

## Relationship between High-Density Lipoprotein and C-reactive Protein in Patients with Atherosclerosis

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### Abstract

**Background and Objective:** Atherosclerosis is an inflammatory disease mostly caused by oxidation of low density lipoproteins (LDLs) while High-density lipoproteins (HDLs) oppose atherosclerosis by inhibiting the oxidation of LDLs. Serum concentration of C- reactive protein (CRP) also increases as an acute phase protein in inflammatory conditions like atherosclerosis. We aimed to evaluate the relationship between serum levels of HDL and CRP in patients with atherosclerosis disease.

**Material and Methods:** CRP and HDL in 45 patients as a case and 45 healthy individuals as a control group were measured in the central laboratory of Yazd city. The CRP was measured by turbidometric quantitative method and HDL by colorimetric method.

**Results:** In case group, the CRP level was  $7.62 \pm 4.08$  mg/l and the HDL level was  $45.29 \pm 9.41$  mg/dl, which are inversely correlated (P-value: 0.001, Pearson correlation: -0.700), while the correlation in control group was not significant (P-value: 0.88, Pearson correlation: 0.023).

**Conclusion:** Based on the results, there is a significant inverse correlation between CRP and HDL in atherosclerotic patients.

**Keywords:** Atherosclerosis Disease, CRP, HDL