo MG, Marchianò S, Adorni MP *et al.* PCSK9 Induces Rat Smooth Muscle Cell Proliferation and Counteracts the Pleiotropic Effects of Simvastatin. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33923431>
18. Alkatiri AH, Firman D, Alkatiri AA *et al.* The Role of Angiotensin Antagonism in Coronary Plaque Regression: Insights from the Glasgowian Model. Int J Vasc Med 2021; 2021:8887248. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33880191>
19. Dayoub EJ, Eberly LA, Nathan AS *et al.* Adoption of PCSK9 Inhibitors Among Patients With Atherosclerotic Disease. J Am Heart Assoc 2021; 10:e019331.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33904340>
20. Beshir SA, Hussain N, Elnor AA, Said ASA. Umbrella Review on Non-Statin Lipid-Lowering Therapy. Journal of cardiovascular pharmacology and therapeutics 2021:10742484211002943. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33836639>
21. Singh J, Wozniak A, Cotler SJ *et al.* Combined Use of Aspirin and Statin is Associated With a Decreased Incidence of Hepatocellular Carcinoma. Journal of clinical gastroenterology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33883511>
22. Hou J, Guo Q, Dong C *et al.* Efficacy of Atorvastatin Plus Conventional Disease-Modifying Antirheumatic Drugs on Disease Activity in Rheumatoid Arthritis: A

- Systematic Review and Meta-analysis of Randomized Controlled Trials. Journal of clinical rheumatology : practical reports on rheumatic & musculoskeletal diseases 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33902096>
23. Wang N, Harris K, Chalmers J *et al.* Combination blood pressure lowering in the presence or absence of background statin and aspirin therapy: a combined analysis of PROGRESS and ADVANCE Trials. J Hypertens 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33883461>
  24. Liu Y, Liu P, Song Y *et al.* A heparin-rosuvastatin-loaded P(LLA-CL) nanofiber-covered stent inhibits inflammatory smooth-muscle cell viability to reduce in-stent stenosis and thrombosis. J Nanobiotechnology 2021; 19:123. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33926468>
  25. Ganji R, Majdinasab N, Hesam S *et al.* Does atorvastatin have augmentative effects with sodium valproate in prevention of migraine with aura attacks? A triple-blind controlled clinical trial. Journal of pharmaceutical health care and sciences 2021; 7:12. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33789774>
  26. Ciric MZ, Ostojic M, Baralic I *et al.* Supplementation with Octacosanol Affects the Level of PCSK9 and Restore Its Physiologic Relation with LDL-C in Patients on Chronic Statin Therapy. Nutrients 2021; 13. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33802219>
  27. Curfman G, Shehada E. Icosapent ethyl: scientific and legal controversies. Open heart 2021; 8. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33888593>
  28. Saber S, Abd El-Fattah EE, Yahya G *et al.* A Novel Combination Therapy Using Rosuvastatin and Lactobacillus Combats Dextran Sodium Sulfate-Induced Colitis in High-Fat Diet-Fed Rats by Targeting the TXNIP/NLRP3 Interaction and Influencing Gut Microbiome Composition. Pharmaceuticals (Basel, Switzerland) 2021; 14. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33917884>
  29. Torrado-Salmerón C, Guarnizo-Herrero V, Henriques J *et al.* Multiparticulate Systems of Ezetimibe Micellar System and Atorvastatin Solid Dispersion Efficacy of Low-Dose Ezetimibe/Atorvastatin on High-Fat Diet-Induced Hyperlipidemia and Hepatic Steatosis in Diabetic Rats. Pharmaceutics 2021; 13. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33804727>
  30. Ha J, Lee B, Park JM *et al.* Escalation of lipid-lowering therapy in patients with vascular disease receiving high-intensity statins: the retrospective POST-HIGH study. Scientific reports 2021; 11:8884. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33903685>
  31. Im J, Kawada-Watanabe E, Yamaguchi J *et al.* Baseline low-density lipoprotein cholesterol predicts the benefit of adding ezetimibe on statin in statin-naïve

acute coronary syndrome. Scientific reports 2021; 11:7480.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33820931>

## Adherence

1. Ahrens I, Khachatryan A, Monga B *et al.* Association of Treatment Intensity and Adherence to Lipid-Lowering Therapy with Major Adverse Cardiovascular Events Among Post-MI Patients in Germany. Adv Ther 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33830461>
2. Choi JM, Lee SH, Jang YJ *et al.* Medication Adherence and Clinical Outcome of Fixed-Dose Combination vs. Free Combination of Angiotensin Receptor Blocker and Statin. Circulation journal : official journal of the Japanese Circulation Society 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33790135>
3. May HT, Knowlton KU, Anderson JL *et al.* High Statin Adherence over 5 Years of Follow-up is Associated with Improved Cardiovascular Outcomes in Patients with Atherosclerotic Cardiovascular Disease: Results from the IMPRES Study. European heart journal. Quality of care & clinical outcomes 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33787865>
4. Gupta A, Lin M, McAlister FA, Ye C. Prior adherence to statins is a predictor of subsequent adherence and persistence to oral, but not parenteral, osteoporosis medications. J Bone Miner Metab 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33821305>
5. Adusumalli S, Patel MS. Statin Prescribing and Dosing-Failure Has Become an Option-Reply. JAMA cardiology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33909018>
6. Mark L, Reiber I, Toth PP. Statin Prescribing and Dosing-Failure Has Become an Option. JAMA cardiology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33909025>
7. Muniandy A, Lee M, Grey C *et al.* Demographic differences in the initiation and maintenance of statins in the first year post ACS in New Zealand: a data linkage study (ANZACS-QI 57). The New Zealand medical journal 2021; 134:31-45.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33927436>
8. Frisk G, Bergström H, Helde Frankling M, Björkhem-Bergman L. Sex-Differences in Discontinuation of Statin Treatment in Cancer Patients the Year before Death. Pharmaceuticals (Basel, Switzerland) 2021; 14.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33923405>

9. Tarn DM, Pletcher MJ, Tosqui R *et al.* Primary nonadherence to statin medications: Survey of patient perspectives. Preventive medicine reports 2021; 22:101357. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33842201>

## Atherosclerosis & Imaging

1. Lipinski J, Margevicius S, Schluchter MD *et al.* Statin effect on coronary calcium distribution, mass and volume scores and associations with immune activation among HIV+ persons on antiretroviral therapy. Antiviral therapy 2020; 25:419-427. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33901017>
2. Razavi AC, Kelly TN, Budoff MJ *et al.* Atherosclerotic cardiovascular disease events among statin eligible individuals with and without long-term healthy arterial aging. Atherosclerosis 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33824003>
3. Xu M, Demuyakor A, Hu S *et al.* Is the effect of atorvastatin 60 mg on stabilization of lipid-rich plaque equivalent to that of rosuvastatin 10 mg? A serial optical coherence tomography combined with intravascular ultrasound imaging. Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions 2021; 97 Suppl 2:1097-1107. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33864710>
4. Mehta A, Rigdon J, Tattersall MC *et al.* Association of Carotid Artery Plaque With Cardiovascular Events and Incident Coronary Artery Calcium in Individuals With Absent Coronary Calcification: The MESA. Circulation. Cardiovascular imaging 2021; 14:e011701. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33827231>
5. Chen LQ, Weber J, Christian T *et al.* Long-term all-cause mortality among asymptomatic individuals with 80th percentile of coronary calcium score based on age and gender in the St. Francis Heart Study. Coronary artery disease 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33826539>
6. Yan L, Dmytriw AA, Yang B, Jiao L. Optical Coherence Tomography of Plaque Erosion and Thrombus in Severe Vertebral Artery Stenosis. Diagnostics (Basel, Switzerland) 2021; 11. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33916103>
7. Lupo MG, Marchianò S, Adorni MP *et al.* PCSK9 Induces Rat Smooth Muscle Cell Proliferation and Counteracts the Pleiotropic Effects of Simvastatin. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33923431>
8. Alkatiri AH, Firman D, Alkatiri AA *et al.* The Role of Angiotensin Antagonism in Coronary Plaque Regression: Insights from the Glagovian Model. Int J Vasc Med 2021; 2021:8887248. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33880191>

9. Ichikawa K, Miyoshi T, Osawa K *et al.* Increased Circulating Malondialdehyde-Modified Low-Density Lipoprotein Level Is Associated with High-Risk Plaque in Coronary Computed Tomography Angiography in Patients Receiving Statin Therapy. Journal of clinical medicine 2021; 10.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33918383>
10. Chen Y, Xing H, Wen J *et al.* Three-dimensional ultrasound imaging: An effective method to detect the effect of moderate intensity statin treatment in slowing carotid plaque progression. J Clin Ultrasound 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33884633>
11. Hazzaa SM, Abdou AG, Ibraheim EO *et al.* Effect of L-carnitine and atorvastatin on a rat model of ischemia-reperfusion injury of spinal cord. J Immunoassay Immunochem 2021:1-24. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33900902>

### **Atorvastatin/Rosuvastatin**

1. `Ye DQ, Ashuro AA, Fan YG *et al.* The Effect of Rosuvastatin on plasma/serum levels of high sensitivity C-reactive protein, Interleukin-6 and D-dimer in people living with Human Immunodeficiency Virus: a systematic review and meta-analysis. AIDS research and human retroviruses 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33913752>
2. Bastani M, Khosravi MB, Shafa M *et al.* Evaluation of high-dose atorvastatin pretreatment influence in patients preconditioning of post coronary artery bypass graft surgery: A prospective triple blind randomized clinical trial. Annals of cardiac anaesthesia 2021; 24:209-216.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33884978>
3. Lipinski J, Margevicius S, Schluchter MD *et al.* Statin effect on coronary calcium distribution, mass and volume scores and associations with immune activation among HIV+ persons on antiretroviral therapy. Antiviral therapy 2020; 25:419-427. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33901017>
4. Wang Y, Jones G, Hill C *et al.* Effect of atorvastatin on knee cartilage volume in patients with symptomatic knee osteoarthritis: results from a randomised placebo-controlled trial. Arthritis & rheumatology (Hoboken, N.J.) 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33844449>
5. El-Khashab IH. Antiangiogenic and Proapoptotic Activities of Atorvastatin and Ganoderma lucidum in Tumor Mouse Model via VEGF and Caspase-3 Pathways. Asian Pacific journal of cancer prevention : APJCP 2021; 22:1095-1104.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33906301>

6. Su G, Sun G, Lv J *et al.* Hsa\_circ\_0004831 downregulation is partially responsible for atorvastatin-alleviated human umbilical vein endothelial cell injuries induced by ox-LDL through targeting the miR-182-5p/CXCL12 axis. *BMC Cardiovasc Disord* 2021; 21:221.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33932991>
7. Momeni B, Nazer S, Masoompour SM *et al.* The effect of atorvastatin on inflammatory markers in sulfur mustard gas induced bronchitis: a randomized double-blinded, placebo-control clinical trial. *BMC Pulm Med* 2021; 21:112.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33794865>
8. Ghaffar MT, Radhakrishna A, Ali I, Whelan B. Statin-induced necrotising autoimmune myopathy: a rare complication of statin therapy. *BMJ case reports* 2021; 14. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33858894>
9. Xu M, Demuyakor A, Hu S *et al.* Is the effect of atorvastatin 60 mg on stabilization of lipid-rich plaque equivalent to that of rosuvastatin 10 mg? A serial optical coherence tomography combined with intravascular ultrasound imaging. *Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions* 2021; 97 Suppl 2:1097-1107.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33864710>
10. Dudhipala NR, Ettireddy SR, Puchakayala GR. Attenuation of lipid levels in Triton induced hyperlipidemia rats through rosuvastatin calcium nanoparticles: Pharmacokinetic and pharmacodynamic studies. *Chemistry and physics of lipids* 2021:105081. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33811848>
11. Jordy AB, Albayaty M, Breitschaft A *et al.* Effect of Oral Semaglutide on the Pharmacokinetics of Levonorgestrel and Ethinylestradiol in Healthy Postmenopausal Women and Furosemide and Rosuvastatin in Healthy Subjects. *Clinical pharmacokinetics* 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33782832>
12. Nebot N, Won CS, Moreno V *et al.* Evaluation of the Effects of Repeat-Dose Dabrafenib on the Single-Dose Pharmacokinetics of Rosuvastatin (OATP1B1/1B3 Substrate) and Midazolam (CYP3A4 Substrate). *Clinical pharmacology in drug development* 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33932130>
13. Zhou YL, Chen LQ, Du XG. Efficacy of short-term moderate or high-dose statin therapy for the prevention of contrast-induced nephropathy in high-risk patients with chronic kidney disease: systematic review and meta-analysis. *Clinics (Sao Paulo, Brazil)* 2021; 76:e1876. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33787670>
14. Krysiak R, Kowalcze K, Okopień B. The impact of hypotestosteronemia on cardiometabolic effects of atorvastatin in men with hypercholesterolemia: a pilot



study. Coronary artery disease 2021.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33826536>

15. Xu I, Taub PR. Baseline testosterone level may modulate statin efficacy. Coronary artery disease 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33826543>
16. Zuo Y, Chen L, He X *et al.* Atorvastatin Regulates MALAT1/miR-200c/NRF2 Activity to Protect Against Podocyte Pyroptosis Induced by High Glucose. Diabetes, metabolic syndrome and obesity : targets and therapy 2021; 14:1631-1645. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33880049>
17. Bagheri F, Darakhshan S, Mazloomi S *et al.* Dual loading of Nigella sativa oil-atorvastatin in chitosan-carboxymethyl cellulose nanogel as a transdermal delivery system. Drug development and industrial pharmacy 2021:1-10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33819116>
18. Elmekawy HA, Belal F, Abdelaziz AE *et al.* Pharmacokinetic interaction between atorvastatin and fixed-dose combination of sofosbuvir/ledipasvir in healthy male Egyptian volunteers. Eur J Clin Pharmacol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33791829>
19. Dulka K, Szabo M, Lajkó N *et al.* Epigenetic Consequences of in Utero Exposure to Rosuvastatin: Alteration of Histone Methylation Patterns in Newborn Rat Brains. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33810299>
20. Kho AR, Hong DK, Kang BS *et al.* The Effects of Atorvastatin on Global Cerebral Ischemia-Induced Neuronal Death. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33922266>
21. Zi L, Zhou W, Xu J *et al.* Rosuvastatin Nanomicelles Target Neuroinflammation and Improve Neurological Deficit in a Mouse Model of Intracerebral Hemorrhage. International journal of nanomedicine 2021; 16:2933-2947. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33907400>
22. Hasanvand A, Ahmadizar F, Abbaszadeh A *et al.* Neuroprotective and Anti-inflammatory Role of Atorvastatin and Its Interaction with Nitric Oxide (NO) in Chronic Constriction Injury-induced Neuropathic Pain. Iranian journal of pharmaceutical research : IJPR 2020; 19:67-75. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33841522>
23. Kobayashi J. Pitavastatin versus Atorvastatin: Potential Differences in their Effects on Serum Lipoprotein Lipase and Cardiovascular Disease. J Atheroscler Thromb 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33790128>
24. Chen J, Zhang C, Yan T *et al.* Atorvastatin ameliorates early brain injury after subarachnoid hemorrhage via inhibition of pyroptosis and neuroinflammation.

Journal of cellular physiology 2021.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33792028>

25. Hou J, Guo Q, Dong C *et al.* Efficacy of Atorvastatin Plus Conventional Disease-Modifying Antirheumatic Drugs on Disease Activity in Rheumatoid Arthritis: A Systematic Review and Meta-analysis of Randomized Controlled Trials. Journal of clinical rheumatology : practical reports on rheumatic & musculoskeletal diseases 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33902096>
26. Hazzaa SM, Abdou AG, Ibraheim EO *et al.* Effect of L-carnitine and atorvastatin on a rat model of ischemia-reperfusion injury of spinal cord. J Immunoassay Immunochem 2021;1-24. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33900902>
27. Xu HR, Yang Q, Xiang SY *et al.* Rosuvastatin Enhances Alveolar Fluid Clearance in Lipopolysaccharide-Induced Acute Lung Injury by Activating the Expression of Sodium Channel and Na,K-ATPase via the PI3K/AKT/Nedd4-2 Pathway. J Inflamm Res 2021; 14:1537-1549. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33889010>
28. Shi S, Wang R, Chen L *et al.* Long-term follow-up and successful treatment of pulmonary alveolar proteinosis without hypercholesterolemia with statin therapy: a case report. J Int Med Res 2021; 49:3000605211010046. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33926277>
29. Liu Y, Liu P, Song Y *et al.* A heparin-rosuvastatin-loaded P(LLA-CL) nanofiber-covered stent inhibits inflammatory smooth-muscle cell viability to reduce in-stent stenosis and thrombosis. J Nanobiotechnology 2021; 19:123. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33926468>
30. Diggelmann F, Bengs S, Haider A *et al.* Potential Impact of Statins on Neuronal Stress Responses in Patients at Risk for Cardiovascular Disease. Journal of personalized medicine 2021; 11. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33916056>
31. Zubiaur P, Benedicto MD, Villapalos-García G *et al.* SLCO1B1 Phenotype and CYP3A5 Polymorphism Significantly Affect Atorvastatin Bioavailability. Journal of personalized medicine 2021; 11. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33805706>
32. Abdulwahab DK, Ibrahim WW, Abd El-Aal RA *et al.* Grape seed extract improved the fertility-enhancing effect of atorvastatin in high-fat diet-induced testicular injury in rats: involvement of antioxidant and anti-apoptotic effects. The Journal of pharmacy and pharmacology 2021; 73:366-376. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33793875>

33. Jo JH, Park HS, Lee DH *et al.* Rosuvastatin inhibits the apoptosis of platelet-derived growth factor-stimulated vascular smooth muscle cells by inhibiting p38 via autophagy. *J Pharmacol Exp Ther* 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33846234>
34. Karvaly GB, Vincze I, Karádi I *et al.* Sensitive, High-Throughput Liquid Chromatography-Tandem Mass Spectrometry Analysis of Atorvastatin and Its Pharmacologically Active Metabolites in Serum for Supporting Precision Pharmacotherapy. *Molecules (Basel, Switzerland)* 2021; 26.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33801290>
35. Wang JR, Wang MZ, Zheng SH, Li ZY. Neural Remodeling of the Left Atrium in Rats by Rosuvastatin Following Acute Myocardial Infarction. *Open Life Sci* 2019; 14:603-610. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33817198>
36. Chen J, Song M, Qian D *et al.* Atorvastatin rescues pulmonary artery hypertension via inhibiting the AKT/ERK-dependent PDGF-BB/HIF-1 $\alpha$  axis. *Panminerva medica* 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33908728>
37. Saber S, Abd El-Fattah EE, Yahya G *et al.* A Novel Combination Therapy Using Rosuvastatin and Lactobacillus Combats Dextran Sodium Sulfate-Induced Colitis in High-Fat Diet-Fed Rats by Targeting the TXNIP/NLRP3 Interaction and Influencing Gut Microbiome Composition. *Pharmaceutics (Basel, Switzerland)* 2021; 14. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33917884>
38. Pereira-da-Mota AF, Vivero-Lopez M, Topete A *et al.* Atorvastatin-Eluting Contact Lenses: Effects of Molecular Imprinting and Sterilization on Drug Loading and Release. *Pharmaceutics* 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33922123>
39. Torrado-Salmerón C, Guarnizo-Herrero V, Henriques J *et al.* Multiparticulate Systems of Ezetimibe Micellar System and Atorvastatin Solid Dispersion Efficacy of Low-Dose Ezetimibe/Atorvastatin on High-Fat Diet-Induced Hyperlipidemia and Hepatic Steatosis in Diabetic Rats. *Pharmaceutics* 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33804727>
40. Evangelista FF, Costa-Ferreira W, Mantelo FM *et al.* Rosuvastatin revert memory impairment and anxiogenic-like effect in mice infected with the chronic ME-49 strain of *Toxoplasma gondii*. *PLoS One* 2021; 16:e0250079.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33857221>
41. Zhu Y, Gou H, Ma L *et al.* Effects of double-dose statin therapy for the prevention of post-stroke epilepsy: A prospective clinical study. *Seizure* 2021; 88:138-142.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33895389>

42. Chen Y, Xiong N, Wang X *et al.* Efficiency of atorvastatin on in-hospital mortality of patients with acute aortic dissection (AAD): study protocol for a randomized, open-label, superiority clinical trial. *Trials* 2021; 22:281.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33853639>

## Basic science

1. Thilanga Liyanage AD, Chen AJ, Puleo DA, Joseph Halcomb F, 3rd. Vancomycin- and Poly(simvastatin)-Loaded Scaffolds with Time-Dependent Development of Porosity. *ACS Appl Bio Mater* 2019; 2:2511-2519.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33912813>
2. Jin H, Ji Y, Cui Y *et al.* Simvastatin-Incorporated Drug Delivery Systems for Bone Regeneration. *ACS biomaterials science & engineering* 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33877804>
3. Fu CN, Song JW, Song ZP *et al.* Excessive expression of miR-1a by statin causes skeletal injury through targeting mitogen-activated protein kinase kinase 1. *Aging* 2021; 13:11470-11490.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33864447>
4. Luo L, Wu J, Lin T *et al.* Influence of atorvastatin on metabolic pattern of rats with pulmonary hypertension. *Aging* 2021; 13:11954-11968.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33886502>
5. El-Khashab IH. Antiangiogenic and Proapoptotic Activities of Atorvastatin and Ganoderma lucidum in Tumor Mouse Model via VEGF and Caspase-3 Pathways. *Asian Pacific journal of cancer prevention : APJCP* 2021; 22:1095-1104.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33906301>
6. Ramin-Mangata S, Thedrez A, Nativel B *et al.* Effects of proprotein convertase subtilisin kexin type 9 modulation in human pancreatic beta cells function. *Atherosclerosis* 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33933263>
7. Wang L, Zhou W, Guo M *et al.* The gut microbiota is associated with clinical response to statin treatment in patients with coronary artery disease. *Atherosclerosis* 2021; 325:16-23.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33878520>
8. Cui H, Soga K, Tamehiro N *et al.* Statins repress needle-like carbon nanotube- or cholesterol crystal-stimulated IL-1 $\beta$  production by inhibiting the uptake of crystals by macrophages. *Biochem Pharmacol* 2021; 188:114580.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33930349>

9. Tsilimigras DI, Bibli SI, Siasos G *et al.* Regulation of Long Non-Coding RNAs by Statins in Atherosclerosis. Biomolecules 2021; 11.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33922114>
10. Su G, Sun G, Lv J *et al.* Hsa\_circ\_0004831 downregulation is partially responsible for atorvastatin-alleviated human umbilical vein endothelial cell injuries induced by ox-LDL through targeting the miR-182-5p/CXCL12 axis. BMC Cardiovasc Disord 2021; 21:221.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33932991>
11. Momeni B, Nazer S, Masoompour SM *et al.* The effect of atorvastatin on inflammatory markers in sulfur mustard gas induced bronchitis: a randomized double-blinded, placebo-control clinical trial. BMC Pulm Med 2021; 21:112.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33794865>
12. Ni Q, Chen H, Li W *et al.* Pravastatin ameliorated osteoarthritis susceptibility in male offspring rats induced by prenatal ethanol exposure. Bone 2021; 149:115976. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33915333>
13. Batta G, Kárpáti L, Henrique GF *et al.* Statin-boosted cellular uptake and endosomal escape of penetratin due to reduced membrane dipole potential. Br J Pharmacol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33908640>
14. Bhardwaj A, Embury MD, Rojo RD *et al.* Efficacy of fluvastatin and aspirin for prevention of hormonally insensitive breast cancer. Breast Cancer Res Treat 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33893908>
15. Bai L, Wang Y, Huo J *et al.* Simvastatin accelerated motoneurons death in SOD1(G93A) mice through inhibiting Rab7-mediated maturation of late autophagic vacuoles. Cell death & disease 2021; 12:392.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33846297>
16. Dudhipala NR, Ettireddy SR, Puchakayala GR. Attenuation of lipid levels in Triton induced hyperlipidemia rats through rosuvastatin calcium nanoparticles: Pharmacokinetic and pharmacodynamic studies. Chemistry and physics of lipids 2021:105081. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33811848>
17. Zheng P, Ding Y, Lu F *et al.* Atorvastatin reverses high cholesterol-induced cardiac remodeling and regulates mitochondrial quality-control in a cholesterol-independent manner: an experimental study. Clin Exp Pharmacol Physiol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891707>
18. Bagheri F, Darakhshan S, Mazloomi S *et al.* Dual loading of Nigella sativa oil-atorvastatin in chitosan-carboxymethyl cellulose nanogel as a transdermal delivery system. Drug development and industrial pharmacy 2021:1-10.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33819116>

19. Huang X, Zheng C, Wang W *et al.* The Effect and Possible Mechanism of Intradiscal Injection of Simvastatin in the Treatment of Discogenic Pain in Rats. Frontiers in neuroscience 2021; 15:642436.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33815046>
20. Dulka K, Szabo M, Lajkó N *et al.* Epigenetic Consequences of in Utero Exposure to Rosuvastatin: Alteration of Histone Methylation Patterns in Newborn Rat Brains. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33810299>
21. Kho AR, Hong DK, Kang BS *et al.* The Effects of Atorvastatin on Global Cerebral Ischemia-Induced Neuronal Death. Int J Mol Sci 2021; 22.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33922266>
22. Lupo MG, Marchianò S, Adorni MP *et al.* PCSK9 Induces Rat Smooth Muscle Cell Proliferation and Counteracts the Pleiotropic Effects of Simvastatin. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33923431>
23. Malviya R, Raj S, Fuloria S *et al.* Evaluation of Antitumor Efficacy of Chitosan-Tamarind Gum Polysaccharide Polyelectrolyte Complex Stabilized Nanoparticles of Simvastatin. International journal of nanomedicine 2021; 16:2533-2553.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33824590>
24. Zi L, Zhou W, Xu J *et al.* Rosuvastatin Nanomicelles Target Neuroinflammation and Improve Neurological Deficit in a Mouse Model of Intracerebral Hemorrhage. International journal of nanomedicine 2021; 16:2933-2947.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33907400>
25. Matsumoto T, Yoshino S, Furuyama T *et al.* Pitavastatin-Incorporated Nanoparticles for Chronic Limb Threatening Ischemia: A Phase I/IIa Clinical Trial. J Atheroscler Thromb 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33907060>
26. Hao L, Chen J, Shang X, Chen S. Surface modification of the simvastatin factor-loaded silk fibroin promotes the healing of rotator cuff injury through  $\beta$ -catenin signaling. Journal of biomaterials applications 2021:885328221995926.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33779364>
27. Chen J, Zhang C, Yan T *et al.* Atorvastatin ameliorates early brain injury after subarachnoid hemorrhage via inhibition of pyroptosis and neuroinflammation. Journal of cellular physiology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33792028>
28. Hazzaa SM, Abdou AG, Ibraheim EO *et al.* Effect of L-carnitine and atorvastatin on a rat model of ischemia-reperfusion injury of spinal cord. J Immunoassay Immunochem 2021:1-24. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33900902>
29. Liu J, Cui Y, Kuang Y *et al.* Hierarchically porous calcium-silicon nanosphere-enabled co-delivery of microRNA-210 and simvastatin for bone regeneration.

Journal of materials chemistry. B 2021; 9:3573-3583.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33909742>

30. Liu Y, Liu P, Song Y *et al.* A heparin-rosuvastatin-loaded P(LLA-CL) nanofiber-covered stent inhibits inflammatory smooth-muscle cell viability to reduce in-stent stenosis and thrombosis. J Nanobiotechnology 2021; 19:123.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33926468>
31. Mehrabiyan N, Movaffagh J, Magham AHJ *et al.* Development of Simvastatin Loaded Electrospun Zein Nanofiber Membranes for Bone Repair. Journal of nanoscience and nanotechnology 2021; 21:5099-5106.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33875095>
32. Murali VP, Guerra FD, Ghadri N *et al.* Simvastatin loaded chitosan guided bone regeneration membranes stimulate bone healing. Journal of periodontal research 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33830521>
33. Abdulwahab DK, Ibrahim WW, Abd El-Aal RA *et al.* Grape seed extract improved the fertility-enhancing effect of atorvastatin in high-fat diet-induced testicular injury in rats: involvement of antioxidant and anti-apoptotic effects. The Journal of pharmacy and pharmacology 2021; 73:366-376.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33793875>
34. Wang M, Wang J, Liu M, Chen G. Fluvastatin protects neuronal cells from hydrogen peroxide-induced toxicity with decreasing oxidative damage and increasing PI3K/Akt/mTOR signalling. The Journal of pharmacy and pharmacology 2021; 73:515-521.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33793833>
35. Jo JH, Park HS, Lee DH *et al.* Rosuvastatin inhibits the apoptosis of platelet-derived growth factor-stimulated vascular smooth muscle cells by inhibiting p38 via autophagy. J Pharmacol Exp Ther 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33846234>
36. Henderson B, Lopes Batista G, Bertinetto CG *et al.* Exhaled Breath Reflects Prolonged Exercise and Statin Use during a Field Campaign. Metabolites 2021; 11. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33805108>
37. Dai W, Shao Y, Chen F. Production of Monacolin K in *Monascus pilosus*: Comparison between Industrial Strains and Analysis of Its Gene Clusters. Microorganisms 2021; 9. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33918292>
38. Karvaly GB, Vincze I, Karádi I *et al.* Sensitive, High-Throughput Liquid Chromatography-Tandem Mass Spectrometry Analysis of Atorvastatin and Its Pharmacologically Active Metabolites in Serum for Supporting Precision

- Pharmacotherapy. Molecules (Basel, Switzerland) 2021; 26.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33801290>
39. Tsiantas K, Tsiaka T, Koutrotsios G *et al.* On the Identification and Quantification of Ergothioneine and Lovastatin in Various Mushroom Species: Assets and Challenges of Different Analytical Approaches. Molecules (Basel, Switzerland) 2021; 26. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33805096>
  40. Guerrero-Bonmatty R, Gil-Fernández G, Rodríguez-Velasco FJ, Espadaler-Mazo J. A Combination of Lactopantibacillus plantarum Strains CECT7527, CECT7528, and CECT7529 Plus Monacolin K Reduces Blood Cholesterol: Results from a Randomized, Double-Blind, Placebo-Controlled Study. Nutrients 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33917503>
  41. Wang JR, Wang MZ, Zheng SH, Li ZY. Neural Remodeling of the Left Atrium in Rats by Rosuvastatin Following Acute Myocardial Infarction. Open Life Sci 2019; 14:603-610. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33817198>
  42. He S, Duan L, Li Y *et al.* A promising nanomatrix system of simvastatin for oral delivery: Evaluation in vitro and in vivo. Pak J Pharm Sci 2020; 33:2489-2495.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33867321>
  43. Chen J, Song M, Qian D *et al.* Atorvastatin rescues pulmonary artery hypertension via inhibiting the AKT/ERK-dependent PDGF-BB/HIF-1 $\alpha$  axis. Panminerva medica 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33908728>
  44. Pereira-da-Mota AF, Vivero-Lopez M, Topete A *et al.* Atorvastatin-Eluting Contact Lenses: Effects of Molecular Imprinting and Sterilization on Drug Loading and Release. Pharmaceutics 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33922123>
  45. Torrado-Salmerón C, Guarnizo-Herrero V, Henriques J *et al.* Multiparticulate Systems of Ezetimibe Micellar System and Atorvastatin Solid Dispersion Efficacy of Low-Dose Ezetimibe/Atorvastatin on High-Fat Diet-Induced Hyperlipidemia and Hepatic Steatosis in Diabetic Rats. Pharmaceutics 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33804727>
  46. Evangelista FF, Costa-Ferreira W, Mantelo FM *et al.* Rosuvastatin revert memory impairment and anxiogenic-like effect in mice infected with the chronic ME-49 strain of Toxoplasma gondii. PLoS One 2021; 16:e0250079.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33857221>
  47. Shakeel F, Alshehri S, Ibrahim MA *et al.* Solubilization and thermodynamic properties of simvastatin in various micellar solutions of different non-ionic



surfactants: Computational modeling and solubilization capacity. PLoS One 2021; 16:e0249485. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33831070>

## Cancer

1. Xu WH, Zhou YH. The relationship between post-diagnostic statin usage and breast cancer prognosis varies by hormone receptor phenotype: a systemic review and meta-analysis. Archives of gynecology and obstetrics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891208>
2. El-Khashab IH. Antiangiogenic and Proapoptotic Activities of Atorvastatin and Ganoderma lucidum in Tumor Mouse Model via VEGF and Caspase-3 Pathways. Asian Pacific journal of cancer prevention : APJCP 2021; 22:1095-1104. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33906301>
3. Khandelwal Gilman KA, Han S, Won YW, Putnam CW. Complex interactions of lovastatin with 10 chemotherapeutic drugs: a rigorous evaluation of synergism and antagonism. BMC Cancer 2021; 21:356. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33823841>
4. Bhardwaj A, Embury MD, Rojo RD *et al.* Efficacy of fluvastatin and aspirin for prevention of hormonally insensitive breast cancer. Breast Cancer Res Treat 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33893908>
5. Rossi A, Filetti M, Taurelli Salimbeni B *et al.* Statins and immunotherapy: Togetherness makes strength The potential effect of statins on immunotherapy for NSCLC. Cancer Rep (Hoboken) 2021:e1368. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33788420>
6. Kwon TJ, Kim TJ, Lee H *et al.* Statin Use Decreases the Risk of Metachronous Gastric Cancer in Patients without Helicobacter pylori Infection. Cancers 2021; 13. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33804425>
7. Prasai K, Tella SH, Yadav S *et al.* Aspirin and Statin Use and the Risk of Gallbladder Cancer. Cancers 2021; 13. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33803387>
8. Feng JL, Dixon-Suen SC, Jordan SJ, Webb PM. Is there sufficient evidence to recommend women diagnosed with endometrial cancer take a statin: Results from an Australian record-linkage study. Gynecologic oncology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33846016>
9. Malviya R, Raj S, Fuloria S *et al.* Evaluation of Antitumor Efficacy of Chitosan-Tamarind Gum Polysaccharide Polyelectrolyte Complex Stabilized Nanoparticles

- of Simvastatin. International journal of nanomedicine 2021; 16:2533-2553.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33824590>
10. Singh J, Wozniak A, Cotler SJ *et al.* Combined Use of Aspirin and Statin is Associated With a Decreased Incidence of Hepatocellular Carcinoma. Journal of clinical gastroenterology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33883511>
  11. Chen Z, Chen L, Sun B *et al.* LDLR inhibition promotes hepatocellular carcinoma proliferation and metastasis by elevating intracellular cholesterol synthesis through the MEK/ERK signaling pathway. Molecular metabolism 2021; 51:101230.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33823318>
  12. Gormley M, Yarmolinsky J, Dudding T *et al.* Using genetic variants to evaluate the causal effect of cholesterol lowering on head and neck cancer risk: A Mendelian randomization study. PLoS Genet 2021; 17:e1009525.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33886544>
  13. Han KT, Kim S. Do cholesterol levels and continuity of statin use affect colorectal cancer incidence in older adults under 75 years of age? PLoS One 2021; 16:e0250716. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891657>
  14. Allott EH, Craig EL, Stopsack KH. In search of the optimal setting for statin trials in prostate cancer: the power of population-based studies. Prostate Cancer Prostatic Dis 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33782544>
  15. Peltomaa AI, Raitinen P, Talala K *et al.* Prostate cancer prognosis after initiation of androgen deprivation therapy among statin users. A population-based cohort study. Prostate Cancer Prostatic Dis 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33790420>

## Children

1. Hou Y, Shao K, Zhao B *et al.* Juvenile idiopathic inflammatory myopathies with anti-3-hydroxy-3-methylglutaryl-coenzyme A reductase antibodies in a Chinese cohort. CNS Neurosci Ther 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33932258>
2. Yeung J, Chisholm K, Spinks C, Srinivasan S. Familial hypercholesterolaemia: Experience of a tertiary paediatric lipid clinic. Journal of paediatrics and child health 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33830584>
3. Kim SY, Song YS, Wee JH *et al.* Evaluation of the relationship between previous statin use and thyroid cancer using Korean National Health Insurance Service-

Health Screening Cohort data. Scientific reports 2021; 11:7912.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33846511>

## Cost-effectiveness

1. Romanens M, Adams A, Bojara W *et al.* Cost-effectiveness analysis of statins in primary care: results from the Arteris cohort study. Swiss Med Wkly 2021; 151:w20498. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33934318>

## CVD

1. Ahrens I, Khachatryan A, Monga B *et al.* Association of Treatment Intensity and Adherence to Lipid-Lowering Therapy with Major Adverse Cardiovascular Events Among Post-MI Patients in Germany. Adv Ther 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33830461>
2. Khatib R, Glowacki N, Lauffenburger J, Siddiqi A. Race/Ethnic Differences in Atherosclerotic Cardiovascular Disease Risk Factors Among Patients with Hypertension: Analysis from 143 primary care clinics. American journal of hypertension 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33876823>
3. MacEwan JP, Zhao LM, Everson K *et al.* Two steps forward, one step back: 50 years of societal value from LDL-C-lowering therapies. The American journal of managed care 2021; 27:162-168. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33877775>
4. Bastani M, Khosravi MB, Shafa M *et al.* Evaluation of high-dose atorvastatin pretreatment influence in patients preconditioning of post coronary artery bypass graft surgery: A prospective triple blind randomized clinical trial. Annals of cardiac anaesthesia 2021; 24:209-216. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33884978>
5. Budenholzer B. In statin-treated patients at high CV risk, adding omega-3 fatty acids vs. corn oil to usual care did not reduce MACE. Annals of internal medicine 2021; 174:Jc40. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33819062>
6. Razavi AC, Kelly TN, Budoff MJ *et al.* Atherosclerotic cardiovascular disease events among statin eligible individuals with and without long-term healthy arterial aging. Atherosclerosis 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33824003>
7. Ryou IS, Chang J, Son JS *et al.* Association between CVDs and initiation and adherence to statin treatment in patients with newly diagnosed

- hypercholesterolaemia: a retrospective cohort study. BMJ Open 2021; 11:e045375. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33827840>
8. Mehta A, Rigdon J, Tattersall MC *et al.* Association of Carotid Artery Plaque With Cardiovascular Events and Incident Coronary Artery Calcium in Individuals With Absent Coronary Calcification: The MESA. Circulation. Cardiovascular imaging 2021; 14:e011701. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33827231>
  9. Li X, Gu D, Wang X *et al.* Trends of Coronary Artery Bypass Grafting Performance in a Cohort of Hospitals in China Between 2013 and 2018. Circ Cardiovasc Qual Outcomes 2021; 14:e007025. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33813854>
  10. Sarak B, Savu A, Kaul P *et al.* Lipid Testing, Lipid-Modifying Therapy, and PCSK9 (Proprotein Convertase Subtilisin-Kexin Type 9) Inhibitor Eligibility in 27 979 Patients With Incident Acute Coronary Syndrome. Circ Cardiovasc Qual Outcomes 2021; 14:e006646. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33813856>
  11. Zheng P, Ding Y, Lu F *et al.* Atorvastatin reverses high cholesterol-induced cardiac remodeling and regulates mitochondrial quality-control in a cholesterol-independent manner: an experimental study. Clin Exp Pharmacol Physiol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891707>
  12. Chen LQ, Weber J, Christian T *et al.* Long-term all-cause mortality among asymptomatic individuals with 80th percentile of coronary calcium score based on age and gender in the St. Francis Heart Study. Coronary artery disease 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33826539>
  13. Baral N, Gautam S, Yadav SA *et al.* Pharmacotherapies in Heart Failure With Preserved Ejection Fraction: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Cureus 2021; 13:e13604. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33816003>
  14. Sugimoto H, Takeuchi M, Taniguchi Y, Sato J. Sudden Cardiac Arrest in a Patient With Sarcoidosis and Familial Hypercholesterolemia. Cureus 2021; 13:e13649. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33824802>
  15. Esan O, Wierzbicki AS. Triglycerides and cardiovascular disease. Current opinion in cardiology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33797418>
  16. Nøkleby K, Berg TJ, Mdala I *et al.* High adherence to recommended diabetes follow-up procedures by general practitioners is associated with lower estimated cardiovascular risk. Diabetic medicine : a journal of the British Diabetic Association 2021:e14586. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33876447>
  17. May HT, Knowlton KU, Anderson JL *et al.* High Statin Adherence over 5 Years of Follow-up is Associated with Improved Cardiovascular Outcomes in Patients

with Atherosclerotic Cardiovascular Disease: Results from the IMPRES Study. European heart journal. Quality of care & clinical outcomes 2021.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33787865>

18. Beuret H, Hausler N, Nanchen D *et al.* Comparison of Swiss and European risk algorithms for cardiovascular prevention in Switzerland. Eur J Prev Cardiol 2021; 28:204-210. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33838036>
19. Danese MD, Pemberton-Ross P, Catterick D, Villa G. Estimation of the increased risk associated with recurrent events or polyvascular atherosclerotic cardiovascular disease in the United Kingdom. Eur J Prev Cardiol 2021; 28:335-343. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891694>
20. Ghayda RA, Lee JY, Yang JW *et al.* The effect of statins on all-cause and cardiovascular mortality in patients with non-dialysis chronic kidney disease, patients on dialysis, and kidney transplanted recipients: an umbrella review of meta-analyses. Eur Rev Med Pharmacol Sci 2021; 25:2696-2710. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33829456>
21. Koskinas KC, Mach F, Räber L. Lipid-lowering therapy and percutaneous coronary interventions. EuroIntervention : journal of EuroPCR in collaboration with the Working Group on Interventional Cardiology of the European Society of Cardiology 2021; 16:1389-1403. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33875408>
22. Zeng L, Ye Z, Li Y *et al.* Different Lipid Parameters in Predicting Clinical Outcomes in Chinese Statin-Naïve Patients After Coronary Stent Implantation. Frontiers in cardiovascular medicine 2021; 8:638663. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33796571>
23. Dayoub EJ, Eberly LA, Nathan AS *et al.* Adoption of PCSK9 Inhibitors Among Patients With Atherosclerotic Disease. J Am Heart Assoc 2021; 10:e019331. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33904340>
24. Kobayashi J. Pitavastatin versus Atorvastatin: Potential Differences in their Effects on Serum Lipoprotein Lipase and Cardiovascular Disease. J Atheroscler Thromb 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33790128>
25. Yang YL, Leu HB, Yin WH *et al.* Adherence to Healthy Lifestyle Improved Clinical Outcomes in Coronary Artery Disease Patients After Coronary Intervention. Journal of the Chinese Medical Association : JCMSA 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33871387>
26. Okumus T, Pala AA, Taner T, Aydin U. Effects of Preoperative Statin on the Frequency of Ventricular Fibrillation and C-Reactive Protein Level in Patients Undergoing Isolated Coronary Artery Bypass Grafting. Journal of the College of

Physicians and Surgeons--Pakistan : JCPSP 2021; 30:373-378.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33866719>

27. Wang N, Harris K, Chalmers J *et al.* Combination blood pressure lowering in the presence or absence of background statin and aspirin therapy: a combined analysis of PROGRESS and ADVANCE Trials. J Hypertens 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33883461>
28. Hazzaa SM, Abdou AG, Ibraheim EO *et al.* Effect of L-carnitine and atorvastatin on a rat model of ischemia-reperfusion injury of spinal cord. J Immunoassay Immunochem 2021:1-24. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33900902>
29. Lee MT, Mahtta D, Ramsey DJ *et al.* Sex-Related Disparities in Cardiovascular Health Care Among Patients With Premature Atherosclerotic Cardiovascular Disease. JAMA cardiology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33881448>
30. Rabizadeh S, Rajab A, Mechanick JI *et al.* LDL/apo B ratio predict coronary heart disease in Type 2 diabetes independent of ASCVD risk score: A case-cohort study. Nutrition, metabolism, and cardiovascular diseases : NMCD 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33810957>
31. Wang JR, Wang MZ, Zheng SH, Li ZY. Neural Remodeling of the Left Atrium in Rats by Rosuvastatin Following Acute Myocardial Infarction. Open Life Sci 2019; 14:603-610. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33817198>
32. Tarn DM, Pletcher MJ, Tosqui R *et al.* Primary nonadherence to statin medications: Survey of patient perspectives. Preventive medicine reports 2021; 22:101357. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33842201>
33. Ha J, Lee B, Park JM *et al.* Escalation of lipid-lowering therapy in patients with vascular disease receiving HIGH-intensity statins: the retrospective POST-HIGH study. Scientific reports 2021; 11:8884.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33903685>
34. Im J, Kawada-Watanabe E, Yamaguchi J *et al.* Baseline low-density lipoprotein cholesterol predicts the benefit of adding ezetimibe on statin in statin-naïve acute coronary syndrome. Scientific reports 2021; 11:7480.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33820931>

## **Endothelium/inflammation**

1. Faraj R, Paine D, Black SM, Wang T. Anti-inflammatory Effects of Statins in Lung Vascular Pathology: From Basic Science to Clinical Trials. Advances in

- experimental medicine and biology 2021; 1303:33-56.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33788186>
2. Alidadi M, Montecucco F, Jamialahmadi T *et al.* Beneficial Effect of Statin Therapy on Arterial Stiffness. BioMed research international 2021; 2021:5548310.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33860033>
  3. Momeni B, Nazer S, Masoompour SM *et al.* The effect of atorvastatin on inflammatory markers in sulfur mustard gas induced bronchitis: a randomized double-blinded, placebo-control clinical trial. BMC Pulm Med 2021; 21:112.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33794865>
  4. Ni Q, Chen H, Li W *et al.* Pravastatin ameliorated osteoarthritis susceptibility in male offspring rats induced by prenatal ethanol exposure. Bone 2021; 149:115976. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33915333>
  5. Claesen K, Mertens JC, Basir S *et al.* Effect of Statin Therapy on the Carboxypeptidase U (CPU, TAF1a, CPB2) System in Patients With Hyperlipidemia: A Proof-of-Concept Observational Study. Clinical therapeutics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33910760>
  6. Shi S, Wang R, Chen L *et al.* Long-term follow-up and successful treatment of pulmonary alveolar proteinosis without hypercholesterolemia with statin therapy: a case report. J Int Med Res 2021; 49:3000605211010046.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33926277>

## Ethnicity

1. Khatib R, Glowacki N, Lauffenburger J, Siddiqi A. Race/Ethnic Differences in Atherosclerotic Cardiovascular Disease Risk Factors Among Patients with Hypertension: Analysis from 143 primary care clinics. American journal of hypertension 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33876823>
2. Fanta K, Daba FB, Tegene E *et al.* Management quality indicators and in-hospital mortality among acute coronary syndrome patients admitted to tertiary hospitals in Ethiopia: prospective observational study. BMC Emerg Med 2021; 21:41.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33789565>
3. Zeng L, Ye Z, Li Y *et al.* Different Lipid Parameters in Predicting Clinical Outcomes in Chinese Statin-Naïve Patients After Coronary Stent Implantation. Frontiers in cardiovascular medicine 2021; 8:638663.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33796571>
4. Yang YL, Leu HB, Yin WH *et al.* Adherence to Healthy Lifestyle Improved Clinical Outcomes in Coronary Artery Disease Patients After Coronary Intervention.

Journal of the Chinese Medical Association : JCMA 2021.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33871387>

5. Turkyilmaz A, Kurnaz E, Alavanda C *et al.* The Spectrum of Low-Density Lipoprotein Receptor Mutations in a Large Turkish Cohort of Patients with Familial Hypercholesterolemia. Metab Syndr Relat Disord 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33794673>
6. Wang JY, Liaw CK, Huang CC *et al.* Hyperlipidemia Is a Risk Factor of Adhesive Capsulitis: Real-World Evidence Using the Taiwanese National Health Insurance Research Database. Orthop J Sports Med 2021; 9:2325967120986808. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33869642>
7. Cho SY, Kim SH, Kang SH *et al.* Pre-existing and machine learning-based models for cardiovascular risk prediction. Scientific reports 2021; 11:8886. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33903629>

## **FH**

1. Sánchez-Hernández RM, González-Lleó AM, Tugores A *et al.* Familial hypercholesterolemia in Gran Canaria: Founder mutation effect and high frequency of diabetes. Clin Investiq Arterioscler 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33814196>
2. Sugimoto H, Takeuchi M, Taniguchi Y, Sato J. Sudden Cardiac Arrest in a Patient With Sarcoidosis and Familial Hypercholesterolemia. Cureus 2021; 13:e13649. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33824802>
3. Jones LK, Tilberry S, Gregor C *et al.* Implementation strategies to improve statin utilization in individuals with hypercholesterolemia: a systematic review and meta-analysis. Implement Sci 2021; 16:40. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33849601>
4. Yeung J, Chisholm K, Spinks C, Srinivasan S. Familial hypercholesterolaemia: Experience of a tertiary paediatric lipid clinic. Journal of paediatrics and child health 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33830584>
5. Mohd Kasim NA, Al-Khateeb A, Chua YA *et al.* A successful pregnancy outcome of homozygous familial hypercholesterolaemia patient on statin therapy. The Malaysian journal of pathology 2021; 43:87-93. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33903311>
6. Turkyilmaz A, Kurnaz E, Alavanda C *et al.* The Spectrum of Low-Density Lipoprotein Receptor Mutations in a Large Turkish Cohort of Patients with



Familial Hypercholesterolemia. Metab Syndr Relat Disord 2021.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33794673>

## Genetics

1. Sánchez-Hernández RM, González-Lleó AM, Tugores A *et al*. Familial hypercholesterolemia in Gran Canaria: Founder mutation effect and high frequency of diabetes. Clin Investig Arterioscler 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33814196>
2. Wendt FR, Koller D, Pathak GA *et al*. Biobank Scale Pharmacogenomics Informs the Genetic Underpinnings of Simvastatin Use. Clinical pharmacology and therapeutics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33837531>
3. Zubiatur P, Benedicto MD, Villalpos-García G *et al*. SLCO1B1 Phenotype and CYP3A5 Polymorphism Significantly Affect Atorvastatin Bioavailability. Journal of personalized medicine 2021; 11. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33805706>
4. Roberts R, Chang CC, Hadley T. Genetic Risk Stratification: A Paradigm Shift in Prevention of Coronary Artery Disease. JACC. Basic to translational science 2021; 6:287-304. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33778213>
5. Turkyilmaz A, Kurnaz E, Alavanda C *et al*. The Spectrum of Low-Density Lipoprotein Receptor Mutations in a Large Turkish Cohort of Patients with Familial Hypercholesterolemia. Metab Syndr Relat Disord 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33794673>
6. Kuang YL, Theusch E, R MK, M WM. Identifying genetic modulators of statin response using subject-derived lymphoblastoid cell lines. Pharmacogenomics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33858191>
7. Gormley M, Yarmolinsky J, Dudding T *et al*. Using genetic variants to evaluate the causal effect of cholesterol lowering on head and neck cancer risk: A Mendelian randomization study. PLoS Genet 2021; 17:e1009525. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33886544>
8. Helkkula P, Kiiskinen T, Havulinna AS *et al*. ANGPTL8 protein-truncating variant associated with lower serum triglycerides and risk of coronary disease. PLoS Genet 2021; 17:e1009501. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33909604>

## Guidelines

1. Alves RJ. Statin Use and Hypercholesterolemia: Are the Current Guidelines' Recommendations Being Followed? Arquivos brasileiros de cardiologia 2021; 116:742-743. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33886721>
2. Schmidt A, Moreira HT, Volpe GJ *et al.* Statins Prescriptions and Lipid Levels in a Tertiary Public Hospital. Arquivos brasileiros de cardiologia 2021; 116:736-741. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33886720>
3. Averno M, Banach M, Bruckert E *et al.* Practical guidance for combination lipid-modifying therapy in high- and very-high-risk patients: A statement from a European Atherosclerosis Society Task Force. Atherosclerosis 2021; 325:99-109. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33892925>
4. Fanta K, Daba FB, Tegene E *et al.* Management quality indicators and in-hospital mortality among acute coronary syndrome patients admitted to tertiary hospitals in Ethiopia: prospective observational study. BMC Emerg Med 2021; 21:41. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33789565>
5. Pearson GJ, Thanassoulis G, Anderson TJ *et al.* 2021 Canadian Cardiovascular Society Guidelines for the Management of Dyslipidemia for the Prevention of Cardiovascular Disease in the Adult. Can J Cardiol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33781847>
6. Sarak B, Savu A, Kaul P *et al.* Lipid Testing, Lipid-Modifying Therapy, and PCSK9 (Proprotein Convertase Subtilisin-Kexin Type 9) Inhibitor Eligibility in 27 979 Patients With Incident Acute Coronary Syndrome. Circ Cardiovasc Qual Outcomes 2021; 14:e006646. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33813856>
7. Jones LK, Tilberry S, Gregor C *et al.* Implementation strategies to improve statin utilization in individuals with hypercholesterolemia: a systematic review and meta-analysis. Implement Sci 2021; 16:40. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33849601>
8. Beshir SA, Hussain N, Elnor AA, Said ASA. Umbrella Review on Non-Statin Lipid-Lowering Therapy. Journal of cardiovascular pharmacology and therapeutics 2021:10742484211002943. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33836639>
9. Machado-Duque ME, Garcia DA, Emura-Vélez MH *et al.* Prevalence of the Use of Aspirin and Statins for Preventing Cardiovascular Events in the Colombian Population with Type 2 Diabetes Mellitus: Comparison of 2008 and 2018. J Prim Care Community Health 2021; 12:21501327211007015. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33787394>
10. Campos-Staffico AM, Cordwin D, Ding Y *et al.* Fewer patients receive recommendations for pharmacotherapy in primary prevention using the 2018

atherosclerotic cardiovascular disease risk estimator. Prev Med 2021;106555.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33862035>

11. Cho SY, Kim SH, Kang SH *et al.* Pre-existing and machine learning-based models for cardiovascular risk prediction. Scientific reports 2021; 11:8886.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33903629>

## LDL- related parameters

1. MacEwan JP, Zhao LM, Everson K *et al.* Two steps forward, one step back: 50 years of societal value from LDL-C-lowering therapies. The American journal of managed care 2021; 27:162-168.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33877775>
2. Liu MM, Peng J, Cao YX *et al.* The difference between fasting and non-fasting lipid measurements is not related to statin treatment. Annals of translational medicine 2021; 9:386. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33842607>
3. Wang L, Zhou W, Guo M *et al.* The gut microbiota is associated with clinical response to statin treatment in patients with coronary artery disease. Atherosclerosis 2021; 325:16-23.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33878520>
4. Ryou IS, Chang J, Son JS *et al.* Association between CVDs and initiation and adherence to statin treatment in patients with newly diagnosed hypercholesterolaemia: a retrospective cohort study. BMJ Open 2021; 11:e045375. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33827840>
5. Sarak B, Savu A, Kaul P *et al.* Lipid Testing, Lipid-Modifying Therapy, and PCSK9 (Proprotein Convertase Subtilisin-Kexin Type 9) Inhibitor Eligibility in 27 979 Patients With Incident Acute Coronary Syndrome. Circ Cardiovasc Qual Outcomes 2021; 14:e006646. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33813856>
6. Wendt FR, Koller D, Pathak GA *et al.* Biobank Scale Pharmacogenomics Informs the Genetic Underpinnings of Simvastatin Use. Clinical pharmacology and therapeutics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33837531>
7. Xu I, Taub PR. Baseline testosterone level may modulate statin efficacy. Coronary artery disease 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33826543>
8. Sniderman A, Langlois M, Cobbaert C. Update on apolipoprotein B. Curr Opin Lipidol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33870931>
9. Guo LL, Chen YQ, Lin QZ *et al.* Non-HDL-C Is More Stable Than LDL-C in Assessing the Percent Attainment of Non-fasting Lipid for Coronary Heart

- Disease Patients. Frontiers in cardiovascular medicine 2021; 8:649181.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33869310>
10. Zeng L, Ye Z, Li Y *et al.* Different Lipid Parameters in Predicting Clinical Outcomes in Chinese Statin-Naïve Patients After Coronary Stent Implantation. Frontiers in cardiovascular medicine 2021; 8:638663.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33796571>
  11. Jones LK, Tilberry S, Gregor C *et al.* Implementation strategies to improve statin utilization in individuals with hypercholesterolemia: a systematic review and meta-analysis. Implement Sci 2021; 16:40.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33849601>
  12. Derington CG, Colantonio LD, Herrick JS *et al.* Factors Associated With PCSK9 Inhibitor Initiation Among US Veterans. J Am Heart Assoc 2021; 10:e019254.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33821686>
  13. Beshir SA, Hussain N, Elnor AA, Said ASA. Umbrella Review on Non-Statin Lipid-Lowering Therapy. Journal of cardiovascular pharmacology and therapeutics 2021:10742484211002943. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33836639>
  14. Ambrož M, de Vries ST, Vart P *et al.* Sex Differences in Lipid Profile across the Life Span in Patients with Type 2 Diabetes: A Primary Care-Based Study. Journal of clinical medicine 2021; 10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33921745>
  15. Mäkelä KA, Jokelainen J, Stenbäck V *et al.* PCSK9 Levels and Metabolic Profiles in Elderly Subjects with Different Glucose Tolerance under Statin Therapy. Journal of clinical medicine 2021; 10.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33801208>
  16. Rabizadeh S, Rajab A, Mechanick JI *et al.* LDL/apo B ratio predict coronary heart disease in Type 2 diabetes independent of ASCVD risk score: A case-cohort study. Nutrition, metabolism, and cardiovascular diseases : NMCD 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33810957>
  17. Ciric MZ, Ostojic M, Baralic I *et al.* Supplementation with Octacosanol Affects the Level of PCSK9 and Restore Its Physiologic Relation with LDL-C in Patients on Chronic Statin Therapy. Nutrients 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33802219>
  18. Kuang YL, Theusch E, R MK, M WM. Identifying genetic modulators of statin response using subject-derived lymphoblastoid cell lines. Pharmacogenomics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33858191>
  19. Im J, Kawada-Watanabe E, Yamaguchi J *et al.* Baseline low-density lipoprotein cholesterol predicts the benefit of adding ezetimibe on statin in statin-naïve

acute coronary syndrome. Scientific reports 2021; 11:7480.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33820931>

## Lifestyle

1. Kłosiewicz-Latoszek L, Cybulska B, Stoś K, Tyszko P. Hypolipaeamic nutraceuticals: red yeast rice and Armolipid, berberine and bergamot. Annals of agricultural and environmental medicine : AAEM 2021; 28:81-88.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33775071>
2. Ribó-Coll M, Castro-Barquero S, Lassale C *et al.* Mediterranean Diet and Physical Activity Decrease the Initiation of Cardiovascular Drug Use in High Cardiovascular Risk Individuals: A Cohort Study. Antioxidants (Basel) 2021; 10.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33808041>
3. Yang YL, Leu HB, Yin WH *et al.* Adherence to Healthy Lifestyle Improved Clinical Outcomes in Coronary Artery Disease Patients After Coronary Intervention. Journal of the Chinese Medical Association : JCMA 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33871387>
4. D'Assante R, De Luca M, Ferraro S *et al.* Beneficial Metabolic Effect of a Nutraceuticals Combination (Monacolin K, Yeasted Red Rice, Polyphenolic Extract of Annurca Apple and Berberine) on Acquired Hypercholesterolemia: A Prospective Analysis. Metabolites 2021; 11.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33917635>
5. Fukami H, Higa Y, Hisano T *et al.* A Review of Red Yeast Rice, a Traditional Fermented Food in Japan and East Asia: Its Characteristic Ingredients and Application in the Maintenance and Improvement of Health in Lipid Metabolism and the Circulatory System. Molecules (Basel, Switzerland) 2021; 26.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33803982>
6. Eliasson A, Kashani M, Vernalis M. Results of a prospective cardiovascular disease prevention program. Preventive medicine reports 2021; 22:101344.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33842199>

## Meta-analyses

1. Zhou YL, Chen LQ, Du XG. Efficacy of short-term moderate or high-dose statin therapy for the prevention of contrast-induced nephropathy in high-risk patients with chronic kidney disease: systematic review and meta-analysis. Clinics (Sao Paulo, Brazil) 2021; 76:e1876. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33787670>

2. Baral N, Gautam S, Yadav SA *et al.* Pharmacotherapies in Heart Failure With Preserved Ejection Fraction: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Cureus 2021; 13:e13604.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33816003>
3. Ghayda RA, Han CH, Lee KH *et al.* The effect of statins on mortality among patients with infection: umbrella review of meta-analyses. Eur Rev Med Pharmacol Sci 2021; 25:2685-2695.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33829455>
4. Hou J, Guo Q, Dong C *et al.* Efficacy of Atorvastatin Plus Conventional Disease-Modifying Antirheumatic Drugs on Disease Activity in Rheumatoid Arthritis: A Systematic Review and Meta-analysis of Randomized Controlled Trials. Journal of clinical rheumatology : practical reports on rheumatic & musculoskeletal diseases 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33902096>
5. Hariyanto TI, Kurniawan A. Statin and outcomes of coronavirus disease 2019 (COVID-19): A systematic review, meta-analysis, and meta-regression. Nutrition, metabolism, and cardiovascular diseases : NMCD 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33838992>
6. De Giorgi R, De Crescenzo F, Rizzo Pesci N *et al.* Statins for major depressive disorder: A systematic review and meta-analysis of randomized controlled trials. PLoS One 2021; 16:e0249409. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33784356>
7. Zhao L, Li S, Gao Y. Efficacy of statins on renal function in patients with chronic kidney disease: a systematic review and meta-analysis. Ren Fail 2021; 43:718-728. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33926359>

## Metabolic Syndrome - Diabetes

1. Ramin-Mangata S, Thedrez A, Nativel B *et al.* Effects of proprotein convertase subtilisin kexin type 9 modulation in human pancreatic beta cells function. Atherosclerosis 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33933263>
2. Mashayekhi-Sardoo H, Atkin SL, Montecucco F, Sahebkar A. Potential Alteration of Statin-Related Pharmacological Features in Diabetes Mellitus. BioMed research international 2021; 2021:6698743.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33834073>
3. Hernar I, Graue M, Richards DA *et al.* Use of patient-reported outcome measures (PROMs) in clinical diabetes consultations: the DiaPROM randomised controlled pilot trial. BMJ Open 2021; 11:e042353.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33853796>

4. Sánchez-Hernández RM, González-Lleó AM, Tugores A *et al.* Familial hypercholesterolemia in Gran Canaria: Founder mutation effect and high frequency of diabetes. Clin Investiq Arterioscler 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33814196>
5. Verma D, Hussain K, Namiq KS *et al.* Vitiligo: The Association With Metabolic Syndrome and the Role of Simvastatin as an Immunomodulator. Cureus 2021; 13:e14029. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33898117>
6. Nøkleby K, Berg TJ, Mdala I *et al.* High adherence to recommended diabetes follow-up procedures by general practitioners is associated with lower estimated cardiovascular risk. Diabetic medicine : a journal of the British Diabetic Association 2021:e14586. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33876447>
7. Tomlinson B, Patil NG, Fok M, Lam CWK. Managing dyslipidemia in patients with type 2 diabetes. Expert Opin Pharmacother 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33823719>
8. Ambrož M, de Vries ST, Vart P *et al.* Sex Differences in Lipid Profile across the Life Span in Patients with Type 2 Diabetes: A Primary Care-Based Study. Journal of clinical medicine 2021; 10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33921745>
9. Mäkelä KA, Jokelainen J, Stenbäck V *et al.* PCSK9 Levels and Metabolic Profiles in Elderly Subjects with Different Glucose Tolerance under Statin Therapy. Journal of clinical medicine 2021; 10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33801208>
10. Machado-Duque ME, Garcia DA, Emura-Vélez MH *et al.* Prevalence of the Use of Aspirin and Statins for Preventing Cardiovascular Events in the Colombian Population with Type 2 Diabetes Mellitus: Comparison of 2008 and 2018. J Prim Care Community Health 2021; 12:21501327211007015. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33787394>
11. Rabizadeh S, Rajab A, Mechanick JI *et al.* LDL/apo B ratio predict coronary heart disease in Type 2 diabetes independent of ASCVD risk score: A case-cohort study. Nutrition, metabolism, and cardiovascular diseases : NMCD 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33810957>
12. Han KT, Kim S. Do cholesterol levels and continuity of statin use affect colorectal cancer incidence in older adults under 75 years of age? PLoS One 2021; 16:e0250716. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891657>

## New Treatments

1. Meier S, Frick M, Liu M *et al.* Reduced adrenal stress response in patients on PCSK9 inhibitor therapy. Atherosclerosis 2021; 325:63-68.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33892329>
2. Cacciottolo PJ, Kostapanos MS, Hernan Sancho E *et al.* Investigating the Lowest Threshold of Vascular Benefits from LDL Cholesterol Lowering with a PCSK9 mAb Inhibitor (Alirocumab) in Patients with Stable Cardiovascular Disease (INTENSITY-HIGH): protocol and study rationale for a randomised, open label, parallel group, mechanistic study. BMJ Open 2021; 11:e037457.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33849844>
3. Lütjohann D, Stellaard F, Bölükbasi B *et al.* Anti-PCSK 9 antibodies increase the ratios of the brain-specific oxysterol 24S-hydroxycholesterol to cholesterol and to 27-hydroxycholesterol in the serum. Br J Clin Pharmacol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33792095>
4. Ballantyne CM, Bays H, Catapano AL *et al.* Role of Bempedoic Acid in Clinical Practice. Cardiovasc Drugs Ther 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33818688>
5. Fras Z. Current Choice for LDL-C Lowering in High-Risk CVD Patients Intolerant to Statins. Current vascular pharmacology 2021; 19:398-402.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33783343>
6. Tomlinson B, Patil NG, Fok M, Lam CWK. Role of PCSK9 Inhibitors in Patients with Familial Hypercholesterolemia. Endocrinol Metab (Seoul) 2021; 36:279-295.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33866776>
7. Feingold KR. Cholesterol Lowering Drugs. In: Endotext. Edited by: Feingold KR, Anawalt B, Boyce A *et al.* South Dartmouth (MA): MDText.com, Inc.
8. Copyright © 2000-2021, MDText.com, Inc.; 2000.
9. Basiak M, Kosowski M, Cyrnek M *et al.* Pleiotropic Effects of PCSK-9 Inhibitors. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33808697>
10. Dayoub EJ, Eberly LA, Nathan AS *et al.* Adoption of PCSK9 Inhibitors Among Patients With Atherosclerotic Disease. J Am Heart Assoc 2021; 10:e019331.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33904340>
11. Derington CG, Colantonio LD, Herrick JS *et al.* Factors Associated With PCSK9 Inhibitor Initiation Among US Veterans. J Am Heart Assoc 2021; 10:e019254.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33821686>
12. Beshir SA, Hussain N, Elnor AA, Said ASA. Umbrella Review on Non-Statin Lipid-Lowering Therapy. Journal of cardiovascular pharmacology and therapeutics 2021:10742484211002943. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33836639>



13. Ciric MZ, Ostojic M, Baralic I *et al.* Supplementation with Octacosanol Affects the Level of PCSK9 and Restore Its Physiologic Relation with LDL-C in Patients on Chronic Statin Therapy. Nutrients 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33802219>
14. Guerrero-Bonmatty R, Gil-Fernández G, Rodríguez-Velasco FJ, Espadaler-Mazo J. A Combination of Lactopantibacillus plantarum Strains CECT7527, CECT7528, and CECT7529 Plus Monacolin K Reduces Blood Cholesterol: Results from a Randomized, Double-Blind, Placebo-Controlled Study. Nutrients 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33917503>
15. Pinzon RT, Tjandrawinata RR, Wijaya VO, Veronica V. Effect of DLBS1033 on Functional Outcomes for Patients with Acute Ischemic Stroke: A Randomized Controlled Trial. Stroke Res Treat 2021; 2021:5541616.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33927846>
16. Beyerle A, Greene B, Dietrich B *et al.* Co-administration of CSL112 (apolipoprotein A-I (human)) with atorvastatin and alirocumab is not associated with increased hepatotoxic or toxicokinetic effects in rats. Toxicology and applied pharmacology 2021; 422:115557.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33932462>

## Other

1. Ye DQ, Ashuro AA, Fan YG *et al.* The Effect of Rosuvastatin on plasma/serum levels of high sensitivity C-reactive protein, Interleukin-6 and D-dimer in people living with Human Immunodeficiency Virus: a systematic review and meta-analysis. AIDS research and human retroviruses 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33913752>
2. Chalikias G, Tziakas D. Slow Coronary Flow: Pathophysiology, Clinical Implications, and Therapeutic Management. Angiology 2021:33197211004390.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33779300>
3. Wu B, Zhou JH, Wang WX *et al.* Association Analysis of Hyperlipidemia with the 28-Day All-Cause Mortality of COVID-19 in Hospitalized Patients. Chinese medical sciences journal = Chung-kuo i hsueh k'o hsueh tsa chih / Chinese Academy of Medical Sciences 2021; 36:17-26.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33853705>
4. Thomson MJ, Serper M, Khungar V *et al.* Prevalence and factors associated with statin use among patients with non-alcoholic fatty liver disease in TARGET-NASH. Clinical gastroenterology and hepatology : the official clinical practice

journal of the American Gastroenterological Association 2021.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33775894>

5. Ferrari F, Martins VM, Teixeira M *et al.* COVID-19 and Thromboinflammation: Is There a Role for Statins? Clinics (Sao Paulo, Brazil) 2021; 76:e2518.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33787678>
6. Krysiak R, Kowalcze K, Okopień B. The impact of hypotestosteronemia on cardiometabolic effects of atorvastatin in men with hypercholesterolemia: a pilot study. Coronary artery disease 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33826536>
7. Xu I, Taub PR. Baseline testosterone level may modulate statin efficacy. Coronary artery disease 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33826543>
8. Salvador P, Oliveira P, Costa T *et al.* Clinical Features and Prognostic Factors of 245 Portuguese Patients Hospitalized With COVID-19. Cureus 2021; 13:e13687.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33833912>
9. Capeau J, Lagathu C, Béréziat V, Fève B. Recent data on adipose tissue, insulin resistance, diabetes and dyslipidaemia in antiretroviral therapy controlled HIV-infected persons. Curr Opin HIV AIDS 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33783403>
10. Torres-Peña JD, Pérez-Belmonte LM, Fuentes-Jiménez F *et al.* Prior Treatment with Statins is Associated with Improved Outcomes of Patients with COVID-19: Data from the SEMI-COVID-19 Registry. Drugs 2021:1-11.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33782908>
11. Ghayda RA, Han CH, Lee KH *et al.* The effect of statins on mortality among patients with infection: umbrella review of meta-analyses. Eur Rev Med Pharmacol Sci 2021; 25:2685-2695.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33829455>
12. Chen W, Wang Q, Zhou B *et al.* Lipid Metabolism Profiles in Rheumatic Diseases. Frontiers in pharmacology 2021; 12:643520.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33897433>
13. Greco S, D'Amuri A, Giorgini E *et al.* Role of Statins in Coronavirus-Related Disease (COVID-19): A Retrospective Cohort Study in Northern Italy. High blood pressure & cardiovascular prevention : the official journal of the Italian Society of Hypertension 2021:1-10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33905094>
14. MacIntyre CR, Chughtai AA, Das A *et al.* Effect of statin use on the risk of influenza and influenza vaccine effectiveness. Int J Cardiol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33775795>

15. Pawlos A, Niedzielski M, Gorzelak-Pabiś P *et al.* COVID-19: Direct and Indirect Mechanisms of Statins. Int J Mol Sci 2021; 22.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33920709>
16. Krychtiuk KA, Lenz M, Hohensinner P *et al.* Circulating levels of proprotein convertase subtilisin/kexin type 9 (PCSK9) are associated with monocyte subsets in patients with stable coronary artery disease. J Clin Lipidol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33789832>
17. Wu CC, Lee AJ, Su CH *et al.* Statin Use Is Associated with a Decreased Risk of Mortality among Patients with COVID-19. Journal of clinical medicine 2021; 10.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33916281>
18. Oddy C, McCaul J, Keeling P *et al.* Pharmacological Predictors of Morbidity and Mortality in COVID-19. Journal of clinical pharmacology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33908637>
19. Hariyanto TI, Kurniawan A. Statin and outcomes of coronavirus disease 2019 (COVID-19): A systematic review, meta-analysis, and meta-regression. Nutrition, metabolism, and cardiovascular diseases : NMCD 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33838992>
20. Wang JY, Liaw CK, Huang CC *et al.* Hyperlipidemia Is a Risk Factor of Adhesive Capsulitis: Real-World Evidence Using the Taiwanese National Health Insurance Research Database. Orthop J Sports Med 2021; 9:2325967120986808.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33869642>
21. Yan LL, Gong E, Gu W *et al.* Effectiveness of a primary care-based integrated mobile health intervention for stroke management in rural China (SINEMA): A cluster-randomized controlled trial. PLoS Med 2021; 18:e1003582.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33909607>

### **PAD and statins**

1. Danese MD, Pemberton-Ross P, Catterick D, Villa G. Estimation of the increased risk associated with recurrent events or polyvascular atherosclerotic cardiovascular disease in the United Kingdom. Eur J Prev Cardiol 2021; 28:335-343. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891694>
2. Matsumoto T, Yoshino S, Furuyama T *et al.* Pitavastatin-Incorporated Nanoparticles for Chronic Limb Threatening Ischemia: A Phase I/IIa Clinical Trial. J Atheroscler Thromb 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33907060>

### **Pleiotropic effects of statins**

1. Thilanga Liyanage AD, Chen AJ, Puleo DA, Joseph Halcomb F, 3rd. Vancomycin- and Poly(simvastatin)-Loaded Scaffolds with Time-Dependent Development of Porosity. ACS Appl Bio Mater 2019; 2:2511-2519.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33912813>
2. Faraj R, Paine D, Black SM, Wang T. Anti-inflammatory Effects of Statins in Lung Vascular Pathology: From Basic Science to Clinical Trials. Advances in experimental medicine and biology 2021; 1303:33-56.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33788186>
3. Luo L, Wu J, Lin T *et al.* Influence of atorvastatin on metabolic pattern of rats with pulmonary hypertension. Aging 2021; 13:11954-11968.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33886502>
4. Ye DQ, Ashuro AA, Fan YG *et al.* The Effect of Rosuvastatin on plasma/serum levels of high sensitivity C-reactive protein, Interleukin-6 and D-dimer in people living with Human Immunodeficiency Virus: a systematic review and meta-analysis. AIDS research and human retroviruses 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33913752>
5. Xu WH, Zhou YH. The relationship between post-diagnostic statin usage and breast cancer prognosis varies by hormone receptor phenotype: a systemic review and meta-analysis. Archives of gynecology and obstetrics 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33891208>
6. Wang Y, Jones G, Hill C *et al.* Effect of atorvastatin on knee cartilage volume in patients with symptomatic knee osteoarthritis: results from a randomised placebo-controlled trial. Arthritis & rheumatology (Hoboken, N.J.) 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33844449>
7. El-Khashab IH. Antiangiogenic and Proapoptotic Activities of Atorvastatin and Ganoderma lucidum in Tumor Mouse Model via VEGF and Caspase-3 Pathways. Asian Pacific journal of cancer prevention : APJCP 2021; 22:1095-1104.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33906301>
8. Cui H, Soga K, Tamehiro N *et al.* Statins repress needle-like carbon nanotube- or cholesterol crystal-stimulated IL-1 $\beta$  production by inhibiting the uptake of crystals by macrophages. Biochem Pharmacol 2021; 188:114580.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33930349>
9. Tsilimigras DI, Bibli SI, Siasos G *et al.* Regulation of Long Non-Coding RNAs by Statins in Atherosclerosis. Biomolecules 2021; 11.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33922114>

10. Su G, Sun G, Lv J *et al.* Hsa\_circ\_0004831 downregulation is partially responsible for atorvastatin-alleviated human umbilical vein endothelial cell injuries induced by ox-LDL through targeting the miR-182-5p/CXCL12 axis. BMC Cardiovasc Disord 2021; 21:221.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33932991>
11. Momeni B, Nazer S, Masoompour SM *et al.* The effect of atorvastatin on inflammatory markers in sulfur mustard gas induced bronchitis: a randomized double-blinded, placebo-control clinical trial. BMC Pulm Med 2021; 21:112.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33794865>
12. Ni Q, Chen H, Li W *et al.* Pravastatin ameliorated osteoarthritis susceptibility in male offspring rats induced by prenatal ethanol exposure. Bone 2021; 149:115976. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33915333>
13. Batta G, Kárpáti L, Henrique GF *et al.* Statin-boosted cellular uptake and endosomal escape of penetratin due to reduced membrane dipole potential. Br J Pharmacol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33908640>
14. Kim JH, Lee HS, Wee JH *et al.* Association between Previous Statin Use and Alzheimer's Disease: A Nested Case-Control Study Using a National Health Screening Cohort. Brain Sci 2021; 11.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33804752>
15. Bhardwaj A, Embury MD, Rojo RD *et al.* Efficacy of fluvastatin and aspirin for prevention of hormonally insensitive breast cancer. Breast Cancer Res Treat 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33893908>
16. Rossi A, Filetti M, Taurelli Salimbeni B *et al.* Statins and immunotherapy: Togetherness makes strength The potential effect of statins on immunotherapy for NSCLC. Cancer Rep (Hoboken) 2021:e1368.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33788420>
17. Kwon TJ, Kim TJ, Lee H *et al.* Statin Use Decreases the Risk of Metachronous Gastric Cancer in Patients without Helicobacter pylori Infection. Cancers 2021; 13. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33804425>
18. Prasai K, Tella SH, Yadav S *et al.* Aspirin and Statin Use and the Risk of Gallbladder Cancer. Cancers 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33803387>
19. Zheng P, Ding Y, Lu F *et al.* Atorvastatin reverses high cholesterol-induced cardiac remodeling and regulates mitochondrial quality-control in a cholesterol-independent manner: an experimental study. Clin Exp Pharmacol Physiol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33891707>

20. Thomson MJ, Serper M, Khungar V *et al.* Prevalence and factors associated with statin use among patients with non-alcoholic fatty liver disease in TARGET-NASH. Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33775894>
21. Claesen K, Mertens JC, Basir S *et al.* Effect of Statin Therapy on the Carboxypeptidase U (CPU, TAF1a, CPB2) System in Patients With Hyperlipidemia: A Proof-of-Concept Observational Study. Clinical therapeutics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33910760>
22. Zhou YL, Chen LQ, Du XG. Efficacy of short-term moderate or high-dose statin therapy for the prevention of contrast-induced nephropathy in high-risk patients with chronic kidney disease: systematic review and meta-analysis. Clinics (Sao Paulo, Brazil) 2021; 76:e1876. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33787670>
23. Hajibandeh S, Hajibandeh S, Alqallaf A *et al.* Statin therapy and postoperative outcomes after major colorectal surgery: The available evidence is not conclusive and robust evidence synthesis may be challenging! Colorectal Dis 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33794047>
24. Verma D, Hussain K, Namiq KS *et al.* Vitiligo: The Association With Metabolic Syndrome and the Role of Simvastatin as an Immunomodulator. Cureus 2021; 13:e14029. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33898117>
25. Zuo Y, Chen L, He X *et al.* Atorvastatin Regulates MALAT1/miR-200c/NRF2 Activity to Protect Against Podocyte Pyroptosis Induced by High Glucose. Diabetes, metabolic syndrome and obesity : targets and therapy 2021; 14:1631-1645. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33880049>
26. Torres-Peña JD, Pérez-Belmonte LM, Fuentes-Jiménez F *et al.* Prior Treatment with Statins is Associated with Improved Outcomes of Patients with COVID-19: Data from the SEMI-COVID-19 Registry. Drugs 2021;1-11. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33782908>
27. Ghayda RA, Han CH, Lee KH *et al.* The effect of statins on mortality among patients with infection: umbrella review of meta-analyses. Eur Rev Med Pharmacol Sci 2021; 25:2685-2695. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33829455>
28. Leutner M, Matzhold C, Kautzky A *et al.* Corrigendum: Major Depressive Disorder (MDD) and Antidepressant Medication Are Overrepresented in High-Dose Statin Treatment. Frontiers in medicine 2021; 8:677866. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33898492>

29. Huang X, Zheng C, Wang W *et al.* The Effect and Possible Mechanism of Intradiscal Injection of Simvastatin in the Treatment of Discogenic Pain in Rats. Frontiers in neuroscience 2021; 15:642436.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33815046>
30. Feng JL, Dixon-Suen SC, Jordan SJ, Webb PM. Is there sufficient evidence to recommend women diagnosed with endometrial cancer take a statin: Results from an Australian record-linkage study. Gynecologic oncology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33846016>
31. Greco S, D'Amuri A, Giorgini E *et al.* Role of Statins in Coronavirus-Related Disease (COVID-19): A Retrospective Cohort Study in Northern Italy. High blood pressure & cardiovascular prevention : the official journal of the Italian Society of Hypertension 2021:1-10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33905094>
32. Basiak M, Kosowski M, Cyrnek M *et al.* Pleiotropic Effects of PCSK-9 Inhibitors. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33808697>
33. Kho AR, Hong DK, Kang BS *et al.* The Effects of Atorvastatin on Global Cerebral Ischemia-Induced Neuronal Death. Int J Mol Sci 2021; 22.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33922266>
34. Pawlos A, Niedzielski M, Gorzelak-Pabiś P *et al.* COVID-19: Direct and Indirect Mechanisms of Statins. Int J Mol Sci 2021; 22.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33920709>
35. Malviya R, Raj S, Fuloria S *et al.* Evaluation of Antitumor Efficacy of Chitosan-Tamarind Gum Polysaccharide Polyelectrolyte Complex Stabilized Nanoparticles of Simvastatin. International journal of nanomedicine 2021; 16:2533-2553.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33824590>
36. Zi L, Zhou W, Xu J *et al.* Rosuvastatin Nanomicelles Target Neuroinflammation and Improve Neurological Deficit in a Mouse Model of Intracerebral Hemorrhage. International journal of nanomedicine 2021; 16:2933-2947.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33907400>
37. Hasanvand A, Ahmadizar F, Abbaszadeh A *et al.* Neuroprotective and Anti-inflammatory Role of Atorvastatin and Its Interaction with Nitric Oxide (NO) in Chronic Constriction Injury-induced Neuropathic Pain. Iranian journal of pharmaceutical research : IJPR 2020; 19:67-75.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33841522>
38. Kim JH, Wee JH, Choi HG *et al.* Association between statin medication and asthma/asthma exacerbation in a national health screening cohort. The journal of allergy and clinical immunology. In practice 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33894391>

39. Matsumoto T, Yoshino S, Furuyama T *et al.* Pitavastatin-Incorporated Nanoparticles for Chronic Limb Threatening Ischemia: A Phase I/IIa Clinical Trial. J Atheroscler Thromb 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33907060>
40. Hao L, Chen J, Shang X, Chen S. Surface modification of the simvastatin factor-loaded silk fibroin promotes the healing of rotator cuff injury through  $\beta$ -catenin signaling. Journal of biomaterials applications 2021:885328221995926. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33779364>
41. Chen J, Zhang C, Yan T *et al.* Atorvastatin ameliorates early brain injury after subarachnoid hemorrhage via inhibition of pyroptosis and neuroinflammation. Journal of cellular physiology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33792028>
42. Singh J, Wozniak A, Cotler SJ *et al.* Combined Use of Aspirin and Statin is Associated With a Decreased Incidence of Hepatocellular Carcinoma. Journal of clinical gastroenterology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33883511>
43. Wu CC, Lee AJ, Su CH *et al.* Statin Use Is Associated with a Decreased Risk of Mortality among Patients with COVID-19. Journal of clinical medicine 2021; 10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33916281>
44. Oddy C, McCaul J, Keeling P *et al.* Pharmacological Predictors of Morbidity and Mortality in COVID-19. Journal of clinical pharmacology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33908637>
45. Hou J, Guo Q, Dong C *et al.* Efficacy of Atorvastatin Plus Conventional Disease-Modifying Antirheumatic Drugs on Disease Activity in Rheumatoid Arthritis: A Systematic Review and Meta-analysis of Randomized Controlled Trials. Journal of clinical rheumatology : practical reports on rheumatic & musculoskeletal diseases 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33902096>
46. Okumus T, Pala AA, Taner T, Aydin U. Effects of Preoperative Statin on the Frequency of Ventricular Fibrillation and C-Reactive Protein Level in Patients Undergoing Isolated Coronary Artery Bypass Grafting. Journal of the College of Physicians and Surgeons--Pakistan : JCPSP 2021; 30:373-378. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33866719>
47. Xu HR, Yang Q, Xiang SY *et al.* Rosuvastatin Enhances Alveolar Fluid Clearance in Lipopolysaccharide-Induced Acute Lung Injury by Activating the Expression of Sodium Channel and Na,K-ATPase via the PI3K/AKT/Nedd4-2 Pathway. J Inflamm Res 2021; 14:1537-1549. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33889010>



48. Shi S, Wang R, Chen L *et al.* Long-term follow-up and successful treatment of pulmonary alveolar proteinosis without hypercholesterolemia with statin therapy: a case report. J Int Med Res 2021; 49:3000605211010046.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33926277>
49. Liu J, Cui Y, Kuang Y *et al.* Hierarchically porous calcium-silicon nanosphere-enabled co-delivery of microRNA-210 and simvastatin for bone regeneration. Journal of materials chemistry. B 2021; 9:3573-3583.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33909742>
50. Liu Y, Liu P, Song Y *et al.* A heparin-rosuvastatin-loaded P(LLA-CL) nanofiber-covered stent inhibits inflammatory smooth-muscle cell viability to reduce in-stent stenosis and thrombosis. J Nanobiotechnology 2021; 19:123.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33926468>
51. Mehrabiyan N, Movaffagh J, Magham AHJ *et al.* Development of Simvastatin Loaded Electrospun Zein Nanofiber Membranes for Bone Repair. Journal of nanoscience and nanotechnology 2021; 21:5099-5106.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33875095>
52. Murali VP, Guerra FD, Ghadri N *et al.* Simvastatin loaded chitosan guided bone regeneration membranes stimulate bone healing. Journal of periodontal research 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33830521>
53. Diggelmann F, Bengs S, Haider A *et al.* Potential Impact of Statins on Neuronal Stress Responses in Patients at Risk for Cardiovascular Disease. Journal of personalized medicine 2021; 11.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33916056>
54. Ganji R, Majdinasab N, Hesam S *et al.* Does atorvastatin have augmentative effects with sodium valproate in prevention of migraine with aura attacks? A triple-blind controlled clinical trial. Journal of pharmaceutical health care and sciences 2021; 7:12. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33789774>
55. Abdulwahab DK, Ibrahim WW, Abd El-Aal RA *et al.* Grape seed extract improved the fertility-enhancing effect of atorvastatin in high-fat diet-induced testicular injury in rats: involvement of antioxidant and anti-apoptotic effects. The Journal of pharmacy and pharmacology 2021; 73:366-376.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33793875>
56. Wang M, Wang J, Liu M, Chen G. Fluvastatin protects neuronal cells from hydrogen peroxide-induced toxicity with decreasing oxidative damage and increasing PI3K/Akt/mTOR signalling. The Journal of pharmacy and pharmacology 2021; 73:515-521.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33793833>

57. Jo JH, Park HS, Lee DH *et al.* Rosuvastatin inhibits the apoptosis of platelet-derived growth factor-stimulated vascular smooth muscle cells by inhibiting p38 via autophagy. J Pharmacol Exp Ther 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33846234>
58. Wang JR, Wang MZ, Zheng SH, Li ZY. Neural Remodeling of the Left Atrium in Rats by Rosuvastatin Following Acute Myocardial Infarction. Open Life Sci 2019; 14:603-610. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33817198>
59. Chen J, Song M, Qian D *et al.* Atorvastatin rescues pulmonary artery hypertension via inhibiting the AKT/ERK-dependent PDGF-BB/HIF-1 $\alpha$  axis. Panminerva medica 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33908728>
60. Saber S, Abd El-Fattah EE, Yahya G *et al.* A Novel Combination Therapy Using Rosuvastatin and Lactobacillus Combats Dextran Sodium Sulfate-Induced Colitis in High-Fat Diet-Fed Rats by Targeting the TXNIP/NLRP3 Interaction and Influencing Gut Microbiome Composition. Pharmaceuticals (Basel, Switzerland) 2021; 14. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33917884>
61. De Giorgi R, De Crescenzo F, Rizzo Pesci N *et al.* Statins for major depressive disorder: A systematic review and meta-analysis of randomized controlled trials. PLoS One 2021; 16:e0249409. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33784356>
62. Evangelista FF, Costa-Ferreira W, Mantelo FM *et al.* Rosuvastatin revert memory impairment and anxiogenic-like effect in mice infected with the chronic ME-49 strain of *Toxoplasma gondii*. PLoS One 2021; 16:e0250079.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33857221>
63. Han KT, Kim S. Do cholesterol levels and continuity of statin use affect colorectal cancer incidence in older adults under 75 years of age? PLoS One 2021; 16:e0250716. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891657>
64. Proto MC, Fiore D, Piscopo C *et al.* Lipid homeostasis and mevalonate pathway in COVID-19: Basic concepts and potential therapeutic targets. Progress in lipid research 2021; 82:101099. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33915202>
65. Allott EH, Craig EL, Stopsack KH. In search of the optimal setting for statin trials in prostate cancer: the power of population-based studies. Prostate Cancer Prostatic Dis 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33782544>
66. Peltomaa AI, Raittinen P, Talala K *et al.* Prostate cancer prognosis after initiation of androgen deprivation therapy among statin users. A population-based cohort study. Prostate Cancer Prostatic Dis 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33790420>

67. Zhao L, Li S, Gao Y. Efficacy of statins on renal function in patients with chronic kidney disease: a systematic review and meta-analysis. Ren Fail 2021; 43:718-728. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33926359>
68. Zhu Y, Gou H, Ma L *et al.* Effects of double-dose statin therapy for the prevention of post-stroke epilepsy: A prospective clinical study. Seizure 2021; 88:138-142. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33895389>
69. Hu X, Li H, Zhao X *et al.* Multi-omics study reveals that statin therapy is associated with restoration of gut microbiota homeostasis and improvement in outcomes in patients with acute coronary syndrome. Theranostics 2021; 11:5778-5793. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33897881>

## Primary Prevention

1. Lim LS. In older adults without CVD, treating 100 persons with statins for 2.5 y prevents 1 MACE. Annals of internal medicine 2021; 174:Jc39. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33819067>
2. Tanner M. In at-risk patients without CVD, polypill plus aspirin reduced a composite of major CV events at 4.6 y. Annals of internal medicine 2021; 174:Jc41. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33819061>
3. Razavi AC, Kelly TN, Budoff MJ *et al.* Atherosclerotic cardiovascular disease events among statin eligible individuals with and without long-term healthy arterial aging. Atherosclerosis 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33824003>
4. Ryou IS, Chang J, Son JS *et al.* Association between CVDs and initiation and adherence to statin treatment in patients with newly diagnosed hypercholesterolaemia: a retrospective cohort study. BMJ Open 2021; 11:e045375. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33827840>
5. Mehta A, Rigdon J, Tattersall MC *et al.* Association of Carotid Artery Plaque With Cardiovascular Events and Incident Coronary Artery Calcium in Individuals With Absent Coronary Calcification: The MESA. Circulation. Cardiovascular imaging 2021; 14:e011701. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33827231>
6. Aguilar-Palacio I, Malo S, Jarauta E *et al.* Pharmacological Primary Cardiovascular Prevention and Subclinical Atherosclerosis in Men: Evidence from the Aragon Workers' Health Study. Journal of clinical medicine 2021; 10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33804382>
7. Abdulwahab DK, Ibrahim WW, Abd El-Aal RA *et al.* Grape seed extract improved the fertility-enhancing effect of atorvastatin in high-fat diet-induced testicular

injury in rats: involvement of antioxidant and anti-apoptotic effects. The Journal of pharmacy and pharmacology 2021; 73:366-376.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33793875>

8. Campos-Staffico AM, Cordwin D, Ding Y *et al.* Fewer patients receive recommendations for pharmacotherapy in primary prevention using the 2018 atherosclerotic cardiovascular disease risk estimator. Prev Med 2021:106555. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33862035>

## Registry data

1. Kim JH, Lee HS, Wee JH *et al.* Association between Previous Statin Use and Alzheimer's Disease: A Nested Case-Control Study Using a National Health Screening Cohort. Brain Sci 2021; 11. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33804752>
2. Kwon TJ, Kim TJ, Lee H *et al.* Statin Use Decreases the Risk of Metachronous Gastric Cancer in Patients without Helicobacter pylori Infection. Cancers 2021; 13. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33804425>
3. Prasai K, Tella SH, Yadav S *et al.* Aspirin and Statin Use and the Risk of Gallbladder Cancer. Cancers 2021; 13. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33803387>
4. Ferrari F, Martins VM, Teixeira M *et al.* COVID-19 and Thromboinflammation: Is There a Role for Statins? Clinics (Sao Paulo, Brazil) 2021; 76:e2518. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33787678>
5. Chen LQ, Weber J, Christian T *et al.* Long-term all-cause mortality among asymptomatic individuals with 80th percentile of coronary calcium score based on age and gender in the St. Francis Heart Study. Coronary artery disease 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33826539>
6. Nøkleby K, Berg TJ, Mdala I *et al.* High adherence to recommended diabetes follow-up procedures by general practitioners is associated with lower estimated cardiovascular risk. Diabetic medicine : a journal of the British Diabetic Association 2021:e14586. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33876447>
7. Danese MD, Pemberton-Ross P, Catterick D, Villa G. Estimation of the increased risk associated with recurrent events or polyvascular atherosclerotic cardiovascular disease in the United Kingdom. Eur J Prev Cardiol 2021; 28:335-343. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891694>
8. Feng JL, Dixon-Suen SC, Jordan SJ, Webb PM. Is there sufficient evidence to recommend women diagnosed with endometrial cancer take a statin: Results

from an Australian record-linkage study. Gynecologic oncology 2021.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33846016>

9. Greco S, D'Amuri A, Giorgini E *et al.* Role of Statins in Coronavirus-Related Disease (COVID-19): A Retrospective Cohort Study in Northern Italy. High blood pressure & cardiovascular prevention : the official journal of the Italian Society of Hypertension 2021;1-10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33905094>
10. Sagris D, Perlepe K, Leventis I *et al.* Statin treatment and outcomes after embolic stroke of undetermined source. Internal and emergency medicine 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33895939>
11. Kim JH, Wee JH, Choi HG *et al.* Association between statin medication and asthma/asthma exacerbation in a national health screening cohort. The journal of allergy and clinical immunology. In practice 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33894391>
12. Derington CG, Colantonio LD, Herrick JS *et al.* Factors Associated With PCSK9 Inhibitor Initiation Among US Veterans. J Am Heart Assoc 2021; 10:e019254. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33821686>
13. Yang YL, Leu HB, Yin WH *et al.* Adherence to Healthy Lifestyle Improved Clinical Outcomes in Coronary Artery Disease Patients After Coronary Intervention. Journal of the Chinese Medical Association : JCMA 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33871387>
14. Singh J, Wozniak A, Cotler SJ *et al.* Combined Use of Aspirin and Statin is Associated With a Decreased Incidence of Hepatocellular Carcinoma. Journal of clinical gastroenterology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33883511>
15. Saeed MK, Shah J, Damani R *et al.* Risk Factors Associated with Statin-Associated Muscle Symptoms in Patients Attending a Specialized Regional Lipid Clinic. Journal of lipids 2021; 2021:8882706. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33791130>
16. Lee MT, Mahtta D, Ramsey DJ *et al.* Sex-Related Disparities in Cardiovascular Health Care Among Patients With Premature Atherosclerotic Cardiovascular Disease. JAMA cardiology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33881448>
17. Lin TK, Huang JY, Pan LF, Jong GP. Gender- and age-related differences of statin use on incident dementia in patients with rheumatoid arthritis: a Nationwide population-based cohort study. Lipids Health Dis 2021; 20:37. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33879179>

18. Wang JY, Liaw CK, Huang CC *et al.* Hyperlipidemia Is a Risk Factor of Adhesive Capsulitis: Real-World Evidence Using the Taiwanese National Health Insurance Research Database. Orthop J Sports Med 2021; 9:2325967120986808.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33869642>
19. Han KT, Kim S. Do cholesterol levels and continuity of statin use affect colorectal cancer incidence in older adults under 75 years of age? PLoS One 2021; 16:e0250716. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891657>
20. Kim SY, Song YS, Wee JH *et al.* Evaluation of the relationship between previous statin use and thyroid cancer using Korean National Health Insurance Service-Health Screening Cohort data. Scientific reports 2021; 11:7912.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33846511>

## Renal Disease

1. Bastani M, Khosravi MB, Shafa M *et al.* Evaluation of high-dose atorvastatin pretreatment influence in patients preconditioning of post coronary artery bypass graft surgery: A prospective triple blind randomized clinical trial. Annals of cardiac anaesthesia 2021; 24:209-216.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33884978>
2. Zhou YL, Chen LQ, Du XG. Efficacy of short-term moderate or high-dose statin therapy for the prevention of contrast-induced nephropathy in high-risk patients with chronic kidney disease: systematic review and meta-analysis. Clinics (Sao Paulo, Brazil) 2021; 76:e1876. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33787670>
3. Zuo Y, Chen L, He X *et al.* Atorvastatin Regulates MALAT1/miR-200c/NRF2 Activity to Protect Against Podocyte Pyroptosis Induced by High Glucose. Diabetes, metabolic syndrome and obesity : targets and therapy 2021; 14:1631-1645. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33880049>
4. Ghayda RA, Lee JY, Yang JW *et al.* The effect of statins on all-cause and cardiovascular mortality in patients with non-dialysis chronic kidney disease, patients on dialysis, and kidney transplanted recipients: an umbrella review of meta-analyses. Eur Rev Med Pharmacol Sci 2021; 25:2696-2710.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33829456>
5. Zhao L, Li S, Gao Y. Efficacy of statins on renal function in patients with chronic kidney disease: a systematic review and meta-analysis. Ren Fail 2021; 43:718-728. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33926359>

## Reviews

1. Faraj R, Paine D, Black SM, Wang T. Anti-inflammatory Effects of Statins in Lung Vascular Pathology: From Basic Science to Clinical Trials. Advances in experimental medicine and biology 2021; 1303:33-56.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33788186>
2. MacEwan JP, Zhao LM, Everson K *et al.* Two steps forward, one step back: 50 years of societal value from LDL-C-lowering therapies. The American journal of managed care 2021; 27:162-168.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33877775>
3. Alidadi M, Montecucco F, Jamialahmadi T *et al.* Beneficial Effect of Statin Therapy on Arterial Stiffness. BioMed research international 2021; 2021:5548310.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33860033>
4. Ballantyne CM, Bays H, Catapano AL *et al.* Role of Bempedoic Acid in Clinical Practice. Cardiovasc Drugs Ther 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33818688>
5. Cha D, Wang F, Mukerji B, Mukerji V. Statin-Induced Necrotizing Autoimmune Myositis: Diagnosis and Management. Cureus 2021; 13:e13787.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33842161>
6. Nemati M, Srari M, Rudrangi R. Statin-Induced Autoimmune Myopathy. Cureus 2021; 13:e13576. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33815984>
7. Picard F, Steg PG. Cardiovascular Disease Risk Reduction in Mild-Moderate Hypertriglyceridemia: Integrating Prescription of Omega-3 with Standard Treatment. Curr Atheroscler Rep 2021; 23:27.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33788024>
8. Diaconu CC, Iorga RA, Furtunescu F *et al.* Statin intolerance: new data and further options for treatment. Current opinion in cardiology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33929368>
9. Esan O, Wierzbicki AS. Triglycerides and cardiovascular disease. Current opinion in cardiology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33797418>
10. Sniderman A, Langlois M, Cobbaert C. Update on apolipoprotein B. Curr Opin Lipidol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33870931>
11. Fras Z. Current Choice for LDL-C Lowering in High-Risk CVD Patients Intolerant to Statins. Current vascular pharmacology 2021; 19:398-402.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33783343>
12. Pitavastatin. In: Drugs and Lactation Database (LactMed). Bethesda (MD): National Library of Medicine (US); 2006.

13. Tomlinson B, Patil NG, Fok M, Lam CWK. Role of PCSK9 Inhibitors in Patients with Familial Hypercholesterolemia. Endocrinol Metab (Seoul) 2021; 36:279-295. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33866776>
14. Feingold KR. Cholesterol Lowering Drugs. In: Endotext. Edited by: Feingold KR, Anawalt B, Boyce A *et al.* South Dartmouth (MA): MDText.com, Inc. Copyright © 2000-2021, MDText.com, Inc.; 2000.
15. Engell AE, Svendsen ALO, Lind BS *et al.* Drug-drug interactions between vitamin K antagonists and statins: a systematic review. Eur J Clin Pharmacol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33895864>
16. Koskinas KC, Mach F, Räber L. Lipid-lowering therapy and percutaneous coronary interventions. EuroIntervention : journal of EuroPCR in collaboration with the Working Group on Interventional Cardiology of the European Society of Cardiology 2021; 16:1389-1403. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33875408>
17. Lalagkas PN, Poulentzas G, Kontogiorgis C, Douros A. Potential drug-drug interaction between sodium-glucose co-transporter 2 inhibitors and statins: pharmacological and clinical evidence. Expert Opin Drug Metab Toxicol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33888031>
18. Feng JL, Dixon-Suen SC, Jordan SJ, Webb PM. Is there sufficient evidence to recommend women diagnosed with endometrial cancer take a statin: Results from an Australian record-linkage study. Gynecologic oncology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33846016>
19. Pawlos A, Niedzielski M, Gorzelak-Pabiś P *et al.* COVID-19: Direct and Indirect Mechanisms of Statins. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33920709>
20. Alkatiri AH, Firman D, Alkatiri AA *et al.* The Role of Angiotensin Antagonism in Coronary Plaque Regression: Insights from the Glagovian Model. Int J Vasc Med 2021; 2021:8887248. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33880191>
21. Roberts R, Chang CC, Hadley T. Genetic Risk Stratification: A Paradigm Shift in Prevention of Coronary Artery Disease. JACC. Basic to translational science 2021; 6:287-304. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33778213>
22. Fukami H, Higa Y, Hisano T *et al.* A Review of Red Yeast Rice, a Traditional Fermented Food in Japan and East Asia: Its Characteristic Ingredients and Application in the Maintenance and Improvement of Health in Lipid Metabolism and the Circulatory System. Molecules (Basel, Switzerland) 2021; 26. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33803982>



23. Curfman G, Shehada E. Icosapent ethyl: scientific and legal controversies. Open heart 2021; 8. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33888593>
24. Kuang YL, Theusch E, R MK, M WM. Identifying genetic modulators of statin response using subject-derived lymphoblastoid cell lines. Pharmacogenomics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33858191>

## Safety and side effects

1. Fu CN, Song JW, Song ZP *et al.* Excessive expression of miR-1a by statin causes skeletal injury through targeting mitogen-activated protein kinase kinase kinase 1. Aging 2021; 13:11470-11490. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33864447>
2. Meier S, Frick M, Liu M *et al.* Reduced adrenal stress response in patients on PCSK9 inhibitor therapy. Atherosclerosis 2021; 325:63-68. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33892329>
3. Mashayekhi-Sardoo H, Atkin SL, Montecucco F, Sahebkar A. Potential Alteration of Statin-Related Pharmacological Features in Diabetes Mellitus. BioMed research international 2021; 2021:6698743. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33834073>
4. Khandelwal Gilman KA, Han S, Won YW, Putnam CW. Complex interactions of lovastatin with 10 chemotherapeutic drugs: a rigorous evaluation of synergism and antagonism. BMC Cancer 2021; 21:356. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33823841>
5. Ghaffar MT, Radhakrishna A, Ali I, Whelan B. Statin-induced necrotising autoimmune myopathy: a rare complication of statin therapy. BMJ case reports 2021; 14. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33858894>
6. Lütjohann D, Stellaard F, Bölükbasi B *et al.* Anti-PCSK 9 antibodies increase the ratios of the brain-specific oxysterol 24S-hydroxycholesterol to cholesterol and to 27-hydroxycholesterol in the serum. Br J Clin Pharmacol 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33792095>
7. Ajmal M, Singh A, Kubba S *et al.* Statin-Induced Triad of Autoimmune Myocarditis, Myositis, and Transaminitis. Case Rep Cardiol 2021; 2021:6660362. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33898067>
8. Bai L, Wang Y, Huo J *et al.* Simvastatin accelerated motoneurons death in SOD1(G93A) mice through inhibiting Rab7-mediated maturation of late autophagic vacuoles. Cell death & disease 2021; 12:392. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33846297>

9. Jordy AB, Albayaty M, Breitschaft A *et al.* Effect of Oral Semaglutide on the Pharmacokinetics of Levonorgestrel and Ethinylestradiol in Healthy Postmenopausal Women and Furosemide and Rosuvastatin in Healthy Subjects. Clinical pharmacokinetics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33782832>
10. Nebot N, Won CS, Moreno V *et al.* Evaluation of the Effects of Repeat-Dose Dabrafenib on the Single-Dose Pharmacokinetics of Rosuvastatin (OATP1B1/1B3 Substrate) and Midazolam (CYP3A4 Substrate). Clinical pharmacology in drug development 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33932130>
11. Wendt FR, Koller D, Pathak GA *et al.* Biobank Scale Pharmacogenomics Informs the Genetic Underpinnings of Simvastatin Use. Clinical pharmacology and therapeutics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33837531>
12. Xiang Y, Okochi H, Kozachenko I *et al.* Effects of Single Dose Rifampin on the Pharmacokinetics of Fluvastatin in Healthy Volunteers. Clinical pharmacology and therapeutics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33880760>
13. Hou Y, Shao K, Zhao B *et al.* Juvenile idiopathic inflammatory myopathies with anti-3-hydroxy-3-methylglutaryl-coenzyme A reductase antibodies in a Chinese cohort. CNS Neurosci Ther 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33932258>
14. Krysiak R, Kowalcze K, Okopień B. The impact of hypotestosteronemia on cardiometabolic effects of atorvastatin in men with hypercholesterolemia: a pilot study. Coronary artery disease 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33826536>
15. Cha D, Wang F, Mukerji B, Mukerji V. Statin-Induced Necrotizing Autoimmune Myositis: Diagnosis and Management. Cureus 2021; 13:e13787. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33842161>
16. Nemati M, Srari M, Rudrangi R. Statin-Induced Autoimmune Myopathy. Cureus 2021; 13:e13576. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33815984>
17. Diaconu CC, Iorga RA, Furtunescu F *et al.* Statin intolerance: new data and further options for treatment. Current opinion in cardiology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33929368>
18. Fras Z. Current Choice for LDL-C Lowering in High-Risk CVD Patients Intolerant to Statins. Current vascular pharmacology 2021; 19:398-402. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33783343>
19. Elmekawy HA, Belal F, Abdelaziz AE *et al.* Pharmacokinetic interaction between atorvastatin and fixed-dose combination of sofosbuvir/ledipasvir in healthy male

- Egyptian volunteers. Eur J Clin Pharmacol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33791829>
20. Engell AE, Svendsen ALO, Lind BS *et al.* Drug-drug interactions between vitamin K antagonists and statins: a systematic review. Eur J Clin Pharmacol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33895864>
  21. Ghayda RA, Han CH, Lee KH *et al.* The effect of statins on mortality among patients with infection: umbrella review of meta-analyses. Eur Rev Med Pharmacol Sci 2021; 25:2685-2695.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33829455>
  22. Lalagkas PN, Poulentzas G, Kontogiorgis C, Douros A. Potential drug-drug interaction between sodium-glucose co-transporter 2 inhibitors and statins: pharmacological and clinical evidence. Expert Opin Drug Metab Toxicol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33888031>
  23. MacIntyre CR, Chughtai AA, Das A *et al.* Effect of statin use on the risk of influenza and influenza vaccine effectiveness. Int J Cardiol 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33775795>
  24. Dulka K, Szabo M, Lajkó N *et al.* Epigenetic Consequences of in Utero Exposure to Rosuvastatin: Alteration of Histone Methylation Patterns in Newborn Rat Brains. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33810299>
  25. Kobayashi J. Pitavastatin versus Atorvastatin: Potential Differences in their Effects on Serum Lipoprotein Lipase and Cardiovascular Disease. J Atheroscler Thromb 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33790128>
  26. Onfiani G, Nascimbeni F, Carubbi F. A case of statin-induced liver injury with positive rechallenge with a second statin. Is there a class effect? Journal of basic and clinical physiology and pharmacology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33882199>
  27. Mäkelä KA, Jokelainen J, Stenbäck V *et al.* PCSK9 Levels and Metabolic Profiles in Elderly Subjects with Different Glucose Tolerance under Statin Therapy. Journal of clinical medicine 2021; 10.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33801208>
  28. Saeed MK, Shah J, Damani R *et al.* Risk Factors Associated with Statin-Associated Muscle Symptoms in Patients Attending a Specialized Regional Lipid Clinic. Journal of lipids 2021; 2021:8882706.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33791130>
  29. Zubiatur P, Benedicto MD, Villapalos-García G *et al.* SLCO1B1 Phenotype and CYP3A5 Polymorphism Significantly Affect Atorvastatin Bioavailability. Journal

of personalized medicine 2021; 11.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33805706>

30. Chen Z, Chen L, Sun B *et al.* LDLR inhibition promotes hepatocellular carcinoma proliferation and metastasis by elevating intracellular cholesterol synthesis through the MEK/ERK signaling pathway. Molecular metabolism 2021; 51:101230.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33823318>

31. Samieirad S, Labafchi A, Famili K, Hashemzadeh H. Medication-Related Osteonecrosis of the Jaw (MRONJ) due to Simvastatin: An Unusual Case Report. World J Plast Surg 2021; 10:132-135.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33833966>

## Stroke and CNS

1. Kim JH, Lee HS, Wee JH *et al.* Association between Previous Statin Use and Alzheimer's Disease: A Nested Case-Control Study Using a National Health Screening Cohort. Brain Sci 2021; 11.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33804752>

2. Danese MD, Pemberton-Ross P, Catterick D, Villa G. Estimation of the increased risk associated with recurrent events or polyvascular atherosclerotic cardiovascular disease in the United Kingdom. Eur J Prev Cardiol 2021; 28:335-343. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891694>

3. Kho AR, Hong DK, Kang BS *et al.* The Effects of Atorvastatin on Global Cerebral Ischemia-Induced Neuronal Death. Int J Mol Sci 2021; 22.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33922266>

4. Zi L, Zhou W, Xu J *et al.* Rosuvastatin Nanomicelles Target Neuroinflammation and Improve Neurological Deficit in a Mouse Model of Intracerebral Hemorrhage. International journal of nanomedicine 2021; 16:2933-2947.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33907400>

5. Sagris D, Perlepe K, Leventis I *et al.* Statin treatment and outcomes after embolic stroke of undetermined source. Internal and emergency medicine 2021.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33895939>

6. Hasanvand A, Ahmadizar F, Abbaszadeh A *et al.* Neuroprotective and Anti-inflammatory Role of Atorvastatin and Its Interaction with Nitric Oxide (NO) in Chronic Constriction Injury-induced Neuropathic Pain. Iranian journal of pharmaceutical research : IJPR 2020; 19:67-75.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33841522>

7. Chen J, Zhang C, Yan T *et al.* Atorvastatin ameliorates early brain injury after subarachnoid hemorrhage via inhibition of pyroptosis and neuroinflammation. Journal of cellular physiology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33792028>
8. Ganji R, Majdinasab N, Hesam S *et al.* Does atorvastatin have augmentative effects with sodium valproate in prevention of migraine with aura attacks? A triple-blind controlled clinical trial. Journal of pharmaceutical health care and sciences 2021; 7:12. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33789774>
9. Lin TK, Huang JY, Pan LF, Jong GP. Gender- and age-related differences of statin use on incident dementia in patients with rheumatoid arthritis: a Nationwide population-based cohort study. Lipids Health Dis 2021; 20:37. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33879179>
10. Evangelista FF, Costa-Ferreira W, Mantelo FM *et al.* Rosuvastatin revert memory impairment and anxiogenic-like effect in mice infected with the chronic ME-49 strain of *Toxoplasma gondii*. PLoS One 2021; 16:e0250079. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33857221>
11. Zhu Y, Gou H, Ma L *et al.* Effects of double-dose statin therapy for the prevention of post-stroke epilepsy: A prospective clinical study. Seizure 2021; 88:138-142. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33895389>

## **Triglycerides/HDL**

1. Mason RP, Eckel RH. Mechanistic Insights from REDUCE-IT STRENGTHen the Case Against Triglyceride Lowering as a Strategy for Cardiovascular Disease Risk Reduction. Am J Med 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33864765>
2. Picard F, Steg PG. Cardiovascular Disease Risk Reduction in Mild-Moderate Hypertriglyceridemia: Integrating Prescription of Omega-3 with Standard Treatment. Curr Atheroscler Rep 2021; 23:27. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33788024>
3. Esan O, Wierzbicki AS. Triglycerides and cardiovascular disease. Current opinion in cardiology 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33797418>
4. Zeng L, Ye Z, Li Y *et al.* Different Lipid Parameters in Predicting Clinical Outcomes in Chinese Statin-Naïve Patients After Coronary Stent Implantation. Frontiers in cardiovascular medicine 2021; 8:638663. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33796571>

5. Ambrož M, de Vries ST, Vart P *et al.* Sex Differences in Lipid Profile across the Life Span in Patients with Type 2 Diabetes: A Primary Care-Based Study. Journal of clinical medicine 2021; 10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33921745>
6. Wang N, Harris K, Chalmers J *et al.* Combination blood pressure lowering in the presence or absence of background statin and aspirin therapy: a combined analysis of PROGRESS and ADVANCE Trials. J Hypertens 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33883461>

## **Trials**

1. Bastani M, Khosravi MB, Shafa M *et al.* Evaluation of high-dose atorvastatin pretreatment influence in patients preconditioning of post coronary artery bypass graft surgery: A prospective triple blind randomized clinical trial. Annals of cardiac anaesthesia 2021; 24:209-216. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33884978>
2. Liu MM, Peng J, Cao YX *et al.* The difference between fasting and non-fasting lipid measurements is not related to statin treatment. Annals of translational medicine 2021; 9:386. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33842607>
3. Lipinski J, Margevicius S, Schluchter MD *et al.* Statin effect on coronary calcium distribution, mass and volume scores and associations with immune activation among HIV+ persons on antiretroviral therapy. Antiviral therapy 2020; 25:419-427. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33901017>
4. Wang Y, Jones G, Hill C *et al.* Effect of atorvastatin on knee cartilage volume in patients with symptomatic knee osteoarthritis: results from a randomised placebo-controlled trial. Arthritis & rheumatology (Hoboken, N.J.) 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33844449>
5. Cacciottolo PJ, Kostapanos MS, Hernan Sancho E *et al.* Investigating the Lowest Threshold of Vascular Benefits from LDL Cholesterol Lowering with a PCSK9 mAb Inhibitor (Alirocumab) in Patients with Stable Cardiovascular Disease (INTENSITY-HIGH): protocol and study rationale for a randomised, open label, parallel group, mechanistic study. BMJ Open 2021; 11:e037457. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33849844>
6. Hernar I, Graue M, Richards DA *et al.* Use of patient-reported outcome measures (PROMs) in clinical diabetes consultations: the DiaPROM randomised controlled pilot trial. BMJ Open 2021; 11:e042353. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33853796>

7. Xu M, Demuyakor A, Hu S *et al.* Is the effect of atorvastatin 60 mg on stabilization of lipid-rich plaque equivalent to that of rosuvastatin 10 mg? A serial optical coherence tomography combined with intravascular ultrasound imaging. Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions 2021; 97 Suppl 2:1097-1107. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33864710>
8. Claesen K, Mertens JC, Basir S *et al.* Effect of Statin Therapy on the Carboxypeptidase U (CPU, TAF1a, CPB2) System in Patients With Hyperlipidemia: A Proof-of-Concept Observational Study. Clinical therapeutics 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33910760>
9. May HT, Knowlton KU, Anderson JL *et al.* High Statin Adherence over 5 Years of Follow-up is Associated with Improved Cardiovascular Outcomes in Patients with Atherosclerotic Cardiovascular Disease: Results from the IMPRES Study. European heart journal. Quality of care & clinical outcomes 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33787865>
10. Guo LL, Chen YQ, Lin QZ *et al.* Non-HDL-C Is More Stable Than LDL-C in Assessing the Percent Attainment of Non-fasting Lipid for Coronary Heart Disease Patients. Frontiers in cardiovascular medicine 2021; 8:649181. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33869310>
11. Matsumoto T, Yoshino S, Furuyama T *et al.* Pitavastatin-Incorporated Nanoparticles for Chronic Limb Threatening Ischemia: A Phase I/IIa Clinical Trial. J Atheroscler Thromb 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33907060>
12. Ichikawa K, Miyoshi T, Osawa K *et al.* Increased Circulating Malondialdehyde-Modified Low-Density Lipoprotein Level Is Associated with High-Risk Plaque in Coronary Computed Tomography Angiography in Patients Receiving Statin Therapy. Journal of clinical medicine 2021; 10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33918383>
13. Chen Y, Xing H, Wen J *et al.* Three-dimensional ultrasound imaging: An effective method to detect the effect of moderate intensity statin treatment in slowing carotid plaque progression. J Clin Ultrasound 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33884633>
14. Okumus T, Pala AA, Taner T, Aydin U. Effects of Preoperative Statin on the Frequency of Ventricular Fibrillation and C-Reactive Protein Level in Patients Undergoing Isolated Coronary Artery Bypass Grafting. Journal of the College of Physicians and Surgeons--Pakistan : JCPSP 2021; 30:373-378. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33866719>

15. Diggelmann F, Bengs S, Haider A *et al.* Potential Impact of Statins on Neuronal Stress Responses in Patients at Risk for Cardiovascular Disease. Journal of personalized medicine 2021; 11.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33916056>
16. Ganji R, Majdinasab N, Hesam S *et al.* Does atorvastatin have augmentative effects with sodium valproate in prevention of migraine with aura attacks? A triple-blind controlled clinical trial. Journal of pharmaceutical health care and sciences 2021; 7:12. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33789774>
17. Muniandy A, Lee M, Grey C *et al.* Demographic differences in the initiation and maintenance of statins in the first year post ACS in New Zealand: a data linkage study (ANZACS-QI 57). The New Zealand medical journal 2021; 134:31-45.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33927436>
18. Ciric MZ, Ostojic M, Baralic I *et al.* Supplementation with Octacosanol Affects the Level of PCSK9 and Restore Its Physiologic Relation with LDL-C in Patients on Chronic Statin Therapy. Nutrients 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33802219>
19. Guerrero-Bonmatty R, Gil-Fernández G, Rodríguez-Velasco FJ, Espadaler-Mazo J. A Combination of Lactopantibacillus plantarum Strains CECT7527, CECT7528, and CECT7529 Plus Monacolin K Reduces Blood Cholesterol: Results from a Randomized, Double-Blind, Placebo-Controlled Study. Nutrients 2021; 13.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33917503>
20. Eliasson A, Kashani M, Vernalis M. Results of a prospective cardiovascular disease prevention program. Preventive medicine reports 2021; 22:101344.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33842199>
21. Allott EH, Craig EL, Stopsack KH. In search of the optimal setting for statin trials in prostate cancer: the power of population-based studies. Prostate Cancer Prostatic Dis 2021. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33782544>
22. Peltomaa AI, Raittinen P, Talala K *et al.* Prostate cancer prognosis after initiation of androgen deprivation therapy among statin users. A population-based cohort study. Prostate Cancer Prostatic Dis 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33790420>
23. Ha J, Lee B, Park JM *et al.* Escalation of lipid-lowering therapy in patients with vascular disease receiving high-intensity statins: the retrospective POST-HIGH study. Scientific reports 2021; 11:8884.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33903685>
24. Im J, Kawada-Watanabe E, Yamaguchi J *et al.* Baseline low-density lipoprotein cholesterol predicts the benefit of adding ezetimibe on statin in statin-naïve



acute coronary syndrome. Scientific reports 2021; 11:7480.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33820931>

25. Chen Y, Xiong N, Wang X *et al.* Efficiency of atorvastatin on in-hospital mortality of patients with acute aortic dissection (AAD): study protocol for a randomized, open-label, superiority clinical trial. Trials 2021; 22:281.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=33853639>

## Women and elderly

1. Ren Z, Bremer AA, Pawlyk AC. Drug development research in pregnant and lactating women. American journal of obstetrics and gynecology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33887238>
2. Lim LS. In older adults without CVD, treating 100 persons with statins for 2.5 y prevents 1 MACE. Annals of internal medicine 2021; 174:Jc39.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33819067>
3. Hellemans L, Mertens B, Hias J *et al.* Age is just a number: the concept of time to benefit in older adults. Eur J Hosp Pharm 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33863810>
4. Dulka K, Szabo M, Lajkó N *et al.* Epigenetic Consequences of in Utero Exposure to Rosuvastatin: Alteration of Histone Methylation Patterns in Newborn Rat Brains. Int J Mol Sci 2021; 22. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33810299>
5. Ambrož M, de Vries ST, Vart P *et al.* Sex Differences in Lipid Profile across the Life Span in Patients with Type 2 Diabetes: A Primary Care-Based Study. Journal of clinical medicine 2021; 10. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33921745>
6. Mäkelä KA, Jokelainen J, Stenbäck V *et al.* PCSK9 Levels and Metabolic Profiles in Elderly Subjects with Different Glucose Tolerance under Statin Therapy. Journal of clinical medicine 2021; 10.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33801208>
7. Lee MT, Mahtta D, Ramsey DJ *et al.* Sex-Related Disparities in Cardiovascular Health Care Among Patients With Premature Atherosclerotic Cardiovascular Disease. JAMA cardiology 2021.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33881448>
8. Lin TK, Huang JY, Pan LF, Jong GP. Gender- and age-related differences of statin use on incident dementia in patients with rheumatoid arthritis: a Nationwide population-based cohort study. Lipids Health Dis 2021; 20:37.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33879179>

9. Mohd Kasim NA, Al-Khateeb A, Chua YA *et al.* A successful pregnancy outcome of homozygous familial hypercholesterolaemia patient on statin therapy. The Malaysian journal of pathology 2021; 43:87-93.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33903311>
10. Frisk G, Bergström H, Helde Frankling M, Björkhem-Bergman L. Sex-Differences in Discontinuation of Statin Treatment in Cancer Patients the Year before Death. Pharmaceuticals (Basel, Switzerland) 2021; 14.  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=33923405>
11. Han KT, Kim S. Do cholesterol levels and continuity of statin use affect colorectal cancer incidence in older adults under 75 years of age? PLoS One 2021; 16:e0250716. <http://www.ncbi.nlm.nih.gov/pubmed/?term=33891657>

---

This activity is supported by an educational grant from Viatrix.  
© P.J. Lansberg