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Inhibition of chitin sulfate on human low density lipoprotein(LDL) oxidation by macrophages

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Growing evidence indicates that oxidized to low density lipoprotein(LDL) may promotes atherogenesis. Therefore, inhibition of LDL oxidation may impede this process. The effect of chitin sulfate on the susceptibility of human low density lipoprotein(LDL) to macrophages-induced oxidation was investigated by monitoring TBARS. Chitin sulfate inhibited LDL oxidation by macrophages in a dose dependent manner, with an IC_{50} value $30\mu M$, as assessed by a thiobarbituric acid reactive substance (TBARS) assay. Chitin sulfate, at $20\mu M$, almost completely inhibited the macrophage-induced increase in electrophoretic mobility of LDL. These observations suggest that chitin sulfate might be an effective in prevention of atherosclerosis.