



---

**Review**

# Novel mechanistic and clinical implications concerning the safety of statin discontinuation

Magdalena Jasińska-Stroschein, Jacek Owczarek, Irena Wejman,  
Daria Orszulak-Michalak

Department of Biopharmacy, Medical University of Łódź, Muszyńskiego 1, PL 90-151 Łódź, Poland

**Correspondence:** Magdalena Jasińska-Stroschein, e-mail: magdalena.jasinska@umed.lodz.pl

---

**Abstract:**

The beneficial effects of statins have been discussed widely, and their preventative role has been confirmed in cardiovascular disorders, primary and secondary prevention settings, and in asymptomatic subjects with a high cardiovascular risk. Despite these benefits, discontinuation of statins is frequent in cardiac patients and might be associated with adverse outcomes in several conditions involving acute coronary syndromes or acute stroke. In this review, we focus on the mechanistic background of statins that might contribute to such negative changes and that extend beyond cholesterol-lowering effects, including the so-called pleiotropic statin activity. In particular, findings regarding the detrimental impact of statin withdrawal on endothelial function, inflammation, platelet activity or AT1 signaling are discussed, along with the possible clinical implications for statin safety.

**Key words:**

HMG-CoA reductase inhibitors, withdrawal, pleiotropic effects, mechanism

---