



Update week 33 & 34 - 2023

Dr. Peter Lansberg is a Dutch lipidologist, educator and innovator. He has been instrumental in setting up The Dutch National Lipid Clinic Network, the Dutch Lipid Clinic Criteria for Familial Hypercholesterolemia (FH), and the Dutch National FH screening program

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The Statin Newsletter will keep you up-to-date with all recent statin publications. Based on a curated approach to select relevant articles.

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## Key Publications

1. **Statins prevent post-thrombotic complications**
2. **What are the risks when statins are used during pregnancy**
3. **Cholesterol absorption and synthesis in diabetic patients**
4. **Inadequate statin use by AF patients**
5. **UK Primary prevention favors cost-effective high-intensity statins**

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## Key publications

### post-thrombotic syndrome (PTS) prevention in DVT patients

The study investigated the effect of adding Rosuvastatin to the anticoagulant therapy for deep vein thrombosis (DVT) patients in reducing post-thrombotic syndrome (PTS). The randomized clinical trial assigned patients to four groups: Warfarin, Warfarin + Rosuvastatin, Rivaroxaban, and Rivaroxaban + Rosuvastatin, and followed the treatments for three months. The study found that Rosuvastatin administration in combination with anticoagulants significantly reduced the occurrence of PTS, and reduced levels of inflammatory factors such as CRP and D-dimer in comparison to patients receiving anticoagulants alone. The study concluded that Rosuvastatin administration was effective in preventing PTS in DVT patients.

**The Effects of 3-Month Rosuvastatin Adjuvant Therapy on Post Thrombotic Syndrome following Deep Vein Thrombosis; a Randomized Clinical Trial.** *Arch Acad Emerg Med* 2023; 11:e43Pishgahi M, Ghane Fard S, Lak Tabriz R *et al.* <http://www.ncbi.nlm.nih.gov/pubmed/?term=37609533>

### Statins during pregnancy, what are the risks? (FAERS data)

The reporting of pregnancy-related adverse events associated with statins using the FDA Adverse Event Reporting System were evaluated in this retrospective analysis. The real-world pharmacovigilance study identified a total of 589 adverse events related to statin use during pregnancy, with 71.8% being reported for pregnancies that began before the statin was prescribed. The study found that statin use during pregnancy was associated with higher rates of premature birth, low birth weight infants, and congenital malformations. The authors suggested that healthcare providers should carefully assess the risks and benefits of prescribing statins to pregnant women and counsel them on effective contraception strategies.

Pregnancy-related Adverse Events associated with statins: A Real-World Pharmacovigilance study of the FDA Adverse Event Reporting System (FAERS). *Expert opinion on drug safety* 2023; Wu T, Shi Y, Zhu B *et al.* <http://www.ncbi.nlm.nih.gov/pubmed/?term=37612600>

### The fa(c)ts on cholesterol absorption and synthesis in diabetic patients

What is the relationship between the cholesterol metabolites serum lathosterol and campesterol levels and diabetes mellitus (DM) patients. The CACHE Study DM Analysis, included 671 patients with DM aged 40–74 years, and a control group of 426 patients without DM. The study found a positive correlation between serum lathosterol levels and DM in women but not in men. The analysis also revealed a positive correlation between serum levels of campesterol and blood glucose levels in both genders. The study suggests that these cholesterol metabolites can serve as a clinical biomarker for DM management.

**Relationship between Diabetes Mellitus and Serum Lathosterol and Campesterol Levels: The CACHE Study DM Analysis.** *J Atheroscler Thromb* 2023; 30:735-753Matsumura T, Ishigaki Y, Nakagami T *et al.* <http://www.ncbi.nlm.nih.gov/pubmed/?term=36171088>

### Statin use in AF patients; theneed to address the under-treatment

To determine the relationship between the under-treatment with statins and mortality risk in patients with atrial fibrillation (AF) data collected in the Italian nation-wide START registry were evaluated. The START registry is a multicenter, observational, prospective ongoing cohort study that includes patients 18 years old on anticoagulation. The analysis revealed that under-treatment with statins in patients with AF was associated with higher all-cause mortality rates. The study found a lower prescription of statins in elderly and female patients. The authors indicate the benefits of statin therapy in patients with dyslipidemia and AF. They suggest attempts to improve prescription rates to improve outcomes in patients with AF.

**Statins under-treatment and mortality in patients with atrial fibrillation. Insights from the nationwide START registry.** Nutrition, metabolism, and cardiovascular diseases : NMCD 2023; Menichelli D, Antonucci E, Pignatelli P *et al.* <http://www.ncbi.nlm.nih.gov/pubmed/?term=37580234>

## High-intensity statins cost-effective in primary prevention

Are lipid lowering strategies in a primary prevention setting cost-effective? Different lipid-lowering strategies for the primary prevention of coronary heart disease from the UK National Health Service, initiated at ages 30, 40, 50, and 60 years, were analysed. A mathematical model was deployed to compare the 5 different lipid-lowering strategies for patients without established cardiovascular diseases. The analysis showed that high-intensity statin therapy was the most effective and cost-saving strategy for primary prevention. Low-cost generic statins were found to be the most cost-effective option. The study provides evidence to support treatment recommendations for primary prevention of coronary heart disease in the UK and. The findings of this analysis are helpful for Policy decisions as well.

Lipid-Lowering Strategies for Primary Prevention of Coronary Heart Disease in the UK: A Cost-Effectiveness Analysis. Pharmacoeconomics 2023; Morton JI, Marquina C, Lloyd M *et al.* <http://www.ncbi.nlm.nih.gov/pubmed/?term=37606881>

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## Relevant Publications

1. Application of Atorvastatin Combined with Ezetimibe in Elderly Patients with Hypertension Combined with T2DM and Analysis of Significance of Changes in Serum Bilirubin Levels During Treatment. Alternative therapies in health and medicine 2023; Zhu S, Wang T, Wang Q, Du M. <http://www.ncbi.nlm.nih.gov/pubmed/?term=37632947>
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3. Coronary Artery Calcium Scoring for Cardiovascular Risk Assessment in Patients with Inflammatory Bowel Disease. Am Heart J 2023; Naami R, Tashtish N, Neeland IJ *et al.* <http://www.ncbi.nlm.nih.gov/pubmed/?term=37634654>
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5. Statin Use and Risk of Clinical Outcomes With Special Reference to Kidney Disease and Concurrent Medications in Patients With Diabetes Mellitus. Am J Cardiol 2023; Kawada T. <http://www.ncbi.nlm.nih.gov/pubmed/?term=37620205>
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## Basic Science

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